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**A REVIEW OF BRT AS PUBLIC
TRANSPORT REFORM IN AFRICAN CITIES**

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INTRODUCTION

As Africa urbanizes rapidly and car ownership increases, its cities are facing the familiar problems of massive congestion, air pollution and crashes. Growing urban transportation emissions are also contributing to climate change which adds more vulnerability and risk, including to transport systems themselves (Shirvani et al., 2017). The fact that the vast majority of citizens living in African cities use a form of public transport and walk presents an opportunity to address equity, public health, congestion and climate concerns simultaneously. This can be done by building up high quality, multi-modal public and non-motorized transport along with critical land-use changes to increase access (Schaeffer and Sclar 1975, Stucki 2015, Suzuki et al. 2013).

In most cities in Africa, public transport is dominated by “informal transport”¹ including most importantly minibus systems which are operated by many private actors. These systems are often called “paratransit” because of their flexible schedules, stops and routes, low levels of regulation over competition and formal business practices (Behrens et al., 2016; UITP, 2008). This definition provides a contrast to more formalized bus systems with fixed stops, routes, fares and schedules. “Popular transport” is also used to describe these deeply rooted local transport systems, which the ma-

jority of citizens use and which has large impact on employment and everyday life in these cities (Mutongi, 2017; Hart, 2016).

Sometimes these systems are called “informal transport” but this is misleading because the transport itself is not informal but is embedded in informal processes that also involve state and other actors. In most cases, minibus operators pay for vehicle and route licenses and other fees to the government and, in this sense, are formal. Informality emerges out of how state and minibus sector actors cooperate and compete, with both sides of this relationship acting inside and outside the law (Agbiboa, 2018)². It is also important to note that the absence of transportation planning by the government leaves the minibus sector to devise routes, stops, fares and other key features of the system. Operators and workers in this sector are bottom up planners of a large part of the transport system in many African cities.

Africa’s minibus transport is poorly understood, although this is changing³. Sadly, the designation as “informal” has often been used as an excuse to ignore how these systems function and hence help explain the failure to explore their positive as well as negative aspects. Positive aspects include low cost to the public purse, high levels of adaptability and resilience and, in many cases, frequent service that generates

¹ Other forms of “informal transport” included bicycles, motorcycles and tuktuks which are also important to explore although they are not usually the target of displacement like the minibuses.

² Rayle notes in her thesis that there is a need to explain “how exactly regulation, business formality and service planning interact to produce certain modes... and why informal transport modes in different countries so often develop similar characteristics” (2017: 3).

³ The literature on these systems is growing. See for example, Behrens et al. 2016, Mutongi 2017, Hart 2017, Khayesi et. al 2015, Williams et al. 2015

substantial access for the majority of citizens, services that the government has failed to provide (Cervero and Golub, 2007). Negative aspects are better known: lack of safety, poor labor conditions, pollution, high and sometimes variable fares, poor accessibility for vulnerable groups, sexual harassment and suboptimal service and network design.

Few, including passengers, would question the need for public transport improvements in African cities and better public management of these systems. However, this entails careful, high quality public transport reform that clearly requires profound institutional transformation. This, in turn, leads to many critical questions: what kinds of public transport reforms do African cities need and what would work best given the nature of how the system works now? How would these reforms be implemented and by which institutions and actors and process? As reform always entails a redistribution of resources, authority and power, what are the broader socio-economic and political consequences of different kinds of reforms? Who benefits and who loses and how within specific reforms?

Currently, local and global capital are moving into Africa's urban transport sector, and, in the process, creating change. Transportation investments in African cities have tended towards externally financed "motor-way oriented development" with a focus on infrastructure for cars, especially highways (Porter, 2007; Klopp, 2012; Mitric, 2013). Within a frenzy to build heavy infrastructure, the question of how to improve existing popular public transport is often missing. Highway development combined with poor development control and land-use planning along with high demand for housing, in turn, has led to low density metropolitan areas (Shlomo 2014) and strip development along with speculative and splintered urbanism (Ayonga 2015, Ayonga and Obiero 2009, Hagans 2011, Watson 2014). This process feeds into congestion, pollution, climate and public health problems including high numbers of crashes and road fatalities (Lall et al., 2017). This form of development has historical roots in colonial city planning that fostered segregation and separation along race and class lines and paid little attention to public transport for the majority (Ayonga 2015, King 1990, Klopp 2012). This context has given rise to self-provision and African entrepreneurship in the popular transport sector, along with problematic spatial and land-use dynamics that generate ever more demand for these transport services.

In this context shifting to a more people-centered, public transport-oriented development paradigm suggests a strong need for *reorganizing the relationship of popular transport sector, land-use and government that leads to stronger outcomes for the public interest*

including improved service and access. This change also requires *improved metropolitan governance including transparent and integrated regulation over transportation and land-use.* Currently, land-use planning and actual land allocations and use (which often occur outside of formal planning/development control) occur quite separately from transport projects. In addition, transport authorities that can operate at the metropolitan scale exist in only a few African cities, and the creation of institutions to manage needed metropolitan-scale reforms faces many challenges. These include poor coordination across governmental levels and agencies, capacity issues, fragmented planning, financing operations and entrenched interests, conflicts of interests as government actors are also actors in the popular transport sector, and problematic practices around the existing road-oriented transport planning. Overall, serious institutional and political constraints exist to shifting patterns of transportation investment and planning and implementing reforms around public transport and related land-use improvements (Poku-Boansi and Marsden 2018, Lindau et al. 2014, Klopp 2012, Klopp and Mitullah 2016).

With growing urgency around improving and decarbonizing public transport, pressures and financial flows through climate funding are building for an investment, planning and policy shift away from building roads towards adding more public transport infrastructure on or along these roads (Mitric 2013, Stucki 2015). As a result, mass transit investments are growing including in commuter rail and, more commonly, bus rapid transit (BRT), defined as "high quality bus-based public transport that delivers rapid mobility through the provision of segregated right-of-way infrastructure and rapid, and frequent operations" (Wright and Hook 2007 quoted in Gauthier and Weinstock, 2010, p. 318). Often, the mass transit mode promoted is linked to which donor is contributing financing and related consulting.

The World Bank and consultants with expertise in BRT corridor design and operations are the key proponents of this mode. This includes most prominently the Institute for Transport Development Policy (ITDP) and Latin American experts who are able to draw on years of experience with the BRT in Bogota (Transmilenio) and the rest of the continent. Proponents argue that BRT is attractive, because it allows rapid improvement in mass transit capacity at relatively moderate cost compared to rail or subways (Deng and Nelson, 2011; ITDP, 2007; Suzuki et al., 2013; Hidalgo and Gutiérrez, 2013). Other benefits include passenger savings in time and greater safety (Carrigan et al. 2013). In addition, especially by using low emission buses, and reducing the number of small more polluting buses, BRT systems can help address greenhouse gas emissions and public health concerns

(Carrigan et al. 2013, Paget-Seekins 2015). Senegal, for example, cites its latest BRT project with the World Bank in its climate action plan. BRT is characterized as contributing to its Nationally Determined Contribution (NDC) to reduce greenhouse gas (GHG) emissions under the 2015 Paris Agreement (World Bank 2017b). From the perspective of government actors and their political concerns, BRT is still a large-scale project with high visibility and other political economy attractions (Klopp 2012, Flyvbjerg 2014). Thus, there is a diverse coalition of groups, often working on different rationales, promoting BRT in African cities.

Most importantly, BRT projects are often seen not just transport projects but vectors of public transport reform (Flores 2016, Flores and Diaz 2019). Drawing on Latin American cases, Flores and Diaz make an interesting distinction between BRT as means to restructure an entire “informal” system and hence to reorganize governance to “create the backbone of a citywide ‘modern’ system”, and BRT as a technical tool to speed up already existing bus systems (Flores and Diaz 2019). In African cities, dominated by popular public transport, BRT projects are clearly expected to drive significant institutional and political changes (Poku-Boansi and Marsden 2018, Finn 2013, Paget-Seekins 2015).

In practice, for many countries this means a donor driven push for the formation of an overarching transportation authority with a team of donor friendly technocrats or champions. This is, because such an authority is seen as a solution to institutional fragmentation and weakness, which are obstacles to smooth operations and planning for a new network design and technologically sophisticated mass transit systems. Further, this speaks to the donor need for concentrated responsibility around financing, implementation, monitoring and eventually managing these sophisticated systems. Often portrayed as a way to create technical capacity, this approach to institutional change also tends to depoliticize what is in effect, a significant reorganization of power, authority and accountability.

Given the profoundly political nature of BRT projects as public transport reform in African cities, it is interesting that the power dynamics and political bargaining around these projects as reform have not been adequately scrutinized (Paget-Seekins, 2015; Poku-Boansi and Marsden, 2018; Rizzo, 2015, 2017). This paper starts with the premise that the introduction of infrastructure heavy BRT is a mechanism to exert and contest power at multiple scales. We see BRT in African cities as primarily an externally driven and conceptualized reform project that aims

to modernize a sector dominated by popular transport. This “modernization” tends to create opportunities for global and local capital requiring consultants, bus operators, and companies that sell technology from automatic fare systems and ITS to actual buses. Behind this, is a vision of displacing and replacing popular transport. Given the high stakes and the strong political bargaining power of this sector expressed through strike action and the involvement of large number of people it employs, this necessarily engenders a contentious politics around critical public transport reform. This is an aspect that demands more attention: the complex dynamics of negotiations around reform, especially who benefits and who loses, shapes critical outcomes and will have potentially wide-ranging impacts for African citizens, governments and goal of improved urban public transport.

Within this context, we explore how BRT projects shape the formation of metropolitan governance and impinge on the future of the currently dominant minibus systems. We begin this paper with a brief review of the literature on BRT and popular transport in Africa, highlighting key gaps, emerging themes, questions and pressing issues. Next, we analyze and compare specific cases in more detail (Johannesburg, Lagos, Accra, Nairobi) and in particular, the nature of the political bargains around these projects and the kinds of institutional reform and contestation around this reform they engender. We selected these cases for geographic spread but also because each case represents a different stage or dynamic in BRT project and metropolitan governance⁴. Finally, we present an analytical synthesis of findings from these cases and provide some recommendations for closing the gaps in our present understanding of BRT, minibus systems, and metropolitan governance for public transport reform in African cities.

⁴ We also had limited time. It would be important to look at these cases in more detail and also include the critically important examples of Addis Ababa, Dakar, Marrakech and Cairo as well as the South African cities and other projects that are emerging.

OVERVIEW OF BRT, MINIBUSES AND TRANSPORT GOVERNANCE IN AFRICAN CITIES

In 2008, with World Bank support, Lagos launched Africa's first BRT along a 22 km corridor, a system that is considered BRT "lite", because it does not involve complete segregation of the buses from other traffic for the entire leg (Mason-Jones and Cohen 2012, Mobereola 2009). Between 2009 and 2011, the first phase of Rea Vaya Johannesburg's BRT became operational; it is considered the first "proper" BRT system on the continent with full segregation (McCaul and Ntuli, 2011; Venter, 2013; Witting and Wegner, 2016). Both systems are being expanded, and more BRT projects have come into operation or are in the planning stages in diverse African cities. BRT systems in some form now operate in Cape Town, Tshwane, Ekurhuleni, and Dar es Salaam and are in the planning or early implementation stages in Dakar, Nairobi, Addis Ababa, Marrakech, and Cairo. In Accra, as we will discuss later, the BRT appears stalled for the time being.

Overall, very little independent analysis exists on the success and failures and overall impacts of BRT in Africa. A number of helpful and important studies

focus on passenger experiences in Lagos (Adebambo and Adebayo, 2009; Okagbue et al., 2015), Dar es Salaam (Chengula and Kombe, 2017) and Johannesburg (Venter, 2016). While these studies show some passenger satisfaction with the services, they also point to concerns around affordability, safety and quality and spread of services. One key problem seems to be that the focus on BRT as a "project" to displace and modernize the existing popular transport system means that integrating popular public transport is given short shrift or as in the case of some South African cities was done poorly. This poor integration contributes to an overall suboptimal travel experience including waiting (Venter et al., 2018; Chengula and Kombe, 2017). An otherwise positive assessment of the relatively new Dar es Salaam BRT notes "the majority of passengers spent up to 20 minutes to walk to the DBRT stations/terminals. This is because most of the DBRT stations/terminals are not aligned with stops, stands, and stations of other modes" (Chengula and Kombe, 2017, p. 17). This links to the fundamental and pressing question of how well BRT interfaces with minibuses and buses (as well as other modes like walking, bicycles and motorcycles) that still cater to the bulk of road passengers in African cities.

Summary of Some Key BRT Projects in African Cities

City/Metro Area	Start date	BRT Character/Stage	Governance	Financing
Lagos	2008 (first)	BRT-Lite 2 nd phase started	Ministry of Transport Created LA-MATA	World Bank Lagos Urban Transport Project (2003-2008) (2010-2017)
Joburg	2009	Full BRT (ITDP silver ranking) 2 nd phase (1C)	City of Joburg responsible, Created Complex fragmented governance- no single metro transport authority	National Treasury City Support Programme Public Transport Network grants to cities, Global Environmental Facility, Brazilian Development Bank (BNDES) some local sources
Accra	2016	BRT Stalled or faltering?	GAPTE (Greater Accra Passenger Transport Executive (GAPTE)	Ghana Urban Transport Project (2007-2015) World Bank, AFD (French Development Agency), GEF (Global Environmental Facility)
Dar es Salaam	2017	BRT first phase just launched but facing problems related to capture of operating company by political actors	DART (Dar Rapid Transit)	World Bank African Development Bank...
Addis		BRT project planning in progress	Addis Ababa Road and Transport Bureau (AARTB) consolidated fragmented agencies under one	World Bank, Ethiopia: Transport Systems Improvement Project (TRANSIP) (2016-2023) Institutional support French Development Agency 2010, 2014, 2015 (BRT support)
Nairobi	Future?	BRT -planned but moving slowly, new political pressures to move forward	NaMATA (just formed but contested)	World Bank, African Development Bank... Government looking for other funders
Dakar		Extensive capacity building/formalization process prior to BRT implementation	CETUD (longest existing transport authority in Africa) Capacity support (2000-2008)	World Bank Dakar Bus Rapid Transit Pilot Project(2017-2023) Urban Mobility Improvement Program Project (2000-2008) (2010-2015)

THE POLITICAL ECONOMICS OF BRT IN AFRICA

BRT projects, their political economy dynamics and related institutional effects have not been rigorously evaluated and analyzed, especially in the African context. Poku-Boansi and Marsden note that “despite the apparent importance of governance issues to BRT implementation, the available literature pays comparatively little attention to it (Poku-Boansi and Marsden, 2018, p. 194). Rizzo (2015, 2017) remains one of the few political economy critiques of BRT, which he characterizes as a tool of neoliberalism, a vehicle for banks, construction companies, and private transport service operators to access Africa’s private transport market. Paget-Seekins (2015) notes that “BRT does not necessarily have to be a neoliberal proposition” and makes the crucial point *that there are multiple ways to proceed with formalization of the popular transport sector*. However, “the dominant model for BRT implementation being spread around the globe is the creation of an international market for bus service with a goal of no public funds for operating subsidies” (2015, p. 116)⁵. This question of which BRT model is being adopted and why is very important and deserves more focus.

Interestingly, on a related note, little discussion exists in the literature around the politics of subsidies and financing of operations and maintenance of BRT systems. Most of the focus is on planning, implementation and the technical performance of BRT systems that are up and running. Further, the particular model of BRT implementation is largely being driven by the funders especially the World Bank. This model appears to assume that the many governance issues existing around public transport regulation and state involvement in the production of informality might be skirted around through a “private-public partnership”. This involves engaging a foreign private operator for the BRT system with some local capital for “buy-in” along with creating a transport authority with technocrats.

Rizzo (2015) notes that the sunk costs of the extensive BRT infrastructure constitute, in effect, a large subsidy for whichever operator runs the system. It is perhaps unsurprising that the most vigorous public discussion around the fairness of subsidies has occurred in South

Africa, a country which does not receive substantial foreign funding and where cities are responsible for operating the BRT (and given the poor economic performance of the systems, are struggling with costs). In South Africa, a growing conversation is occurring on equity and fairness around who pays the most for transport and which operations get national subsidies (BRT, scheduled bus and rail, car travel) versus minibuses which operate largely without subsidy⁶. The only minibus subsidies are unpaid potential tax revenues and some access to funds through the Taxi Recapitalization Programme in which minibus owners receive a once-off capital grant to assist in replacing vehicles. This kind of discussion around subsidies and the distribution of costs and benefits appears to be missing in many other countries where external financing for the capital construction reduces the transparency and downwards accountability to taxpayers and citizens. One sign of this is that little to no public discussion occurs during BRT implementation around operational costs and the scale of potential subsidies for BRT. In South Africa concerns are growing around equity and inclusion, as well as the very high costs of and levels of subsidy for running BRT (Venter et. al 2018, Vermeiren et. al. 2015, Beukes 2018). Munoz-Raskin and Scorcia (2017, 2018) point out key differences in spatial form and travel demand patterns between South Africa and Latin American cities, which can help explain some of the disappointing economic performance of BRT in South Africa. In South Africa, BRT is mostly funded through grants from the National Treasury to the city governments, which, in turn, are expected to raise operational funds. The problems emerging out of the first phase of BRT building are fueling critical thinking around minibus upgrading and “hybrid systems” along with using more land-use interventions (Schalekamp and Behrens, 2010; Jennings and Behrens, 2017; Behrens et al., 2016).

This suggests that an alternative, more incremental approach to public transport reform is developing as an option. This would be to use capital as well as operations subsidies to *upgrade the existing system which would also require improving transparency and functioning of state regulation and extraction from the system*. Within this approach, it is still possible to upgrade the minibuses into a more integrated and better designed, higher capacity bus system without

⁵ Rizzo’s work also shows how the complex and ultimately successful maneuvering by local, politically influential minibus (daladala) operators in Dar es Salaam within a World Bank funded BRT project, edged out an external operating company. More recently, it has become clear that politicians are part of the new operating company and hence have found a way to benefit at the expense of public service causing the World Bank to suspend funding in response (Interviews in Dar es Salaam, June 2018).

⁶ Additional pressures for a discussion on subsidies are coming from the Competition Commission market inquiry into the Public Passenger Transport sector, which was triggered by the contentious presence of Uber but raises many critical questions of who benefits from current subsidies in South Africa (Government Gazette, 10 May 2017). The Commission’s market inquiry “will assess the general state of competition in the land based public passenger transport industry balancing the need for efficiencies emanating from coordination and monopolization and the overall benefits of competition to consumers”. There is also a concern with prices as the “prices for transport per household income seem high and growing and citing Kerr (2015) “that half the workers using several modes of land transport have their hourly wage reduced by 40% or more due to transport costs” (Competition Commission 2017, 16). One analyst suggests that the minibus industry with its “collective setting of prices” might have some reason to be concerned about an investigation into prices, but the industry is generally favorable to the inquiry given concerns with unequal subsidies (de Wet 2017).

BRT as was the case for Municipality of George in South Africa (Aboo and Robertson, 2016). This would privilege network redesign and other operational improvements before high speed on a number of corridors. Eventually with improved governance and functioning of the minibus sector, the conditions for successfully running high speed BRT-like corridors might then be in place.

This involves engaging minibuses in a formalization process, usually through regulatory reform especially around licensing and also through contracting for services around BRT (Venter, 2013; Jennings and Behrens, 2017; Walters, 2018). Other ways to engage the sector is through upgrading minibus infrastructure (stops and terminals, routing) or providing right of way or dedicated lanes as well as capacity-building courses for improving operations and trust (Jennings and Behrens, 2017; Schalekamp and Klopp, 2018; Bulman, 2017; Schalekamp, 2017). Unfortunately, in the South African case, much past engagement with the minibus sector has been “time-consuming, intensive and at times volatile” and not always very successful (Schalekamp and Behrens, 2013). It is important to note that with large-scale BRT projects in the works, many planners envisioned a replacement of minibuses altogether which is a poor starting point for engagement. This is especially the case since it is increasingly evident that “hybrid” systems where minibus taxis play a key role in an integrated public transport network are likely to be the future in almost every African city given financial constraints, spatial forms and political realities.

THE MISSING LABOR QUESTION

The shift from “labor intensive to capital intensive urban bus transit and hence the contraction of the quantity of jobs is also a critically important issue in cities with very high levels of unemployment (Rizzo, 2015, p. 264). Venter et al (2018) suggests, in the South African case, with BRT the total number of jobs are not lost as integrated ticketing and other services create new jobs. However, as Rizzo (2017) found in Tanzania and as Venter et al (2018) notes, many of the existing workers are not rehired for new kinds of jobs available under BRT. This requires mitigation processes, which in the South African case is addressed through compensation schemes. With strong constitutional provisions and institutions, compensation is actually disbursed which of course, drives up costs of BRT implementation, which may be one reason little discussion exists of this dimension in other countries. Currently, matatu workers in Nairobi also have fears of displacement and marginalization within BRT implementation (ITF 2019). In Kenya, even with strong constitutional protections, the rule of law is much less entrenched and mandated compensation for poorer people affected by projects often

does not to occur. This is yet another much neglected issue along with the growing evidence that improvements in the minibus system (fewer crashes for example) could be achieved through improved wages and conditions as well as monitoring using technology (Kelley et al. 2019). The Municipality of eThekweni is one of the few experimenting with direct subsidies to operators and drivers in exchange for improved services (Schalekamp and Klopp, 2018).

CASE STUDIES: LAGOS, JOHANNESBURG AND NAIROBI

Below we present three cases studies; Johannesburg, Lagos and Nairobi. Each of these cases represents different political processes, institutional dynamics and spatial and historical contexts as well as different phases of BRT and metropolitan development. Lagos and Johannesburg represent early adopter cases of BRT in Africa. Lagos created a “BRT-Lite system” after extensive negotiations with the minibus sector through the National Union of Road Transport Workers (NURTW). In contrast, Johannesburg engaged in a minibus replacement and compensation program and implemented a BRT closer to standards promoted by ITDP. It is considered a “best case” in design standards by that organization (ITDP 2007). Nairobi has been in a protracted BRT planning phase but is now under increasing political pressure to deliver to the point that it has procured buses and has painted a lane of one of its major highways as BRT Only corridor without a clear planning or institutional framework. We present each case in turn and then use comparative analysis to draw out some insights about the political dynamics of BRT driven public transport reform from across these cases especially as they relate to metropolitan governance changes. We ask what kinds of deals are stuck between the popular transit sector and government and what are the outcomes of these deals for the future of African cities and citizens?

CASE STUDY: LAGOS

Public Transport reform in Lagos

With over 17 million people and 16 local urban government areas, the Lagos metropolitan region is a dynamic, economically vibrant conurbation of profound economic importance to Nigeria. As elsewhere in Africa, congestion, crashes and air pollution are all serious problems (Mobereola, 2006; Oshodi et al., 2016). While Lagos has a large and growing fleet of private vehicles, and hence high levels of traffic congestion, the majority of citizens in this mega-city rely on some form of public transport; one estimate

suggests that 80% and 85% trips in Lagos are made by public transport (Opeifa, 2012). Lagos has (poorly integrated) multi-modal public transport system consisting of a fleet of about 83,000 buses including a large fleet of minibuses (danfo) together with smaller numbers of midi-buses (molue) and shared taxis (okada) as the dominant mode (see below) (LAMATA 2009 cited in Oshodi et al., 2016)

The mini and midi-bus services which carry the bulk of citizens daily reflect many of the common paratransit defects. Route development is motivated by where the greatest profit can be derived which leads to suboptimal networks. Most minibus owners have only a few vehicles, and drivers compete aggressively on the road. Vehicles are in a poor state of repair, offering a low quality ride for passengers at volatile fares. As a consequence, riders of such vehicles tend to experience uncomfortable, unsafe and tedious journeys. Transport prices associated with this form of public transport are also quite high compared to regulated buses and BRT and historically, have accounted for a substantial percent of a typical passenger’s disposable income, even as high as 40% in some cases. Nevertheless, these systems provide frequent and often convenient service and some can be hailed from any location (Adeniji, 1987).

National Union of Road Transport Workers (NURTW)

Given the critical importance of popular transport in the multi-modal transport system in Lagos, the collective body which represents workers in the sector, the National Union of Road Transport Workers (NURTW), is politically powerful and holds sway as one of the dominant actors in urban public transport. The Road Transport Employers Association of Nigeria (RTEAN) is also a powerful player, with its members drawn from the owners of large bus and interurban operations. Given the importance of the NURTW as an organization in public transport reform in Lagos it is worth going into more detail about how it operates.

Formed in 1978, NURTW is a blend of a public transport company and a transport worker’s union. Mem-

Passenger Traffic per Day in Lagos

Mode	Passengers/Day	Percentage to Total Passengers
Walking	8,800,000	40%
Bus Rapid Transit	90,000	0.41%
Regulated bus (LAGBUS)	150,000	1%
Private Cars	2,508,000	11%
Semi-Formal Mini Buses (Danfos)	5 9,982,000	45%
Federal Mass Transit Train	132,000	1%
Water Transportation System	74,000	0.34%
Other Non-data Modes (including, motorcycle, tricycle, bicycle, taxis, articulated vehicles, mini-vans and boats)	264,000	1%
Total Passengers Traffic/Day:	22, 000, 000	

(Lagos Metropolitan Area Transport Authority, 2015 cited in Oshodi et al., 2016)

show travel-time savings, and the World Bank claims a long list of benefits including:

- Journey time was reduced by an average of 25 minutes from one end to the other.
- Fares have gone down from 230 Naira to 100 Naira.
- To facilitate boarding, the buses have lower floors and are equipped with ramps for persons with limited mobility.
- 2000 jobs for drivers, bus conductors, inspectors, ticket sellers, and mechanics created and an additional 10,000 indirect jobs to operate formal and informal park-and-ride facilities and mini-fast-food services.
- CO₂ emissions reduced by 13 percent and GHG emissions by 20 percent.
- Wait time has been reduced from 45 to 10 minutes, reducing the exposure of passengers to pollution and leading to health benefits through reduced respiratory diseases (Gorham 2017).

Some surveys in show that passengers were happy to have better services but still had concerns around affordability, safety and quality and spread of services (Adebambo and Adebayo, 2009; Okagbue et al., 2015). It is interesting to note that early figures for the BRT suggested that it moved 200, 000 passengers a day but 2015 figures from LAMATA now cite 90,000 passengers a day suggesting the need for a more careful and updated analysis of performance of this system over time.

Change in BRT Operator

In 2015, Governor Fashola was succeeded by Governor Ambode from the same APC political party and the new governor continued the reformist project animated by a vision of turning Lagos into a modern metropolis which included improved mass transit. After Governor Ambode's election, LAMATA gave NURTW a 3 month notice that it was suspending the contract with the union. Citing non-compliance with the terms of the BRT operations Service Level Agreement signed with the State government, LAMATA pointed to public complaints over poor services and the use of unsafe vehicles (Oyebade 2016) for the suspension. Clearly, the government gambled that it had the public on its side on the issue and/or had powerful enough counter-vailing supporters.

LAMATA proceeded to recruit a company with Nigerian investors and management, Primero Transport Services Limited, to run services on BRT corridors. Primero, the current operator, experienced challenges in running high capacity buses, including the fluctuating currency which affected \$US dollar loans⁷ for bus purchases and high operating costs, leading very quickly to fare hikes and strikes with drivers lamenting that their terms of service had been reversed, with salaries slashed from N60,000 to N45,000 (Adelaja, 2016). Recently, the Chief Managing Officer of Primero Transport Services acknowledged the limitations of the more neo-liberal Public-Private Partnership model in an interview:

"Lagos is probably the only major city in the world that I know that is trying to run a public transport system that is not providing any subsidy for the operators. All over the world, it is actually a social function, and you cannot transfer a social function to a private company. On the one hand, you are trying to make sure the company does not charge the full normal price, and you are not providing subsidy."(quoted in Alade, 2018).

This question of subsidies and costs of BRT remains a key issue to explore further and it is important to note that making such calculations effectively also requires financial transparency that in some cases, may be a challenge.

Challenges for LAMATA

While key structural problems seem to be linked to BRT implementation including inadequate subsidies for buses and operations, LAMATA, as a key coordinating institution with a strong mandate to push forward public transport reform seems to be a helpful institutional step. However, Oshodi et al. (2016) in their excellent analysis raise a number of critical issues. First, they argue that "at the heart of snail speed development in Lagos is over-centralization of tools and resources for development". In particular, given the scale of Metropolitan Lagos with its 16 local governments, effective governance will require building stronger local capacities to manage transport⁸. LAMATA in this view still reflects problematic, top down centralizing tendencies of Nigerian politics and must start to reach out to this lower level of government with support and capacity building.

Second, Oshodi et al (2016) also argue that the "multiple roles of LAMATA as service provider, industry coordinator, fund warehouse and regulator

⁷ The ~25% currency devaluation after obtaining loans in USD led to higher operating costs and serious challenges. Thanks to Dayo Mobereola for this insight.

⁸ Former LAMATA Commissioner Dayo Mobereola notes that "local capacities are a key ingredient for LAMATA as can be seen from engagement for construction services, as well as operators with NURTW and Primero. Recently, the introduction of ITS includes using local capacity building working as part of a consortium for IT services, communication infrastructure, installation, maintenance and operations. In addition, they are building capacity for the regulator and operator for planning service routes. The lessons learned in BRT from the NURTW and Primero, LAGBUS can be applied to improve future services. Such lessons include ways of incorporating coordination at the center to include traffic management, local government member participation, police, multiple payment platforms, etc" Personal Communication 8 November 2018.

are overwhelming for one institution” and might be “unbundled into three institutions with LAMATA focusing on coordination and service delivery, the Lagos Transport Safety and Standard Commission (LTSSC) can deal with industry wide standard, regulations, guidelines, equipment specification, emission control and consumer protection among other regulatory issues and can absorb the current Vehicle Inspection Service. The Lagos Transport Fund (LTF) can mobilize, warehouse, grow and disburse the fund as appropriate” (2016, p. 125).

Thirdly, they argue “obvious lack of transparency and accountability in many of the operations and projects of the authority continue to threaten large scale attraction of reputable and qualified private sectors to the system”. Fourthly but not lastly, given the high levels of poverty and informal economy activities, the displacement and destruction linked to these projects requires stronger social protection measures. Overall, *it appears that institutional reform for public transport reform unsurprisingly needs to be wider and more sophisticated given the complex institutional terrain of Lagos but that LAMATA was a promising start.*

CASE STUDY: JOHANNESBURG REA VAYA

When Johannesburg adopted Africa’s first ‘proper’ Bus Rapid Transit (BRT) system, the Rea Vaya (‘We Are Going’), in the mid-2000s, it did so in the context of, and as part of, a period of enormous change. A city called ‘Johannesburg’ had existed in some form for over a century, but the metropolitan City of Johannesburg, as exists now, was then only a few years old and only just starting the process of remaking the apartheid city. The Rea Vaya BRT was thus the first major transport intervention, indeed in some ways the first city-wide intervention, into a difficult, divided, and intractable urban form.

Now, a decade on, it is possible to look back with some distance on the processes that gave rise to the BRT, that made it possible and necessary, and that made it such a challenge to implement. South Africa now is politically very different to the South Africa that undertook to build a BRT; Johannesburg doubly so. The BRT has started reshaping Johannesburg both literally, in spatial terms, and in its governance and institutions.

Johannesburg: spatial context

Johannesburg is a product of apartheid spatial planning, which enforced the rigid segregation of the city by race and class. A fundamentally modernist approach, this produced an economically concentrated urban core, surrounded by white suburbia, and (at some distance) low-density dormitory settlements for Indian, coloured, and black South Africans. Strict separation of land use and the economic sterility of

these settlements enforced dependence on commuting to white businesses in the urban core, supported by an extensive but highly selective long-distance supply-driven public transport network. Outside Johannesburg, a large repressive apparatus enforced ‘influx control’, severe limitations on urbanisation by black

South Africans.

Successive economic crises in the 1970s and 80s, amidst the general morbidity of the apartheid regime, led to progressive breakdown of this system. Haphazard reforms combined with irresistible pressure from outside the cities to produce rapid urbanisation, creating an urban population that far outstripped housing supply and the ability (or inclination) of the state to provide infrastructure and services. Large shanty towns, known as informal settlements, resulted. Meanwhile austere underinvestment in public transport along with deregulation produced an enormous paratransit industry to service townships that remained dependent on long commutes, shifting the financial costs of the apartheid spatial form squarely onto the poorest, worst-located urban residents. As a result, the lowest-income public-transport users spend 21% of their incomes on their daily commute (Venter, 2011).

In Johannesburg, this was accompanied by white flight from the CBD, and ‘decentralisation, deconcentration, northern drift and differentiation’ (Turok, 2001), dispersing economic activity into what was hitherto white suburbia. Johannesburg is therefore categorised by combination of a negative population gradient (Harrison and Todes, 2015) and a weakly positive employment gradient; which together produce significant ‘spatial mismatch’ (Budlender, 2016) between jobs and residents.

Johannesburg: institutional context

Given the centrality of the city to the injustices of apartheid, both the spatial and institutional form of South African cities was a preoccupation of policy-makers and activists before and after the country’s first democratic elections in 1994. An intensely negotiated, ‘protracted and difficult process of local transition’ (Tomlinson, 1999, p. 2), too complex to recount fully here, resulted in the amalgamation in 2000 of 15 local authorities, differentiated by race, into the single metropolitan ‘unicity’ of the City of Johannesburg, in an entirely new legal and constitutional regime governing local government (on which see Cartwright and Marrengane, 2016).

Cartwright and Marrengane (2016) characterise this process of transition as deriving from an ideological exposure to ‘the interests of global capital without a coherent philosophical alternative from which to offer a riposte.’ (p8). Nonetheless, Gotz et al. (2010) argue that metropolitanisation was a ‘godsend’ for Johan-

nesburg, and that the scale ‘allows for an undivided view of the functional city-wide space, and thus, in turn, the conditions for meaningful strategic spatial planning. [...] A metropolitan wide planning view has in turn created the conditions for developing city-wide infrastructures that begin to knit together urban spaces divided by apartheid’ (11). They go on to name the BRT system specifically as a key intervention enabled by metropolitanisation.

Influential in these national processes of local government reform were the ideas of New Public Management (NPM) (Harrison, 2002 citing Watson 2002), imported from the UK, Australia, and New Zealand, which involved ‘private sector management processes and ideas to public services, with the use of tools such as performance management, competitive incentives, output controls, service-delivery partnerships, and goal-directed budgeting’ (Harrison, 2002 n.p.). In Johannesburg, in line with NPM thinking nearly a dozen municipal-owned companies with independent boards were established to deliver core services such as roads (the Johannesburg Roads Agency) and electricity (City Power).

Another complication to the governance of transport took (and takes) the form of ‘intergovernmental relations’, the term used to describe interactions and interdependencies between South Africa’s three independent spheres of government. The respective functions and mandates of each sphere are constitutionally prescribed, and transport is split between all three spheres. National government is responsible for national transport policy, interprovincial coordination, airports and harbours, national roads, and the national rail network and services including freight and passengers. Provincial government is responsible for intermunicipal coordination, provincial roads, certain inter-city transport modes, and the regulation of the minibus taxi industry. Local government is responsible for intra-municipal mobility, local roads, and local public transport services. This system was reformed and rationalised (to the extent that it is) at the same time as the local government system, with national and Gauteng provincial transport white papers in 1996 and 1997 respectively (NDOT 1996) and culminating in the passage of the National Land Transport Transition Act (NLTTA) in 2000, with various provincial legislation in the years following.

Tackling transport in the new Johannesburg

This process of institutional upheaval and reform, in the context of a fiscal crisis in Johannesburg (driven partly by the city’s hitherto complex and unwieldy structure: Gotz et al., 2010), meant that the pressing object-level problems of the city could only be tackled in earnest in the new millennium. The City undertook a process of strategic planning at a number of scales, starting with long-term economic plan Joburg 2030

in 2001, a Human Development Strategy (2005) and a Growth and Development Strategy and five-year Integrated Development Plan (both in 2006).

In this period of strategic planning—and prior to many of the higher-level plans intended to inform it—Johannesburg produced the country’s first Integrated Transport Plan in 2003, as mandated by the NLTTA. This document is wide-ranging, but broadly articulates a vision for rationalisation and improvement of the city’s public transport services. It names as its first priority the improvement of access and service quality for existing and prospective public transport users, and to this end described the establishment of a Strategic Public Transport Network, a system of highly-serviced transport corridors between residential and other nodes. The SPTN was in principle mode-agnostic but in practice would have relied extensively on conventional buses, with some supportive infrastructure such as dedicated lanes.

In the section ‘Land-use restructuring’ it more explicitly evokes some of the features of Johannesburg’s later plans, including ‘corridor densification and infilling’ and ‘rationalisation of transport and housing strategies’ (City of Johannesburg, 2003, p. 337). At no point in the document is ‘Transit-Oriented Development’ mentioned by name, although these and other principles such as pedestrianisation strongly echo it.

At this time, the focus of transport planning was overwhelmingly on roads. Transportation Planning and Management was a small directorate in the City’s Town Planning Department, with a small mandate limited mostly to administration of minibus taxi ranks. With the election of a new city council in 2006, however, the City of Johannesburg was restructured and Public Transport became a department in its own right:

[It] moved from maybe about 20 people doing a little bit of planning and tinkering around with the taxi industry, to a fully-fledged transportation department and [...] it suddenly took over the oversight of the Johannesburg Roads Agency and Metrobus [two municipal-owned companies] as well (Bob Stanway, interview, 16 May 2018).

Bus Rapid Transit arrives

When the concept of BRT came to South Africa, therefore, it found fertile ground. A freshly consolidated—and untested—national and local policy and institutional environment; an ambitious transport plan drawn up under the auspices of a political rising star (Parks Tau, who would later become Executive Mayor and then co-President of global body United Cities and Local Government); a newly expanded and empowered transport department under an energetic political patron (Member of the Mayor’s Committee

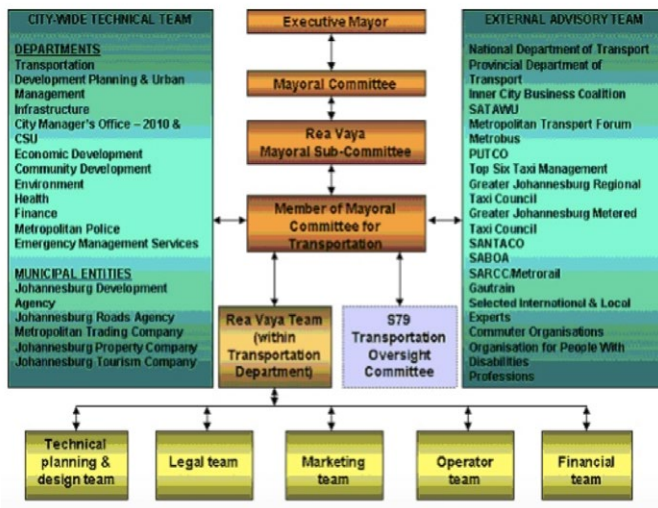


Figure 4. Rea Vaya Institutional Structure (Taken from Allen 2011)

for Transportation, Councillor Rehana Moosajee); and, perhaps most importantly, strong ideological and political tailwinds behind reform of and investment in public transport.

The story of how international consultants brought the concept of BRT into this system has been told most extensively by Wood (2015, see for example 2014). By 2006 the City Council had resolved by vote to adopt BRT, ostensibly as the mode of choice for the Strategic Public Transport Network, and in March 2007 a decision at Cabinet level led to the National Department of Transport making a significant capital grant available—itsself the result of a confluence of greater focus on public transport, burgeoning energy around the BRT concept, and the impending World Cup to be held (primarily) in Johannesburg, which would require significant transport investment.

Delivering the BRT System

Rea Vaya was designed from the start to be implemented transversely across the City's structures (Figure 4). Although the new Public Transport Department was responsible in the first instance for delivery of the bus infrastructure, the project was overseen by an Interdepartmental Steering Committee composed of most of the department heads of the city. This transversal structure was intended to reflect the nature of Rea Vaya as not just mobility infrastructure, but an intervention into the very spatial form of the city, and to this end the two departments of Planning and Land-Use Restructuring in particular were closely involved in the project at a high level. Other departments' involvement included using procurement on the project to encourage smaller black-owned businesses, under the oversight of the Economic Development Department, and achieving a set of environmental goals guided by the Environment Department.

In practice, however, the planning and implementation of the BRT fell almost exclusively under the management of the Public Transport Department, and the execution of the Johannesburg Development Agency (JDA). The other departments, limited by capacity constraints and faced with a project outside of their formal mandates, largely fell by the wayside—although several department heads remained closely involved at the level of the Steering Committee.

The Public Transport Department had no implementation or project management capacity of its own, and to that end fell back on two structures. First, it contracted the JDA, outside of the latter's formal mandate, because the JDA at the time was energetically and successfully implementing capital projects for the City. Public Transport came to depend on the JDA's capacity. Second, they contracted with an external Project Management Unit (PMU). The PMU model, which is routine in large South African projects—especially capital projects—entails the contracting of long-term consultants to procure and manage the rest of the project. It has the benefit of securing capacity that the contracting department may not have, but it introduces large overheads (because the PMU typically top-slices all the work it procures) and ultimately prevents the building of internal capacity.

Significantly, the Rea Vaya received no feasibility study and no cost/benefit analysis before the fact. Instead it had a single scoping study, produced primarily by one of the major international proponents of BRT, produced after the formal council resolution adopting BRT and long after the political decision had been made. This study makes some claims about the Rea Vaya that are outrageous in hindsight, especially as regards its finances: it claimed that 'as has been achieved in most other BRT systems around the world, Rea Vaya will strive to not require any operational subsidies. [...] The efficiency gains from converting a system to BRT typically results in an improvement in service quality at an equal or lower cost' (ITDP, 2006, p. 87). This boosterism proved to be not only misleading but actively damaging, by raising expectations far above what could ever be met (on which see Harber and Bryer, n.d. forthcoming). More sober analyses soon established that the question was not whether a subsidy, but how much. The project was ill-prepared for in other ways, including a lack of risk analysis or management, and extremely optimistic (which one official interviewed called 'naïve') timelines and assumptions.

The reliance on the JDA also had costs, both financial—because the JDA, as a municipal-owned company, derives its budget largely from top-slicing capital projects—and non-financial. As a major part of the BRT infrastructure was the building of dedicated

lanes and median stations, it formally fell under the mandate of the Johannesburg Roads Agency, which although answerable to Public Transport was also formally independent. It suffered from a poor reputation for delivery, and suspicions of impropriety. To secure an agreement that the JDA could perform the bulk of the project, it had to be allowed to procure certain contracts, including the Rea Vaya's live-information and integrated ticketing systems. These were ultimately procured at the last minute, integrated poorly into the rest of the system, and barely functioned. The replacement of paper tickets with smart cards, for example, reduced ridership by half almost overnight, with only partial recovery over the subsequent months.

The minibus taxi industry

A key aspiration of the Integrated Transport Plan had been the formalisation of the minibus taxi industry and its integration into the Strategic Public Transport Network. This, combined with their jealously—and violently—guarded monopoly on public transport from Soweto to Johannesburg, meant that the taxi industry had to be brought onside for any implementation of the BRT. The City's preferred route was to import a model from the original BRTs in South America, that brought paratransit owners on to own and run the Bus Operating Companies of the new system, and retrained paratransit drivers to drive the buses. The minibus taxi industry, although initially resistant, came over through a combination of proactive engagement and trust-building by the City on the one hand, and self-interest on the other. Venter (2013) identifies the taxi industry in the late 2000s as stagnating, and the industry's embrace of BRT as a route to renewed growth and profitability.

This is not to understate the difficulty of the process. One of the top Johannesburg officials responsible had predicted a month of negotiations; in the end, it took three years and included at least one outbreak of murderous violence when buses started running before negotiations had concluded. The course of negotiations had been dramatically shaped by a public commitment by National Government that no taxi owner or driver would be left worse off by the introduction of BRT. The taxi owners and drivers from the affected routes were successfully integrated as owners and staff of Piotrans, a new bus operating company.

The resulting deal is costly for the City and includes substantial compensation for lost income and restraint-of-trade payments, contributing the ongoing need for operating subsidy. There are also other ongoing costs. The benefits of the restraint-of-trade agreement have gone unrealised, as other taxi operators have emerged to compete (illegally) with the Rea Vaya. Expectations have been raised extremely high for negotiations on subsequent BRT routes,

where taxi associations have been unwilling to accept any less than the high, World Cup- and grant-fuelled prices the City paid for the first routes. Finally, the bus operating companies have proven to be fertile ground for patronage, with growing demands to expand their remit, for example into fuel and security contracts.

Governance after the BRT

By 2013, three BRT routes were running: two from Soweto to Johannesburg, and one around the CBD. Planning was underway for a third, running to the north-east. In that year, newly-elected Executive Mayor Parks Tau, a longstanding and significant political champion of transport reform and spatial transformation in Johannesburg, announced a new policy programme that he names the 'Corridors of Freedom' (Figure 5).

There is some disagreement over whether the Corridors of Freedom represented, in the main, policy continuity or change. Certainly, they represented the strongest, most coherent articulation to date of densification along transit corridors, with the BRT as a catalytic capital investment. It is also true that many of the key elements can be identified in the city's ITP and GDS from the decade prior. Nonetheless, the announcement of the Corridors represented a major milestone in the City's approach to the governance of space.

Three Corridors were announced. Empire-Perth, which runs from Soweto in the south-west to the CBD, and Louis Botha, which runs from the CBD to Alex township in the north-east, both correspond to existing or then-planned BRT routes. Empire-Perth is primarily a commuter corridor, with limited TOD potential, while Louis Botha is an existing mixed-income, mixed-use corridor with much greater potential; it is also benefiting somewhat from lessons learned on the earlier implementation of Empire-Perth's BRT route. The third 'Corridor' is not really a corridor at all, but an oblong industrial area south of the CBD, with no obvious TOD potential or use for a BRT. Its inclusion in the policy is peculiar.

Insofar as the Corridors were a significant policy announcement, it is because they represented a new approach to area-based investment and planning in the city. Each area received a Strategic Area Framework (SAF), a document articulating a broad strategy for densification and promotion of transit-oriented development. The SAFs were united by a high-level vision for changing the spatial form of the city. It is for this reason that Pieterse (2014) calls the Corridors of Freedom a 'governance technology': they represented a means to rally the city's strongly siloed departments behind a coherent spatial agenda, to which end they were somewhat successful.

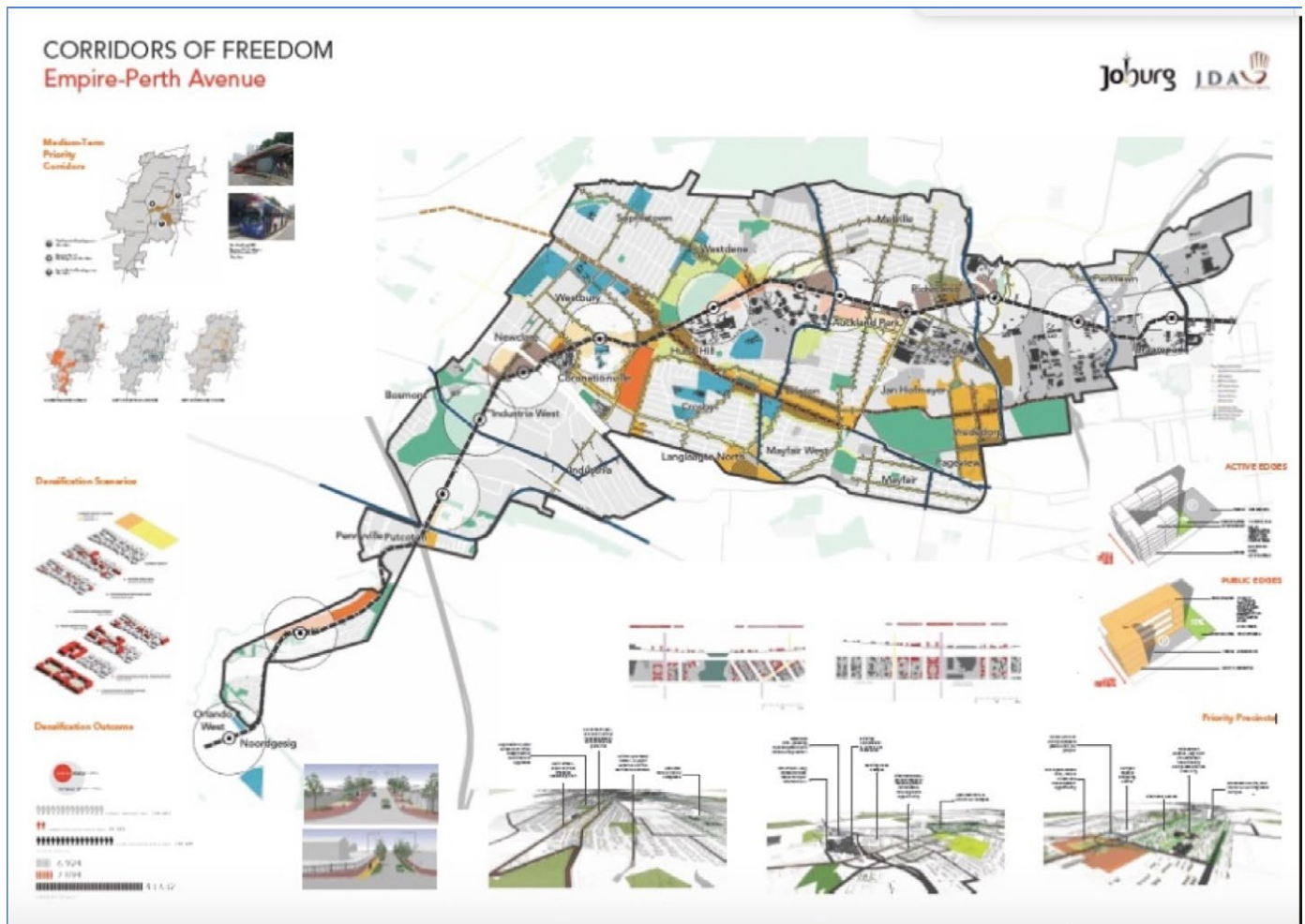


Figure 5. Visualization of the Corridors of Freedom Concept (City of Johannesburg)

Partly because of the Corridors agenda, and partly because of the maturation of the BRT's implementation, the City has increasingly strong links between previously unconnected departments (Figure 4). There are institutionalised relationships between Public Transport, the Metro Police, the Johannesburg Property Company, the Johannesburg Roads Agency, and so on, for various BRT-related services. To this end, the BRT has been both an opportunity and a driver for the City to overcome the strong silos built into its structure.

A parallel process is observable in the National Government. Most notably, in 2012 the Cities Support Programme⁹ (CSP) of the National Treasury was established, after several years of planning. This unit, tasked with the broad remit of improving the fiscal and financial sustainability of cities, adopted a full-throated articulation of TOD as its approach to urban space. The CSP has, since then, been responsible for propagating TOD and related ideas pioneered in Johannesburg to other cities in South Africa. More recently a renewed Integrated Urban Development Framework unit in the National Department of Co-operative Governance (responsible for relationships

between national, provincial, and local government) has also adopted many of these ideas. Previously, the National Government's primary interaction with cities was the downward flow of grants, and the upward flow of data for reporting purposes. There is increasingly a more collaborative, more horizontal involvement of National Government in urban governance, based both on relationships and institutions such as the City Budget Forum.

An area of significant challenge, and where reform has often been unsupportive, is in the Gauteng Provincial Government. Since the mid-2000s, the GPG has been articulating the concept of the 'Gauteng Global City Region' (GCR), with a number of associated policies ostensibly aimed at improving coordination and governance between Gauteng's three metropolitan and various smaller municipalities. An early plank in this programme was the Gautrain rapid-rail system, running between the three metros; another is a long-proposed Gauteng Transport Authority/Commission. Coordination is obviously needed between Gauteng's three adjacent metropolitan municipalities, especially with regard to transport: both Johannesburg and Ekurhuleni run bus

⁹ Disclaimer: One of the authors was a long-term consultant for the CSP from 2014-2015.

services across each other's borders, and all three metros have now established BRT services with no route, ticket, fare, or other integration with one another or with the provincial Gautrain system that connects them.

Nonetheless, the Province's agenda has failed to introduce any significant coordination, and instead has had at least three major problems. First, despite focusing in rhetoric and policy on coordination, the Provincial Government has exhibited strong centralising tendencies, which although yet-unrealised have led it to resist Johannesburg's attempts to rationalise transport, or to resist unless it's done on Province's terms. Second, the Province lacks the internal capacity to plan or manage public transport. This has changed, to some degree, with the implementation of the Gautrain system, but not entirely. The Gautrain is very much a train service designed by road engineers, with little-to-no regard for the greater needs or purposes of public transport.

Thirdly and finally, the Province has a completely different and utterly antagonistic spatial vision to Johannesburg, a strongly centrifugal one: the development of large settlements on the provincial periphery, and the servicing of old and new peripheral settlements with public transport. This is perhaps understandable given the electoral concerns of provincial as opposed to municipal politicians, but this means that the provincial government has been very little help, and often a hindrance, to the agenda pursued by Johannesburg and (most of) the National Government. This has taken a number of forms, but most striking is the example of 'mega human settlements', enormous low-density dormitory settlements planned by the Provincial Government in areas with few economic prospects. Although the Province claims that these will have self-sufficient local economies, the strong likelihood is that they will in fact just represent extreme sprawl, and an intensification of Johannesburg's reverse population density gradient.

The BRT in Johannesburg today

The Corridors of Freedom were the centrepiece of Mayor Tau's and the ANC's campaign for re-election in the 2016 municipal elections. Largely due to dissatisfaction with the ANC nationally, no party secured a majority. The government that took over was an alliance of smaller parties, who installed a xenophobic libertarian billionaire, new to public service, as Executive Mayor.

As a direct result, the Corridors of Freedom are 'dead' according to a senior official. In fact, they are twice-dead: first, because they were closely associated with Mayor Tau and the ANC, they were targeted early for elimination in policy; second, because the City's activities have been reoriented almost entirely towards a

short-term vote-winning agenda ahead of the national elections of 2019. This agenda was summarised by one official as 'potholes for the rich and houses for the poor': capital expenditure has been de-prioritised for being too slow to effect change, and the Corridors of Freedom was slower than most.

One of the first casualties of the new City government was non-motorised transport. Johannesburg had had a pilot programme of bicycle lanes; many were poorly-designed or otherwise non-functional, but nonetheless represented the reclamation of road space from private vehicles for potentially pro-poor ends. However, these proved to be an easy target for the populist partner in the new governing alliance, whose leader was quoted as saying '[We] will not build bicycle lanes (for the affluent) as long as the people still stay in the shacks' (quoted in Toyana, 2016).

The BRT, however lives on, because of national grant funding for public transport. And the Corridors might have a productive afterlife: their logic has become institutionalised in a number of smaller but potentially significant ways. For example, the City's capital expenditure prioritisation model has been built by sympathetic officials to favour a logic of infill and densification, especially along transit corridors. This strictly technocratic tool therefore has huge potential to guide seemingly-unrelated investment decisions according to the logic of TOD, and implicitly the logic of the Corridors. Similarly, the pioneering institutional changes driven by the BRT yet survive. The BRT has already started reshaping the city in space and in its institutions, but the full scale of its effects will only be clear in the years to come.

CASE STUDY: NAIROBI BRT PLANNING AND METROPOLITAN GOVERNANCE

Nairobi's 1973 metropolitan growth strategy argued for the urgent need to develop public transport including "conventional bus services and "some form of high capacity route for the exclusive use of buses" (Urban Study Group, 1973). To manage such a system, the report suggested the formation of a "Nairobi Transport Authority to control public transport operations as well as car parks, parking meters, traffic orders" to better manage it (Urban Study Group, 1973). Improved metropolitan management and public transport were seen to be fundamentally connected.

Instead, for both political and economic reasons, by the 1990s, the city saw the collapse of publicly run bus services, leaving some limited commuter rail- launched in 1992-as the only publicly owned mass transport in the city. Unsurprisingly, Nairobi's matatus filled the gap in public transport provision, growing in numbers and influence with the city's

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HUD) ¹². This sits in tension with a process of devolution unfolding out of the 2010 Constitution which gives powers to Nairobi City County over its streets and urban transport. Technically, as far as cities are concerned, the national government is responsible for 1) road traffic 2) the construction and operation of national trunk roads 3) the standards for the construction and maintenance of roads by counties and 4) railways and aviation. Counties are responsible for public road transport, county roads, street lighting, traffic and parking, ferries and harbors (Constitution of Kenya, 2010). This makes sense that the city- which is closest to the ground- and citizens take these responsibilities. Nairobi County also has integrated planning functions and with JICA, completed the Integrated Urban Development Master Plan for the City of Nairobi (Nairobi City County, n.d.). However, currently, a profound mismatch exists between resources and responsibilities. If devolution is to be effective for Nairobi, the national government must take a strong role in building the capacities of Nairobi to manage public transport (Tendler, 1997).

In practice, the city streetscape is being transformed through well-funded national road agencies like the Kenya National Highways Authority (KeNHA), which is building highways along the main corridors without consideration of and responsibility for the surrounding urban fabric and strong consultation with the county and its citizens. Similarly, the Kenya Urban Roads Authority (KURA), is also building roads in Nairobi and is technically the World Bank partner in one of the planned BRT corridors (Airport-Gichuru). Interestingly, the national government has shown little interest in developing “the standards for the construction and maintenance of roads by counties” or urban street guidelines that might put constraints on current road designs. Further, while a National Integrated Transport Policy and National Urban Development Policy exist, the Ministry appears to be far less engaged in building and disseminating policy and guidelines to the counties, a key and critical constitutional responsibility. In fact, Nairobi county with support from UNEP and the Kenya Alliance of Resident Associations has gone ahead and developed and passed its own Non-Motorized Transport Policy (2017) which also demands that the city create street guidelines, which presumably would also be critical to have in place as mass transit is planned and developed.

High Levels of Reliance on Foreign Loans for Financing

Secondly, this bureaucratic fragmentation must be understood in part as coming out the second feature of Kenya’s urban transport governance that differs

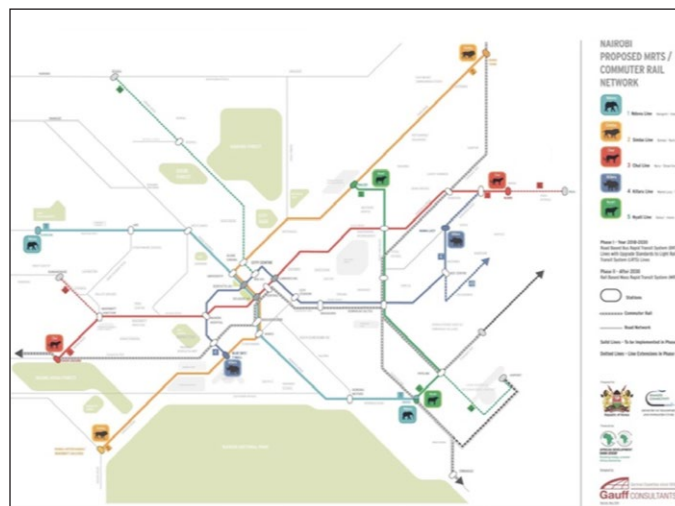


Figure 7. Planned BRT Corridors as a projected grid on the city prepared by Gauff Consultants coming from Ministry of Transport and funded by development partners 2014.

from South Africa: high levels of reliance on foreign loans and investment for financing public transport infrastructure. These loans by the World Bank, Chinese development banks, African Development Bank, EU, JICA and others are negotiated at the national level. Both lenders and national agencies who they partner with seek to control the management of funds, procurement and implementation of projects. This leads to a focus on corridor-by-corridor project approach to mass transit with the rest of the city as the blank space on planning documents (Figure 7). In addition, these disparate planning processes which involve foreign consultants tend to propose solutions linked to the preferences of the development partner, creating harmonization problems. ¹³

This power dynamic means that national agencies tend to try to hold onto the purse strings for their projects with obvious benefits- both institutional and economic- in the form of an ability to control lucrative contracts and procurement processes (Klopp, 2012). Flyvberg (2014) calls this the “economic sublime”: given large budgets “there are ample funds to go around for all, including contractors, engineers, architects, consultants, construction and transportation workers, bankers, investors, landowners, lawyers, and developers” (2014, p. 9) except in the Kenyan case, transportation workers, which are not unionized or well organized, tend to be excluded from benefits so far (ITF 2019). Overall, this configuration of power and resources directly leads to a resistance on the part of the national government to transferring capacities to the county level. At the same time the national government leaves responsibilities for addressing problems created by poor transport project design-such as flooding stemming from inadequate

¹² Compare the 2018/2019 National Budget Estimates for Transport (100, 748, 787, 235 Ksh or 1 billion \$US) and for Infrastructure (171, 349,380,000 or 1 billion \$US) compared to Nairobi’ County’s budget for 2018/2019 for Public Works, Transport and Infrastructure (6, 202, 000, 000 Ksh. or 6 million \$US). Nairobi Metro Area has around 5 million people or 10% of the national population of 48 million people).

¹³ In Nairobi, donors hired a consultant to try and harmonize all the different plans and projects in 2012. See Mott MacDonald 2013.

drainage construction- to counties (Interviews with transport and county officials Nairobi May 16 2018). This also works against a more open, collaborative and coordinating approach to addressing the problems of Nairobi's streets and transport.

Low Levels of Transparency, Information Sharing and Public Participation in Decision-Making

The third feature of transport governance-low levels of transparency, information sharing and public participation in decision-making- also stems in part from this political economy. Each institutional actor resists oversight and public intrusion into discretion over decision-making especially budgets. In 2015, a representative survey of Nairobi residents asked "when transportation decisions are made in Nairobi county do you think members of the public like you are consulted?" An overwhelming 89% (+/-5% error) said no (Klopp and Rateng, 2015). Further, information on designs, plans and data used for decision-making are rarely accessible by the public and sometimes data itself is irregularly commoditized (Williams et al. 2014). Unlike health and education sectors which make some data available for Kenya's open data initiative and also embrace more use of technology, transport-with the exception of crash data ¹⁴- has made little data public. The sector has also resisted using new technologies to gather and share data, preferring inserting technology through consultants and contracts with poor retention. More positively, some transport actors are attempting to engage in outreach by attending public fora and responding to queries on social media. The National Transport and Safety Authority (NTSA), responsible for overseeing road safety and Nairobi City County are notable in this regard. The NTSA shares data on crashes and more recently, pledged to share road safety audits (Statement at KARA forum, May 23 2018).

High Levels of Reliance on the Private Sector for Current Urban Transport Provision

The fourth feature of transport governance is the high reliance- and actual neglect in planning- of the actually existing public transport system- dominated by matatus (Klopp and Cavoli, 2018, 2019). Reliance on the matatu sector as a back stop for public transport appears to have diluted an official ethos of public responsibility for provision of improved public transport services. In fact, there is a prevailing culture of seeing the matatu sector not as a public transport system that needs improvement, but rather as a money-making or entrepreneurial activity numerous investors, cooperatives and businesses (Khayesi et al., 2015). In addition, the government makes money on licensing (Matatus need both NTSA and Nairobi County licences) and the traffic police extract large sums from bribes. In addition, further complicating

both the politics and the regulatory regime, a number of matatu owners are senior police officers, politicians and civil servants, representing a serious conflict of interest (Klopp and Mitullah, 2016; Alston, 2009).

Bias Towards Large Physical Infrastructure

This links to the fifth feature which is the bias that exists towards large, physical infrastructure such as roads (Klopp, 2012; Porter 2007, Mitric 2013, Flyvbjerg, 2014) as opposed to the more politically complex task of managing a reorganization of public transport and planning. The political and social complexity of the sector adds to the challenge of reform with large numbers of private owners and multiple associations representing both owners and drivers who are also trying to organize union representation for their own interests (ITF 2019). However, it is hard not to conclude that the focus on the large-scale projects and the by and large neglect of improving existing public transport-which will have to happen regardless of the implementation of mass transit (Klopp and Cavoli, 2018 2019; Schalekamp and Klopp, 2018)-reflects the economic and political incentives around the "economic and political sublime" made possible by the large budgets and complex implementation of large projects.

This dynamic is being disrupted to some extent with the growing shift of external funding-in part a response to climate change- from financing road building to financing mass transit. This raises the question of who will operate these emerging mass transit systems whether BRT, LRT and Commuter Rail at a metropolitan scale; this shift in financing is a serious institutional and political challenge to the status quo dynamics in Kenya. Commuter Rail as an extension of the national railways appears to be the least problematic in that Kenya Railways has a clear constitutional responsibility to work with the county on this mode although there is need for coordination with other modes. However, when it comes to buses and light rail, counties have full legal control of road transport on their streets.

Overall, strong incentives exist for the national government and development partners to keep the control of budgets and implementation at a national level, and an argument can be made that given the profound economic importance of the Nairobi Metropolitan region to the entire country, the national government has a strong stake in the success of the region. Still, given the failure to act ever since 1973 when the idea of a transport authority was first proposed, it is hard not to see the support for a new metropolitan institution for transport in part as a means to keep incoming externally financed road public road transport budgets at the national level.

¹⁴ And interestingly this crash data shows how profoundly dangerous highway building has been in Kenya- with very high rates of deaths and injury on the major transport corridors. Still, basic design criteria are resisted. See the National Transport and Safety Authority website and Nairobiaccidentmap online

Given the haste to move forward with mass transit in Nairobi, British consultants were hired to develop draft legislation for a new institution- the Nairobi Metropolitan Area Transport Authority (NaMATA). A Nairobi Metropolitan Area Transport Authority Bill was finally put together and published in the Kenya Gazette for the public to read in 2017. Nevertheless, NaMATA was created the same year by means of an Executive Order while the legislation is still pending. This suggests a concern with delays if the government waits to take the legislation through the national assembly process. Indeed, the Katiba Institute, one of Kenya's most important constitutional watchdog civil society organizations, has filed Petition 94 of 2018 against the government, arguing "NaMATA, as created, has a deleterious implication on devolution and the functioning of county governments. It is another effort by the national government to illegally and irregularly re-centralise governance contrary to the provisions of the Constitution" (Petition 94 of 2018).

Indeed, the legislation takes county functions and places them in a much more nationally controlled institution. The legislation creates the Nairobi Metropolitan Area Council with the Cabinet Secretary responsible for Transport (Chair), Cabinet Secretary responsible for the National Treasury, the Governors of Nairobi and the surrounding counties of Kiambu, Machakos, Kajiado and Murang'a. Management is vested in another board consisting of a chairperson appointed by the president, the principle secretaries in charge of transport, roads and treasury, the county executive member for transport and three independent experts. This composition effectively dilutes the power of Nairobi County over public transport and ensures national control over management and the power to access finance and make contracts.

NaMATA is widely touted by national level transport technocrats, both government and foreign consultants, as a solution to the governance problem raised by the need for managing a metropolitan wide public transport system with mass transit. It is supposed to plan, regulate and oversee the establishment of an integrated, efficient, effective and sustainable public transport system. The medium-term objectives are the improvement and development of existing facilities (traffic signalling, parking space, dedicated bus lanes, etc...) and, in the long-run, NaMATA is expected to lead the large-scale project of a bus rapid transit (BRT) system of 5 main routes within the Nairobi Metropolitan Area (2017-2021). However, its funding is unclear.

Currently, national level transport technocrats within government and the development partner community are largely silent on the constitutional problems NaMATA poses as well as how the current problems

with transport governance are to be addressed within the context of an additional institution. Meanwhile, under intense pressure to deliver by the President whose government is riven by corruption scandals, the MTHUD has painted exclusive lanes on one of the major corridors labelling the road as "BRT only". Buses are already being procured from South Africa, while confusion is rife around the actual plans for BRT. The national government is also increasingly recognizing that it does not have legal control over Nairobi's streets and needs cooperation from the county.

Overall, an alternative approach to addressing the metropolitan governance problem, which has echoes in the concerns around LAMATA in the Lagos case and reflects the actual practice in South Africa, would be to invest heavily in capacity support at the county/city level as well as the national level. Effort could focus on incrementally building up better operational management and regulatory skills drawing on existing expertise including in the matatu sector and through upgrading existing public transport services and traffic management. This would involve addressing the complex issues in the matatu sector immediately as this will take time and creativity: as the example of South Africa suggests, this issue cannot be swept under the rug of large-scale projects.

It would also be key to set up more inclusive consultative processes to develop proper street design and operation standards and frameworks, share data and information better and improve transparency to move towards a stronger democratically accountable transport governance system. As envisioned in Kenya's constitution, metropolitan governance might then grow more organically from the bottom up through more constitutionally sound platforms of cooperation across counties and national agencies in a more networked versus centralized model. This might have the advantage of avoiding another layer of government between citizens and those responsible for their service provision. The current struggle around transport governance and institutional reform in Nairobi- triggered by the introduction of financing of BRT and mass transit more generally-reflects how transport-a key part of everyday life-ties into deep questions about how and who should govern the city and region.

ANALYSIS AND DISCUSSION

In all, there are a number of emerging lessons from the growing sample of BRT projects in Africa. Although these lessons are deeply interconnected, and embedded in wider questions of context and political economy, we might broadly group them under certain guiding questions.

Our first question is why BRT systems are built in Africa. In each case, the introduction of BRT appears to be a response to the mobility needs of the city: each of the cities profiled here, and indeed many other major African cities, have a combination of major mobility challenges and inadequate public transport systems. However, this need is necessary but not sufficient to explain the proliferation of BRT across Africa. Behind every BRT system is also a combination of local politics and political economy, both legitimate and illegitimate, ranging from the need for high-profile developmental projects to win votes to crude patronage and corruption. There is also an entire global political economy to BRT, represented by the international funders, lobbyists, and consultants, that works to induce local appetite for BRT specifically as opposed to other approaches to bus, rail and non-motorized transport upgrading. The result is an alliance between the well-intentioned and the outright cynical that serves to portray BRT as cheaper, more effective, and easier to implement than it actually is.

BRT, as a technology, is particularly well-suited for these local and global dynamics. It involves enormous capital investment—good for networks of lenders and of patronage—but still looks like an absolute bargain when compared to rail-based modes. As a new technology, similar to but often conceptualized as incompatible with existing bus systems, it is unburdened by legacy issues and can be introduced in a ‘big bang’, ostensibly to displace other modes rather than accommodate them. Some of the labor it requires to operate is relatively low-skilled, making it possible to promise—if not always to deliver—that jobs will be created, especially for displaced minibus workers. In all, BRT manages to take the delicate and typically incremental work of public transport planning and elevate it to the “economic sublime” (Flyvbjerg, 2014).

The next question is who implements BRT. BRT, as a mode, is designed to serve higher population densities than conventional buses; indeed, at low densities its benefits largely disappear. As such, it is not typically suited to serving an entire metropolitan area (at least, not at typical African densities). Nonetheless, because it is usually undertaken as a ‘total fix’, a turnkey solution to the mobility challenges of a large city, it is at least conceived of—if not ultimately designed—as a metropolitan transport mode. There are also issues of local politics and political economy that

are highly context-specific: it is likely that Dar es Salaam or Nairobi would not have been able to mobilize the money, capacity, or possibly even the mandate to undertake their respective ambitious BRT projects. As such, BRT is repeatedly associated with the ‘metropolitanisation’ of transport in African cities, in the form of new metropolitan institutions such as DART or NaMATA, typically established and controlled by the national government. Indeed, this is often pitched as a feature of the mode: BRT is often explicitly articulated as a tool for creating a form of top down and centralized metropolitan governance.

Whether a centralized authority over public transport (and ideally some land-use) is a necessary condition for success in generating mass transit, and therefore a key goal—which tends to be the approach of the World Bank—remains another important question. Theorists of institutions often warn against this kind of “institutional monocropping” or the “imposition of blueprints based on idealized versions of Anglo-American institutions the applicability of which is presumed to transcend national circumstances and cultures” (Evans, 2004). Interestingly, we see in the Johannesburg case, that BRT is operating without such an authority but instead through a rather unique network of institutions at the city level.

While an idealized metropolitan authority would in theory consolidate responsibility and accountability as well as possibly allow for more of the much-needed coordination to run complex metropolitan regions, the attempt to set such a system up from top-down and from external blueprints—as opposed to allowing a more bottom up and negotiated institutional design process—often provokes critical constitutional issues and can engender conflict rather than cooperation as in the Nairobi case. Lagos appears to be more successful in its creation of LAMATA. However, LAMATA may be successful precisely by taking a more flexible approach to its authority as well as to design and negotiation with the minibus unions and the powerful NURTW.

It is also far from clear that piecemeal transfer of functions to metropolitan-scale institutions—here of transport, there, some other function of the state—is in fact metropolitanisation at all. Institutions like NaMATA or LAMATA may in principle spatially integrate the governance of transport across the metropolitan region, but they do little to integrate governance in a wider sense, and indeed may end up representing and causing deeper fragmentation. The separating out of certain modes of mass transit from all other urban issues such as land use or spatial planning, and indeed in some cases from other modes of transport, does not meaningfully represent the kind of integration needed for a constructive metropolitanisation.

Linked to this issue of metropolitanisation and scale is that of accountability and electoral incentives. The metropolitan transport agencies are typically accountable upwards, to national (or in the case of Lagos state) governments, which, in turn, have an attenuated accountability to the metropolitan area in question: Nairobi's votes are only part of the electoral concern of Kenya's national government and even less of agencies that are not directly beholden to electorates. As such, national governments and their agencies are at some remove from the need to actually improve urban transport for users on the ground who are also voters and taxpayers¹⁵. Instead, they might be more invested in large, visible transportation infrastructure as part of projects of national renewal, modernization, or prestige. Local governments cannot be so cavalier: they are much more directly accountable to the riders, prospective riders, or neglected would-be riders of any transport system (or users of any service) and are correspondingly more focused on actual service improvement. This is no groundbreaking insight, but the dynamics are stark in the case of African BRTs, and it is commonly neglected when these systems and their institutions are being designed and discussed.

This observation links closely with how BRT systems in Africa have accommodated existing operators, especially 'paratransit' or minibus operators. Given that the vast majority of people in these cities rely on these systems for mobility, access and many more for their livelihoods, this sector has significant bargaining power even if these actors are not always coordinated. African cities have tended to adopt the South American approach to existing operators, which is formalization and incorporation of owners and drivers into the operation of the new system. This requires delicate negotiation, especially as BRT directly competes with minibus systems for road space and passengers. In the cases of Johannesburg, Cape Town, Tshwane and Lagos these negotiations took time and skill and are ongoing for phase 2 but as we have seen, ultimately, they had some success in implementing BRT corridors as part of building mass transit systems but ones that look strikingly different across cities. It is also notable that in many cases the main focus of BRT is on infrastructure and designs where there are "political and economic sublime" benefits including patronage for allies, as opposed to developing a more inclusive, ongoing dialogue with the minibus sector, a sector which is typically seen as a barrier or competitor. This is evident in the Nairobi case where design processes are often conducted by foreign consultants with minimal public engagement including with the minibus sector, generating concern and suspicion.

As we saw in the Johannesburg case, a recognition exists in South Africa that cities did not always bargain well with minibus associations and set up problematic expectations. This creates problems for the next phases of mass transit development. As a result, cities in South Africa are experimenting with other approaches to engagement rather than continuing with a displace and replace paradigm, which the National Treasury may not be able or willing to continue to support (Klopp and Schalekamp, Forthcoming, Schalekamp and Klopp 2018). In Lagos, the National Union of Road Transport Workers (NURTW)-sometimes portrayed as a cartel or even a criminal organization (Fouchard 2018)- has significant bargaining power and the end result was a BRT-Lite which allows minibuses to use some parts of the BRT lanes. This generated minimal displacement as well as new business opportunities for the union. This means that the form of BRT does not meet many of the "global best practices or standards" but rather, when it moves forward, is a product of political negotiations where process matters including strategy and tactics as well as timing (Rizvi and Sclar, 2014).

The next question is how BRT systems are implemented. International 'best practice' is almost universally imported, at least in principle, in the form of outsourced planning, construction, management, vehicle design and operation contracts. These are justified, to the degree that they need to be, on the grounds that the global private sector can perform the various functions involved in BRT operations more efficiently than the state, and that this represents opportunities for local providers to get established and grow. Regardless of the merits of these claims—which are at the very least undemonstrated—this requires very sophisticated capacity on the part of the state, not to operate the system, but to effectively design and manage the contracts of its operation. In the context of new, under-capacitated institutions, enormous amounts of money, and high political stakes, it is not surprising that contract design, administration, and enforcement are the rocks on which several African BRT systems have faced serious problems, including in Tshwane, Johannesburg and Dar es Salaam.

The question of standards is part of a critical debate within the practice of BRT as an exercise of political power in African cities. This also raises the issue of incrementalism and adapted forms of BRT like BRT-Lite versus the modernist ideal of leap frogging to a high-tech BRT. ITDP and other global proponents of standards often clash with those actors like the head of LAMATA engaged in complex negotiations on the ground to move towards an implementation of improved mass transit. As Rizzo (2017) points out,

¹⁵ Interestingly this is the argument of city-level transport reformers in New York City who find their metropolitan transport authority (MTA) insufficiently accountable to the voters and transit users.

this is also the complex terrain where global economic interests often jockey for market share as well. The design standards are a very narrow set of technical specifications meant to achieve the best traveler experience and service along the corridor, and they also call into question who is able to implement these standards—which often then leads to the need for external assistance. It is interesting to note that these standards also do not extend to concerns with how the entire network will function or with integration with minibus systems and NMT networks and what compromises or innovations must be made to make integrated public transit systems as a whole work well (Klopp and Cavoli 2019).

Finally, for now, is the question of who pays for the BRT. This is related, but distinct, from the question of who builds it. For example, the fact that Johannesburg's BRT was funded largely out of the national fiscus through a custom-designed grant complicated its implementation by local government by setting policy constraints—some helpful, others not—within which the BRT was confined. However, it largely left intact the strong local accountability of the system which interestingly has led to new thinking and innovation in approaching improving public transport (Schalekamp and Klopp, 2018). It was also a successful experiment in distributing transport grants directly to municipalities, without having to go through provincial government.

In contrast, the significant donor and lender funding that has made possible a number of other African BRTs has been not only constrained from the point of view of design, but has contributed to the weakening of accountability and governance, by encouraging the deployment of BRT as a *sui generis* transport system in its own right, independent from existing government structures and wider planning conversations. As we saw with Nairobi, high levels of external financing in conjunction with Kenya's political economy dynamics appear to more intensely distort accountability processes and interfere with a more organic and even constitutionally based institutional development of metropolitan government needed for the future management of a rapidly growing urban region. Finally, it is critically important to note that given the high levels of informal planning and economy in African cities, many vulnerable citizens suffer job or livelihood loss, physical displacement and social network disruption when highways are widened and land appropriated for these projects which is a serious concern.

CONCLUSIONS AND RECOMMENDATIONS

Africa's rapidly growing cities and metro regions will need to improve public transport in part by building mass transit systems. This involves creating locally derived forms of metropolitan-scale governance and improved public regulation of transport and land-use. The introduction of BRT as a step towards these goals is provoking many, as of yet unanswered, questions and accelerating critical debates around what kinds of mass transit systems- as well as other public transport reforms- make sense and what kinds of institutions of metropolitan governance are likely to succeed in helping build urgently needed, high quality, integrated multi-modal public transport systems in African cities.

This review shows that while knowledge on BRT in diverse African cities is accumulating, substantial, critical gaps exist. BRT in all its dimensions needs to be more profoundly queried, contextualized and treated as part of a much wider set of political bargaining processes over urban transformation. In this regard, it is vital that BRT projects are studied and questioned, not only as a technology, but as political projects for reorganizing institutions and governance in African cities. In this context, we need to move away from a big project and infrastructure focus and expand our policy imagination to look at the full set of options, ideas and local experiments around public transport reform in African cities including those occurring outside of BRT and other mass transit projects. This includes exploring incremental, bottom up development of higher capacity bus operations and network reform including non-motorized transport as well as support for better labor conditions and service improvements through contracting. We also need to explore more ways to support diverse, local institutional responses to problems at the metropolitan scale. City capacity and genuine devolution needs to be part of the equation in order to move towards more downwardly accountable and responsive systems.

Finally, it is clear that we need to build more knowledge on the nuances of BRT and other public transport reform as politics in Africa. Currently, knowledge production in this area is very fragmented and disparate with an almost, complete absence of in depth cross-city and cross-regional comparison and learning. We need more critical review, synthesis and comparative work including more substantial South-South discussions across cities and regions. This is especially true at a moment when critical reflection is occurring in Latin America about BRT and questions are growing about the applicability of a Latin American "BRT model" in diverse African cities (Munoz-Raskin and Scorcio, 2017, 2018). Traditional "capacity building" within national governments thus

needs to be balanced with more support for African cities, universities, think tanks and civil society to both build their data and knowledge bases and to support knowledgeable voice and debate in public transport reforms. This will no doubt do much to help the continent move towards more inclusive, meaningful, and knowledge-driven urban transformation- on its own terms.

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