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**Can the On-going Nairobi BRT Project Guarantee a Just
Transition? Signposts from Labour Impact Assessment
Report and Other Studies**

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**Can the On-going Nairobi BRT Project Guarantee
a Just Transition? Signposts from Labour Impact
Assessment Report and Other Studies**

The government of Kenya is introducing Bus Rapid Transit (BRT) system within Nairobi City and its environs to address traffic congestion and related effects. The pilot phase of the project is on-going in one of the five designated corridors. There is limited literature on the impacts of this system of public transport on informal workforce within paratransit sector and other aspects of just transition. This paper attempts to address this gap using data from Nairobi BRT labour impact assessment and other studies. The central argument herein is that whereas this system of public transport has potential to create new jobs and formalise existing precarious ones, majority of informal paratransit workforce operating along the designated corridors stand to lose their jobs due to relocation in the absence of an inclusive design and appropriate compensation plan. Moreover, available evidence shows limited stakeholders' engagement and social dialogue in the on-going processes. Addressing these challenges will require among others adopting an inclusive BRT design to minimise job losses, empowering transport union workers to amplify their voices within deliberative spaces besides securing the necessary political good will at the highest level possible.

Keywords: Nairobi BRT project, just transition, decent jobs and stakeholder engagement

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Introduction

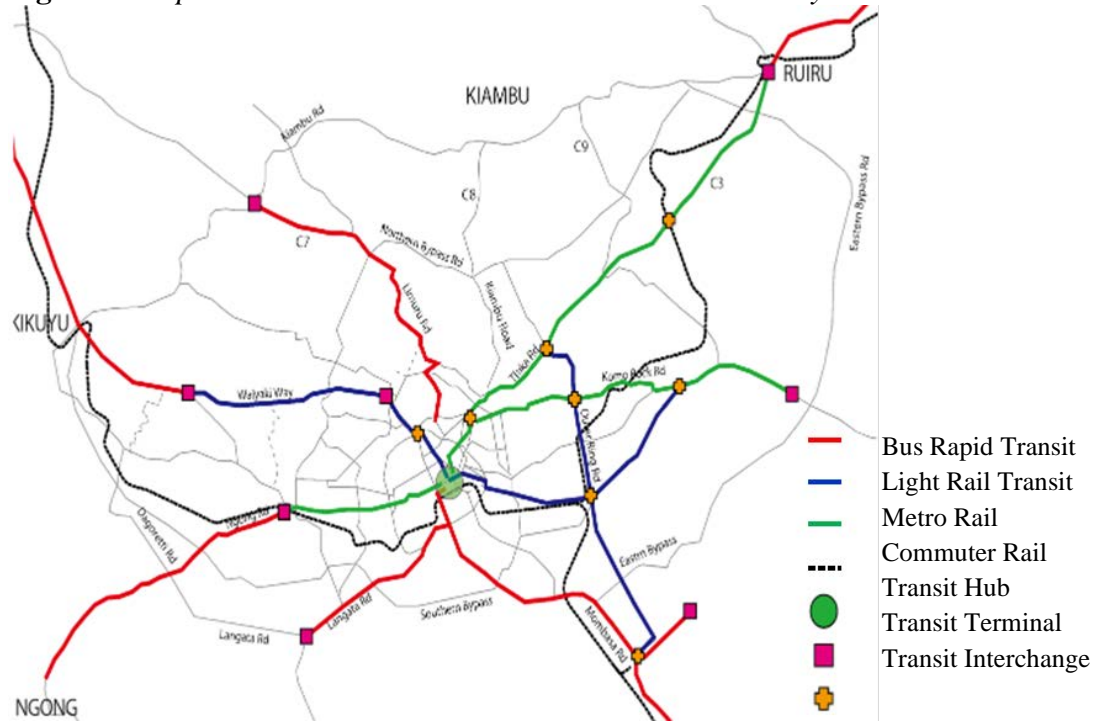
Public transport plays a key role in societies by moving people, goods and services. Despite this, the sector commonly referred to as informal, paratransit or popular transport in developing countries faces many challenges from accidents to traffic congestion (EMBARQ, 2013, 2014; Shirvani *et al*, 2017). They have responded with varied measures but with mixed results. Bus Rapid Transport (BRT) System, which is the focus of this paper, is one of them.

BRT corridors are already up and running in Dar es Salaam, Lagos, and in the South African cities of Cape Town, George, Johannesburg, and Pretoria. Another ten are currently under planning or construction all around Africa cities namely Abidjan, Dakar, Dar es Salaam (phases 3 & 4), Douala, Nairobi, Kampala, Kumasi, Maputo and Ouagadougou.¹ This system of public transport has the following key features in comparison to the ordinary paratransit system: dedicated lanes built to special standards without bumps, special stations with raised platforms, cashless fare system and long buses with carrying capacity of between 50 and 150 passengers (ITDP, 2018). According the World Bank model, the BRT infrastructure should be funded through Public Private Partnership (PPP) and operated by the private sector with a minimum experience of three years.

Nairobi BRT project which is traceable to 2009. Its primary objective was to transport people and decongest the city. The idea was eventually documented in 2012 with the formulation of Sessional Paper No. 2 of 2012 on the Integrated National Transport Policy (GoK, 2012). The project is conceived to cover five corridors or interconnected lines named after the following Kenya's Big Five animals: *Ndovu* (Elephant) line stretching from Kangemi to JKI/Mombasa road); *Simba* (Lion) line from Njiru to Jamhuri; *Chui* (Leopard) line intended to provide commuters with luxury of riding one bus from Njiru area in Embakasi to Jamhuri Showground; *Kifaru* (Rhino) line from Mama Lucy Hospital to T-Mall via CBD; and lastly, *Nyati* (Buffalo) line starting from Balozi Estate near GSU headquarters to Imara Daima via Outering Road as captured in the figure 1 below.

¹<https://www.worldbank.org/en/news/feature/2022/11/28/with-bus-rapid-transit-african-cities-are-riding-toward-a-better-future> (accessed, 12 October, 2023).

Figure 1. Proposed BRT Corridors and Routes within Nairobi City and its Environs



Source: Integrated Urban Development Master Plan for the City of Nairobi (NIUPLAN), 2014-2030.

The government agency overseeing the implementation of the project is Nairobi Metropolitan Transport Authority (NaMATA) established in 2017. Its core mandate is to develop an integrated transport system that will address the transport challenges within Nairobi metropolitan areas which covers five counties namely Nairobi, Machakos, Kajiado, Kiambu and Murang'a. Three actors are involved in the implementation and subsequent operation of the project namely the government, development partners and the private sector. Under this arrangement, the government is expected to provide the infrastructure and the regulations, while the private investors will provide the rolling stock namely the buses. Development partners will support the government through financing.

This paper explores the extent to which Nairobi BRT project can deliver a just transition within the local context. The underlying assumption is that initiatives that seek to address public transport challenges in these countries should not undermine existing jobs in the sector. They should, instead, create more opportunities for decent jobs besides transforming precarious ones through formalisation. In addition, the process should be inclusive characterised by robust stakeholders engagement and social dialogue. The article is organised as follows: introduction, material, method, results, discussions and conclusion.

Literature Review

This section provides a brief survey of available literature focusing on impacts of BRT on public transport based on different case studies, informal public transport

sector in Kenya then finally examines the concept of just transition which informs the discussions herein.

Effects of BRT System of Public Transport Based on Different Case Studies

There is proliferation of literature focusing on different aspects of BRT system of public transport since the launch of *Transmileo* BRT in Bogota in December 2000. Available literature underscores the following as some of its key benefits: significant reduction in local pollutants and greenhouse gases emissions due to reduced traffic congestion, use of modern technology and better driving training (EMBARQ, 2013; Germa and Host, 2018); improved road safety as a result of shifting passengers to high capacity buses, use of dedicated lanes and reduced on the road competition by drivers besides improved training (Bocarejo *et al*, 2012; WHO, 2013; EMBARQ, 2014; Duduta & Lindau, 2016); decline in exposure to air pollutants due to use of clean vehicle technology, reduction of passengers exposure to air (Germa and Host, 2018); increased physical activity by passengers with far reaching health benefits; and cheaper fare compared to light rails (Batarce & Mulley, 2016).

While proponents of BRT extol these benefits and urge many countries to embrace this system of transport, skeptics cast doubt. A case in point is Matteo Rizzo (2015, 2017) who, using political economy approach points out how interests of key proponents of the BTR system of transport overrides the intended benefits to the ordinary users in these countries and above all at the expense of more affordable and sustainable alternatives for example reforming or transforming the existing paratransit system. It is also doubted if the proposed system can create jobs commensurate to the ones lost during its implementation. There are no authoritative studies on the impact of this system of public transport on the informal workforce in the paratransit sector except the Nairobi baseline survey (Spooner and Manga, 2019) which partly informs this article. Equally missing is an assessment of this system of public transport using other aspects of just transition such as stakeholder engagement, social dialogue, equity and respect for human rights (ILO, 1999, 2010, 2013, 2015). This paper attempts to fill this gap.

The Informal Public Transport Sector in Kenya

Public transport system in Kenya just like other Sub-Saharan African countries is largely informal. There is a considerable debate on the exact distinction between formality and informality within employment sector. Scholars such as Keith Hart, considered the originator of the concept of informal economy, use the degree of rationalisation of work as the main variable in distinguishing informal economy from formal one. Formal economy, in this case, provides opportunities for wage earning on either permanent or contractual basis with regular rewards. Conversely, informal economies are predominantly characterised by self-employment (Hart, 1973; Quinn and Teal, 2008). Further studies, building on Hart's approach, show that informal employment goes beyond self-employment and, instead, even encompasses various forms of wage labour which in most cases may not be

contractual but occurring in very precarious situations (Breman 1996; LeBrun and Gerry, 1974; Rizzo, 2017). This paper uses this broader conceptualisation of informality given the nature of employment relationships in the *matatu* industry in Kenya.

The emergence of *matatu* sector which is the common face of paratransit industry in Kenya is traceable to 1960s in response to the growing urbanisation and industrialisation in Nairobi (Kinyanjui, 2014). These vehicles which were mainly old provided transport services to mainly black Africans who were working in the industrial areas in the outskirts of the city. Many of them returned to their rural villages over the weekend to join their families since women were not allowed to involve in formal work. The public transport buses provided by the London-based Overseas Trading Company (OTC) through the local franchise Kenya Bus Services (KBS) by then only provided services between the industries and areas living quarters of the Asian workers (Mukabana, 2016).

Even though at this time there were only few old and unlicensed *matatus* across the country, their numbers increased overtime. Two factors explain this surge. One, weak regulations and enforcement by transport authorities in the country which allows for easier entry into the sector without due consideration for demand and supply. Two, majority of public transport owners prefer a fourteen seater as opposed to high capacity buses in order to minimise the initial high cost of purchasing vehicles with the view of eventually maximising profit (Mutongi, 2017).

Apart from moving people and goods, the sector also provides employment to many people both directly and indirectly. At the time of writing this paper there was no authoritative figures on the number of *matatus* in Kenya and those who are employed in the industry. Instead, conflicting figures continue to emerge. However, a recent survey of the public transport vehicles by Manga (2023) within Nairobi Metropolitan area established the following. One, there are about 236 SACCOs/companies operating 21,527 public transport vehicles plying primary routes beginning from various parts of Nairobi City and terminate at different parts of the metropolitan. Two, there are approximately a total of 155 primary routes within the metropolitan area. Three, despite the challenges in the sector, it remains a key employer in the country. The SACCOs/Companies plying the primary routes identified employs directly a total of 52,095 workers distributed as follows: 23,8239 drivers, 25,251 conductors and 3,005 administrative staff. The workforce is male dominated. These figures exclude other informal employees within the sector who work in a complex employment relationship besides being the majority.

Just Transition in the Context of Climate Change and Public Transport

‘Just transition’ as a concept has evolved over time. Its known first usage is traceable to the United States in 1970s by Tony Mazzocchi, a trade unionist for Oil and Chemical and Atomic Workers’ Union. He coined the term in a bid to address contradictions involved in addressing environmental challenges and workers’ concerns (UNRISD and Morena, 2018; Galgóczi, 2018). Since then, the concept has been used to bring workers concerns at the centre whenever transitions are made at work place. International Labour Organisation (ILO), for instance, has been been at the fore front

propagating the concept in order to advance workers' well-being alongside other entities (1999, 2010, 2013, 2015).

In the context of climate change agenda, the term was first included in the Final Decision of the 16th Conference of Parties (CoP16) of the UNFCCC held in Cancun, Mexico in 2010². The decision recognised that addressing climate change requires a paradigm shift towards building a low –carbon society that offers substantial opportunities; and, ensures continued growth and sustainable development, based on innovative technologies and more sustainable production, consumption and lifestyles; and to ensure a just transition of workforce that creates decent work and quality jobs. The CoP further acknowledges the significance of: i) avoiding or minimising negative impacts of response measures on social and economic actors, promoting a just transition of a workforce; ii) the creation of decent work and quality jobs in accordance with nationally defined development priorities and strategies; and iii) contributing to building new capacity for both production and service related jobs in all sectors, promoting economic growth and sustainable development.

In 2015 ILO released the guidelines for just transition towards environmentally sustainable economies and societies for all (ILO, 2015). It eventually became an integral part of the Paris Agreement on climate change in 2015 which which recognises the need to hold the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels to significantly reduce the risks and impacts of climate change³. Inspired by ILO, the Paris Declaration frames just transition as comprising the following three dimensions: the imperative of a just transition of the workforce (i.e. the process of integrating justice/the question of social dialogue and stakeholder engagement). Two, the creation of decent work and quality jobs (i.e. the outcomes). Three, paying attention to the nationally defined development priorities and circumstances (the national context).

a) Imperatives of a just transition of the workforce

This aspect of just transition requires that there is a meaningful social dialogue and broader stakeholder engagements at key stages and levels of such initiatives to ensure a fair process which does not leave anybody behind (Galgóczi, 2018). In particular, it considers all processes or pathways being pursued to ensure that the transition integrates all the critical aspects of justice namely equity, inclusion, participation, respect for human rights, respect for human dignity. It is against this backdrop that a country like Kenya is required to ensure that national commitments toward reducing green gas emissions in various sectors for instance transport observes these key principles.

b) Creation of decent work and quality jobs

²Decision 1/CP.16 The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, FCCC/CP/2010/7/Add.1, p. 4.

³UNGA/Res/70/1 Transforming our world: the 2030 Agenda for Sustainable Development.

This second aspect of just transition concept underlines the need for states to work towards achieving sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.⁴ This pursuit according to ILO report on Decent Work (ILO, 1999) should take into consideration gender equity by promoting opportunities for both men and women to obtain decent and productive work, in conditions of freedom, equity, security and human dignity. ILO further identifies the following four pillars as critical to realisation of decent work: promotion of rights to work, employment, social protection and social dialogue. The key point is to create jobs of acceptable quality given that quality of work can mean many things. Since quality of work could relate to different forms and conditions of work as well as feelings of value and satisfaction, the need today is, therefore, to devise social and economic systems which ensure basic security and employment while remaining capable of adaptation to ever changing circumstances in a highly competitive global market.

In 2008, ILO adopted a framework of decent work indicators covering ten substantive elements which are closely linked to its four strategic pillars of the Decent Work Agenda: employment opportunities; adequate earnings and productive work; decent working time; combining work, family and personal life; work that should be abolished; stability and security of work; equal opportunity and treatment in employment; safe work environment; social security; and social dialogue, employer's and workers' representation (ILO, 2013). In the context of climate change and just transition, the employment opportunities element of decent work agenda seeks to monitor or establish net job losses or gains during economic transition; or programmes to build new skills or adopt skills of workers to new work opportunities under the low carbon climate resilient pathways. The legal indicators could be presence of rights to collective bargaining procedure to guarantee job security is taken into consideration during the just transition process. Another necessity is the nature of jobs to be abolished and the presence of laws and policies providing alternative pathways, and social protection in the case of redundancies resulting from abolition of carbon intensive jobs (Kibugi, 2019).

c) Nationally defined development priorities and circumstances

In the Kenyan context this should be understood along the six UNFCCC priority sectors with 2030 NDC target of 30% and the 2018-2022 NCCAP (GoK, 2018). It is also argued that just transition agenda need to be approached from two perspectives. First, is the creation of opportunities which through innovation and entrepreneurship implement the economic, social and environmental transition, and provide the much needed decent work by developing businesses that are in line with nationally determined priorities. In this regard, the country should embrace low carbon climate resilient development pathways that prioritise adaptation and conforms to the elements of sustainable development in line with article 10 of the Constitution (GoK, 2010). Second, ensuring that the process of just transition is pursued in a participatory manner

⁴UNGA/Res/70/1 Transforming our world: the 2030 Agenda for Sustainable Development, p. 19.

through consultation and dialogue in line with human rights framework as provided for under the same constitution.

Method

This paper is based on various studies conducted between 2017-2023 focusing on the on-going Nairobi BRT project using a mixed -method approach to enhance validity through triangulation given the precarious nature of informal workforce. Data collection started with literature review. A survey using semi-structured questionnaire was administered among 600 informal workers distributed as follows: 200 on board crew (drivers and conductors), 200 service providers (mechanics, vendors and spare part dealers), and 200 stage workers (callers, stage managers). There were nine (9) Focus Group Discussions, three for each category of informal transport worker force (crews, service providers and stage workers). There were also key informant interviews with *matatu* operators, urban transport, community members including participant observations during field visits. The study also relied on google maps to locate bust stops along the designated BRT corridors.

Additional information was gathered during two sub-regional workshop on BRT best practices and future network actions held in Dar es Salaam, Tanzania from 24-26 April 2018 and Dakar, Senegal from 27-29 November 2019. Apart from sharing experiences on the on-going BRT implementation across Africa, participants had the opportunity to visit Dar Rapid Transit (DART) depot including questions and answer sessions with depot operators, a ride along one of the major DART routes besides interaction with select operators of public service vehicles popularly known as *daladala*. There were also three round table discussions on the project in Nairobi convened by different agencies between 2022 and 2023. Additional information was obtained from overview of public transport survey in Nairobi in 2003. The process of data collection during surveys were participatory involving members of informal *matatu* worker's union to enhance learning. Quantitative and qualitative data were analysed through descriptive statistics and content analysis respectively. The study observed necessary ethical issues key among them anonymity during survey in addition to seeking consent before interviews.

Results

Nairobi BRT Project as a Nationally Determined Priority

This section attempts to address the extent to which the on-going BRT project is a low carbon climate resilient development pathway that prioritises adaptation and conforms to the elements of sustainable development. Kenya is highly vulnerable to climate change and is already experiencing climate-related disasters such as notable increase in droughts and floods. These effects are estimated to create an economic liability of 2%-2.8% of the country's gross domestic product (GDP) every year because the economy is dependent on many climate-sensitive sectors. COVID-

19 pandemic worsened this crisis. Consequently, the country should, therefore, embrace ‘green growth’ in order to build a sustainable and resilient economy. This can be achieved by integrating climate change into development policies and actions in each sector in order to lower greenhouse gas emissions, the country’s vulnerability to climate shocks and its effects (GoK, 2021).

Nairobi city relies heavily on fuel-based individual transport and shared taxis or minibuses known as *matatus*. According to the Green Economy Strategy and Implementation Plan 2016 - 2030 (GoK, 2016), Kenya's transport related carbon dioxide (CO₂) emissions have doubled over the last ten years. The situation will worsen as the population grows over the next decade if there is no intervention thus most likely making the city inhabitable. So far, available information shows that vehicles stuck in traffic within Nairobi City potentially cost Kenya almost \$1 billion a year in lost productivity. Moreover, Nairobi ranks the fourth most congested city in the world with an average travel time within the city at about 57 minutes mainly due to lack of both a scheduled public transport system and an elaborate non-motorized transport network (Wairimu, 2019).

Kenya is a party to the United Nations Framework Convention on Climate Change (UNFCCC), its Kyoto Protocol, and the Paris Agreement. As a result, the country has made considerable efforts to mainstream climate change requirements into its development plans, policies, strategies, programmes and projects in addition to other measures to achieve low-carbon and climate-resilient development; including mechanisms for mobilising, tracking and reporting on climate finance. In 2015, the Government of Kenya submitted its Nationally Determined Contribution (NDC) to the Paris Agreement pledging to reduce its greenhouse gas (GHG) emissions by 30% by 2030 relative to the business-as usual scenario. A case in point is the commitment to increase the finance for mitigation and adaptation in the transport sector. Overall, the country estimates the cost of implementing Kenya’s mitigation and adaptation actions at USD 65 billion during the period between 2020 and 2030. Analysis of the transport sector shows an investment gap in NDC priority actions of 37.7 billion Kenya shillings in the transport sector. The country requires Ksh. 222 billion and Ksh. 325 billion to implement Kenya’s NDCs in the transport sector by 2019-2023 and 2024-2030 respectively (GoK, 2021).

Nairobi BRT project is one of the nationally determined development priorities under adaptation intended to reduce green gas emission in the transport sector. Implementation of BRT often involves five key stages namely feasibility studies, detailed design, funding, construction of the infrastructure followed by actual operation of the buses. There is limited information about both the actual implementation time table and other specific details for example the type of BRT buses that will be implemented in all the five corridors. The general schedule is that it will be rolled out between 2018 and 2030. The pilot phase of the project commenced on 4 August 2020 along Thika superhighway. It involves construction of dedicated lanes from Ruiru town to Kenyatta National Hospital covering a stretch of 27 kms along the *Simba line* (corridor two).

Since the conception of the Nairobi BRT project, there have been mixed information on the actual design to the general public. Similarly, there have been new infrastructural projects along the designated corridors raising concern as to

whether the initial plans are still intact and if so, the extent to which they will be integrated with the new mobility initiatives.

These intrigues notwithstanding, preliminary assessments show that, to some extent, the BRT project is adoptive in the context of climate change on the following basis. One, it will significantly reduce the number *matatus* along the designated corridors as long as the design incorporates dedicated lanes and rely on high capacity buses. Moreover, the plan is to have a rolling stock comprising long buses with the carrying capacity of between 50-150 passengers (ITDP, 2018). Two, the use of electric buses in some corridors (i.e. line three which the European Union has already signed a Memorandum of Understanding to fund). The total net effect will be significant reduction of green gas emission going by experiences in both Mexico and Bogota (Turner *et al*, 2012; EMBARQ, 2013; Germa and Host, 2018). Nevertheless, the extent of such realisation will largely depend on the ultimate design adopted.

Does the Nairobi BRT Project Make Provision for the Imperatives of Just Transition?

This section examines the extent to which the project addresses the imperatives of just transition namely inclusion, participation, respect for human rights, human dignity, and equity. Study findings show limited consultations with informal workers in the sector within the official framework of engagement yet they stand to be affected most upon full implementation of the project. This sense of marginalisation is mainly due to narrow conceptualisation and application of the term stakeholder; underlying power relations within the official deliberative spaces; and the inability of the informal workforce to organise better to make effective claims within such spaces.

On 26 February 2019 the Cabinet Secretary for Transport, Infrastructure, Housing, Urban Development and Public Works through the *Gazette notice no. 2578* formed a task force on the transition and transformation of the public transport sector during the implementation of the Mass transit transport system within the Nairobi Metropolitan. It comprises twenty-three members (twenty appointed while three co-opted). Their key functions entailed the following. One, co-opt not more than three persons who possess the relevant experiences, skills and experience which is considered necessary and proper to achieve its objectives. Two, carry or commission such studies or research as may inform its recommendations to the cabinet secretary. Three, solicit, receive and consider views from member of the public and other interested parties. Lastly, conduct any other activities required for the effective discharge of its mandate.

An assessment of the composition of the task force which is a critical cog in decision making reveals a biased conceptualisation of stakeholder in two ways thus undermines the spirit of inclusion and active participation. One, it is male dominated – only one women out of 23 members hence undermines the benefits of gender considerations in transport planning and provision. Two, as much as the task force has three representatives from the public transport sector, they are mainly vehicle owners often referred to as operators within policy circles thus leaving out informal workers who are the majority in the sector.

Related to the preceding observations is the entrenched epistemic bias within the deliberative spaces. For a long time, bureaucrats have viewed public transport policy making, planning and design as a technical turf that mainly requires input by technocrats to the exclusion of users. As much as this mentality is gradually changing, much of the biases still persist and partly explains why the on-going BRT project implementation is dominated by both foreign and local elites. The underlying political economy of donor funded projects further exacerbates the situation. Interviews with key informants reiterate the hurry with which donor funded projects in recipient countries are often implemented without due consideration for public participation. Reasons include the pressure by donors to meet tight deadlines for both commercial and strategic interests on the one hand; and on the other hand, the reluctance of local bureaucrats to questions donors as captured by this key informant.

I think we need to engage the financiers as much as they engage with the local technocrats. The grant comes and you cannot question. Because it is their money, local groups will not question their school of thought. They are just excited about the money. There is also another element of low self-esteem among local bureaucrats while engaging donors. It is a physiological issue. It is an issue across sectors.⁵

The outcome is infrastructural projects which do not conform to local realities hence may not be sustainable in the long run.

The study also found out that NaMATA had organised field visits for stakeholders to tour the pilot project along corridor 2 in 2020. An interview with a participant in one of the trips paints a picture of an exercise dominated by government agencies. It was more of sensitisation workshop meant to buy in these agencies instead of a broader stakeholder engagement exercise. Moreover, the trips were only limited to those who were aware and available within the schedule.

Related to this is the concern by a section of Mathare community residents and some representatives of Civil Society Organisations over on failure to adequately involve communities living along Juja road where the on-going pilot project passes through in the compensation plans. They cited instances whereby the local administrators have held meetings to discuss the same without adequate representation from them. Intrigues of mishandling of compensations are not unique to the on-going BRT project. They have been witnessed in previous massive infrastructural projects in the country such as the Standard Gauge Railway and other infrastructural projects in the country (Achuka, 2018).

There have been other initiatives by other interest groups intended to enhance stakeholders' engagement within the on-going project with mixed outcomes.⁶ Some

⁵Interview with an urban planner and social activist on 29 April 2023 in Nairobi.

⁶a) Round table discussion on on-going Nairobi BRT project on "Making Nairobi Bus Rapid Transit (BRT) Socially Just: Key issues for consideration", convened by SJPTWG at Sarova Panafric Hotel, Nairobi 15 July 2022; b) Round table discussion on the "The role of different stakeholders in relations to a just transition and green BRT", organised by the Swedish Embassy, the Swedish Residence, Gigiri, Nairobi, 12 April 2023; c) Round table discussion on the "The role of different stakeholders in relations to a just transition and green BRT", organised by the Swedish Embassy, the Swedish Residence, Gigiri, Nairobi, 12 April 2023.

of the key concerns that have emerged in such fora include inadequate information on the exact nature of the design, arrangements for compensations, operating model (i.e., whether vehicle owners will have a stake in supplying the rolling stock or not), fare structure, potential job opportunities and how they will be distributed including gender considerations; and lastly, limited and inequitable distribution of BRT stations along the pilot phase. In all these engagements, representatives of NaMATA acknowledge the significance of making Nairobi BRT project people centred besides promising to consider suggestions raised. Whether the agency will keep its promise is debatable.

Other impediments to effective engagement by informal transport workers in the on-going BRT processes are internal to them. They include limited technical knowledge on subject matter on the one hand and on the other hand inability to organise better to hold the powers that be accountable. One striking findings during the Nairobi BRT labour impact assessment was lack of awareness of BRT system by the general public and even among key stakeholders like transport workers' unions. During the first survey in 2017 more than 80 percent of those who participated in the first assessment in 2017 said that they had never heard of BRT or the plans to introduce BRT in Nairobi (Spooner and Manga, 2019).

The second wave of the survey in 2018, however, revealed a significant increase in awareness and understanding of Bus Rapid Transit (BRT) among matatu workers in the year between the two waves of the survey. The number of those who were not aware fell to 54 percent in 2018 almost certainly because of the much greater media coverage of BRT during 2018, including widespread reporting on the President's pledge to ride on a BRT bus before the end of the year.

Another obstacle is the proliferation and poor coordination among transport unions in the sector due to competing interests and lack of common vision. There were 10 unions representing various category of workers within the sector at the time of the study with little synergy. Related is the inadequate resource base and technical skills to undertake serious academic research (Manga, 2022; Ondieki and Otieno, 2023). In case such knowledge was available, there was no evidence of proper utilisation to bring out the desired change. A case in point is the failure by Kenya transport workers unions to exploit the information generated from the Nairobi BRT labour impact assessment Report (2019) to effectively engage the power that is on a range of issues. Whereas International Federation of Transport Workers (ITF) specifically sponsored the assignment for the this purpose, local unions only had a one off engagement with the Principal Secretary in charge of housing infrastructure, transport and urban Planning in 2019 when they submitted the report.

Will Nairobi BRT Project Guarantee Decent Jobs?

In order to address this question, this section begins by discussing the nature of the workforce within the informal public transport sector within Nairobi city, their complex work relationships, forms of livelihoods and potential effect of Nairobi BRT project on the informal workforce.

a) Characteristics of informal matatu workforce within Nairobi city and its environs

The Nairobi BRT labour impact survey (2017, 2018) findings show that informal workforce in the sector is youthful and male dominated as 70 percent of the respondents were under the age of 40 while 22 percent of them were women. It comprises varied occupations under the following three broad categories: on-board crews, stage workers and matatu service workers. Each has distinct features. On-board crew comprised drivers, conductors, callers, squad drivers, squad conductors, *kamagera drivers and kamagera conductors*. Stage workers comprised callers (*manambas*), porters/loaders, *pigasetti*, stage clerks, vendors and hawkers, SACCO supervisors and administrators, informal supervisors, hawkers and traffic marshals, side mirror mendors, shoe shiners, seat warmers, bus sweepers, police agents, ‘cartel workers (bagations) *boda-boda* riders and *tuk- tuk* drivers (Spooner and Manga, 2019).

Matatu service workers fall under the following two sub-categories. One, mechanics which undertake routine vehicle services, brakes and tyre members, welders, panel beaters and spare part dealers. Two, technicians, cleaners and vehicle washers, sound engineers, night security guards, spare part dealers, panel beaters, electricians, painters, tyre-fitters/ repairers and radar men. More than 50 percent of the workers interviewed had been in their respective occupations for five years or more. The workforce was largely educated, with more than 60 percent having completed secondary level (Spooner and Manga, 2019).

b) Livelihoods, employment relationships and working conditions

It is difficult to give precise figures on net income and expenditures for all occupations in the matatu industry for various reasons. Some respondents were not comfortable discussing their net income, or the nature of their outgoings. In order to address this gap the investigators resorted to in-depth interviews with matatu operators (crew) to work out the figures. The findings varied with the year and size of the matatu. Overall, data gathered from the survey and key informant interviews reveals considerable fluctuations in gross income from day to day, or hour to hour, and a wide variety of necessary outgoings which are often unpredictable. Before vehicle crews can start to earn money, most have to meet high daily financial “targets” set by vehicle owners – in effect a rental fee forcing them to work long hours to make up for any shortfall. In addition, workers have to pay for various operation costs including arbitrary fines and extortion (Spooner and Manga, 2019). The industry also involves a complex set of employment relationships. Depending on occupation, matatu workers’ livelihoods depend on informal income from drivers, conductors, customers, informal employers, and SACCOs. This is further evident in the nature of employment opportunities in the sector while majority of workers depend on each other either directly or indirectly for their income. The baseline survey also found out that matatu workers are in highly precarious employment. Very few have formal contracts while most of them are wholly self-employed, or on hourly or daily informal ‘contracts’. Moreover, nearly half the

workers have been working in their current occupations for less than four years. Most matatu workers work very long hours. Most of those surveyed work 12 hours per day or more. More than 65 percent work six days per week, and 27 percent work seven days per week (Spooner and Manga, 2019).

- c) *Jobs which are likely to be lost and created upon completion of the project*
- i) *Estimating the size of the total matatu workforce in Nairobi.*

There are no figures available on the anticipated number of jobs to be created in the Nairobi BRT system. However, employment data is available from other BRT operations. In Johannesburg, for example the Rea Vaya (phase 1A) 25.5 km BRT system generated 830 permanent jobs: 256 within the bus operating company, 280 in the stations (cashiers, ‘ambassadors’ and marshals), 240 in security and cleaning, and 40 in administration (McCaul and Ntuli 2011). Phase 1 of Rea Vaya is comparable to route 3 of the proposed Nairobi BRT. A very approximate estimate of jobs to be created by the BRT system in Nairobi can be provided by calculating the number of jobs per kilometre of route, based on the Rea Vaya example.

While there are no reliably precise figures, there are various estimates on the number of matatu vehicles operating in Nairobi, and the number of people employed in the industry. It is also notable that there are problems encountered when attempting to define the matatu workforce. Nearly all studies which attempt to define the size of the matatu industry are limited to a consideration of the number of “operators”, and even this is not easily defined. “Operators” may include SACCOs, vehicle owners, and/or drivers. To provide a more accurate estimate of total numbers in Nairobi, we attempted more detailed analysis of the many occupations and roles to be found in the matatu workforce and estimate the numbers employed per occupation affected by BRT systems. These could be calculated from the numbers of SACCOs, vehicles, stages and matatu routes affected, and the numbers of workers in each, depending on occupation.

- ii) *Calculation assumptions*

Given the difficulties in identifying precise figures, the study was based on a number of assumptions as the basis for calculating the potential impact on employment figures:

BRT Routes: Figures assume that all five routes will be in operation, as outlined in the original proposal for a full BRT system by NAMATA (Gauff Consultants, 2014). These include extensions 4b (Limuru Road) and 2b (Kiambu Road). Each cross-town route is divided in two – from the CBD to the respective terminus. Distances are calculated from Google Map data. Data was unavailable for Route (5) five.

SACCOs and Vehicles: The estimated number of SACCOs and vehicles per route is from data supplied by the Matatu Owners Association. This provides a total of 175 SACCOs and 6,000 vehicles currently operating on the proposed

BRT routes. This seems to be consistent with the results of a 2012 survey commissioned by the Transport Licencing Board, which estimated the total fleet size to be approximately 10,000 vehicles (Envag Associates 2012) and estimates from 2017 of 11,000 vehicles.⁷ It is unlikely, but not clear, that these include unregistered vehicles.

Stages: The definition of a “stage” is not clear, sometimes referring to terminals, major intersection bus stops, or all bus stops (including unofficial stopping places). We have estimated a total of 1,141 stages, identified from Google Map data.

Matatu Routes: The matatu routes affected by each of the BRT routes and corridors has been calculated on the basis of data from digitalmatatus.com, estimating 61 matatu routes in total.

Numbers of workers affected: From information provided from surveys, interviews and focus groups, we have made broad – but conservative – assumptions on the number of workers from each occupation employed per vehicle, route, or stage. (see table 4: Assumptions for Calculation of Matatu Workers)

iii) Calculation method

For each occupation in the matatu industry, we estimated the number of jobs at risk from the introduction of BRT, per route, based on assumptions on the number of workers from each occupation employed per vehicle, route, or stage. The number of jobs likely to be created were calculated on the basis of jobs per kilometre, using the Rea Vaya data as follows: Bus operating company (10 jobs per km); station staff (11 jobs per km); cleaning and security (9 jobs per km); administration (2 jobs per km).

Overall, from these calculations, the study estimates that 35,193 jobs are at risk, if all BRT systems were to become operational, not including line 5 (Outer Ring Road/East Nairobi), for which data is unavailable. Of these, the on-board crews account for 18,400 anticipated jobs lost. But these represent not much more than half the total. Vendors, food vendors, loaders, stage attendants, and *boda-boda* riders based at matatu stages are particularly at risk. At the same time, we estimate that BRT operations will create 5,760 new jobs. Therefore, we estimate that there would be a net loss of nearly 30,000 jobs as captured in Table 1.

⁷Interview with Richard Kanoru on 3 November 2017 in Nairobi as captured by Stephen Kisingu International Federation of Transport Workers (ITF) correspondence, Nairobi Office.

Table 1. Summary of the Number of Jobs which are Likely to be Lost and Created once the Nairobi BRT Project is Implemented

Nairobi BRT Routes	Jobs likely to be lost once BRT is fully implemented				Jobs likely to be created
	On-board crews	Stage workers	Service workers	Total	Total
<i>Ndovu</i> : Kangemi-Imara	4,907	2,353	1,240	8,500	1,536
<i>Simba</i> : Bomas-Ruiru	5,520	2,863	2,232	10,615	2,496
<i>Chui</i> : Njiru-showground	4,140	2,125	1,863	8,128	928
<i>Kifaru</i> : Mama Lucy Hospital-T-Mall	3,833	2,264	1,853	7,951	800
Total	18,400	9,605	7,188	35,193	5,760

Source: Data collected from various sources (Spooner and Manga, 2018).

d) Formalisation of existing precarious jobs

Besides creation of new jobs, it is assumed that BRT has the potential to address a myriad of problems which undermine productivity of informal workforce in the matatu sector. For instance, a large proportion of those surveyed complained of harassment and extortion from *Askaris* - police (30 percent) and local government officials (20 percent). Information gathered through FGDs with the three categories of workforce⁸ further identified the following challenges: extractions and harassment by law enforcement officers (traffic police and city traffic marshals), long working hours, poor pay/remunerations, dysfunctional and unresponsive SACCOs, limited working spaces, traffic congestion, lack of formal contracts/social security, general poor working conditions and diminishing job opportunities (Spooner and Manga, 2019).

Of particular concern is the target system, a business model which is assumed to be the fundamental cause of the many problems in the matatu industry in Kenya whereby vehicle owner charges high daily fees to thrive. It is argued that the business model has profound consequences namely: impoverishing the workforce who directly depend on the vehicle and instead gives huge profits to vehicle owners which in turn is an incentive for new entrants and the attendant competition; leading to exceptionally long working hours; encourages a competitive and aggressive driving leading to high accident rates; produces congestion on the streets; encourages corruption and organised crime (Spooner and Manga, 2019).

The underlying assumption is that these challenges can be addressed by adopting the following measures: replacement of target system with regular, predictable and secure wages, introduction of two –shifts system for crews, creating more jobs while reducing working hours, introduction of harmonised and regulated fares, improve working environment, introduction of a cashless system; giving formal recognition to *kamageras*, stage workers; strengthen the democratic governance and management of SACCOs; assist the development of formalised social protection cooperatives; and provided entrepreneurial/business training for informal workers in the sector (Spooner and Manga, 2019).

⁸FGDs conducted on 22, 23 and 24 January 2018 with informal workers in Nairobi.

Discussion

The study findings reiterate the significant role that paratransit sector plays in the economy and the general lives of residents of cities like Nairobi besides its complex employment relationships as other studies show (Kinyanjui, 2014; Khayesi, 2015; Rizzo, 2015 2017; Hart, 2016; Mutongi, 2017; Wright, 2018). Salient observations include the following: the broad conceptualisation of informal workforce characterised by a complex employment relationship; the young male dominated informal matatu workforce even though women are increasingly taking up jobs such as driving which were previously preserve of men. Despite this, the working conditions in the sector remain difficult and precarious.

As noted in other experiences within the global south (Rizzo, 2015; 2017; Wright, 2018), the Nairobi case studies equally underlines the potential of the project once fully implemented to create new jobs as well as transform precarious ones on the one hand. Disrupt some existing ones along the designated BRT routes on the other hand. Nevertheless as available literature shows, the extent of such changes will largely depend on the nature of the design adopted and requisite compensations measures. This will affect mostly those who will neither get absorbed into the new job opportunities created through this new system of public transport nor get properly compensated. The dispossession further reinforces the argument that mega transport projects and other related reform initiatives within the developing countries' metropolis quite often benefits big multinational organisations and local elites at the expense of ordinary local players in terms of capital accumulation thus propagating Neo-liberal agenda (Rizzo, 2015, 2017). Overall, it contradicts key tenets of just transition which places employment creation, decent job and social protection at the centre of climate change (ILO, 1999, 2010, 2013, 2015).

This brings us to the intrigues of compensation and inclusion. Studies underscore the following factors as critical for adequate compensation within a context of implementing massive transport projects: effective urban transport governance with a functional institutional framework, the culture of constitutionalism, effective citizen voice and prevailing political will. Experiences from difference case studies show most of the transport established to operate at metropolitan scale have not lived up to their expectations due to poor coordination across governmental levels and agencies, capacity issues, fragmented planning, financial operations and entrenched interests for example deployment of foreign consultants sympathetic to the donor agenda key among the meeting tight deadlines sometimes at the expense of other considerations by the locals (Klopp *et al*, 2019).

Failure by the existing national coordination framework to midwife a robust stakeholder participation in the process due to elite capture is not unique to this project. Similar experiences have been documented elsewhere (Cornwall, A. and Coelho, V.S.P. (2007). Related to this is the significance of strong constitutional provisions and institutions to guarantee effective compensation. The fact that past experience from Kenya is replete with botched compensations whenever massive infrastructural projects are undertaken (Achuka, 2018) further underline lack of

culture of constitutionalism (Klopp *et al*, 2019). It also casts doubt on whether compensations related to BRT projects will be any different.

This further brings us to the question of voice. Under normal circumstance, effective citizen voice act as a countervailing force to the inequities of dysfunctional institutions (World Bank, 2003). Despite this, the Nairobi case study exposes a waning voice from the informal transport workers' side through their trade unions. Reasons are similar to those outlined in other studies as impediments to effective trade union engagement in Kenya and even other African countries. They include the proximity of the Central Organisation of Trade Unions (COTU) to the state due to historical circumstance leading to state capture (Manga, 2022, Ondieki and Otieno, 2023; Ndavula, 2023); inadequate organising capacity (Manga, 2022), local politics which encourage fragmentation of unions instead of fostering synergy (Manga, 2022), and lastly, the prevailing political economy which favours owners of the capital at the expense of ordinary workers in the eyes of the state (Etyang' 2019; Klopp *et al*, 2019; Manga, 2022).

These impediment to active involvements of informal workers in the in the key stages of the projects (planning and implementation) eventually undermine the imperatives of just transition under which advocates inclusion, participation, respect for human rights, dignity and equity (ILO, 1999, 2010, 2013, 2015). Moreover, failure to adequately involve women further undermines realisation of the benefits associated with gender based planning in public transport provision and the general quest for social justice (Kamau and Wa Mbugua, 2020).

Conclusion

This article sought to examine the extent to which the on-going Nairobi BRT project can guarantee a just transition for informal workforce in the paratransit sector within Nairobi City and its environs. Anecdotal evidence shows that the project cannot guarantee this in a binding and authoritative fashion. Despite the possibilities of creating new jobs besides formalisation of some precarious jobs within the sector, majority of informal public transport workers operating in the proposed routes stands to be affected negatively if there are no proper mitigation measures. Key suggestions include adopting inclusive BRT design which allow co-existence of other forms of paratransit modes; appropriate compensation of job losses and other forms of dispossession; and active involvement of informal matatu workforce through their unions in the planning and implementation of the Nairobi project. The following factors are critical to the realisation of these suggestions: empowering transport workers and their unions to amplify their voices within existing deliberative spaces; institutionalising such spaces to avoid the pitfalls of prevailing power relations which favour elites in addition to o secure political good will at the highest level possible. Unfortunately, evidence so far implies that on-going consultation focus more on vehicle owners instead of informal matatu workforce who are the majority in this industry. These observations imply that the much touted major public transport projects in the developing countries, for example BRT, have potentials for self-contradiction. As a result, they may end up advancing Neo-liberal

agenda at the expense of local interests. Equally evident is the broad concept of just transition hence the potential pitfall of promoting one concept at the expense of the other expense. It further requires a delicate balance among competing interests.

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