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Gender-informed mobility planning, governance and policy in African cities: status, barriers, and ways forward

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Preface

In 2019 the Volvo Research and Educational Foundations (VREF) launched its Mobility and Access in African Cities (MAC) program. The purpose of the program is to support research on issues related to sustainable, equitable mobility and access in cities in Sub-Saharan Africa (SSA) in ways that can increase knowledge and capacity, as well as contribute to long-term processes of change.

An important goal of the program is also to stimulate dialogue among researchers at SSA universities, as well as between researchers and broad groups of stakeholders, on issues related to sustainable and equitable urban mobility and access.

By initiating and funding scientific papers within specific areas, VREF aims to contribute to new knowledge that is relevant for understanding and strengthening access in Sub-Saharan African cities, as well as to spread this knowledge to researchers, educators, and other stakeholders with interests in the area. The format of these papers (or "think pieces") is designed to give the author an opportunity to present a state-of-the-art overview of research and/or policy on a specific topic, as well as to provide space for critical reflection on the topic, based on the author's own expertise, experiences and perspectives.

The current paper by Taibat Lawanson (University of Lagos, Nigeria) focuses on the state of knowledge and practice with regard to implementing gender-informed mobility planning and policy in Africa. A key question in the paper is: considering that gender equity and inclusivity are explicit policy goals across the continent, why are there currently so few policy frameworks that directly address these issues?

This work is one of two scientific papers on "Gender-informed mobility planning and policy: status, barriers, ways forward" that were commissioned by VREF in 2022. The second paper in this area, authored by Gail Jennings (University of Cape Town, South Africa), is also available, under "Results and Publications" on www.vref.se.

We hope that the papers will be a resource for researchers, educators, and other stakeholders in further developing their own approaches and engagements, as well as strengthening the impacts of their work.

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Glossary of Terms

AJWS	American Jewish World Service
BRT	Bus Rapid Transit
EBRD	European Bank for Reconstruction and Development
ECOWAS	Economic Community of West African States
ECWR	Egyptian Centre for Women's Rights
GBVAH	Gender-Based Violence, Assault and Harassment
GTTC	Government Technical Training Centre, Accra
ILO	International Labour Organization
LAMATA	Lagos Metropolitan Area Transport Authority
LASTMA	Lagos State Traffic Management Authority
MBT	Minibus Taxis
MMT	Metro Mass Transit Limited
NGEC	National Gender and Equality Commission
NGO	Non-governmental Organization
NMIMT	Non-motorized and Intermediate Transport
NMT	Non-motorized Transport
NURTW	National Union of Road Transport Workers
PT	Public Transportation/Transport (here referring to shared transport for which a fee is paid; not necessarily government provided)
SACCO	Savings and Credit Cooperative Organization
SDGs	Sustainable Development Goals
SMME	Small, Micro and Medium Enterprises
Trotro	Commercial motorcycle (also called Okada)
UN	United Nations
VAWG	Violence Against Women and Girls
WEL	Women's Empowerment Link

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Executive summary

It has been established, globally, that transport needs and mobility patterns are highly gendered. However, nowhere is the interaction between mobility and gender more intensely evident than in African societies characterized by a *patriarchal social order*. Differences in mobility needs arise primarily from the extra transport burden imposed on women due to their traditional gender roles in society. The objectives of this thought piece, commissioned by the Volvo Research and Educational Foundations (VREF), are to:

1. Provide an overview of the extent to which gender considerations have been mainstreamed into national and city transport policies in four African cities, with particular attention to understanding the status of gender-informed mobility planning;

2. Highlight and reflect on the key transport-related barriers experienced by women and the institutional issues militating against gender-responsive mobility policy and planning in the study cities; and

3. Recommend ways forward that could be adopted to better inform and strengthen gender-informed mobility planning and governance.

The authors have used data from national and city-level transport legislation/policy documents and key informant interviews with transport planning/engineering practitioners, academics/researchers, and gender experts/advocates to identify and reflect on barriers to gender-informed mobility planning and policy in the cities of Accra, Cape Town, Lagos, and Nairobi. The analysis was anchored in feminist perspectives of patriarchy and the transport disadvantages framework. Despite commitments to gender equity in national constitutions and gender policy frameworks, the transport policies/plans/legislation in the cities studied were largely gender-blind and lacked explicit initiatives to achieve gender mainstreaming in the sector. With the exception of generic declarations committing to achieve gender equality, promote accessibility and safety for all, and assure universal design, proven measures to meet women's particular and complicated mobility needs are insufficient and superficial. Barriers to accessibility, safety, and security (including protection from sexual harassment) were found to be present in all of the cities studied. Employment in the transportation sector is overwhelmingly male-dominated and male-biased, with considerable underrepresentation of women at all levels of transportation policy, planning, and service delivery. Patriarchy, gender stereotypes, negative perceptions, and restrictive entry and progression requirements in the workplace have made employment opportunities in the transportation industry unattractive to many women. However, in recent years, a few women have occupied upper- and middle-level positions in the industry.

Manywell documented hindrances such as gender-blind policies, a dearth of gender-disaggregated data, and insufficient institutional capacity, lack of political commitment and inadequate financing have impeded gender-responsive mobility policy and planning in the study cities. "We posit, however, that it is critical to examine patriarchal social systems and male dominance

as central to determining the transport challenges faced by women. This is because women's mobility is a complex issue embedded in family, community, the politics of ownership and access to resources, gender stereotypes, gendered divisions of labor, socio-cultural norms, and decision-making power, all of which impact how, when, and where women move. Therefore, it is impossible to design gender-responsive transportation systems that cater to women's needs without addressing the socio-cultural factors and the politics of space, time, and people that govern gendered mobility. Consequently, in addition to addressing issues related to funding, political commitment, institutional capacity, and integrated land-use and transport planning, it is necessary to focus on promoting favorable socio-cultural attitudes toward women's autonomy in mobility to address the documented barriers to women's access to mobility, visibility and employment in the transport sector, and transportation security.

The report concludes with suggestions and reflections for further research and gender-inclusive transport design in the studied cities.

Chapter one: Introduction

1.1 Background

The links between gender, mobility, and transport planning are important, but are seldom recognized or addressed in policy contexts. Most transport decisions focus on so called shown urban mobility, but hidden, irregular, and potential mobilities are not commonly discussed. They should be. Research on travel behavior has consistently revealed significant differences in mobility patterns and trip modes between men and women in both developed and developing countries, with poor women being significantly disadvantaged with respect to access to transport services and facilities (Uteng, 2011; Basaric, Vujicic, Simic, Bogdanovic, & Saulic, 2016; Stark & Meschik, 2018; Uteng & Turner, 2019). Lack of sufficient access to mobility has hampered the education, health, employment, welfare, and overall well-being of women (Sweet & Kanaroglou, 2016; Borker, 2016). Furthermore, while it is well documented that women have distinct mobility needs, in many developing countries that are grappling with rapid urbanization and limited investment resources, urban transport systems and services have neither been designed nor planned to be gender-inclusive. Women's specific travel needs and daily mobility challenges are not addressed sufficiently (Lucas & Porter, 2016). Exploring the complex linkages between gender and transport is crucial for achieving sustainable and inclusive transport development, particularly in the Global South.

Efforts to achieve the Sustainable Development Goals (SDGs) –– will be unsuccessful if gender in mobility is not adequately addressed. The goals of good health and well-being (SDG 3), gender equality (SDG 5), reduced inequalities (SDG 10), sustainable cities and communities (SDG 11), climate action (SDG 13), and partnerships for the goals (SDG 17) will not be realized without a

targeted focus on gender and development in urban and transport planning. Urban transportation is vital to inclusive cities. SDG target 11.2 seeks to "By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons" To meet this these goals, it is pertinent to examine the existing condition of gender and everyday mobilities and how they should be advanced to achieve the SDGs targets.

In sub-Saharan Africa, women's access to safe and inclusive transport is impeded by the inability of governments to meet the transport needs of their growing populations while paying specific attention to gender-differentiated mobility patterns. Efficiency goals are commonly prioritized over gender considerations in public transport planning. In addition, the accessibility and travel concerns of women and other vulnerable populations tend to be poorly understood by many transport professionals and overlooked in transport policies and programs. (Sustainable Mobility for all, 2019; Porter et al., 2020). Moreover, in many of Africa's rapidly-growing cities, women are underrepresented in the transport sector, with respect to decision-making, planning and management, operation and service delivery (UN Habitat, 2018; Muhoza, Wikman, & Chavez, 2021).

There is budding research on women's travel needs and women's challenges in accessing public transport in African cities, including position papers commissioned by the Volvo Research and Educational Foundations (Salon & Gulyani, 2008; ActionAid International, 2016; Vanderschuren, Phayane, & Gwynne-Evans, 2019; Jennings et al., 2019; Porter et al., 2020). However, there have been too few detailed exploratory analysis and reflections on gender-responsive transport policy, planning, and governance. Filling this gap is crucial, because in Africa women's access to transport and other public and private resources tends to be dictated by a mix of patriarchal, socio-cultural, technical, economic, and institutional factors. Significant changes are needed to transform patriarchal social systems and path dependencies in transport planning and governance processes. Drawing on literature, empirical studies, and citizens' experiences in Lagos, Accra, Nairobi and Cape Town, this paper offers reflections on the status of, barriers to and opportunities for achieving gender-informed mobility policy and planning in Africa. This is intended to facilitate the identification of pathways for mainstreaming gender concerns in transport.

1.2 Objectives and Scope

This thought piece is intended to:

1. Provide an overview of the extent to which gender considerations have been mainstreamed into national and city transport policies in four African cities,

2. Highlight and reflect on the key transport-related barriers experienced by women and the institutional issues militating against gender-responsive mobility policy and planning in the study cities; and

3. Recommend ways forward that could be adopted to better understand and strengthen gender-informed mobility planning and governance.

The scope of the paper is focused primarily on contextual factors (patriarchal social systems) and institutional challenges to gender-inclusive transport policy and urban mobility planning issues in the capital cities of Accra (Ghana), Lagos (Nigeria), Nairobi (Kenya) and Cape Town (South Africa). These four cities were selected for case studies to enable a broad contextualization of the challenges. The intention is to identify practical strategies for real policy change and ways to implement gender-responsive projects and programs in the case-study cities and other African cities with similar characteristics with respect to their regional sub-group, city size and socioeconomic factors.

1.3 Methods and Approach

The approach to developing this thought piece generally aligns with a scoping-study methodology that aims to offer insights and reflections on the status of, barriers to and strategies for achieving gender-inclusive urban mobility policy and planning in the four case-study cities. It emphasizes a shift from primarily quantitative modelling approaches to qualitative, context-specific enquiries that allow for social-equity issues in the transport system to be evaluated. The reflections in this paper are drawn primarily from three sources:

- *Policy and Literature Reviews*: A review of current and existing national and city-level transport policies was performed for Lagos, Accra, Nairobi and Cape Town to assess how gender issues have been addressed when establishing transport sector goals and where there may be policy gaps. In each city, national policies, plans and laws governing the transport sector were reviewed (see Appendix II). In addition, relevant grey and academic literature published by African-based researchers on gender, mobility, and inclusive transport were reviewed to understand the current research trends and proposals regarding gender-inclusive transport.

- *Key Informant Interviews*: Key informant interviews with representatives of the public and private sectors and civil society provided insights and new information, as a complement to the policy and literature reviews. The study employed purposive and snowball sampling, where 15 key informants were interviewed. The key informants were made up of practitioners working in government, transport ministries and related agencies (5 interviewees), academics and researchers in transport planning/engineering and urban land-use planning (6), and gender experts/advocates (4) across the four study cities (see Appendix III). Expertise in transportation, mobility, gender and the status of women in the transport sector, and an ability to provide insights and other information, were criteria applied in the selection of interviewees for the study. Statistical representation was not sought, due to the qualitative method of the

research (Jennings & Arogundade, 2021). The sampling procedure entailed identifying and contacting interviewees via email. In the end, fifteen informants were interviewed: four each in Lagos, Accra, and Nairobi, and three in Cape Town. The smaller number of interviewees in Cape Town was due to failed attempts to obtain an interview with a representative from the Ministry of Transport. The interviews included questions about gender issues in the field of public transport and were semi-structured. Women's participation in policy decision-making and processes, challenges to mainstreaming, and upcoming prospects for an inclusive transport system were among the major topics discussed.

- *Research and Personal Experiences*: The authors relied extensively on their working experience as urban social researchers working and residing in sub-Saharan Africa and their personal experiences with gender-related issues when navigating public transport systems in African cities as women.

The study cities (Lagos, Accra, Nairobi and Cape Town) were selected due to the similarities in their institutional arrangements for public transport planning and management and the dominance of informal private operators, characterized by low-occupancy buses, poor service quality, inefficient transport services, and a lack of adequate safety and security measures for women. The cities also exhibit limited transport infrastructure and significant gender inequalities in access to transport.

1.4 Structure of the Paper

Following this introductory chapter, the paper is organized as follows. Chapter two presents an overview of gender and mobility issues, emphasizing critical barriers to women's access to public transport in Africa. In chapter three, national- and city-level policies, plans and legislation on transport are reviewed with respect to their gender responsiveness. In chapter four, an analysis of and reflections on the status and barriers to women's access to public transport systems in four African cities is presented. Conclusions and recommendations for promoting a gender-informed transport policy and planning process at the city level are presented in chapter five.

Chapter Two: Current Gender Characteristics of - Travel in African Cities

2.1 Mobility Patterns and Barriers: A gendered perspective

Africa's transit industry is gradually changing as governments across various countries (e.g., South Africa, Tanzania, Ethiopia, Nigeria, Morocco, and Ghana) attempt to introduce new modes of transit, including BRT, light rail systems, and e-ridesharing. This notwithstanding, access

to these modes of transportation across gender and socio-economic status is unequal. Many African cities are lagging in meeting current and future demand for travel, due to limited investment in the public transport sector and rapid urbanization.

Across sub-Saharan Africa, there are linkages between travel, gender, and cultural, religious, and social expectations. Nowhere are the connections between gender and transport more evident than in Africa, which is dominated by patriarchal societies with gender-responsive socio-cultural norms (Porter, 2008; Porter et al., 2020). However, access to mobility for men and women varies across age, culture and socio-economic status, which present distinctive mobility barriers and opportunities for different demographic groups. For instance, Porter and Gwaka have both noted a moral component to travel amongst young Africans, especially young women (Porter et al., 2017; Gwaka, 2018). Travel has been considered a temptation, leading to promiscuity for young women and being pulled into the wrong crowd (leading to gangsterism, crime and substance abuse) for young men. Gender roles have not changed significantly over the past few decades, despite a surge in female involvement in higher education and paid jobs. Thus, The household responsibility hypothesis asserts that societal gender roles are determined at the household level. Women (and in particular low-income women) are primarily homemakers with limited mobility and transport planned to meet household responsibilities, whereas men are mobile breadwinners (Porter et al., 2017; Gwaka, 2018).

It has also been revealed that women tend to work closer to home and make short-distance trips due to their time-space restrictions, such as childcare responsibilities. They also employ trip-chaining more frequently, carrying out relatively more complex trips than their male counterparts (Uteng, 2011; Uteng & Turner, 2019). As a result of their limited mobility, women's daily trips, tied to activities such as shopping, household chores, errands, and religion, are more commonly carried out outside peak traffic times compared to men's. Accordingly, transportation networks should be designed to provide services that extend beyond peak-hour journeys for daily mobility access to be gender sensitive. As elsewhere, African cities demonstrate socio-economic inequalities in how their citizens utilize public transportation (Chatterton, 2018). With respect to transport modes, women and girls are less likely to travel by car, motorcycle and bicycle, and more likely to walk or travel by public transit (Agyemang, 2017; Sabry, Saadallah, & Ayad, 2017). Due to their relatively higher economic position, men are more likely to drive cars (Amoh-Gyimah & Aidoo, 2013; Diaz-Olvera, Plat, & Pochet, 2016). Due to availability and price, low-income women rely more predominantly on public transportation to satisfy their travel demands compared to men. I.e., women have less access to private vehicles and are therefore more likely than men to take public transportation. For women working in the informal sector in urban areas, the use of informal public transport is significantly higher than women in other contexts, due to its affordability and to a lack of formal transportation options on preferred routes. For example, commercial minibuses, commercial motorcycles and commercial tricycles (three-wheelers) are the primary modes of transportation for more than 70 percent of households in Dar es Salaam that depend on the informal sector for as their primary source of income (Joseph et al., 2020). For these households, however, there are no persistent differences in use between men and women regarding

the various modes of formal and informal motorized public transportation (Mbara, 2016; Macha-do-Leon, De-Ona, Baouni, & De-Ona, 2017).

The exposure of women and girls to harassment, bodily injuries and violence (especially sexual abuse) when travelling is prevalent in many cities. When travelling, a significantly larger proportion of women (particularly young women) than men experience unwelcome attention and sexual harassment. These safety concerns are greater at night when walking, using paratransit and other public transportation (Chakwizira, Bikam, & Adeboyejo, 2018;). Studies show convincing evidence that mobility restrictions have been placed on young women and girls due to worries about attacks, promiscuity, rape and unplanned pregnancies (Bwire, 2011; Schuyler et al., 2017). In Kigali, Rwanda, 55 percent of women said they were worried about going to educational facilities after dark (UN Women, 2013).

Moreover, a startling 97 percent of the women polled in a 2013 UN Women research project in Egypt reported being sexually harassed, most frequently in the form of touching or groping, which included harassment in public settings such as streets and public transportation. Among the affected passengers were women from low-income communities with no alternative modes of transportation. When choosing their form of transport, route, and time of day to travel, women are constrained by the fear of harassment and/ or assault. As a result, women and girls tend to travel in groups to feel safe and to discourage promiscuity (Odufuwa, 2008; Porter et al., 2017). Whilst daily harassment has been reported as a significant barrier to women's use of public transport systems, engineers and planners have either neglected the realities of harassment and violence against women in the design of transport systems or are powerless regarding decisions on incorporating gender-responsive measures in transport-system designs. The effect of this is that gender considerations are not often factored into transport investments and programmes interventions. However, women generally feel safer in mixed-used areas developed with clear sightlines to public places, infrastructure that prioritizes pedestrians, visible public signs, good street lighting, and—most importantly—public spaces that meet the needs of a varied population of users.

In some African societies, gender prejudices also influence women's use of some modes of transportation. For example, cycling has been considered unacceptable for women and girls as it is seen to be inappropriate in some cultural contexts (El-Dorghamy & Mosa, 2016; Seed-house, Johnson & Newbery, 2016, Acheampong & Siiba, 2018). Moreover, in most West African nations, motorcycles are the predominant mode of transportation and mobility, but women rarely operate them in cities. However, riding as a passenger on a motorcycle has frequently been thought permissible (Seedhouse, Johnson & Newbery, 2016; Evans, O'Brien & Ng, 2018). Women's limited access to motorized transportation modes have been found to make it difficult for them to access many locations and urban resources, including markets and places of employment.

Furthermore, Porter found that some young women have suffered from family and society-imposed mobility limits stemming from their perceived fragility and need for care (Porter, 2011). Patriarchal socio-cultural norms have also created barriers to women's inclusion in the admin-

istration of the transport sector. Poor representation of women as employees in the industry emanates from and reinforces male control of the transport industry and travel operations. This lack of representation also results in gender-blind and gender-biased transportation policy and planning in African cities (Uteng & Turner, 2019, Kacharo, Teshome & Woltamo, 2022). Further, women in Africa are confronted with significant discrimination in the transport industry, limiting the breadth and quality of mobility and job opportunities open to them (Porter, 2014).

The World Economic Forum's Covid Action Platform identified opportunities for improving women's mobility through inclusion, participatory design, and pedestrian prioritization (Ypma, Bellmann & Polack, 2020). Similarly, the International Transport Workers' Federation warned of COVID-19 exacerbating existing inequalities and called for measures to support women transport workers during the pandemic (including income protection, access to appropriate sanitation, and measures to end violence and harassment of women) (International Transport Workers' Federation, 2020). In addition, they argued for gender impact assessments and a gender-responsive strategy that can create a "gender-equal new normal," with decent jobs for all transport employees. Transportation-related research needs to understand the gender component of the transportation sector, in order to contribute to improving accessibility and safety and guide public transportation planning and operations. The Flone Initiative published an assessment of the impact of the COVID-19 pandemic on 30 female transport workers in Nairobi, including their exposure to job loss, food insecurity, fear of infection, and police harassment while working after curfew hours (Flone Initiative, 2020). Additionally, operators, drivers and other providers of informal forms of transportation services frequently perpetrate gender-based violence, assault and harassment (GBVAH) perpetuation.

2.2 Conceptual Framework: Patriarchy and Transport Disadvantages of Women

In this thought piece, we draw on feminist theories of patriarchy as we reflect on how social systems and institutions contribute to women's vulnerability in the transport sector. Patriarchy is broadly used herein to describe societal systems dominated by hierarchical power relations that favor masculinity over femininity and allow males to dominate and exploit women (Bain & Arik, 2016). They limit women's access to transport through access to resources/power as well as participation in decision-making regarding employment, travel modes and travel times. In this thought piece, the transport disadvantages framework (see Figure 1) as specified by UN Women (2017) and Tanzarn (2017) has been adapted as an analytical framework. The framework is used to identify barriers to gender-informed mobility planning in Africa and to investigate the how patriarchy contributes to women's transport vulnerabilities, through political/administrative, socio-cultural, and economic institutions in the African cities studied.

Gender inequalities
- Space/Activity patterns
- Time use
- Resources/Assets
- Power

Gender differentiation

Patriarchal socio-cultural norms and values

Restrictions imposed on

Gender-differentiated demands for, and benefits from, transport

- Gendered travel patterns and needs
- Safety and security
- Women's transport burden
- Women's restriction in:
  - Employment opportunities
  - Mobility
  - Access to transport means
  - Visibility and representation

Probable solutions

- Changes in socio-cultural attitudes
- Empowerment/Capacity building for women
- Evidence-based integrated transport policy and planning
- Women-friendly work spaces and transport systems
- Awareness creation on rights and entitlements
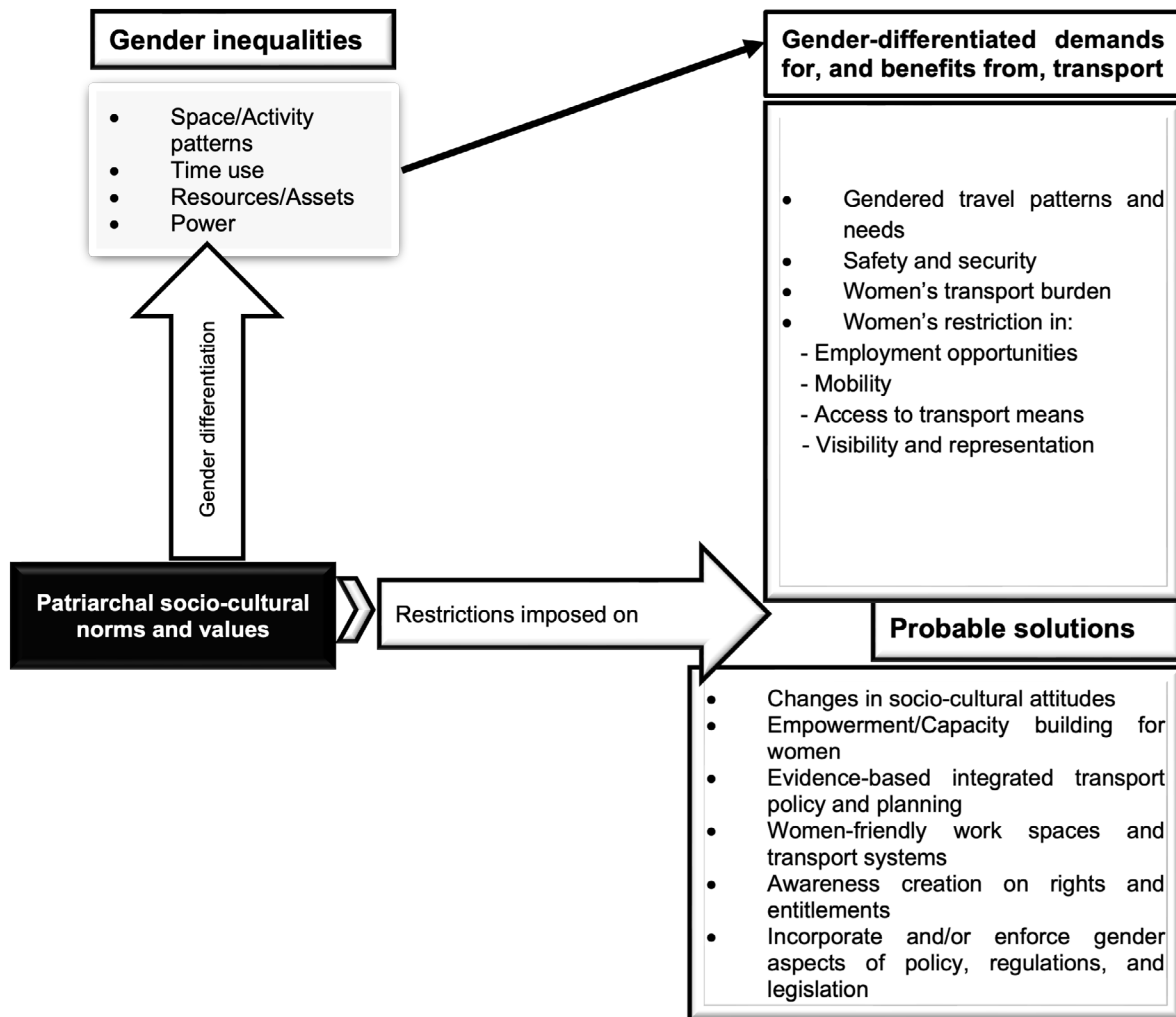- Incorporate and/or enforce gender aspects of policy, regulations, and legislation

Figure 1: Patriarchy and Transport Disadvantages of Women (Source: Adapted from Tanzarn, 2017)

Women and men travel in different ways, and they have distinct needs with respect to accessibility, mobility, and safety. Women's excessive workloads and accompanying time poverty, gender inequalities in space and activity patterns, unequal resource distribution, low educational achievement, exposure to crime, and limited access to resources are all rooted in patriarchal social systems that define gender stereotypes and household gender roles (see Figure 1). These, in turn, restrict women's mobility patterns, access to transportation, and work opportunities through a confluence of gender- biased standards and gender-based resource disparities (Jennings, 2015).

Chapter Three: Gender Mainstreaming in Transport Policy and Planning in African Cities

Since the 1990s, international development organizations and governments have conducted extensive research on gender issues in general and women's access and mobility in urban and rural transportation in developed countries in particular (Peters, 2013). Accordingly, a body of literature exists to guide policymakers, transportation planners, and practitioners as to how to mainstream gender into transport policy, planning, infrastructure design, and the provision of services (Maramba & Bamberger, 2001; Tanzarn, 2019). "However, empirical evidence indicates that little progress has been made across Africa in achieving gender mainstreaming." All of the studied cities are in countries with national constitutions, legislation, policy frameworks and commitments that refer to promoting the principles of gender equality and gender empowerment. For example, the constitutions of Ghana (1992), South Africa (1996), Nigeria (1999) and Kenya (2010) enshrine provisions for guaranteeing equal opportunities and prohibiting gender-based discrimination.

Relevant institutions such as ministries, departments and agencies focused on women and gender, as well as gender focal points, have also been established. Separate and comprehensive national gender policies have also been adopted in all of the study countries to give policy direction to the constitutional provisions on gender equality and to create enabling frameworks for mainstreaming gender equality and women's empowerment into national and sectoral policies, plans and programs (see Appendix II). However, the link between transport (mobility) and gender is not explicit in the gender policies except for Ghana's National Gender Policy (2015), which makes commitments to promote "affordable, reliable and decent transport services and infrastructure for all, particularly women, the vulnerable, the aged and persons with disabilities."

Gender-mainstreaming measures have also been included in the study-city countries' national development policies and plans. Ghana's Medium-Term National Development Policy Framework (2022-2025), for example, identifies "limited gendered mainstreaming in sectors" as a critical issue of concern for national development and incorporates specific policy measures to enable the country to attain gender equality and equity in political and social development and strengthen gender mainstreaming and economic empowerment of women. Likewise, South Africa's National Development Plan, 2030 and Medium Term Strategic Framework: 2019-2024), Nigeria's National Development Plan, 2021-2025 and Kenya's Vision 2030 and Medium Term Plan 2018-2022 all contain varying levels of gender-equality-enhancing strategies aimed at mainstreaming gender into national development processes. These strategies are intended to be translated into various sector-specific plans and legislations, including those for the transport sector.

Although national/city-level plans and policies do not necessarily guarantee that actions are implemented, they contain critical guiding principles for moving from advocacy to action.

National transport policies and plans are vital in determining whether gender mainstreaming issues receive priority in urban planning and resource allocation. Therefore, it is essential to analyze for each city the extent to which national and local transport policies, strategies legislation and regulations address women's mobility, safety and security needs, visibility/inclusion in policymaking, planning and service provision. Three main questions were used to assess this:

1. Does the policy/legislation acknowledge gender inequalities in transport?

2. Does the policy include specific gender-equality objectives/principles?

3. To what extent does the policy outline specific and proven gender strategies to address harassment, women's underrepresentation, accessibility, safety and other gender issues in transport?

The majority (nine out of eleven) of the transport policies and plans evaluated for the four study cities acknowledge that gender inequalities are rife in the transport sector (see Figure 2). This acknowledgement notwithstanding, a content analysis of the policies reveals that measures to address these inequalities were insufficient and primarily addressed only issues related to employment, non-motorized transport, education and safety. Explicit policy interventions to address differences in gender mobility needs regarding accessibility and security are lacking. The Lagos Non-Motorised Transport Policy, 2018 and the Draft Urban Transport Policy of Nigeria are the only policy documents that include specific strategies to address accessibility issues for women, whilst addressing harassment was only mentioned in the former.
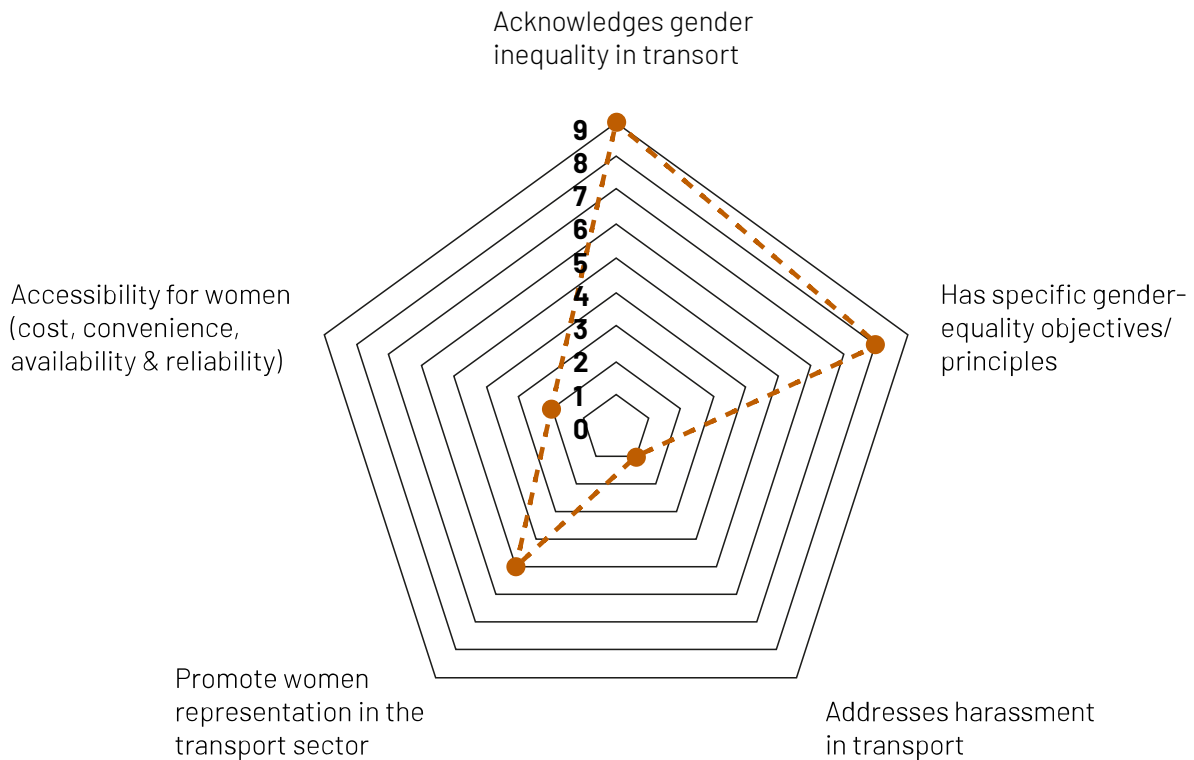
Figure 2: Integration of gender considerations in national and city-level plans and policy documents

For Accra, the National Transport Policy (2020) of Ghana identifies the transport sector as a critical player in attaining the SDG goal of gender equity. It includes a specific objective that aims to ensure that the "transport system responds to the socio-economic needs of women, children and the aged." However, beyond this objective, the policy fails to acknowledge and identify the sources of existing gender inequalities in transport in Ghana. More worryingly, gender-specific interventions have not been mainstreamed into the policy to help address the mobility needs of women and barriers to transport safety and security. Regarding women's employment in the transport sector, the policy commits to encouraging women to take transport-related courses and programs and enhancing the conditions of women in the transport industry by "promoting the role of women as service providers and professionals."

No governmental entity is responsible for integrating gender and transport needs in Accra. However, the Women Moving The City! initiative aims to narrow the gender gap in the transport sector while giving women free access to training, hiring women as bus drivers, and providing better employment opportunities[1]. So far, sixty women have been selected for six months of training with the Government Technical Training Centre (GTTC) in Accra, in this initiative led by Scania West Africa in partnership with the Greater Accra Passenger Transport Executive (GAPTE) and the German international development organisation Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). (Scania, 2018).

1   https://www.scania.com/group/en/home/about-scania/sponsorship-and-community-engagement/a-sustainable-society/women-moving-the-city.html

Nigeria's Revised National Transport Policy (2013) is silent on gender mainstreaming. Neither a policy goal nor objective nor specific policy actions have been outlined to address gender-specific needs in urban mobility. However, Nigeria's Draft Urban Transport Policy (2010) has an entire section (Chapter 8) dedicated to gender and vulnerable groups. The gender differences in travel patterns and mobility needs for men and women are adequately acknowledged, with a general policy goal "to develop an efficient, self-sustaining, adaptable, affordable and reliable mobility needs for women, children, elderly and the physically challenged citizens with special mobility needs." Despite the attention and recognition given to gender mobility needs in the policy, limited strategies have been outlined in the policy to help achieve the goal, except for increasing female employment in the transport sector and promoting multi-trip/time-based fares.

The Lagos State Transport Policy (2018) acknowledges the "lack of inclusiveness in road transport provision for vulnerable groups," including women, as a significant concern. Although it sets a policy objective to address the challenges faced by these groups, it does not put in place specific strategic actions to address these challenges, nor does it indicate how the challenge could be addressed. The Lagos Non-Motorised Transport Policy (2018) is more gender-responsive, as it promotes "gender equity through the provision of non-motorised transport (NMT) and public transport facilities that are safe for women to use." It commits to ensuring that public streets are accessible to all. It stands out among the other city/national policies reviewed, in that it includes measures for collecting gender-disaggregated data on NMT users and user behavior to aid in planning and monitoring policy interventions.

The Lagos Metropolitan Area Transport Authority (LAMATA) is responsible for coordinating transport planning, policies, and public transport infrastructure implementation. Since 2013, LAMATA has been committed to hiring women as drivers for a high-capacity Bus Rapid Transit system (BRT) in Lagos (Carvajal & Alam, 2018). The aspiration is to achieve full gender parity among Lagos' bus drivers in the future. However, Lagos' general transport policies regarding women's needs and safety considerations are weak. In addition, there was poor representation of women at the inception and conceptualization of Lagos' transportation policies and laws.

The South Africa Draft Revised White Paper on National Transport Policy (2017) explicitly acknowledged the lack of gender equality in the transport sector. It specifically identified pregnant women as one of the special categories of passengers whose needs must be addressed by public transport. To advance human resource development for the transport industry, this policy seeks to "better understand and help overcome barriers to entry and the successful operation of SMMEs, black and women-owned enterprises in transport, in a manner that is grounded in the realities of the marketplace." The 2018 Draft White Paper on Roads Policy for South Africa contained commitments to ensuring that the design and construction of new roads consider the needs of users with special conditions, including pregnant women and female passengers who are "particularly at risk of crime and abuse." The South Africa Draft National Non-Motorised Transport Policy (2008) acknowledges the transport burden on women. It seeks to promote non-motorized transport to reduce women's workloads and the time and effort that women spend on transport activities. The Comprehensive Integrated Transport Plan (2018 – 2023) for

the city of Cape Town seeks to increase women's employment in the transport sector by training women "in technical career streams, apprenticeships and mentorship," as well as establishing Women's Road Maintenance Teams. In general, Cape Town's transport policies and plans do not include specific gender-responsive actions to comprehensively tackle the issues surrounding differences between men and women as transport users, workers and decision-makers, or gender-responsive transport infrastructure. All of the plans have stand-alone policy measures that would not adequately address accessibility, sexual harassment, employment and other gendered mobility inequalities in the transport system.

The South African National Taxi Council (SANTACO) is a national organization representing South African taxi associations and individual cab drivers. SANTACO ensures that the taxi industry is regulated and that it offers public transport services that are secure, dependable, and reasonably priced. SANTACO seeks to advance gender equality in the sector (Department of Statistics South Africa, 2021). However, the only recognizable effort of the Council is its pledge to work with the South African government and people to prevent gender-based violence and femicide (SA News, 2020).

Of all the urban transport policies studied, the Kenyan Integrated National Transport Policy (2009) is the only policy document that contains explicit acknowledgment that gender mainstreaming is a significant challenge in the transport sector. It identifies gender imbalances in access and mobility as a critical issue. It recognizes that women in rural and informal urban settlements bear the largest share of the household transport burden. This is because they spend a lot of time on transport activities in fulfilling the basic needs of families. This acknowledgement notwithstanding, the strategies outlined in the document all aim to promote gender balance in access to and use of Non-Motorized and Intermediate Transport (NMIMT), to the neglect of other public transport modes. Key strategies to achieve gender balance in the policy include ensuring that NMIMT vehicles and facilities are gender responsive and reducing restrictions hindering women and girls from using NMIMTs.

Similarly, the Nairobi City County Government Non-Motorised Transport Policy (2015) outlines various safety, security, socio-cultural and personal barriers affecting the use of NMIMTs and commits to "Restore cycling by improving on road safety, providing a coherent cycling network, encouraging women and school-going children to cycle." However, the strategic objectives and actions outlined in the National Transport Master Plan, including a Transport Master Plan for the Greater Kampala Metropolitan Area (which sets out a framework for developing the transport sector over 15 years, 2008-2023) and the Nairobi Metropolitan Area Transport Authority Strategic Plan 2019-2023, are gender neutral. The limited focus of the existing policy frameworks governing transport development on NMIMTs in Nairobi does not ensure that the entire public transport system is gender-responsive and addresses specific gender mobility needs, employment inequalities and the safety and security concerns of all transport users, including women. Muhoza, Wikman & Chavez (2021) have reported on the extent of women's involvement in policymaking in Nairobi. They noted that the Principal Secretary (PS) for transport and the Director of Maritime and Shipping Affairs are both women. Likewise, the PS of transportation and the Senior Trans-

port Economist on road transport are women. Further, they noted that women's engagement in transport policy and decision-making does not guarantee that solutions will be implemented for addressing gender issues. What is essential is to ensure that gender issues in transport are fully understood in policymaking and that there are advocates for planning processes that aim to bring about change.

Article 201 of Kenya's constitution (2010) has resulted in laws, rules, policies, and institutions that support gender parity. The National Gender and Equality Commission (NGEC) is one of them. Kenya's NGEC ensures that gender mainstreaming is included in the public and commercial sectors (ROK, 2011). The NGEC maintains a significant oversight role, ensuring that gender mainstreaming is prioritized as a fundamental policy of national institutions, especially rural transport agencies. Although the mandate of NGEC is to promote gender equality and freedom from discrimination, mainstreaming issues of gender, its priority focus is on four major agendas: universal healthcare, food and nutrition, manufacturing, and housing.

To summarize, gender-responsive transport laws are required to ensure that strategic actions outlined in transport-sector policies and plans are supported by the legal infrastructure that is necessary for their implementation. There is poor integration of gender considerations into transport policy frameworks, plans and legislation in the study cities. An evaluation revealed that thirteen transport-related legislations and regulations (see Appendix II) for the cities studied were gender-blind, with no overt attempts to ensure gender mainstreaming. This silence on gender in transport legislation is a cause for concern. Notably, gender mainstreaming measures/strategies are not overtly captured in transport policy frameworks and plans beyond general statements committing to gender equality, improved accessibility, safety for all and implementing universal design.

Moreover, although many of the transport policies and plans included objectives on gender equality, these were included as stand-alone policy objectives that were not fully mainstreamed and integrated across all dimensions of the policies. The incorporation of gender dimensions in national transport legislation, however, need not be seen as an added burden but as a means of illuminating the transport needs of women, men, girls and boys in policy and planning. Gender and transport experts in the studied cities have called for mainstreaming of gender in public transportation. ¨

> "We expect the transport sector to mainstream gender issues. I do not think that generic policies on gender are beneficial because it leads us to assume who we are talking about. Yet, we know that the issues of transport, especially public transport and women, are so specific that you cannot just generalize it to vulnerable groups. We need to go deeper to disaggregate different categories of women and their needs" **(Gender Expert and Researcher, Key informant interview, Nairobi, November 2022)**.

> "Not enough is in the national transport plan regarding women's concerns. Where there are policies, there is a problem of implementation...the will to implement. It seems that

when we talk about gender inclusion in all those policies, it is like, let's just tick all those boxes…. like there is a woman in the bus, there is a woman in this and that…But not necessarily to address women's needs, concerns, and well-being" **(Transport Planner, Key Informant Interview, Accra, November 2022)**.

Although gender-responsive policymaking and planning is crucial, implementing targeted measures to address existing transport challenges that women face and political commitment from city and national-government authorities is lacking. Transport planners and engineers appear helpless in their efforts to design gender-responsive transport systems as there is no supporting policy and legislative framework to leverage for developing them. This is a root cause of gender-based inequalities in access to public transport in many African cities.

Chapter Four: Deep Dives on Women and Public Transport in Four African Cities

The inability of governments in sub-Saharan Africa to address the transportation needs of their rising populations while addressing gender-differentiated mobility patterns is hampering women's access to safe and inclusive transportation. In public transport planning, efficiency often takes precedence over gender considerations. As a result, the accessibility and mobility concerns of women and other disadvantaged groups are ignored or poorly understood by many transport experts in Africa. The public transportation systems in Accra, Lagos, Nairobi, and Cape Town pose similar mobility challenges for women. Public transport is a primary means of transportation in these cities, as in many other African cities. Public transport in these cities is unreliable and characterized by: inadequate service supply; low-capacity vehicles operating without planned schedules and formal authority; overcrowding; poor safety and security measures; and gender inequalities. Furthermore, women are underrepresented in the transport industry in these cities, spanning from higher-level decision making, planning and management down to the operational and service delivery levels (Muriuki et al., 2018; Muhoza, Wikman & Chavez, 2021), as they are often seen as lacking in agency and/or capacity. Gender stereotypes and patriarchal norms have created entry barriers for women's participation in the transport sector.

"We have these norms or stereotypes in our society that really see women only as people who cannot handle danger, people who cannot address issues that require courage or who do not have the heart to deal with certain situations when they happen. The man is the one who has a heart and what it takes to work in areas like the transport sector" **(Academic/Researcher, Key informant interview, Accra, November 2022)**.

Men are typically in charge of transport policy development, project design, planning, and implementation (Lucas et al., 2019; Muhoza, Wikman, & Chavez, 2021). They also determine the industry's employment criteria and dominate transport-industry governance.

4.1 Women's Access to Public Transport in Accra: Institutional Barriers

Accra is Ghana's capital city and the country's most populated city. According to the Population and Housing Census, Greater Accra had a regional population of 5,446,237 in 2021 (Ghana Statistical Service, 2021). Regarding modal choice, most Ghanaians (95%) travel by informal modes of transportation offered mainly by independent operators, through a mix of paratransit modes including buses, minibuses (trotro), taxis and Uber (Kumar, Kwakye & Girma, 2004; IBIS Transport Consultants LTD, 2005). Even in the high-income group, very few women own private vehicles for personal mobility and business use. Women dominate the use of cheaper modes, like the trotro, compared to the use of taxis and web-based services like Uber because of affordability.

Formal public transport is limited to two bus operators: the Metro Mass Transit Ltd (MMT) and the Aayalolo BRT buses. Together, these service providers only supply about five percent of the total passenger volume in the city. Government subsidies make MMT fares affordable for women, but MMT bus availability and reliability are significant issues. Comfort, safety, and convenience in buses are crucial issues for women in Accra. Hence, most women use the trotro, which is always available. Accra's public transportation system is generally not gender-responsive; it fails to meet the specific mobility needs of women, children, older people, and people with disabilities. This is because the current systems largely reflect a dominant patriarchal societal structure.

> "The transport planning in many of our Ghanaian cities is geared towards the typical male or elite and upper-middle income road users who can own a car, without giving any significant assistance or provisions for the ordinary woman" **(Transport Planner, Key Informant Interview Accra, November 2022)**.

The formal public transport buses are also not responsive to the particular needs of women traders with wares.

> "The Ayalolo [BRT] and MMT are not conducive for the type of goods transported by female traders, and comfort is a real challenge for women. You often see them squeezing their wares/goods onto the bus in peak morning hours with all categories of people in formal and informal employment and children travelling to school" **(Practitioner/Consultant, Key informant interview, Accra, November 2022)**.

In addition, a lack of facilities to ensure passenger convenience and comfort make BRT unattractive for women in Accra. For example, there is little to no provision for weather shelters and passenger seats at the BRT station in Kimbu. In addition, the need to queue in the sun for buses with varying arrival times often induces women to use the trotros. It is worth noting, however, that the Ayalolo Buses (BRT) in Accra is the only transport service that makes provisions for nursing mothers, by designating dedicated seats for their use (see Appendix IV).

Informal transport systems have also been noted to be uncomfortable and unsafe for vulnerable groups, including women (Amoako-Sakyi, 2017). Unfortunately, the informal transport operators –

including motorcycles, auto rickshaws, trotros and informal buses – make no specific provisions for women even though women constitute a majority user group. They simply ignore that women get pregnant, travel with children, and have to nurse their children. Møller-Jensen (2021) reported that relying on trotros is often problematic for women as they are rickety and unpredictable, with no guarantee the services will come as needed. The safety records of the paratransit operators in Accra are also a significant concern amid intense traffic congestion.

> "I have lived in Accra with traffic congestion since 2001. Whilst traffic affects everyone, its impact on women is a big issue due to women's multiple roles, including dropping and picking up kids from school, shopping and working. I would say that the traffic is affecting everything that a woman does, making our transport burden worse as tro-tros are unreliable and unsafe" **(Transport Planner, Key Informant Interview, Accra, November 2022)**.

Figure 3: Accra BRT – Ayalolo
Credits: Bola Oguntade – Poseidon imaging

Much of the justification for Ghana's gender-neutral approach to transport planning has been the government's declining budget and limited financial capacity. Due to competing demands on government budgets, the focus in many Ghanaian cities is to plan for basic transport needs that facilitate the mobility of everyone. Thus, planning departments pay less attention to more nuanced and sophisticated approaches, such as gender-responsive planning.

> "Primarily, when donor-driven road projects are designed, they work well with gender considerations. However, government projects have budget constraints. … At the end of the day, the Ministry's Key Performance Index (KPI) is the length of the road rehabilitated, FI will, and the length of the road developed. So, you do not have the money to do these extra gender issues … they call them 'extra' and do not see them as an integrated part of the road" **(Transport Planner, Key Informant Interview, Accra, November 2022)**.

Moreover, the transport industry in Accra has long been male-dominated. The underrepresentation of women in the industry primarily emanates from poor public perception and gender stereotypes, lack of access to resources and challenging working conditions connected with the paratransit sector. Because the paratransit transport industry has historically been violence prone and dominated by young men, it prevents many women from accessing employment opportunities in transportation. In addition, most bus and minibus operators are men, who have the requisite resources and can obtain loans for transportation investments considerably more readily than women.

The situation is changing, however; there are now some female mechanics and commercial female drivers in the state-run transport services including the BRT- Aayalolo buses, as well as female taxi, Uber and commercial motorcycle/motor tricycle operators. The representation of women in top-level decision-making roles, as well as in transport engineering, has also increased recently. Currently, women serve as (Chief) Directors of transport-sector-related Ministries and Departments at national and decentralized levels. Moreover, an all-female engineering team is working on the Abidjan-Lagos road corridor as part of the ECOWAS project. Likewise, the engineer in charge of the ongoing World Bank BRT project in Kumasi is a woman. Thus, women are increasingly engaging in technical transport positions. Regrettably, however, these increases are modest and insufficient to promote gender-informed mobility planning and policy in Accra. Women's needs in transport, both as users and as service providers, remain unmet. For example, even when women manage to get involved in higher-level decision-making processes and transport engineering, they tend to be discriminated against and expected to provide less-technical services, such as taking minutes or making coffee at meetings.

> "Our sector is male-dominated and male-biased. I was in a position as the chief engineer for close to seven years, and I think they saw me as the weaker vessel. When there was any opening for the director position, either in the head office or the regional offices, they would say she is a woman; how does she take care of her children? When I joined the Ministry of Roads and Highways, I was the only female engineer there and struggled.

I had to create an image for myself to be seen as capable" **(Transport Practitioner, Key Informant Interview, November 2022)**.

As described by the key informant above, subtle forms of discrimination and negative attitudes can hamper women's employment opportunities in the transport sector and keep the industry male-dominated. Women's engagement in the informal transport industry in Accra is even more challenging, because job security, income, and employment tend to be affected during maternity and childcare periods.

4.2. Women and Public Transport in Lagos, Nigeria

Lagos is a significant economic, financial, and social center with a robust and rising population estimated at 26 million inhabitants occupying a land area of 3,577 km2[2]. About five million vehicles travel daily along the State's 16,000 km road network. (Lagos State Government, 2020 Commuters on the average spend up to 40 percent of their salary on transportation (Nagaba, 2019). The transportation system in Lagos is insufficient and inefficient with respect to journey times, affordability, comfort, accessibility, and safety. Lack of access to affordable and safe transport options puts women and other vulnerable groups (such as children, minority groups and the elderly) at risk.

> "There is simply no provision for women in many public transport buses. Everybody boards: whether you have a baby or not, you board! It is only BRT that is kind of making concessions for the needs of women. But the other transport, the tricycles, Danfos, the Molue [buses], there is no provision for women, for their safety, for their care, for the reality that they get pregnant, they have children, and they have to nurse their children, there is no such provision for them" **(Gender expert, Key informant Interview, Lagos, November 2022)**.

Moreover, the actions of *"agberos"* (transport union touts) have been a source of concern for public transport users, particularly women, as their aggressive practices and penchant for violence threatens women's unfettered access to transport termini and bus stops. Transport fares are also an issue of concern for informal women traders, as it often exceeds their transport budgets. Although men face similar issues, affordability affects women traders drastically. Apart from their transportation needs competing with other priorities, like taking care of the home and their children and purchasing inventory, women in Lagos also complain of not receiving correct change from conductors when they pay fares, being required to pay extra for seats for their goods and being dropped off at locations other than their planned destinations. Women often report that drivers get to a point in the journey and stop and say, "Sorry, this is where we are stopping, we are turning around, and we are going in a different way" because there is traffic or because they fear being stopped by the Lagos State Traffic Management Authority (LASTMA), or

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2   https://guardian.ng/news/how-agbero-multiple-dues-spike-transportation-costs-by-25-in-lagos/

by "agberos,". This inconveniences women, especially when they are travelling with luggage and/or children (interview with gender expert, November 2022). Since women shoulder the largest responsibility for household budgeting and ensuring that there is enough money for food, clothing, etc., increases in transport costs can affect other household needs. Women are also more likely to sacrifice their own needs, e.g., food, to meet the transport and other needs of the family.

Otu & Agugua (2020), reporting on the results of a survey, indicated that in Lagos young women in particular experience sexual harassment when using Okada (motor taxi) services. One Okada rider reported that the Okada driver will make abrupt stops, so that female passenger's breasts will hit them. Furthermore, they found that female respondents expressed feeling particularly unsafe when walking to transport terminals. Up to 73 percent of female respondents in their survey indicated that they choose not to use tricycles or motorcycles because they fear becoming victims of some form of sexual harassment." In our own interviews, we found that female bus conductors and BRT bus drivers in Lagos share similar concerns regarding people shouting at them or threatening to beat them up. Several interviewees reported that women experience groping and sexual harassment and need to be vigilant, particularly in tight paratransit spaces.

> "A lot of women generally report that when they get to a public transport stop/station, they also have to look at who is on the bus so that they know that it is not just men on the bus or at least older men in the bus, maybe there are also children so that they feel more comfortable getting on that bus" (Gender expert, Key informant Interview, Lagos, November 2022).

These testimonies indicate that women are highly concerned with harassment and sexual violence in public transport, with women prioritizing security over other attributes of transport services. In general, robbery, assault and pickpocketing, and harassment (or the fear of it, in its different manifestations), continue to be the most prevalent safety and security concerns of women as transport passengers and workers.

> "We received a report about a lady who had her baby on her back on the bus. The baby was crying, and so many passengers were telling her...feed the baby, and she did not want to take the baby and start feeding the baby on the bus. So, she said no, do not worry; I am getting off soon. However, when she got to the stop, the passengers called the police and said she had stolen the baby. So she then had to go to the police station and explain to them that the child was hers. Due to this experience, she indicated that she no longer takes her child on the bus" (Gender expert, Key informant Interview, Lagos, November 2022).

Lagos state government responses to the safety and security concerns of women in Lagos have been encouraging, though limited. Recently, LAMATA launched the SHECAN Tool developed

under the EMPOWER project[3] (Uteng et al., 2021). The EMPOWER project was motivated by actual and perceived risks of gender-based violence, assault, and harassment (GBVAH) experienced by women in sub-Saharan Africa. EMPOWER aimed to increase the ability of transport experts and other significant players to combat GBVAH in urban mobility. The SHECAN tool is an online application that assists decision-makers in addressing sexual harassment in public transportation. The tool offers recommendations to enhance urban transit security and safety, initially for women but ultimately for everyone. The application includes best practices from across the globe to enhance women's safety through interventions such as legal frameworks, surveillance and policing, infrastructure, campaigns, vehicle design, and management (Uteng et al., 2021). The Lagos State Parks and Garages recently introduced barcode security systems to prevent kidnapping and other crimes on buses. Passengers, including women, can scan a bus's QR code to get the bus's details and report incidents. Furthermore, BRT Bus designs also allow for inclusion, though how effective this is is yet to be empirically determined:

> "Dedicated spaces have been provided in the Lagos BRT buses for pregnant women and wheelchair users. While these are laudable initiatives, their effectiveness will need to be evaluated to ascertain the extent to which they address the mobility concerns of women. Besides, most of the emerging initiatives are restricted to formal public transport systems, while informal transport operators cater for the transport needs of most of the population. ... The kind of work that some women do requires that they move with heavy loads and wares, and it is not easy to transport these loads in the BRT buses in the morning. Having to struggle with people that are going to offices is not good" **(Gender expert, Key Informant Interviews, Lagos, November 2022).**

Figure 4: Lagos BRT
Credits: Bola Oguntade – Poseidon Imaging

Most of the vehicles used for providing informal transportation services are obtained under hire-purchase agreements. This is a standard method for purchasing vehicles in Nigeria's transportation industry. Purchasers make weekly payments and, after a certain period of making payments (for example, paying 20,000 Naira weekly for six months), they own the vehicle. Many women navigate gender discrimination by investing in the transport business (Owolabi et al., 2021). Because the vehicles are expensive, microfinance banks often provide vehicles to women via the National Union of Road Transport Workers (NURTW). This cooperative arrangement has resulted in women's investments in vehicle ownership gradually taking off.

A former LAMATA Chief Executive Officer asserted that gender balance is "not simply a moral obligation, but also a financial argument." In Lagos, female BRT drivers have relatively good safety and professionalism records, thus motivating LAMATA to aspire for a gender balance among its bus drivers.

> "I must commend LAMATA, that they are doing quite a lot. There are few female drivers on the BRT. The last-mile buses have female bus drivers on them". **(Transport Researcher, Key Informant Interviews, Lagos, November 2022).**

However, in the informal sector, men occupy top positions in the National Union of Road Transport Workers (NURTW). Only a few women are executive members of any informal transport association in Lagos. There have been some improvements in female representation in the industry in the formal sector. However, the dominance of men in the informal sector (which is mainly unregulated) is the source of social risks for the few women engaged and for whom the informal

transport unions do not provide sufficient protections. Some women have reported experiencing extortion and sexual harassment from union representatives and passengers (Adeyemo, 2021).

The debate regarding female underrepresentation in the transport sector in Lagos raises questions about understanding the barriers and facilitators to women's engagement in the transport sector. Whilst women's representation in the industry is indeed low, it is essential to ask whether women actually want to be engaged in this sector. It is crucial to understand that the underrepresentation is two-fold; there are jobs in the transport sector that are desirable but unavailable to women, and there are jobs that attract less interest from women. For example, bus company owners in Lagos prefer to "hire women bus drivers because the buses they drive last longer and because female bus drivers are punctual…. But there are not that many women that actually come to get hired, and so they do not find many women to hire." **(Transport researcher, Key Informant Interviews, Lagos, November 2022).**

Further, most paratransit operations, like the services provided by Okada and Danfo, are physically demanding, requiring both physical endurance and strength. As a result, these services are primarily provided by young men, with very few women found providing them. Such nuances and barriers must be understood before pursuing interventions, to avoid misdirecting resources.

4.3 Women's Access to Public Transport in Nairobi, Kenya

Notably, walking and public transport are the primary modes of transportation in Nairobi, which has a population of 4.40 million (Kenya National Bureau of Statistics, 2020). Walking accounts for 47 percent of daily journeys, with public transportation dominated by privately-owned paratransit buses and minibuses, accounting for 36 percent. Private automobiles account for only 15 percent of all journeys (Nairobi City County Government, 2015). The remaining two percent is provided using other transportation modes, including trains (which run between the Central Business District and the eastern and southern areas of Nairobi during peak hours) and public motorbikes. Lack of sufficient infrastructure poses significant road-safety issues.

As in other African cities, women in Nairobi face daunting challenges accessing public transport systems. However, different categories of women face different challenges. Responsibilities for delivering and picking up children to/from school, taking care of children, and homecare/shopping makes the transport demands of women with children more complex than those of women and men without children. When traveling with children, women and men must plead with the transport providers or buy a seat. Sometimes after buying a seat for a child, they are asked to relinquish it when an older person boards. This can cause friction, especially when the parent has paid a fare for the child. Whilst some parents do not think their children should stand in buses, prevailing cultural values and sensitivities indicate that children should not occupy seats when an elder or an adult is standing.

Security whilst travelling is another significant concern for women in Nairobi.

"Generally, ladies are timid about travelling late, which is a limitation because you would feel you cannot be late. Considering the way our cities work, when you leave work at a particular time, you have to get home late, then when you load it with picking up a child and shopping, that will be much later" **(Gender Expert and Researcher, Key informant interview, Nairobi, November 2022)**.

Women are frequently victims of theft while waiting at bus stops or walking from bus stops to their neighborhoods. Although men face similar challenges to women in accessing public transport, women are particularly vulnerable. This is of particular concern when women limit their travel due to fear of being attacked or harassed. In such cases, women's opportunities are being undermined rather than expanded through transport accessibility.

"In many cities, you will find fewer women if you go to a public transport terminal late at night. Women are few not because they prefer not to board those vehicles but because they are limited in how they can plan their activities because of the fear of getting into transport late, considering where they are going to drop off and from the drop off to the house" **(Academic and Researcher, Key informant interview, Nairobi, November 2022)**.

In a survey of Matatu (privately-owned minibuses used as group taxis) passengers in Nairobi, women reported being indecently attacked, forcefully grabbed, fondled and in extreme cases even raped (Mungai & Samper, 2006; Gekoski et al., 2015). In Nairobi, there have been recurring cases of assault and sexual harassment of women in public spaces posted on the Internet, causing national and international outrage. This translated into the #MyDressMyChoice campaign, led by the Flone Initiative, which fought to end sexual assault and harassment in public transportation spaces. The campaign led to the legislation that makes public stripping a woman a felony punishable by up to ten years in prison (Institute for Transportation & Development Policy, 2018). This is because, in Nairobi, some residents attributed sexual harassment and assault to clothing choices, with offenders justifying attacks on women based on inappropriate attire.

Beyond sexual harassment, as public-transport-system passengers, women face harassment-related challenges in securing employment in the transport sector. According to the International Transport Workers' Federation (2021), a woman seeking employment implies offering her body. Likewise, female matatu workers are frequently harassed by passengers, who caress them or slap their buttocks when trying to collect their fees.

"Our government has been very keen; they do not want to hear harassment of women at any level. However, if there is harassment identified in the transport sector, it has always been very punitive; the Police come in, everybody responds quickly, and it is highlighted many times on social media. So, the government is not only sensitive to issues of sexual harassment of women but are now taking it beyond sensitivity to responsiveness" **(Gender Expert and Researcher, Key informant interview, Nairobi, November 2022)**.

Research in Nairobi indicates that males dominate the informal matatu industry. However, many women depend indirectly on the transport industry for their livelihoods, primarily through street vending (Spooner & Manga, 2019). Shift work, long hours, the location of employment venues, and gender-based violence lead to unconducive work environments, careers, and employment options company choices for women (ILO, 2013). In the informal sector, women's job security, income, and employment tend to be affected during maternity and childcare periods. Employers pay on a daily basis, depending on targets set in informal agreements between bus owners and operators (drivers and conductors). To meet these targets and maximize daily trips, drivers and conductors work long shifts, which can be difficult for women with home and caregiving duties. According to a Nairobi SACCO spokesperson, matatu operators often work 12- to 14-hour shifts (6 am to 8 pm). In addition, due to physical danger, pregnant women often lose money because they must take maternity leave early.

> "In the informal transport sector, women will not be given maternity leave. A woman may need a day or half a day off because of a patient or child, so they may have to leave early so that she can go and pick up that child, probably let the child rest and get back. Those flexibilities that go with women's multiple roles are lacking in the informal transport sector. You lose your job the moment, for example, you are expectant, or you pull out for days to go and take care of a patient" **(Academic/Researcher, Key informant interview, Nairobi, November 2022)**.

However, the situation has recently begun to change.

> "In Kenya, we have one Tuk-Tuk association in our third largest city, where a lady is the chair. I think we carried one with us to Tanzania for peer learning. We are seeing them come up now in this challenging terrain that was considered to be a male terrain. Even if you talk about motorcycle riding, some women now ride as drivers." **(Transport researcher, Key Informant Interviews, Nairobi, November 2022)**.

The lack of high-quality gender-disaggregated data is a significant institutional obstacle to resolving gender inequalities in the transport sector in Nairobi. Gathering gender-disaggregated data, as a relatively new practice, helps uncover structural inequities and enables holding stake-holders accountable for their commitments to assessing gender equality. Promoting, enforcing and monitoring equality and non-discrimination on the basis of sex is a crucial development indicator of SDG 5 (Achieve gender equality). The absence of gender-disaggregated data in Nairobi makes it challenging to determine the unique needs of women, men, and children and to facilitate the development of gender-responsive policies.

> "The generalisation does not help much, but it is more about going deeper into the different challenges women face and which type of women. And also, knowing that in Nairobi and Africa, we do not have good data, and not many cities are collecting travel pattern data ... Getting segregated data and trying to learn where is the direction women are

going is lacking" **(Gender Expert and Researcher, Key informant interview, Nairobi, November 2022)**.

Poor urban design also contributes to gender-related problems with respect to accessing public transportation in Nairobi and other African cities. The central city approach to planning, where all economic activities and nodes are located in the central part of a city, creates accessibility challenges. In Nairobi, transport and land-use-planning practices have not been adequately integrated, with limited intersectional thinking that recognizes that women's needs are different than men's and need to be considered to create more equitable access to transport systems.

> "We need designs of seats that consider the African woman, *as we require more space than some other kinds of women*. …Most of our buses do not have level boarding, and sometimes it can be very difficult to board… If you have the wrong redesigned vehicles, which are 6 feet up, you can imagine how you have to lift yourself and the children with you alone up there. So, those are the basic things that we need to be conscious of and include in the designs and planning of transportation" **(Gender Expert and Researcher, Key informant interview, Nairobi, November 2022)**.

4.4 Gender and Access to Public Transport in Cape Town, South Africa

In South Africa, train use by women is relatively limited; more men utilize this transport mode. At the same time, women are more likely to commute by bus/bus rapid transit (BRT), minibus taxi (MBT), or as passengers in private vehicles (Vanderschuren, Phayane, & Gwynne-Evans, 2019). Walking is the most prevalent mode of transportation in South Africa, with 48.6 percent of women and 47.6 percent of men walking for all trip categories. Men (16.9%) outnumber women (11.8%) as automobile drivers, while women (13.2%) outnumber men (10.9%) as car passengers. Women (26.5%) utilize public transportation slightly more than men (23.5%), as women prefer buses and MBTs to trains (Anand & Tiwari, 2006, Salon & Gulyani, 2008). Cape Town has 1,303,988 households, equating to 4,758,433 people (City of Cape Town, 2021). The City's land area is 2446 km2, and the average population density is almost 1,800 people/km2. This is relatively low compared to other major cities in Africa and the world. Walking accounts for 20 percent of the modal share of travel, while travel by private vehicle ranges between 34 and 50 percent (South Africa, 2013). The latest National Household Travel Survey, conducted in South Africa just before the COVID-19 pandemic started in March 2020, showed that the minibus taxi sector accounted for just over 80 percent of the public transport passenger market share. This was an increase from 67 percent in 2013. The importance of this informal transportation subsector in moving the population has grown, and it is now overwhelmingly the primary transportation mode.

As in other African cities, women in Cape Town have been shown through location- based travel-dairy surveys to engage in more complex activity patterns compared to men, due to the division of labor within households. This makes their travel needs quite distinct from men's. Most often, in homes with children and elderly, women are assigned more extensive childcare and

general care responsibilities than men. Women are often accompanied by children or family members, traveling for example to see a doctor or visit a clinic. This is particularly pronounced in middle-income and high-income households, where cars are involved, but even in homes without a vehicle and in lower-income households. Women food vendors who sell cooked foods at public transport terminals in Cape Town wake up at about four or five am to collect fresh farm produce and take it to the public transport interchange and cook, so that when the peak transit hours starts, the food will be ready for commuters to buy. These are examples of particular sets of intense travel needs that must be considered in planning transport systems. Unfortunately, women's unique travel needs are often not well understood and thus not incorporated into the design of Cape Town's transport systems.

In Cape Town, there is a significant disparity in the risk perceptions of men and women. Male bus passengers do not perceive a security concern throughout their trip at any time of day. However, female passengers prefer not to travel in the evening. Although women rarely ride the railway, they assessed off-peak hours as unsafe. Generally, women perceive public transportation as risky at all times of the day and feel uneasy while waiting at the platform/stop and on the train (Vanderschuren, Phayane & Gwynne-Evans, 2019).

> "Women are particularly vulnerable in our public transport services. Their security needs are not always well met, so they often need to organize their own arrangements by travelling around in groups to mitigate their security risk" **(Gender Expert and Researcher, Key informant interview, Nairobi, November 2022)**.

According to train users in Simonstown, there is an apparent disparity between the harassment experienced by men and women (Vanderschuren, Phayane, & Gwynne-Evans, 2019). Men and women raised concerns about mugging and pickpocketing on the way to and from the train. Muggings were more prevalent for women than men, while pickpocketing was higher for men. Likewise, women are subjects of verbal and sexual harassment on the train. The train as a means of public transport poses the most significant travel related security danger for women in Cape Town. In response to some security complaints, a designated coach on the train with security guards was established to ensure the safety of children traveling alone and passengers who feel vulnerable. This is a general service available to all passengers, unlike the women-only carriage service implemented in India some years ago.

Traditionally, public-transport planning practice in South Africa has been disproportionately focused on providing transport services to the poor on the outskirts of cities and in townships. Emphasis has been placed on measures to address these households' needs and has been gender blind. Women benefit when urban planning creates cities with easily-accessible and affordable transport services. It is much easier for women to perform their diversity of tasks in denser, well-connected, safer cities, with more eyes on the streets, reliable public transport, and better facilities. Urban land-use planning can contribute to achieving this by creating compact, mixed-use cities with more suitable public transport and non-motorized transport infrastructure. However, sprawling urban development makes this difficult to achieve in many African cities. Urban

sprawl increases distances between destinations, making it unsafe for women to travel at night. It is a significant issue that needs to be addressed from different perspectives.

> "The majority of planning is often technical, and men usually do it. Thus, planning is still much done around the gendered-capitalist notion of how cities function, that men go to work and come home…I do not think there is a lot of disaggregation concerning transit or urban planning. You know, the public is kind of lumped together in a general group of people, and I do not think there is a lot of thought given to, like…Older people need this kind of service…or younger people need that kind of service…or people with kids need other things… And so, people will put a corridor or a transit node and be like, oh, that will do for everyone" **(Researcher and gender expert, Key Informant Interview, Cape Town, November 2022)**.

As in the other study cities, female representation in the transport sector is low in Cape Town. This reflects the general paratransit sector in South Africa, which is 99 percent male-dominated, with very few women at the operational level as queue martials, drivers or taxi owners. This is because the informal transport environment in Cape Town is quite violent, making it difficult for women to work in.. "The few women working in the industry have in most cases taken over the businesses of deceased husbands and fathers."

> "In Cape Town and South Africa, the taxi industry generally seems quite aggressive; taxi drivers tend to work very long hours and are notorious for disobeying the rules of the road. There has been a lot of conflict among cartels for a long time. There are "taxi wars", and sometimes you don't know what sparks them. They are more like territorial wars or fights between or among the taxi associations fighting for routes…So, taxi drivers were seen as foot soldiers in the turf war between the different cartels…and it is a type of historical legacy that has culminated in the few women in the sector" **(Researcher and gender expert, Key Informant Interview, Cape Town, November 2022)**.

Few women are employed in the formal sector as train and bus drivers, transport planners, and engineers. In 2017, the Deputy Minister of Transport asserted that it was time for women and young people to join to control South Africa's transport sector. This call seems to have yielded results, as the three most senior planners leading the transport planning process in Cape Town are all women. The debate about women's representation in the transport sector has also raised the question of whether women's representation in the industry will guarantee the development of gender-responsive transport systems. Whilst some transport and gender experts believe that it takes a woman to bring a better understanding of the needs of women to the sector, others argue that women's involvement does not automatically ensure that gender-responsive transport systems will be developed and that necessary institutional infrastructure will be established to meet women's transport needs.

> "I think there is this wrong assumption that things will be different when women hold the docket. It is not necessarily so. I just think that if you have a committed male who

understands gender dynamics and has the proper exposure regarding gender responsive planning and also understands the gender needs of the transport system and if gender assessment is embedded in planning techniques and policy systems, then you do not need to have the woman to make policies happen" **(Academic/Researcher, Key inform-ant Interview, Cape Town, November 2022)**.

The above statement is tenable. Employing impactful women with proper training and skills will better ensure the representation of women's interests and will encourage more women to work in the sector. This is because, compared to men with similar qualifications, women know relatively better what is required to ensure that women's concerns are addressed, from the board level through to operations and grassroots levels. They also bring different priorities and perspectives to the transportation planning process. Hence, although they are new to their positions, it is expected that the involvement of the three women mentioned above at the highest level of transport decision making may result in gender-responsive transport planning, policies, laws and institutional capacity in Cape Town.

Chapter Five: Summary and Reflections: Toward Gender-responsive Mobility Planning and Policy in Africa

5.1 Patriarchy and gender inequalities in transport

The transport sector in the four study cities is highly gender biased, with significant inequalities between men and women regarding access to public transport. As illuminated through our case studies of Accra, Cape Town, Lagos and Nairobi, women's transport needs remain unresolved in many African cities. This places women in a constant state of vulnerability when utilizing transport services. Several institutional factors, including gender-blind policies, lack of gen-der-disaggregated data and weak institutional capacity (political and funding commitments) for gender-responsive planning have culminated in the accessibility, visibility, and security barriers that African women face in the transport sector. However, the patriarchal nature of many Afri-can societies also plays a pivotal role in perpetuating gender inequalities in the transport sector. This is because public-transport services are offered within a patriarchal social system with dwindling financial resources and in a context where women are disenfranchised with respect to ownership/access to resources and decision-making power. Socio-cultural norms and societal perceptions of acceptable travel times and modes for women, and traditional/patriarchal gender roles, significantly limit women's autonomy with respect to mobility.

Moreover, gender stereotyping of the sector as a male domain, which was observed as a general perception in all four cities, affects the ability of women to enter and hold positions in the transport industry. No matter what women (low or high-income) do, they are at a mobility

disadvantage due to socio-cultural limitations. Sexual harassment and gender-based violence in crowded informal transport terminals and buses are the norm in our case study cities. Women are sexually harassed in public transport, resulting in fear of travel. Addressing this will require policy responsiveness and considerable attention to socio-cultural attitudes and power imbalances in society. This is because women's mobility is not just about individual female travelers or the responsiveness of the transport system. It is also about women's mobility as embedded in and interacting with society at large, families and households, and masculine hegemony, which together determine how, when and where women move. Hence, it is impossible to develop gender-responsive transport systems that meet the needs of women without simultaneously addressing the socio-cultural contexts and the politics of place, time and people within which gendered mobility takes place. In light of this, integrating gender considerations into national and regional level policies, plans and laws through agenda setting and institutional capacity building, though crucial, is only an entry point to gender-informed mobility planning and governance in many African cities.

5.2 Gendered Transport Policies and Politics

Developing gender-responsive transport systems that equitably address the mobility needs of men, women, and other social groups in Africa is a political activity undertaken by transport planners and engineers who are predominantly men, even though some women have entered the transport planning and engineering profession. Transport policies and plans are framed primarily around entrenched the patriarchal systems. Policy strategies and interventions are primarily based on the interests and needs of those with the power to make decisions at the when transport systems are being developed.

It is, therefore, not surprising that transport policy formulation and planning processes in the cities studied have relied primarily on developing generic strategies to improving the transport system. Gender equity and social inclusion objectives have generally been treated as peripheral issues. As a result, most of the national and city-level transport policies and plans are gender-blind. Many policies make generic comments about inclusiveness, such as "creating an accessible, affordable, reliable, safe and secure transport system for all users," "addressing challenges faced by vulnerable groups in society," "enabling equitable access for all," and "providing universal access," but do not explicitly target the needs of women. Although policies seek to address accessibility, safety and security for all, which are very important for women, the generic nature of the policies does not address women's unique mobility needs (such as navigating complicated activity schedules). There is a need for intersectional thinking in transport policy and planning processes that recognizes that women's needs differ from men's with respect to mobility access. Rwanda's 2021 National Transport Policy and Strategy presents a best practice that promotes explicit gender mainstreaming in the transport sector, as it proposes strategies for "creating an enabling environment," encouraging women's/girls' education and training, and preventing and responding to Gender Based Violence (GBV) in the transport sector.

Including gender in cost-benefit analyses of transport projects and requiring gender auditing of transport policies, plans and designs for transport infrastructure are crucial components of strategies for mainstreaming gender in transport. A gender-needs-assessment tool for the transport sector needs to be developed and used to audit national and city-level transport projects, policies, programs, plans and laws, to ensure that gender considerations are mainstreamed from the outset. This is important for ensuring that transport policies are not gender-blind and do not lead implementers to make subjective assumptions regarding who the vulnerable groups being targeted are. Women's issues and needs in public transport are so specific that they cannot be addressed through generalized measures for vulnerable or marginalized groups. The discourse on gender-responsive transport policy and planning also needs to be extended to include analyses of broader issues regarding the gender politics and socio-economic development, as well as women's power and access to resources. This is because the transport system is experienced differently by different travelers based on their socio-economic realities.

5.3 Conclusion and Recommendations: Ways Forward for achieving gender-responsive public transport

Promoting inclusive public transport systems in African cities entails providing transport services that are accessible, safe and secure for all users, including women. This requires an inclusive and gender-responsive sector that employs women from the highest decision-making to operational levels. Although employing more women in male-dominated and male-biased transport systems is not straightforward due to issues regarding the capacity and interest of women to work in the sector, a deliberate and committed effort to attract and sustain women in the transport sector could make a difference. This requires developing gender-responsive policy frameworks for transport planning that create conducive work environments for women in the sector. Adopting a quota system that specifies minimum representation of women employed in public transport agencies could serve as a key mechanism to increase the representation of competent women in transport policymaking and planning, and in operations as transport engineers, vehicle operators and transport service providers. However, for this to work, it will be necessary to provide women with requisite skills, and to make transport-sector jobs attractive to them. Incentivizing young women to study technical and professional transport planning, engineering, and related disciplines is critical to achieving this.

Within this patriarchal context, encouraging more women mentors in the transport field to showcase their success stories and inspire young women to take transport-related courses and jobs is an effective strategy for addressing the underrepresentation of women in transport-sector professions.

> "Our cultural background is also a significant challenge to female engagement in the sector because when we were in the university and doing engineering, they called us the iron ladies. Of course, you get different names because you have ventured into a male-dominated field, but the dynamics are changing now. So, we must keep pushing

and be coaches and mentors to the up-and-coming female youths to get more of them"
(Academic/Researcher, Key informant interview, Accra, November 2022).

Beyond increasing female employment in the transport sector, addressing concerns of sexual harassment of women in public transport is a critical component of inclusive transport planning. This issue is, however, complex to address in most African cities that are experiencing high rates of gender-based violence, which seems to have been normalized. Moreover, African societies have been so bound to traditional norms that they do not always respect individuals' privacy or interests. In some respects, what happens in the transport sector is similar to what is happening more broadly in Africa, with deep-seated issues around gender violence that need to be addressed systemically. It is, therefore, essential to educate young men and make them aware of appropriate behavior towards women; they must understand that women have rights and know what is permissible and what is not. Considering the complexities surrounding sexual harassment, a holistic and broad-based approach involving all key stakeholders is required for such education to yield results.

To facilitate reporting of sexual harassment and other security-related problems in the public transport system, it is helpful to provide a dedicated public-transport emergency number that all transport users, including women, can use to contact and, where possible, get an immediate response. In addition, leveraging current technological solutions, such as deploying cameras in buses and bus stops/stations, could be explored. Cameras provide important information that is needed when investigating harassment cases. It is also useful to women, for trip-planning purposes, to have access to relevant information on when and where transport services are and are not safe to use. Where people can get that kind of information is a recurring question. The Safetipin app in India is a crowd-sourced app that collects data on insecurities in cities. Anyone who sees the report of a crime or experiences or witnesses a crime or harassment can report the incident on the app. Subscribers to the app can see where and at what times reported crimes, including harassment, occur. With such information, women can decide how to plan their trips. Whilst this app looks promising, its applicability in Sub-Saharan Africa may be challenging in cities with low Internet and smartphone penetration. However, it may be a relevant solution for cities with good smartphone penetration and Internet connectivity, particularly for young public transport users who are up-to-date with mobile apps. For other women, such as informal traders who may be illiterate, targeted public campaigns on preventing sexual harassment in the transport sector and what to do if they experience harassment would be a helpful approach.

The nexus between transport and land-use planning is another critical entry point for gender-informed mobility planning. The cities case-studies reveal that low-density, unplanned and sprawling urban spatial development patterns make public-transit planning and development costly. This has created accessibility problems in many cities, where informal transport operators provide low-capacity buses and offer paratransit services that are used mostly by women. Compact and mix-used approaches to land-use planning are vital to promoting gender inclusiveness. This kind of planning will enable activities and destinations to be accessible and will reduce the need to travel (i.e., for mobility). Integrating land-use and transport planning through

mixed-use zoning helps to reduce the transport burden on women as it becomes easier for them to drop off their kids at school, shop, work and access other facilities and services within one neighborhood. In addition, transport planning – particularly service availability, frequency and scheduling – needs to be done through a gender lens. This is because women's activity patterns (particularly those in the informal sector) are complex. Therefore, a gender-responsive transport system that is well-planned, with apps to provide women with information about where to find transport services appropriate to their needs at various times is critical. Also, there is the need for integrated transport systems that do not compromise women's safety and security, especially during last-mile travel. However, this type of planning requires reliable data on gender-disaggregated travel patterns. Unfortunately, such data is not readily available in Africa, making it difficult for transport planners to know where women need to go and by which mode or route to design effective and efficient public-transport services for women.

Furthermore, the traditional design of travel services based on peak and off-peak travel demand does not serve women well, because the peak and off-peak assumes formal employment; most working women in many African cities work in the informal sector. This makes it crucial to collect data on women and general travel patterns through, for example, mobility diaries for gender-responsive transport planning. In addition, the presence of adequate facilities at and near bus stops and stations is vital to gender-responsive transport planning. Lighting, visibility, clean and safe stations and gender-responsive sanitary facilities are essential for women when travelling.

5.4 Considerations for Further Research

To promote the development of gender-responsive transport systems, it is important to develop the research capacities of transport agencies and stakeholders in academic and research institutions to conduct comprehensive and comparative research across African cities. The following areas are recommended for research:

- Developing gender-informed mobility interventions to address women's accessibility, safety, and security needs requires reliable data that is unavailable in many African countries. There seem to be many unknowns about women's needs and mobility across African cities. Further research could improve understanding of women's travel patterns and mobility needs, which could in turn contribute to formulating appropriate planning strategies. For example, collecting and analyzing granular and gender-disaggregated data could help to answer questions about how women use transport. How much time do women spend walking? Where do they work? Where do they catch taxis/buses/motorcycles/autorickshaws? What time of the day are they using these forms of public transportation? What challenges do they face?

- A comprehensive and comparative study of women engaged in transport work from top management down to the operations level as drivers, operators, conductors, sales officers and mechanics, among others, is also recommended. This will generate data needed to understand how they found their way into those positions or jobs, their success stories, what obsta-

cles they have faced and how many other women would wish to move into the sector, as well as the barriers and facilitators to increased representation of women in the transport sector.

- Anecdotal evidence across many higher education institutions indicates that many more women study transport planning and engineering-related disciples than are found in the field of work. There appears to be a gap between education and access to jobs in the sector. Hence, it will be helpful to conduct tracer studies to identify the factors that discourage/prevent women with requisite expertise from working in the transport sector.

5.5 Conclusion

Women's underrepresentation and vulnerability in the African urban transport sector is well known to be largely due to the patriarchal nature of African society. This study has corroborated the well-established fact that women, men, children and the youth have different mobility needs. However, across African cities, a male-centered approach to transport planning has been adopted where transport planning is typically designed to meet peak and off-peak travel demand corresponding with formal working hours in jobs that are largely dominated by men. This practice disenfranchises the majority of women, despite the fact that women have more extensive mobility needs as a result of the triple gender-based roles (productive, reproductive and communal) assigned to women in society. Furthermore, gender stereotypes and cultural norms prevent sufficient female representation in strategic and professional positions in the transport sector to catalyze necessary reforms.

Many African governments and public-transport agencies have limited capacity, which restricts their actions to addressing hard-transport infrastructure needs, like constructing roads and providing buses, to aid mobility. It is imperative that soft and gender-related issues arising from existing transport systems be prioritized in order to promote balanced socio-economic development and ensure that all urban citizens have access to sustainable mobility options. Priority issues for immediate attention include: developing gender-responsive transport projects, programs, policies and plans; building institutional capacities; increasing access to gender disaggregated data; increasing human resources to undertake integrated land-use and transport planning; and instituting gender-responsive programs to ensure accessible, convenient, safe, and secured public transport systems for women. Addressing these priority issues will increase women's mobility, which will in turn increase women's access to education, health, employment, welfare, and overall well-being,

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Appendix I: List of Reviewed Policies/Laws

	National Plans/ Policy/Constitution	Gender Policy	Transport Policies	Transport Regulations
Lagos (Nigeria)	Nigerian Constitution (1999) National Development Plan (NDP) 2021–2025	National Gender Policy 2021–2026	Revised National Transport Policy, 2013 Draft Urban Transport Policy Lagos State Transportation Policy, 2018 (Draft) Lagos Non-Motorised Transport Policy, 2018	Lagos State Road Traffic Law 2012 National Road Traffic Regulations, 2012 L.I. 2180
Accra (Ghana)	Constitution of Ghana (1992) Medium-Term National Development Policy Framework (2022-2025)	Gender Policy (May 2015) Affirmative Action Policy (1998)	National Transport Policy (2020)	Road Traffic Act (2004, Act 683) And The Road Traffic (Amendment) Act, 2008 (Act 761) Road Fund Act, 1997 (Act 536) Road Traffic Regulations, 2012 L.I. 2180
Cape Town (South Africa)	Constitution of South Africa (1996) National Development Plan, 2030 Medium-Term Strategic Framework: 2019-2024	South Africa's national policy framework for women's empow-erment and gender equality, 2001	Draft Revised White Paper on National Transport Policy, 2017 Draft White Paper on Roads Policy for South Africa, 2018 Comprehensive Integrated Transport Plan (CITP), 2018–2023 for Cape Town Draft National Non-Motorised Transport Policy, 2008	Road Accident Fund Act 56 of 1996 National Road Traffic Act 93 of 1996 National Road Traffic Amendment Bill, 2012, 18 July 2012 No. 35528 National Land Transport Act, 2009 (Act No. 5 of 2009)

| Nairobi (Kenya) | National Constitution of Kenya (2010) Kenya Vision 2030 Third Medium-Term Plan (2018-2022) | National Policy on Gender and Development (2019) | Integrated National Transport Policy, 2009 Nairobi City County Government Non-Motorized Transport Policy, 2015 The Transport Master Plan for Greater Kampala Metropolitan Area (2008-2023) Nairobi Metropolitan Area Transport Authority Strategic Plan 2019-2023 | Kenya Roads Act, 2007, The Kenya Road (Amendment) Act, 2022 Traffic Act CAP 404, 2015 Kenya Roads Board Act, 1999 National Transport and Safety Authority Act (2012) |

Appendix II: Interview Respondents

Lagos	Nairobi	Accra	Cape Town
Olamide Udoma Lagos Urban Development Initiatives	Prof Winnie Mitullah University of Nairobi	Dr Paulina Agyekum Ablin Consult Engineers and Planners Limited	Professor Roger Behrens University of Cape Town
Dr Olajumoke Akiode Centre for Ethics and Sustainable Development	Dr. Gladys Nyachieo Multimedia University	Dr Constance Akurugu SD Dombo University of Business and Integrated Development Studies	Dr Zethu Zonke Gavrilov Tembisa Pretoria Taxi Association
Mrs Oluwaseun Sonoiki Lagos Metropolitan Areas Transportation Authority	Dr. Janet Mang'era National Capital Trust	Engineer Rita Ohene Sarforh Ministry of Roads and Highways	Dr Margot Rubin University of Cardiff
Dr Adewale Alade University of Lagos		Professor Charles Adams Kwame Nkrumah University of Science and Technology, Kumasi	
Prof. Odufuwa Bashir Olabisi Onabanjo University			

Appendix III: BRT in African Cities and Gender Considerations

BRT Components	Lagos (BRT-lite)	Accra (Aayalolo)	Cape Town (MyCiti)	Nairobi (Proposed)
Commencement	The first BRT in Africa. Commenced service in 2008[4]	The Aayalolo is a conventional bus-transit service with improved bus stops and terminal infrastructure. Commenced operations in 2016[1]	Commenced operations in May 2010, shortly before the 2010 FIFA World Cup, providing a shuttle service from the Civic Centre to Cape Town International Airport[5]	The BRT in Nairobi, Kenya, is a proposed project under the supervision of the Nairobi Metropolitan Area Transport Authority (NaMATA)[6]
Reason for its introduction	To relieve Lagos traffic congestion, make fares affordable for low-income earners, and improve travel safety[7]	To reduce peak-hour traffic congestion and improve travel time[8]	To offer a better-quality service (comfort, convenience, reliability, safety, efficiency, car-competition) to existing public transport users and to attract users from other modes[2]	To decongest traffic and reduce pollution[9]
Distance/Coverage	Operates on a 22 km trunk-only corridor, with about 60% segregated bus lanes	It operates on a 22 km trunk-only road with about 3.5 dedicated lanes at sections with extreme congestion	Operates 36 routes, using 42 bus stations on approximately 20km distance[2]	The proposed BRT will operate on a 20.18 km route[10]

4   Asimeng, E. (2021) Bus rapid transit implementation with the inclusion of incumbent paratransit operators in African cities: lessons from Accra, Urban, Planning and Transport Research, 9:1, 534-548. https://www.tandfonline.com/action/showCitFormats?doi=10.1080/21650020.2021.2000485

5   MyCiTi | Cape Town Integrated Rapid Transit (IRT) system

6   Institute for Transportation and Development Policy (2019).Service plan for Nairobi BRT Line 2. Microsoft Word - Nairobi BRT Service Plan for BRT Line 2 191030.docx (itdp.org)

7   Klopp, J., Harber, J. & Quarshie, M. (2019). A review of BRT as public transport reform in African cities. http://dx.doi.org/10.13140/RG.2.2.29342.79686

8   Jafaru, M. (2016, November 26). Aayalolo buses unveiled. *Graphic Online*. 'Aayalolo' buses unveiled - Graphic Online

9   Ngure, D. (2022, August 27). The Nairobi BRT: A quick guide. *Living in Nairobi*. Nairobi BRT: A Quick Guide for 2022 (livinginnairobi.com)

10   Kimuyu, H. (2022, March 15). Nairobi BRT system remains a distant dream. *News*. Nairobi BRT system remains a distant dream | Nation

Services	Express and all stop services; trunk only[1]	Express and all stop services.	Express and all stop services; trunk and feeder[2]	The buses will travel at dedicated times and have higher capacities than current public road transport[6]
Shelters	There are enhanced shelters, although inadequate for protecting women and their goods from harsh weather conditions. These shelters offer seats, which may be comforting for waiting passengers, such as pregnant women and nursing mothers	Availability of enhanced shelters, but with limited seating for waiting passengers. Noteworthy, the quality of the seating is unattractive and uncomfortable, which discourages women from using it	Large transit shelters, as people mostly board at enclosed terminals with surrounding surveillance, offering some protection for all passengers	
Accommodating the needs of women	Although the BRT is cheaper than the paratransit, it does not prioritize the needs of the market traders (primarily women), as there are restrictions on the amount of load permitted on the bus	The BRT does not allow for passengers carrying goods (primarily women)	The BRT does not allow individual passengers to carry goods weighing more than 30kg. This limitation forces many to utilize minibus taxis[8]	
Seats	Some seats are allocated for persons living with disabilities, pregnant women and passengers traveling with children	Each Aayalolo has four designates seats for nursing mothers, The seats are colored yellow and located close to the middle doors[11]	In most cases, vehicle interiors are designed to fit male body sizes. This is true in general across the BRTs examined	
	In addition, bus styles that put the seats facing toward the center (as those for disabled persons as the BRT Lite, Aayalolo and MyCiti buses) can put women in a position where they have the crotches of standing men in their faces			

11   KNOW MORE ABOUT AAYALOLO BUS RAPID TRANSIT IN GHANA - Bing video

Accessibility for Nursing mothers	The buses prohibit open strollers. Caregivers are required to remove the child(ren) from and fold up the strollers	The buses prohibit open strollers. Caregivers are required to remove the child(ren) from and fold up the strollers	The vehicles are equipped with ramps that can be pulled out to allow easy access for passengers traveling with children in strollers[8]
Harassment	Cases of groping and touching are rampant due to the high standing to siting ratio and lack of supervision or enforcement by the service providers	The buses have no conductors. Service marshals assist drivers (not passengers) at the bus stops. They offer little to nothing to improve passenger safety[12]	There are security staff and law enforcement officers at the stations. Likewise, MyCiti utilizes a closed-circuit television (CCTV) monitored at a control center and provides adequate lighting at bus stops. However, safety on board remains a challenge in the BRTs examined[8]
Gendered Employment	Female participation in the transport sector—as operators, drivers, engineers, and leaders—remains low. The BRT industry remains heavily male-dominated, making it difficult for women service users to make themselves heard. There are limited incentives for the bus services to become more inclusive[13]		

12 Ofori-Boateng, P. (2016, December 12). Is Aayalolo up to the task of easing traffic in Ghana? Ghana Business News. Is Aayalolo up to the task of easing traffic in Ghana? - *Ghana Business News*. Is Aayalolo up to the task of easing traffic in Ghana? - Ghana Business News

13 Carvajal, K. & Alam, M. (2018, January 24). Transport is not gender neutral. *World Bank Blogs*. Transport is not gender-neutral (worldbank.org)