*The Forgotten Group:*

# Kenyan Women who are Driving for a Living

## A Case Study

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*Dedicated to all of you who never stop to believe in me.*
*I exist because of you.*

"Kila mtu ana haki ya kupumzika na kufanya kazi kwa kiasi cha saa zinazostahili. Pia ana haki ya kupata likizo, kwa vipindi, na kupokea mshahara kama vile angekuwa kazini"

Ulimwengu juu ya Haki za Binadamu, Kifungu cha 24

"Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay"

Universal Declaration of Human Rights, Article 24


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# Abstract

Female drivers operating in the public transport sector are underrepresented in the literature on women's mobility which largely addresses the fear of crime among female riders. Alternative modes of transport, as well as job opportunities, have nevertheless started to emerge as international and local ride-hailing firms mushroom across the globe in urban cities. The World Bank Group International Finance Corporation (IFC) found the participation of Uber female drivers in the sharing economy as promising for socio-economic development, but little attention is paid to women's subjective well-being, including fear of victimization in their workspace. The purpose of this case study is, therefore, to shed light on the driving behaviour and perceived safety of female drivers operating in Nairobi's ride-hailing sector which experienced rapid expansion since 2016. The study adopts a mixed-method design and a bottom-up approach of behavioural geography to answer the main research question: How are Driving Patterns of Female Ride-hailing Drivers in Nairobi Shaped by Spatial Reasoning and Perceived Safety? The findings ground on data from 137 completed questionnaires, seven semi-structured in-depth interviews and a focus group discussion collected during a period of eight weeks in the first quarter of 2020.



***Keywords***

Female Drivers • Nairobi • Ride-Hailing Industry • Behavioural Geography • Perceived Safety • Driving Patterns

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# List of Abbreviations

| | |
|---|---|
| **CPT** | Crime Pattern Theory |
| **DIT** | Digital Information Technology |
| **FGD** | Focus Group Discussion |
| **FMC** | Female Matatu Conductor |
| **FMD** | Female Matatu Driver |
| **FRD** | Female Ride-Hailing Driver |
| **FTD** | Female internet Taxi Driver |
| **GBV** | Gender Based Violence |
| **IFC** | International Finance Corporation |
| **ICT** | Information and Communication Technology |
| **NHS** | National Institute for Health Research |
| **PSV** | Public Service Vehicles |
| **RAT** | Routine Activity Theory |
| **ROI** | Rate of Occurrence Index |
| **SDG** | Sustainable Development Goal |
| **VAWG** | Violence Against Women and Girls |
| **WEL** | Women's Empowerment Link |

# Chapter 1. Introduction

"I was so scared; I am telling you. I am never going, I told that client that if I have to come and pick you, please come to the main road" (Scola, FRD 3).

Gendered mobility is rarely what first cross one's mind when thinking about gender inequalities. Great similarities between women's travel experience and patterns in urban space are nonetheless found across cultures, class, and countries. Feminist geographers argue that the unequal access to transport modes are rooted in patriarchal structures which led to the construction of socially accepted gender roles and norms. According to Loukaitou-Sideris (2016), women's mobility is restricted as long as cultural, economic, physical and psychological barriers continue to exist. Psychological barriers can be understood as the emotions and perceived safety or vulnerability of an individual. Perceived vulnerability, in turn, is defined as "the combination of an individual's perceptions of the severity of the consequence of crime and his or her ability to exert control, that is, to defend him- or herself against attack" (Lorenc et al., 2014:17). Generally, women fear victimization to a much larger extent than men and the transport environment is not an exception. Frequently cited by other scholars, Loukaitou-Sideris has come to be one of the pioneers because of her work on female commuters' fear of crime. She argues that women's mobility is restricted as a consequence of the sexual harassment she fears while on transit. Women-only transportations have thus risen in various metropolises such as Beirut, Mexico City, New Delhi and Tokyo in an attempt to address the Violence against Women and Girls (VAWG) in transportation (UN Women, 2010).

By 2019, the Kenyan based organisation Flone Initiative presented a toolkit for the public transport sector to ensure the safety of female commuters in Africa. This, after conducting a study on the prevalence of Gender-Based Violence (GBV) in Nairobi which found that 73 per cent of the surveyed had witnessed sexual harassment against a female commuter in the Matatu sector (local word for 'bus'). Mwangi (2018) the project manager of Flone Initiative states:

> In Kenya's public transportation system, women's safety, security and dignity is never guaranteed. Consequently, some women and girls are changing the way that they dress, as well as their travel routes and transport modes in order to minimize the risk of assault. (Mwangi, 2018)

## 1.1 Justification of the Study

Although transportation needs of female riders have received relatival attention from scholars, NGOs, and policymakers on a global and local level, the psychological barriers among female drivers operating in the

public transport sector go practically unnoticed. Under recent years, the ride-hailing sector[1] has come to rapidly expand across the globe. Subsequently, opened doors to an alternative mode of door-to-door transport as well as an alternative form of employment. The Kenyan ride-hailing app Little Cab has experienced a 13-fold increase of registered female drivers since its launch in 2016 (Bhalla, 2018; Tubei, 2019). The sharing economy and the ride-hailing sector, in particular, has the potential to spur socio-economic development where women are identified as the main beneficiaries (IFC, 2018). However, the concerns of women who are driving for a living as independent contractors seem to fall between two stools. On one hand not fully secured in her workspace because of the absence of an employer to hold accountable if regulations are ignored. On the other hand, her driving needs seems to be a forgotten case as she already reached a high level of agency. This study argues that the current understanding of 'Women's Mobility' must incorporate a diverse narrative of female actors in the transport systems, both as riders and drivers.

## 1.2 Aim and Research Question

The aim of this case study is to examine the behavioural geography of female ride-hailing drivers (FRDs) in Nairobi with a focus on their perceived safety and driving patterns. Moreover, it is to shed light on the opportunities and challenges faced by independent contractors in the ride-hailing industry. The findings are believed to contribute to a more diverse understanding of women's mobility with the inclusion of female drivers. The aim of the study links to the Sustainable Development Goals (SDGs), namely "to end all forms of discrimination against all women and girls everywhere" (SDG 5:1) and "to make cities inclusive, safe, resilient and sustainable" by 2030 (SDG 11) (United Nations, 2020).

The main research question (1) is accompanied by a more specific question (2):

(1) How are Driving Patterns of Female Ride-hailing Drivers in Nairobi Shaped by Spatial Reasoning and Perceived Safety?

(2) What Do Commuters' Attitudes Towards Women Operating in Nairobi's Public Transport Sector Reveal About Gender Roles?

The study assumes that female drivers like female commuters in Nairobi, adjust their behaviour to avoid victimization in the workspace. Attitudes towards FRDs are further believed to affect the perceived safety and mirrored in driving patterns. The case study adopts a mixed-method design to collect a mixture of quantitative and qualitative data under eight weeks in Nairobi 2020. With reference to the work of feminist

[1] The transport sector is part of the gig and sharing economy. Ride-hailing firms offer drivers to sign up to a digital platform as independent contractors to share their vehicle with persons who requests and pays for a ride.

and behavioural geographers and influenced by the Routine Activity Theory (RAT), a conceptual framework guides both the data collection and analysis. Data have been collected from a total of 137 commuters (a short questionnaire) seven women operating in the ride-hailing and matatu sector (semi-structured in-depth interviews), and one Focus Group Discussion (FDG) with FRDs.

## 1.3 Limitations and Significance of the Study

Interpretations of data are influenced by the role and experiences of the researcher who did an internship at a Women's Rights Organization in Nairobi 2019. The statistical and external validity of this study is considered low as findings are limited to its very specific case of 149 respondents. Future research on the topic is suggested to enlarge the sample to enhance the understanding of driving patterns and perceived vulnerability among FRDs. However, data collected on the spatial reasoning of FRDs is rich and unique, therefore considered of high credibility. Something that should be of high interest for ride-hailing firms as well as policymakers in Kenya who seek to improve working conditions and support women's empowerment[2].

## 1.4 Outline of the Thesis

The thesis is structured into six chapters. This first chapter is followed by the literature review and gives the reader a summary of previous work on women's mobility and fear of crime as both riders and drivers. The chapter also describes Nairobi's public transport sector and the birth of its ride-hailing industry in 2015. Chapter three explains the RAT and presents the conceptual framework of the field study which draws upon the theoretical framework of behavioural geography. Methodological choices of sample techniques, data collection and analysis are described and motivated in chapter four. In addition to this, the student also reflects upon her own positionality within the field and limitations of the study. The analysis of the study can be read in chapter five. Data from in-depth interviews and FGD make up most of the findings on the behavioural geography and perceived safety of FRDs. Finally, the last chapter summarises the discoveries and concludes that female drivers operating in Nairobi's ride-hailing sector fear victimization and adjust their driving behaviour thereof as reflected in driving patterns. The endless pricing-war between ride-hailing firms force drivers to work more hours and sacrifice time with their children. Based on the study's findings, there are reasons to be concerned about the consequences the Covid-19 pandemic will have on the FRD's possibility to sustain her family.

[2] Kenya ratified the Universal Declaration of Human Rights in 1990, and is advocating for women's empowerment since 1994 (Kenya National Bureau of Statistics, 2014:273) which saw the addition of the SGDs in 2015.

# Chapter 2. Literature Review

## 2.1 Feminist Geography and Gendered Mobility

To understand the importance of mobility one must understand the role of cities as one space where to access resources of capital (economic, social, and cultural). Feminist geography, a sub-discipline to human geography, study the interconnection between space, power relations and gender (Warf, 2010). Feminist geographers started off explaining the spatial differences in paid (public space) and unpaid (private space) work between men and women in the 1980s. Nowadays, more focus is given to new technology and its influence on women's work and relocation of the workspace (Preston and Ustundag, 2005:212). While the traditional division of labour gradually has started to change (more women enter the labour market outside the home), the geography of urban areas remains to affect women's behaviour to, from and at the workplace. Furthermore, spatiality reinforces or changes gender roles (Preston and Ustundag, 2005; Warf, 2010).

Loukaitou-Sideris (2016) writes about women's restricted movement as a cause of social power relations, divided into four themes of barriers: culture, economic, psychological, and physical. Thus, the historically long discrimination of women and the assigned stereotypical gender roles to obey in private and public spaces shaped and continue to restrict women's mobility patterns in the global North and South. As a result, women's transportation needs differ from men's, both in terms of accessibility and safety (Law, 1999; Loukaitou-Sideris, 2014:250; IFC, 2018). The concept of gendered travel behaviour emerged in the late 1970s as feminist geographers started to question the absence of women's concerns in transport- and time-geography pointing out fear of crime to hampering women's movement (Law, 1999:569-570). Since then, travel patterns have often been observed through the spectacles of criminology to examine rider's perceived safety.

Badiora, Ojewale and Okunola (2015) studied the perceived risk among commuters on a public transport route crossing seven states in Nigeria (Nigeria West-Eastern Highway). The scholars argue that crime rates in combination with one's perceived vulnerability have a negative impact on a commuter's well-being and travel patterns. The study aimed to provide new insights on the topic, for which policies and implementation of crime prevention further could ground on. Based on the findings and estimated 'Rate of Occurrence Index' (ROI), most commuters feared robbery. A distinct difference was also drawn between fear of crime in transportation and time of travel, thus during the day or night, and weekdays or weekends. Fear of victimization in the study rose during weekends and nights and was positively associated with gender and age. Consequently, limiting the options for mode and time of travelling. Badiora, Ojewale and Okunola (2015) emphasized that increased policing and improved design in transit

environments could reduce the fear of victimization, thus contributing to safer public transportation. Proposed by Loukaitou-Sideris (2014) women in transit fear victimization and sexual harassment and assault in particular. Indeed, women, together with low-income and elderly dwellers are identified as groups that are more vulnerable to victimization (Hale, 1996 cited in Newton and Ceccato, 2015). In response to unsafe transport environments, women-only transportation has emerged in various places like Lebanon, Mexico City and New Delhi.

The phenomenon of "Pink" Public Transportation in Mexico City is understood by Dunckel-Graglia (2013) as a solution to cultural problems of GBV in Mexico City. Studied during a period of three years, the author states that high rates of GBV in transit environments relate to gender inequalities existing in the urban space (*ibid.*:86). The program was launched and implemented by several federal institutes in 2010 after it became evident that 90 per cent of the women had or will experience sexual violence in her lifetime (*ibid.*:91). The purpose was further to raise awareness about women's rights and offer female passengers a safer mode of transport with women-only vehicles. According to Dunckel-Graglia (2013), in Mexico City, an alternative mode of transportation – rather than the mainstream built-environment-approach – reduce gender inequalities in transit settings, but not necessarily on a deeper level. "Women believed that until the culture of men changes, the city is responsible to provide them with a separate transit system that allows them to commute safely and without fear and harassment" (Dunckel-Graglia, 2013:94).

## 2.2 The Ride-Sharing Industry

Though the roots of sharing-services can be traced back to the 17th century (IFC, 2018:9), the sharing economy has been catalysed by the digital revolution which made Digital Information Technology (DIT) reasonably affordable. This is especially true for a large number of low-income people who easily can access a digital space, thereby the globalised economy where capital exchange occurs digitally and not physically in urban cities. New professions have risen across the world such as digital nomad, influencer and Youtuber. Most other 'traditional' professions (accommodation and taxi services) have also sought their way into the internet by providing assets and services to customers and clients through digital platforms (Airbnb and Uber for instance), defined as a 'sharing model'.

One of the industries found in the sharing economy is ride-hailing. It is here relevant to make a distinction between the two terms 'ride-hailing' and 'ride-sharing'. Where ride-hailing refers to a digital app which connects a rider with a driver, ride-sharing indicates the same kind of service but shared with various passengers who are going to the same destination or location. Logically, the later reduce the price since the cost is shared (IFC, 2018). Ride-hailing is characterized by 'dynamic pricing', which means that supply

and demand regulate the price. As a result, high demand and few drivers nearby increase the price, while high supply and few clients lower the price.

In her paper, Brown (2017) focuses on women's mobility in the rising ride-hailing sector as riders and drivers in the US. Controversially, the author proposes that laws against gender discrimination in employment should be reconsidered. This in order to allow gender-specific ride-sharing firms to operate in the US without the risk of being sued. The main argument of the author is the possibility to provide clients and taxi employees with a safer mode of transport due to women's perceived fear in transit spaces. In this sense, women-only transportation has the potential to also improve the work environment for ride-sharing female drivers. In addition to this, Brown (2017) suggests ride-hailing to be recognized as 'intimate' rather than public transportation due to the absence of a 'potential audience' (*ibid.*:396). "Ridesharing is a unique form of public accommodation because, unlike riding a train or bus, it involves inviting a customer into the driver's own car" (Brown, 2017:395).

The International Finance Corporation (IFC) in cooperation with Accenture and Uber published a detailed study (2018) about the sharing economy and the role it could have on socio-economic development. The publication focuses on the ride-hailing industry and covers the experience of female Uber drivers from Egypt, Indonesia, Mexico, South Africa, and the United Kingdom. According to IFC (2018), the sharing economy "opens new opportunities for women to participate in the economy and achieve greater financial and social autonomy" (IFC 2018:3). The research findings grounds on data collected from 7,357 online surveys distributed to drivers in the two largest cities of countries surveyed. The diverse geographical areas make it possible to draw some general conclusions of the shared challenges and opportunities faced by women operating the ride-sharing industry.

### 2.2.1 Female Ride-Hailing Drivers: Challenges and Opportunities

IFC (2018) recognized a significant difference between male and female drivers' access to vehicles, hence, to join the ride-hailing industry as independent contractors. Accessing a vehicle is the major constraint for women among five identified barriers (getting a driving licence; getting money to rent a car; getting insurance; paperwork required by Uber and opening a bank account) (*ibid.*:38). Where 41 per cent of the men own the vehicle, this only applies to 30 per cent of the women surveyed. Additionally, class differences were also shown to affect women's asset ownership. 21 per cent of women from 'below-median-income households' lease the car they work with for Uber. This in comparison to 14 per cent from 'above-median-income households'. Among the countries studied, a female driver from South Africa is less likely to own the vehicle she uses (9 per cent) compared with Indonesia (43 per cent) (*ibid.*:36-37).

On the other hand, once in the ride-hailing field, 74 per cent of the women appreciate the industry's 'flexibility' which allows them to manage their time between work and family. And for some (one in seven), the income generated allows further investments in side-businesses. The economic relief caused by boosted incomes when engaging in the sharing economy is emphasized as an enormous opportunity by the researcher (2018).

Like the travel patterns of female riders in public transport generally, the driving patterns of women are influenced by security concerns. As a result, women choose not to work during the nights, something which could have a negative impact on their earnings, but also discourage other women to join the sector (*ibid.*:29-32). When asked if something stops the female drivers from driving more, 34 per cent stated competition as a reason, followed by safety concerns (26 per cent). Equally important 14 and 11 per cent state client cancellation because of their gender and aggression from traditional taxi drivers respectively, as hindrances. Sociocultural norms are further raised as a constraint which restricts women's work performance (*ibid.*:34).

These findings are to a large extent mirrored in a research from Tehran on female drivers' career aspects as independent contractors in a male-dominated industry (Beigi, Nayyeri and Shirmohammadi, 2020). The researcher adopted an intelligent career framework by analysing why, how and with whom women seek a career as female internet taxi drivers (FTDs). Data collected drew upon semi-structured interviews from a sample of 34 women. Beigi, Nayyeri and Shirmohammadi (2020) identified constraining and driving institutional forces. Family and religion represent different values and beliefs that influence a person's behaviour and are understood as social institutions. Existing female driver stereotypes further forced interviewees to adopt different skills and behaviour to manage her job. Among those, 'becoming less feminine', avoiding certain areas and being selective about when to work and who to carry to ensure her safety. "Some FTDs felt unsafe when giving rides to male passengers due to risk of victimization and harassment – of possible being sexually harassed and physically attacked while working alone and sharing a small space with strangers" (*ibid.*:9). The researchers describe the independent contract work as a double-edged sword where female drivers enjoy the fruits of financial independence and great flexibility at the expense of their safety. Many respondents nevertheless seem to appreciate the support they get from the taxi companies which allow them to reject male clients, without getting lowered ratings[3]. Likewise, companies had assisted drivers in scenarios of harassment from clients. Beigi, Nayyeri and Shirmohammadi (2020) state that the negative experiences of FTDs were in most cases linked to "the

[3] Ratings can be understood as a public receipt visible to all users of a digital platform and supposed to reflect the quality of the service.

stereotype that female taxi drivers belong to lower social classes" (*ibid.*:10). As a result, some look down on women working as online taxi drivers.

## 2.3 Background to the Case Study: The Public Transport Sector in Nairobi

The public transport system in Nairobi is generally known as poor, unregulated and congested and comprises privately-owned vehicles (traditional taxi and ride-hailing vehicles), motorcycles (locally called *Boda Boda*), and mini-buses and buses (locally called *Matatu*). Most ride-hailing companies offer urban dwellers to choose preferred transit services like automobiles, Boda Boda and minivans based on their preferences for travel time, pricing, and convenient travel.

Dating back to colonial-era (Nyachieo, 2018), the matatu-sector is the main provider of motorized transportation for 80 per cent of Kenya's urban citizens with the most affordable fares. Many passengers are attracted by the unique "pimped" matatu-culture (Ullmann and Baye, 2018) which seek to give riders a vibrant journey experience. Something which nevertheless causes regular heated debates about road safety among car drivers and policymakers. Local NGOs have started to highlight the downsides of the matatu-industry which threatens women's personal integrity and safety. In 2014, a Kenyan woman who wore a mini-skirt was stripped and beaten by a group of men at a bus station in Nairobi. The incident came to be the spark of the #MyDressMyChoice movement. Citizens took to the street of Nairobi and demanded justice and the right to dress as one prefers without risking victimization. It became clear that this was not an isolated event, but the tip of a much larger structural problem of GBV (Regev, 2014; Mwangi, 2018). Stated by WEL (2015), the matatu culture encourages gender roles to be maintained "[because] stickers posted on these vessels reinforce common gender stereotypes and prejudices against women. These are further reinforced by songs and videos played in the public vehicles bearing content that is demeaning to women" (*ibid.*:11). Two separate studies conducted by NGOs in Nairobi present an alarming reality of GBV in the public transport system.

### 2.3.1 The Matatu Sector

After studying the prevalence of GBV in public transport of six counties in Kenya, WEL (2015) reports that 40 per cent of the surveyed commuters have witnessed violence against a female passenger. Another 54 per cent had personally experienced gender violence while using public transportation. Flone Initiative, on the other hand, estimate that 88 per cent of commuters surveyed have heard or witnessed sexual harassment against a female commuter in Nairobi (Wafula, 2018: 21 cited in Román 2019). Sexual harassment, in turn, is categorized into three different types: **(a)** abusive language, **(b)** inappropriate physical contact, and **(c)** undressing, where the major perpetrator identified by matatu riders is operators

(Wafula, 2018). Put in a broader context, GBV in the Nairobi region is one of the highest in Kenya. Almost every second woman (age 15-49) in Nairobi have experienced domestic physical violence and one out of five women had experienced sexual violence (Kenya National Bureau of Statistics, 2014:294; 298).

The two studies conclude that various improvements must be made to secure safe public transportation for women. Among those, sensitizing gender rights to Public Service Vehicles (PSV) managers, operators, and commuters, additionally encouraging more women into the transport workforce. The latter is something which potentially also could economically empower women. In sum, unsafe transit environments and failure to acknowledge women's travel concerns in Nairobi threat their freedom of movement and violates women's rights to freedom from violence and discrimination. These conditions also constrain women to participate in the sector as employees (Wafula, 2018).

### 2.3.2 The Ride-Hailing Sector

Being a hotspot of Information and Communication Technology (ICT), Kenya has seen an incredible increase of smartphone penetrations with a cellular subscription of 0,399 per 100 people in 2000 to 96,32 in 2018 (The World Bank, 2020). In 2007, M-PESA was launched by the Kenyan telecom operator Safaricom which allows payments to be sent and received even with more primitive phones. By 2017 the platform had attracted 30 million users in ten countries (Monks, 2017). It did not take Safaricom long to also launch its ride-hailing app Little Cab in 2016 after Uber entered Nairobi in 2015. Ride-hailing firms' desire to get the biggest piece of the booming sharing economy has led to a 'price war' to lay hold of Nairobi's customers (Omboki, 2019; Tanui, 2019).

By 2015 the minimum price of UberX was 2,8 USD and drivers were paid 0,6 USD per kilometre and 0,04 USD per minute (Itimu, 2017a). Bolt and Little Cab accompanied the ride-hailing sector with fares of 0,24 and 0,28 USD per kilometre, respectively. As a result, the fares of UberX dropped to 0,33 USD per kilometre by 2016 (Itimu, 2017b). Riding fares have been lowered, but drivers are forced to work more hours as the commission rates remain the same; 15 per cent for Little Cab and Bolt contractors, in comparison to 25 per cent for Uber contractors. In 2018, Uber launched a new service called Uber Chap Chap with even lower prices if drivers signed up with a fuel-efficient Suzuki Altos, with a minimum fare of 0,93 USD and 0,15 USD per kilometre. By July 2019, ride-hailing drivers working for the three mentioned firms gathered to strike against the shrinking fares, high commission rates and increased working hours which were claimed to have cost the life of 10 drivers due to accidents caused by fatigue in a two-month period (Omboki, 2019). In their article, Zollmann and Morawczynsk (2019) estimate that drivers in Nairobi work 12 hours per day and 6 days a week. The authors moreover stress the need to regulate conditions of the ride-hailing sector but do not give any concrete example of implementation

strategies as they identify a 'policy conundrum' existing in the sharing economy. Online independent contractors simply fall between the stools of regulatory authorities and policymakers.

> When Uber first came into the Kenyan market, business was very good for us. I could afford to work for eight hours a day with a comfortable two-hour nap between 12 noon and 2 pm. Things have now changed with the revenue shrinking so badly due to cuts in the rates charged that I sometimes have to work for up to 24 hours or more. (Omolo in Omboki, 2019)

### 2.3.3 Female Ride-Hailing Drivers

Numbers of registered digital taxi drivers in Nairobi city was estimated to 12,000 in 2018, female drivers represented 3 per cent (Bhalla, 2018). Of course, an unbalanced representation of women, but female drivers contracted by Little Cab have in fact had a 13-fold increase since the launch in 2016 (Bhalla, 2018; Tubei, 2019). The experience of FRDs has until recently started to appear in media reportages (Bhalla, 2018; Ayuko, 2019; Osman, 2019). The drivers are often being portrayed as chic, hardworking and independent women. "With their manicured nails, immaculate make-up and matching handbags and stilettos, you would be forgiven for mistaking the five women seated in the café of the upscale Nairobi hotel for a group of senior female executives" (Bhalla, 2018). Perhaps more interesting than describing drivers' outer traits, all articles try to lift the safety concerns of women operating in the ride-hailing sector. Sexual harassment and assault are parts of the daily manoeuvring for many of the drivers where the rider could be the perpetrator. In response to this, Mehnaz Sarwa founded and launched 'An Nisa', a taxi-hailing firm exclusively for women, driven by women, in September 2018 (Tubei, 2019). With a similar concept, but arguably less recognized – Lady Bug – is a service which has given male and female riders of Little Cab the option to prefer a lady driver since 2016. The purpose of the service is twofold, first to provide clients with a safe mode of transport. Second, inspire more female drivers into the industry as the fares for the option are slightly higher.

## 2.4 Conclusion

This chapter has provided an overview of gendered mobility, which defines transport requirements to be different for women due to social power structures, gender roles and fear of victimization. Psychological barriers of mobility are at the core for the studies conducted by Badiora, Ojewale and Okunola (2015) and Dunckel-Graglia (2013), including literature written by Loukaitou-Sideris (2014, 2016). The review demonstrates that current literature on women's mobility tends to focus on female riders rather than drivers. Here, one can criticize feminist scholars for reinforcing traditional gender roles; women perceived as passive riders, weakening their agency as drivers. Nevertheless, a driving license is not necessarily equivalent to free mobility. Instead, females working in the ride-hailing industry face the same constraints

as riders (IFC, 2018). Given that ride-hailing is still in its infancy, and the literature therefore limited, more research is needed to increase the understanding of women's driving patterns within the urban space. In addition to this, there is an overall lack of a clear framework to illustrate what all authors touch upon, namely the connections between gender inequalities, fear of victimization and restricted mobility.

Existing studies on women's mobility in Nairobi have focused on the riders in the public transport sector, hence leaving out the concerns of female drivers in their analysis. Meanwhile, a growing number of articles shed light on constraints faced by Kenyan female drivers to be similar to the findings presented in the IFC (2018) report. Certainly, the narrow scope of work reviewed reflects the gaping hole on the needs and mobility of female drivers in academia and Nairobi in particular. Therefore, there is a growing need to enlarge the concept of 'women's mobility' and include the perceived safety and driving patterns of FRDs.

# Chapter 3. Theory

Driving patterns are the result of repeated driving behaviour. Individual decision-making can be linked to spatial conditions, thus studied from a perspective of behavioural geography. Behaviour refers to the process of stimulus which leads to one's reasoning, ending up in one or several responses. In human geography, spatial information together with personal characteristics and sociocultural factors are crucial components of consciousness, leading to a certain behaviour. The outcomes further affect how one will respond to an upcoming similar stimulus, where repeated behaviour forms a behavioural pattern.

Behavioural geography has commonly been used to determine crime occurrence and patterns in the urban sphere including women's fear of crime (Knox and Pinch, 2014). Likewise, the crime pattern theory (CPT) and RAT are extensively mentioned and used by scholars analysis on riders' travel patterns (Loukaitou-Sideris, 2014; Badiora, Ojewale and Okunola, 2015; Newton and Ceccato, 2015; Brown, 2017). Therefore, RAT will be adopted even in this study to analyse drivers' spatial reactions as influenced by their perceived vulnerability. 'Subjective well-being' is, in contrast to other studies, added to the conceptual framework to cover a more comprehensive picture of driving patterns, but also reflect upon the workspace environment.

## 3.1 Behavioural Geography

Spatial decision-making, reasoning and knowledge are central concepts of behavioural geography, a theoretical framework and sub-discipline to human geography (Gold, 2009; Montello, 2013). Logically, trends and dimensions are studied from the perspective of individual perceptual knowledge and choice, thus behaviour, to handle problems arising in space and time. The 'space' consists of a physical and perceived environment (Gold, 2009; Metoyer, 2010; Montello, 2013).

Research on behavioural geography from the mid-1960s to early 1980s started off on broad terms, studying the spatial behaviour in three distinct areas: emotional attachment to place, natural hazards and cognitive mapping (Gold, 2009). Planning and design were emphasized as important tools to improve the built environment, thereby affecting human perceptions. Critics, nonetheless, questioned the homogenous representation in studies' samples, as well as the extensive focus on behaviour as a cause of personal characteristics which disregarded socio-economic conditions. Subsequently, since the 1980s, behavioural geographers tend to focus more on environmental factors and spatial activity of humans with the development of new (navigation) and old (time geography, environmental attitudes and risks) conceptual approaches (Gold, 2009; Montello, 2013).

According to Metoyer (2010:1), the behavioural geography is regarded as a methodological bottom-up approach where a person's environmental attitudes are studied at the 'disaggregate level' (Montello, 2013:1) and later applied to groups with shared similar characteristics. "[Behavioural geographers] assume that perceptions and knowledge are shared and taught to others in the same setting or social group so that within that group generalizations are plausible" (Metoyer, 2010:2). This draws upon the belief that cognition and perception can be understood as personal and collective imageries representing experiences and conditions within the community (Knox and Pinch, 2014).

## 3.2 Conceptual Framework

To examine linkages between drivers' perceived safety, driving behaviour and pattern, a conceptual framework has been developed based on previous studies and existing literature which integrates core concepts from the discipline of human and behavioural geography.

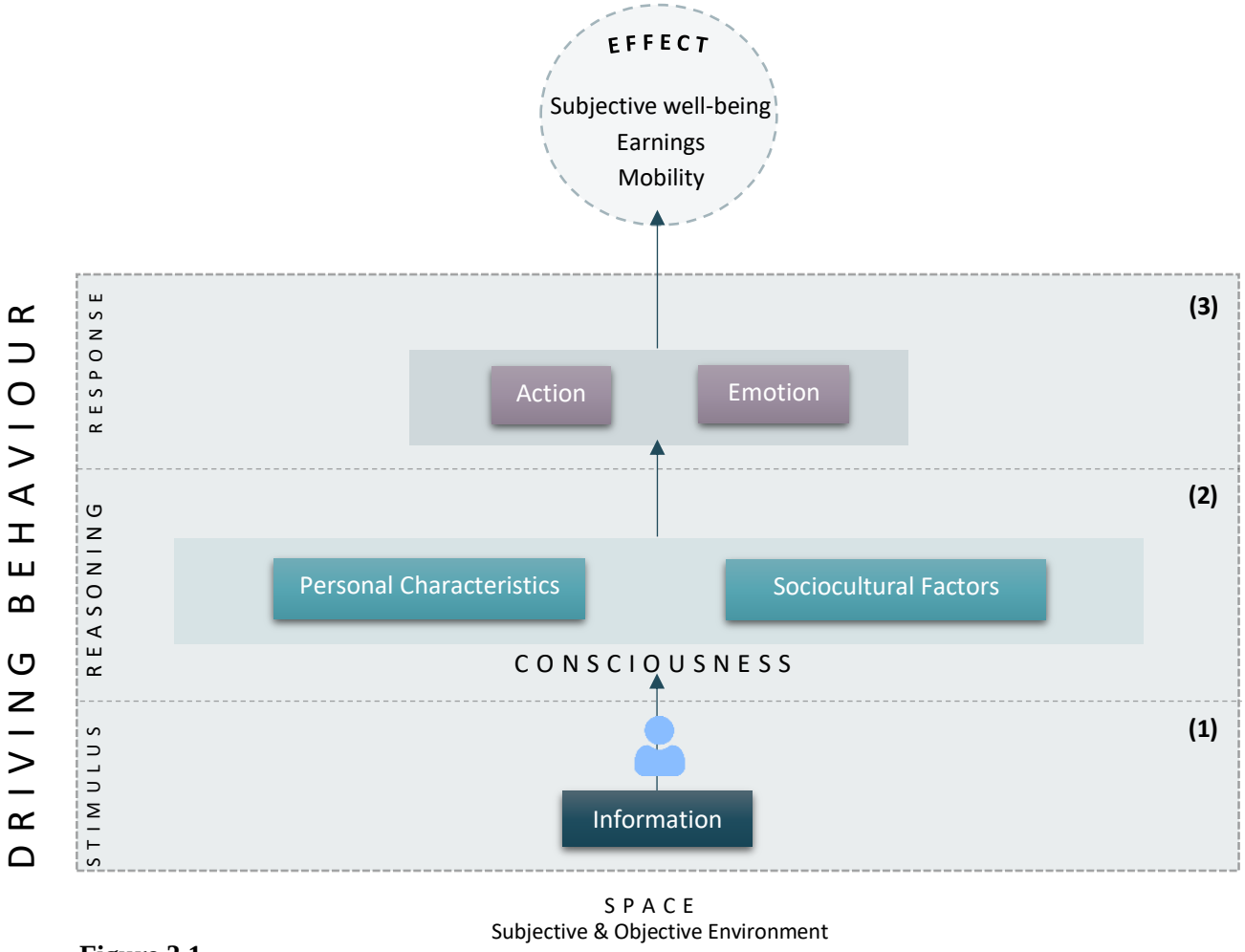



**Figure 3.1**

*Conceptual Framework of Driving Behaviour and Potential Effects*

*Note:* The conceptual framework has been developed by the author to fit the purpose of this study, but grounds on the work of Werlen, 1993 cited in Knox and Pinch (2014:2011) and Gold, J. R., 1980 cited in Gold, 2009:286).

Behavioural geography is illustrated as a process of **(1)** Stimulus, **(2)** Spatial reasoning and **(3)** Response and/or Decision-making in time and space (subjective and objective environment). The spatial behaviour, in turn, might influence one's mobility, earning and subjective well-being. Stimulus refers to any kind of information which is being processed through a person's consciousness which consists of **(A)** Personal Characteristics and **(B)** Sociocultural Factors. In this paper, personal traits (e.g., ambitious, creative, independent), emotions (e.g., anxiety, happiness) and attitudes are considered personal characteristics, either caused or reinforced by one's experience. Sociocultural factors refer to norms and attitudes existing in the objective (general) and subjective (personal) environment (for instance, attitudes towards women working in the transport sector). Individual spatial cognition further determines her response to the stimulus, leading to an emotional response, action, or a combination of the two.

Briefly touched upon in the literature review, fear of crime among female riders has resulted in several women-only transport initiatives across the world. It is relevant here to evaluate a bit more on the concept, hence motivate why 'subjective well-being' together with 'mobility' is included in the conceptual framework.

### 3.2.1 Fear of Crime and Subjective Well-being Explained

In a report published by National Institute for Health Research (NHS), Lorenc et al., (2014) present a comprehensive synthesis of implications on individuals mental and physical health due to crime and fear of crime. The report is published to shed light on crime theories and different crime-preventing interventions and an improved physical environment are especially emphasized. The authors revise a significant number of theories and empirical data to create a causal map compiling the main fallouts into six concepts: **(1)** Crime and Disorder; **(2)** Fear of Crime**; (3)** Health and Well-being; **(4)** Built Environment; **(5)** Social Environment and **(6)** National Policies (*ibid* .:9). Individual attitudes, perceived vulnerability, perceived individual risk and emotional response are further identified as sub-concepts to 'Fear of Crime'. These together with 'avoidance behaviour' are certainly interesting to study for the purpose of this research. The report concludes that fear of crime limits one's physical activity, but also states that the linkages between fear of crime and well-being are complex (*ibid.*). Subjective well-being in this context refers to the female driver's job satisfaction, as a result of driving behaviour and pattern. The latter, to a large extent shaped by the former.

### 3.2.2 Routine Activity Theory

Crime occurrence is caused by three interdependent elements according to Cohen and Felson who developed the RAT in 1979: the presence of **(1)** a suitable target and **(2)** a likely offender in a space where **(3)** a potential guardian is not present (Chamard, 2007; Miró, 2014; Schreck, 2017). Guardianship does not exclusively refer to police or security guards, but the physical or 'symbolic presence' of a person which

makes crime less likely to occur (Miró, 2014:3). In the literature review, Brown (2017) refers to this as 'potential audience'. "[The] focus of routine activity is the study of crime as an event, highlighting is relation to space and time and emphasizing its ecological nature and implication thereof*"* (Miró, 2014:1).

The approach takes socio-economic changes on the macro-level into consideration. Moreover, 'social and technological patterns' (Chamard, 2007:2) influence daily routines, thus the likelihood for the three elements to converge. Therefore, in the light of the growing sharing economy and increasing numbers of ride-hailing vehicles (suitable targets), the RAT is applicable. The case study itself does not aim to explain crime patterns or motives in Nairobi's transport environment; it would require a comprehensive analysis of likely offenders. Instead, RAT is integrated into the conceptual framework to examine how these elements affect female driver's perceived safety, successively the spatial decision-making and mobility of drivers in time and space. A second reason to use RAT rather than other theories of criminology and crime is its shared similarities with human geography where spatial factors to a degree explain a phenomenon.

# Chapter 4. Method

The field in this study contains two sub-fields. First, the digital space where drivers receive requests from clients on online-platforms through ride-hailing apps. Second, the physical space of road networks in and outside Nairobi county identified as the space where drivers work to earn a living. Both quantitative and qualitative data were collected under a period of eight weeks in Nairobi under the first quarter of 2020. While the quantitative data aims to capture general attitudes towards women operating in Nairobi's transport, the qualitative data digs deeper into the mobility of FRDs.

## 4.1 Data Collection

The data of this study grounds on a short questionnaire (137 respondents) and semi-structured in-depth interviews with five FRDs, one former female matatu driver (FMD) and one female matatu conductor (FMC). Additionally, one focus group discussion with another sample of five FRDs. The five in-depth interviews with female drivers together with the FGD lay at the core of the collected data (in total 10 FRDs).

### 4.1.1 Short Survey

Using random sampling, a short survey was carried out under a three-day period in central Nairobi KCB (11-13/2-2020) together with a female research assistant and male translator. This yielded 137 completed responses with a non-response rate of 5,5 per cent. Data has been collected in order to answer the more specific question: What Do Commuters' Attitudes Towards Women Operating in Nairobi's Public Transport Sector Reveal About Gender Roles? Subsequently, grasp commuters' perceptions and whether they resemble the cautiousness and perceived safety of FRDs. The short survey included four descriptive questions, see Appendices B Table B1[4].

**1)** What do you consider as your primary mode of transport in Nairobi?

**2)** Do you feel safe when using this mode of transport?

**3)** Considering different types of crimes (harassment, robbery/theft, assault, road safety), is there any that you fear when you travel with your primary mode of transport?

**4)** Do you have any preferences when it comes to the sex (male or female) of the conductor and/or driver?

[4] References to tables or figures where the number is preceded by a letter are found in the appendix corresponding to that letter.

The research assistant and translator were given compensation of 9,4 USD per day and person. In addition to this, the researcher conducted two in-depth interviews with one woman who previously worked as a matatu driver for six years and one woman who currently is working as a matatu conductor. Structured exactly as the interviews with FRDs and following the same procedures, these two interviews aimed to explore perceived safety and experienced attitudes in comparison to ride-hailing drivers. The interview with the former driver took place at the same café as interviews with FRDs while the interview with the conductor was held at a livelier café near the Matatu station KCB.

The researcher's field notes also hold important reflections and comments from the experiences in the field and are sometimes used to partly understand the collected data.

### 4.1.2 In-depth Interviews

The main research question – How are Driving Patterns of Female Ride-hailing Drivers in Nairobi Shaped by Spatial Reasoning and Perceived Safety? – has been formulated in a way which makes it essential to fully comprehend individual spatial behaviour before similarities can be recognized and analysed. Four of the interviewees were sampled through a purposive sample technique whereby the researcher requested a Lady Bug in the ride-hailing app Little Cab. The researcher met the fifth female driver while using Uber for private reasons. In total, the researcher travelled with Uber 66 times in a period of 8 weeks, only three of those were females. English and Swahili are the primary languages of Kenya and a translator was therefore not considered as necessary during the interviews (including the FGD) which all were conducted in English.

The researcher did not ask the driver to participate in the field study while on the road. Instead, approached the women a few days after the ride. Interviews were scheduled to off-peak hours (when work demand is low) and at the same café along Mbagathi Way, Nairobi. All interviewees were given compensation of 14 USD. This amount does not reflect drivers' revenue per hour, but it was important to show the interviewee appreciation for the average two hours of work she lost, not to forget the openness to share her work experiences with a foreign student.

A set of five predefined themes guided the interviews: **(i)** Family situation and Working Hours; **(ii)** Fear of Crime; **(iii)** General Attitudes Towards Female Drivers; **(iv)** Job-satisfaction and **(v)** Spatial Decision-making. The reasons to conduct semi-structured interviews were two. Firstly, to reduce the feeling of superiority whereby the student asks a set of prepared questions to the 'researched' (Hammet, Twyman and Graham, 2015). Secondly, give the interviewee an opportunity to freely reflect upon topics and bring up her concerns. As an effect, the length of the interviews varied between 51 to 90 minutes. All interviews

were audio-recorded, and consent forms signed (Figure A1). Participants have in chapter five been given pseudo names to maintain their anonymity (Table B2).

### 4.1.3 Focus Group Discussions

A focus group discussion (FGD) was held with a sample of five female drivers to increase the understanding of driving patterns and what type of crimes drivers fear in certain areas through visual mapping. The group was given printed maps and highlighters with the task to identify areas or routes they avoid and what type of crime they fear. Participants were also encouraged to write down their visions for the ride-hailing industry, something which opts to shed light on their concerns as independent contractors. In addition to this, the FGD sought to investigate if similarities in driving behaviour and experiences between interviewees and FGD participants could be found. Thereby, contribute to the reliability of the interview findings. In contrast to the in-depth interviews, participants were sampled by one of the interviewees who knew many women working in the ride-hailing industry. It can, therefore, be considered as (small) snowball-sampling (Hammet, Twyman and Graham, 2015). The FGD took place in a private house as it was essential to let participants discuss in a quiet and 'safe' place (*ibid*). Like the in-depth interviews, participants signed the consent form and the FGD was audio recorded (70 minutes). Participants were given compensation of 6,5 USD as well as lunch.

## 4.2 Analysis Methods

The questionnaire data was coded in the analytic software SPSS. The 152 denaturalized transcribed pages from interviews and the FDG session were on the other analysed through a thematic approach which draws upon the conceptual framework presented in chapter three. Moreover, there was an already set idea of prespecified concepts. Reading and labelling the transcript one by one, the researcher soon noticed that new descriptive codes emerged, such as drivers concerns. These concerns arose either as a direct response to a question or indirectly through repeated topics or issues brought up by the respondent. The five main themes which appeared are presented in chapter five as separate sections. The student kept notes about the analysis process for the purpose of reflexivity (Hammet, Twyman and Graham, 2015; Creswell and Creswell, 2018).

Descriptive codes of segments in transcripts were first labelled, thereafter sorted, compared and clustered into patterns codes followed by memoing (Punch, 2014) to develop a shared driving behaviour of FRDs. Types of stimulus are identified as indicators and driving behaviour represents a higher level of abstraction. The analysis process followed to a large extent, the three main activities presented in Miles and Huberman Framework; data reduction, data display and drawing conclusions (*ibid.*). A couple of procedures have been done to reach authenticity, such as triangulation (e.g., attitudes towards women collected from the

study's three different data sources), a rich description of spatial reactions and use of external auditor (Creswell and Creswell, 2018).

Three of the female ride-hailing interviewees were more eager to illustrate their responses by recalling certain incidents, where the two others focused more on general perceptions and attitudes. To clarify, given the different focus of the in-depth interviews and FGD, respondents are in the analysis sometimes referred to as 'interviewees' or 'participants' where it was not possible to simplify across the groups. In most cases because the same type of questions was not asked.

## 4.3 Limitations of the Study and Positionality of the Researcher

Transcribing audio records immediately after conducting the interviews became an important activity for reflexivity in the field (Hammet, Twyman and Graham, 2015; Creswell and Creswell, 2018). The student reflected upon her role as a researcher and became aware of certain recurring personal behaviours such as unconscious phatic and bodily expressions which perhaps influenced what respondents selected to share.

It is impossible to say how the student's nationality and age affected respondents' willingness to participate in the short survey. Some people approached the student out of curiosity, but the majority were more reserved and expressed concern for the purpose of the questionnaire. There was a general fear that the student worked for the government. Meanwhile, it seemed to be easier for the native-born research assistant to approach participants without having to explain for what reasons the data was being collected. Interestingly, numbers of refusal were equal for the two collectors.

Before quantitative data was collected, the researcher informed the assistant how questions should be asked, and responses categorised to set a shared approach (Hammet, Twyman and Graham, 2015). However, while coding the data in SPSS, it was soon realised that the assistant had allowed multiple responses on question one. Also, commuters' gender preferences of the driver or conductor (question 4) contrasted between data collected by the assistant and researcher and suggests that the two had verbalized the question differently.

At first, it was not considered necessary to have a translator for the conduction of the short survey. But, after approaching several persons with limited English knowledge during the second day in the field it was decided that the person who had advised the researcher and assistant where to conduct the survey would also help the former with translation. However, the student did not take the time to inform what role the translator would have, that is, bridging the language gap between the student and respondents in a neutral way. At times, the translator tried to confirm a response with a doubtful follow-up question as can be read in the field diary: "If I had asked someone about their primary mode of transport and the person

immediately answered ‘Matatu’ [the translator] would ask them: “So you are not walking? no Boda Boda?” Which in some cases affected the responses” (Field Note, 12 February 2020). Because of the narrow geographical area to target its sample and the internal inconsistency, it is eligible to question the statistical validity of the questionnaire data. Important to remember, the quantitative data constitute a small portion of the study’s findings, which mostly ground on rigorously qualitative data collected from in-depth interviews and the FGD. Here the major threat of its validity comes with the researcher and her personal characteristic which influenced how data has been collected and interpreted (Creswell and Creswell, 2018).

# Chapter 5. Findings and Analysis

The focus of this chapter is to present, analyse and discuss the study's main findings. The chapter starts off by presenting the quantitative data on commuters' primary mode of transport and attitudes towards women operating in Nairobi's public transport sector. The findings of FRDs' behavioural geography constitute the main part of this chapter and covers **(a)** the Driving Patterns; **(b)** the Avoidance Behaviour; **(c)** Personal Characteristics; **(d)** Job Satisfaction and **(e)** the Driving Concerns of respondents. The final part of the chapter discusses the findings with reference to RAT and previous literature.

## 5.1 The Public Transport Sector and Commuters: Perceived Safety, Fear of Crime and Attitudes

The short survey generated 72 responses from women (53 per cent) and 65 from men (47 per cent). Undoubtedly, the main mode of transport for both genders is Matatu, 122 of the 137 surveyed use Matatus most frequently. The second most used mode of transport for women is ride-hailing cabs (6,3 per cent) while men walk (6,8 per cent). Where 5 per cent of the women surveyed use a private car, this only applies to less than 3 per cent of the men (Tables C1 and C2). In total, almost 29 per cent of the respondents feel very safe while using their main mode of transport, 63 per cent indicates that their perceived safety depends on time or route of travel and less than 9 per cent does not feel safe at all (Table C3). Studying the perceived safety across the gender, two out of five men feel very safe, compared to one out of five women. As displayed in **Figure 5.1-2**, 15 per cent of the surveyed women do not feel safe at all, in comparison to 1 per cent of the men (Tables C4 and C5).

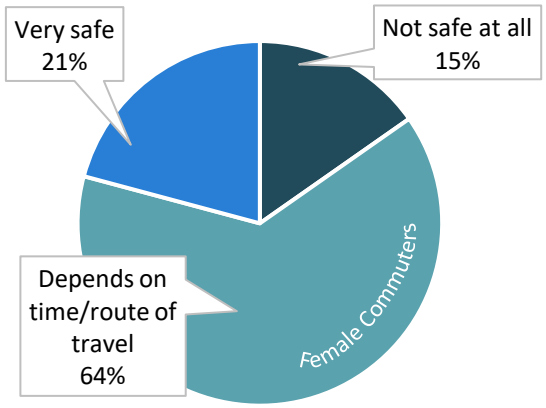



**Figure 5.1**
*Perceived Safety Among Female Commuters*

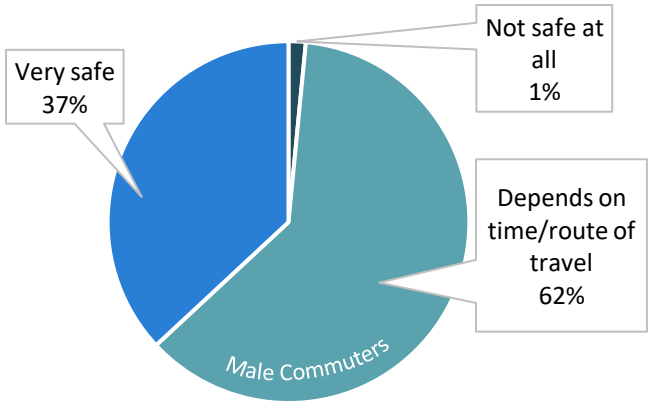



**Figure 5.2**
*Perceived Safety Among Male Commuters*

On transit, most commuters fear theft and/or pickpocketing, but women fear harassment and sexual assault to a much larger extent than male respondents. Almost 15 per cent of women asked, fear sexual assault while travelling within Nairobi, in comparison to 2 per cent of the men (Tables C6 and C7). As presented in Table C8 female matatu commuters fear all type of crimes (harassment, theft, sexual assault and road safety) in contrast users of ride-hailing services only fear theft. Even when walking or using a private car, women fear harassment and theft. Types of crime feared among male travellers (Table C9) is distributed like women's, where matatus can be considered as the most unsafe mode of transport. Important here to clarify, road safety refers to the drivers' behaviour, and in this context – speaking about crime – understood as drivers' misconduct such as over-speeding and/or driving while drunk or high.

21 per cent of the 122 respondents who consider matatu as their primary mode of transport would prefer a male driver, and less than 6 per cent prefers a female driver. On the other hand, more than 16 per cent prefer a female conductor (Tables C10 and C11). In total, 63 per cent of female matatu commuters surveyed fear theft while on transit, and every fourth woman states that she would prefer the conductor to be a woman (Table C12). In comparison, 9 per cent would like the conductor to be a man. Likewise, three out of the nine respondents who use ride-hailing services as their primary mode of transport would prefer a man as their driver.

## 5.2 The Ride-Hailing Industry and Female Drivers: Driving Patterns

Driving patterns of female drivers are partly reflected in working hours and routes. Some shared features between drivers were discovered. To begin with, nine out of the ten FRDs are single mothers and the ride-hailing industry is their main and only source of income. One joined the sector in 2016 where another interviewee joined as recently as 2019 (e.g., FRD 3,4). There is only one driver who solely works with one app, the rest are signed up to at least two ride-hailing firms to meet their own-set daily targets. The common amount is 28 USD. Six drivers own their car, while four lease the car for 14 USD per day. Respondents wake up around five o'clock in the morning, take children to school and work till ten o'clock in the evening or till she meets her daily target. Though she has the flexibility to work less than 15 hours per day, she is more often found to extend her working hours into the night. Working extra hours is hardly ever powered by a desire to increase revenues but to meet the basic daily target. Several drivers stress that working more hours is neither a choice nor pleasant, but something they must do to sustain their families (e.g., FRD1,4,6,7).“If you don't work those hours, you will not meet your target, yeah, it is like, you know the essence of working, you work so that you can gain. If you don't work such hours, there is no gain” *(*Julie, FRD 4).

Two drivers do not work at night because of security reasons: “I don't work at night. Unless with a client I am familiar with. I don't work at night, I just feel so unsafe (…) at night that's when you get to meet the drunkards” (Scola, FRD 3). When asked if the conscious decision to not work during the night affect her earnings, she argues that the distance of night trips is longer compared to day trips. Furthermore, once she drops a client outside the city centre, the chances to get a request back to town are small. She is then forced to drive back without a client which she considers as a loss in both fuel and time.

The FRDs who work at night adopt similar strategies to ensure that their perceived safety is maintained by **(a)** Increased Cautiousness), **(b)** Switching off Unsafe Apps and **(c)** Avoiding Certain or Unknown Areas. Several drivers confirm that their cautiousness rises while working at night by asking where the client is going prior to pick-up (FRD 1,3,4). Two drivers state that it is not safe to work with one specific ride-hailing app at night, consequently they ‘go offline’ after eight o'clock in the evening. This, after several hijackings, occurred when drivers had been online and either picked a client or received a request. The drivers found the company's security for its drivers as weak and the follow-up in case of an incident or emergency as too slow.

> You always hear people [other ride-hailing drivers] saying: “please don't use this [name of app] at night, somebody was hijacked… like a driver was hijacked a car was left somewhere, a driver was killed”. You

won't be able to be the next victim (…) We have just complained so much. We complain each and every time, but nothing has been done. So, the best option is to switch off. (Veronica, FRD 3)

These patterns of behaviour while driving was recognized as 'avoidance behaviour'. Though mostly adopted during the night, drivers avoid certain areas or become more cautious even during the days if, for instance, a male client request a Lady Bug (e.g., FRD 1,4).

## 5.3 Avoidance Behaviour

The avoidance behaviour of interviewed drivers has been labelled, compared, and conceptualized into a higher level of abstraction as presented in **Table 5.1**. This resembles the conceptual framework in chapter three but is more detailed as concepts entail drivers' previous emotions and behaviour (indicators). Types of stimulus associated with a respondent's spatial cognition causing an emotional response and/or reaction have been identified as three: **(i)** Neighbourhood/Area, **(ii)** Unknown Road/Area and **(iii)** Client. As can be seen, emotional responses and reactions are colour coded according to type of stimulus. The colours are used to demonstrate the analysis process and how different spatial stimulus resulted in spatial emotional response and reaction.

**Table 5.1**

*Conceptualized Avoidance Behaviour of FRDs Caused by Different Types of Stimulus*

| | | |
|---|---|---|
| **(3)** Rection | | |
| **A.** Cancellation<br>**B.** Change of Pickup Location<br>**C.** Going Offline/Avoiding Area<br>**D.** Refuse Finishing Trip | **E.** Ensure Windows/Doors are Locked | **F.** Confrontation<br>**G.** Accept Situation<br>**H.** Calling/Sending Live Location to Friend<br>**I.** Cautiousness<br>**A.** Cancellation<br>**D.** Refuse finishing trip |
| **(2)** Emotional Response | | |
| Caution<br>Fear | Alone<br>Insecure<br>Regretful<br>Scared | Curious<br>Un-/comfortable<br>Un-/safe<br>Sceptic |
| **(1)** Stimulus | | |
| **(i)** Neighbourhood/Area (e.g., Ruaka, Eastleigh) | **(ii)** Unknown Road/Area | **(iii)** Client (gender, age, ethnicity, behaviour) |

To illustrate, a driver who dropped a client in an Unknown Area **(**Stimulus **ii**, in Table 5.1**)** shared how she felt alone, scared, and regretful. Consequently, made sure the windows and doors of the cars were locked. "Once that client alights you are like wow, I am alone here. Whatever he was fearing, or she was fearing, may be out there…you feel like, you regret" (Esther, FRD 5). Another driver decided to call and share her live location with a friend while she was carrying two male clients **(**Stimulus **iii,** in Table 5.1**)**.

She felt unsafe because of their behaviour and wanted someone to know where she could be found in case something would happen. She later ended up cancelling the trip and dropped the clients before they had reached their destination.

> I just got so uneasy and I just decided that I am not moving, so well we proceeded but when I got to a shopping centre, that is where I stopped and I told them: I can't continue (…) I am not comfortable. (Scola, FRD 3)

Nine types of avoidance behaviour – during day and night – have been recognized as **(A)** Cancellation; **(B)** Change of Pickup Location; **(C)**; Going Offline/Avoiding Area **(D)** Refuse Finishing the trip; **(E)** Lock Windows/Doors; **(F)** Confrontation; **(G)** Acceptance; **(H)** Sending Live Location to a Friend and **(I)** Cautiousness. After completing the in-depth interviews and realising the significant influence of avoidance behaviour on driving patterns such as working hours and routes, the researcher was left with new unanswered questions: what type of crime are being avoided and in what areas?

### 5.3.1 Areas and Types of Crime Avoided

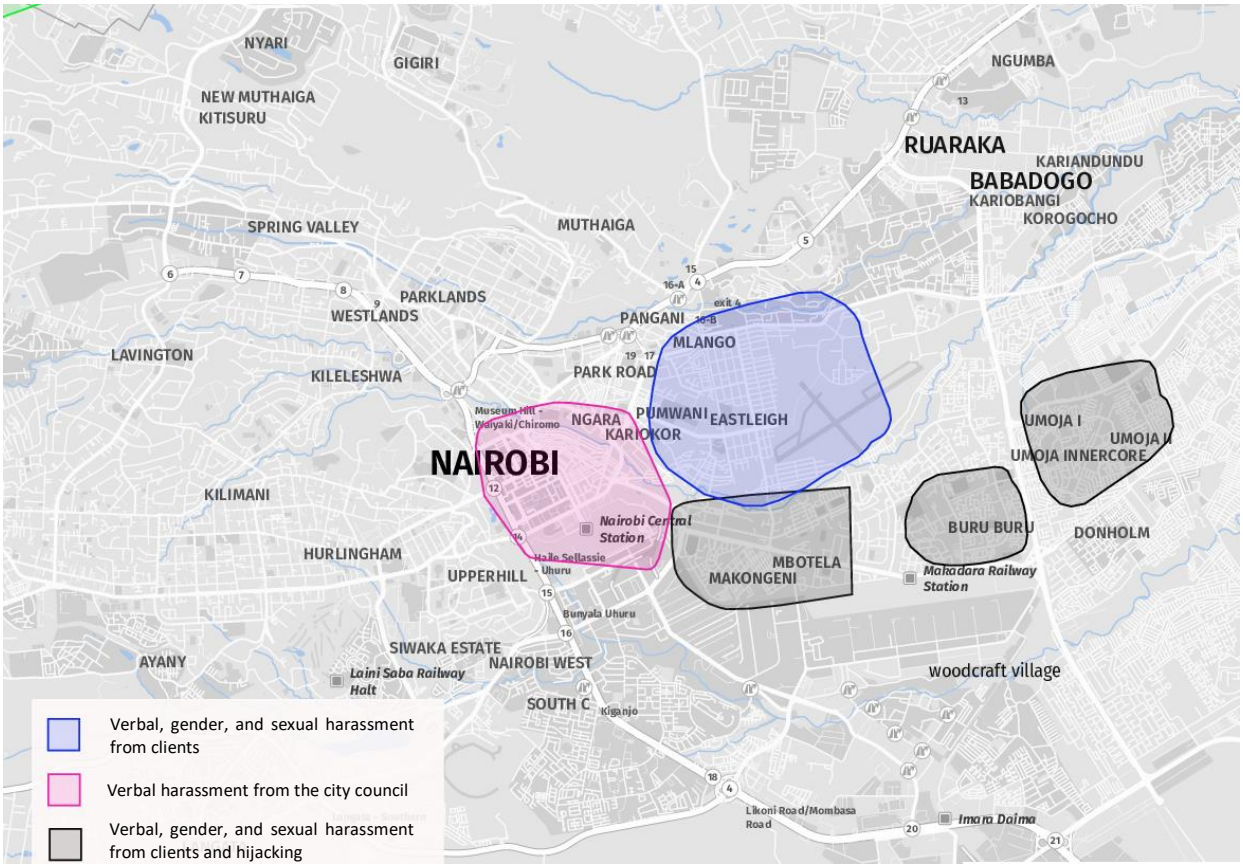
During the FGD, participants identified three main types of crimes which they fear while working:

a) Verbal, gender, and sexual harassment from clients
b) Verbal harassment from the city council (greed)
c) Hijacking

A fourth category entailed a) and c). These crimes were also frequently mentioned by all drivers throughout the in-depth interviews. Within the focus group, areas avoided during the day are significantly different from avoided areas during the night and illustrated in **Map 5.1** and **5.2**. During the daylight, drivers avoid the very heart of Nairobi, CBD, where the city council is active. CBD is a highly congested area, where most of the matatu commuters arriving from suburbs areas are alighting. This in combination with an absence of parking spots forces ride-hailing drivers to quickly drop-off clients without getting caught by the city council who clamps the car once FRDs stop. Eastleigh was also considered as a congested area where many Somalis live and perceived as behaving rude and arrogant towards drivers. In Makogeni, Bure Bure and Umoja all participants except one fear different types of harassment and hijacking.

> [For me] it is just phobia for Umoja, those areas… I just don't like it, I just fear it, it is just to ghetto… I just have a fear, those guys can do anything even during the day…they can even show you a gun during the day! (Caroline, FRD 6)

The same driver also says that if she drops a client in Bure Bure, she switches off her phone, and does not go online until she reaches Upper Hill.




**Map 5.1**

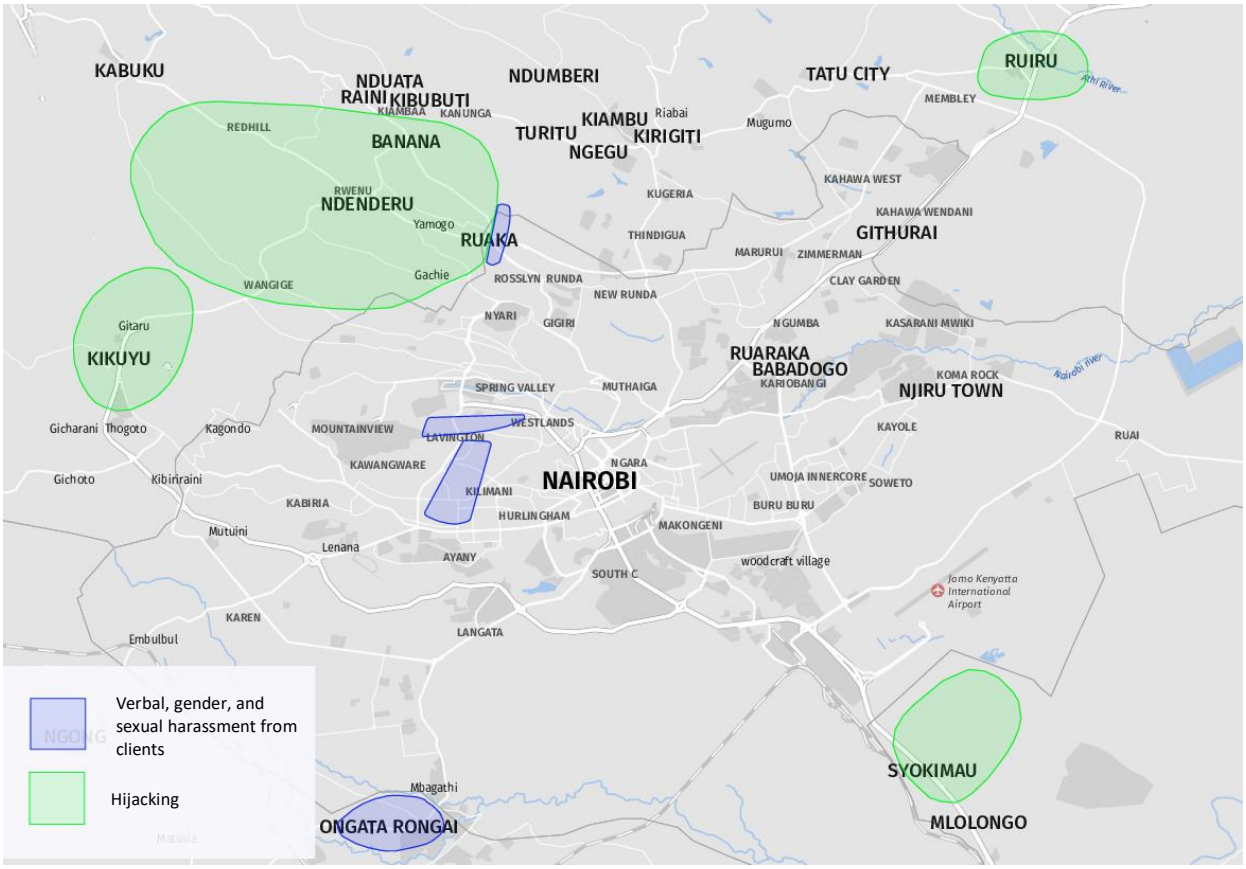
*Areas Avoided and Types of Crime Feared at Day among FRDs*

Source: Mapz (2020a), marked areas added by the author.

*Note:* Map displays the central parts of Nairobi County.

If participants avoid central Nairobi during the day, quite the opposite happens at night. The avoided areas are instead mainly located outside Nairobi county where the main fear is hijacking. Fear of harassment is current in Kilimani, Lavington, Ruaka and Ongata Rongai. One of the participants shares her reason for not working at night with the rest of the group; she once got sexually harassed by a male client in Ruaka. "The guy just picked my dress and pulled it…So, he pulled it up and I was like, okay he is going to rape me (…) The guy just picked my hair, and he started pulling" (Naomi, FRD 7).

At least three drivers had experiences of clients requesting sexual favours (e.g., FRD 6,7,8). One confronted the client, stopped the car, and told the client to leave the car. Another decided to play along with the client's proposition with the motivation: "I don't want to make him angry and I don't want to make him like, to agitate in any way, so I went along with it" (Caroline, FRD 6). The incident occurred in Ruaka where the respondent normally does not go at night, but this time around she had chosen to as she needed the revenue. Ruaka is also mentioned by the interviewees Lillian and Veronica as an avoided area who both confirm their fear of hijacking.




**Map 5.2**

*Areas Avoided and Types of Crime Feared at Night among FRDs*

Source: Mapz (2020b), marked areas added by the author.

*Note:* Map displays Nairobi County and parts of neighbouring counties.

A driver can receive information about a client, hence stimulus, before, under and after a ride. Once FRDs receive a request and see the name of the client, they might behave differently depending on their personal characteristics. Examining a driver's reasoning, thus, underlying attitudes, emotions, experiences, and perceptions is crucial to understand why different types of avoidance behaviour occur. Following sections present drivers' personal characteristics and reasoning.

## 5.4 Personal Characteristics

Stated in the conceptual framework, personal characteristics involve experiences and emotions. All drivers confirm that they at least once felt scared because of a client's behaviour or the area for the destination. Previous experiences which occurred in the workplace of a driver (thus the car) have been labelled as gender harassment, sexual harassment, and hijacking. Gender harassment, on one hand, is considered as discrimination because of ones' sex whereby stereotypical gender roles are being assigned to a person, thus "the behaviour of the harasser does not need to be sexual in nature" (Wishnia, 2020). Sexual harassment, on the other hand, is understood as "unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature" (EEOC, 1997). Emotions spurred by these incidents are assembled in **Table 5.2.**

**Table 5.2**

*Summarised Personal Characteristics: Previous Experiences and Caused Emotions*

| Experiences | Emotions |
|---|---|
| • Gender Harassment<br>• Hijack<br>• Sexual Harassment | • Afraid<br>• Anxious<br>• Intimidated<br>• Mad<br>• Scared<br>• Uncomfortable<br>• Worried |

Underlying attitudes also influence a person's spatial decision-making. An answer where the respondent described characteristics of a socio-cultural group was considered as FRDs' perception about others such as: "Men do like being closer to a woman… They feel grateful when driven by a woman" (Veronica, FRD 3). In contrast, if respondent described herself or female drivers from the perspective of another person's belief, considered as others' attitudes towards FRDs such as: "These young girls, it's hell (…) they see us like we are so desperate" (Scola, FRD 4). Analysing existing attitudes is furthermore crucial to get the full picture of driver's behavioural geography.

### 5.4.1 Sociocultural Factors, Gender and Sexual Harassment

At least five of the drivers share how they repeatedly are being perceived as desperate, poor and masculine by clients, friends and families and the society as whole because of their choice to work in the ride-hailing industry, despite being women (e.g., FRD 2,4,6,7,8). A summary of experienced attitudes towards respondents are displayed in **Table 5.3**.

**Table 5.3**

*Summarised Sociocultural Factors: Attitudes Towards Women Operating in the Ride-hailing Sector*

| Women working as ride-hailing drivers are perceived as… | | | |
|---|---|---|---|
| Attitudes towards female drivers | …careful/appreciated drivers…<br>…desperate…<br>…masculine…<br>…prostitutes…<br>…poor… | …careful/appreciated drivers…<br>…frightening…<br>…hardworking…<br>…intruders…<br>…tough… | …desperate… |
| | …by… | | |
| | **…CLIENTS** | **…MALE DRIVERS** | **…GENERAL** |

> Women will down look at you – why are you doing such kind of thing? – because it looks like it is being done by people who is not educated, you know? So, they down look at you like you are so desperate…this is a man thing, why you doing this, kwanini hujasoma, have you not gone to school? (Veronica, FRD 2)

> The society at large doesn't appreciate whatever we are doing… The whole society cause actually people know it as job for men, they take is as for men, they have never appreciated a woman doing [this job, they] will see us as we are so desperate. (Naomi, FRD 7)

Gender discrimination experienced by respondents becomes obvious when riders cancel trips once they realise that they are assigned a female driver. A form of discrimination all drivers have experienced at least once. Not seldom are the ones who cancel a trip, the younger female clients. Drivers' interpretations of a client's reason to cancel are mixed. Some believe that it is because of jealousy (e.g., FRD 2,4,8) meanwhile Lillian believes it is because women are doubted as good drivers. Several FRDs have experiences of clients who cancel a ride just to request again by hoping they will get another driver.

> They don't trust women. I think they don't have any confidence in a woman driver. Because mostly ladies cancel on you. I just ask them, why, why did you have to cancel on me… You don't think I can drive you faster self like men do? (Lillian, FRD 1)

This quotation shows how a driver's personal characteristics play a crucial role in her spatial reaction to stimulus. Lillian chooses to confront the client (see, Reaction **F,** Confrontation**,** in Table 5.1), she sees herself as a talkative person, thus will be curious to know the client's reasoning. Other drivers, nonetheless, state that they would not question a client (see, Reaction **G,** Acceptance, in Table 5.1) since they risk paying a high price in terms of lowered ratings, or worse, getting their account blocked by the ride-hailing firm.

**Table 5.4**

*Summarised Personal Characteristics: Perceptions of Female Drivers*

| Women working as ride-hailing drivers' perception of… | | | |
|---|---|---|---|
| | …CLIENTS: | …MALE DRIVERS: | …GENERAL: |
| Perceptions | • Abusing<br>• Arrogant/rude<br>• Grateful<br>• Judging/doubtful<br>• Supportive<br>• Un-/respectful | • Assaulting<br>• Encouraging<br>• Jealous<br>• Mismanaged<br>• Supportive<br>• Un-/respectful | • Disparage<br>• Jealous<br>• Judging |

Hand in hand with the perception of female drivers as desperate and poor goes the common attitude among clients that women who operate as ride-hailing drivers are prostitutes, typically when working at night, but also because of their choice of dressing. Again, five women had to carry clients while getting requests for sexual intercourse (e.g., FRD 4,5,6,7,8,9).

> He didn't want to alight actually; he was like: how much do I send you? I told him: [2,8 USD] unrated, that is what the app is saying. And he is like: what about [19 USD], I give you [19 USD] and we go somewhere? (…) Like you are fuelling your car to go to look for men! (Julie, FRD 4)

> It really intimidates me when someone thinks that (...) I am completely, totally desperate for money like I am poor...When you [are] telling me that you want me to… you want to triple my money so that you can have me in your bed, it shows that you don't respect me at all. (Esther, FRD 5)

Most ride-hailing clients expect the driver to call, or at least send a message prior to pick up. Generally, a driver who introduces her- or himself is considered as a driver who values customer service. Given this, the researcher got surprised by Esther's strategy to not call clients, thereby minimising the risk for unwanted calls from former clients who have saved her number and would call to ask her out. Or even send her inappropriate videos (Field Notes, 25 February 2020).

#### 5.4.1.1 Male Ride-Hailing Drivers

As can be seen in **Table 5.4**, all interviewees feel that they are supported, encouraged, and respected by the male peers in the sector. Most of them tell how male drivers shared pieces of advice and showed navigation functions when they still were new in the ride-hailing business. (e.g., FRD 1,2,3,4). Two of the FRDs describe that their male colleagues 'salute' them because they manage to handle all challenges that come with the job. In contrast to this, a couple of female drivers believe that they are perceived as 'intruders' by traditional drivers who harassed some FRDs at least once (e.g., FRD 3,5). However, not necessarily because they are women, but because they are working with digital taxi firms which since the entrance in Nairobi 2015 squeezed the market of traditional drivers.

## 5.5 Job Satisfaction

When asking the drivers if they are satisfied with their job, the long working hours are frequently mentioned as displeasure due to the increased competition between ride-hailing companies but also between drivers themselves. Consequently, drivers are forced to work more to meet their targets. Respondents talk about a time when the ride-sharing industry in Nairobi was 'beautiful', between 2016 to 2018 (e.g., FRD 3,6,7). By then, the drivers could easily work seven hours and would still meet their daily targets and spend time with the family. At the time of the field study, none of the respondents worked less than 12 hours per day. "Actually, I find no time for the children. Because [you] have to wake up early so at least you can catch the morning trips, go back home late, so literally… you just meet them [the children] on say Sundays" (Scola, FRD 3). Equally important, many respondents also state that they feel proud of themselves and enjoy being financially independent and able to sustain herself and her family (e.g., FRD 1,2,4,5). The quote below demonstrates the complexity of being an independent contractor.

> I have to balance between my children and my work. I have to balance between paying bills or stay home with my kids. So, it is a challenge, the good thing is... I always feel proud [over] it. At least I can support them through driving. I cannot start crying because at least I have something that supports them. It is not satisfying; it is more of challenging. Because I have just to balance it. Sometimes I have to work more hours...but I will be more happier to be with my kids. (Lillian, FRD 1)

## 5.6 Driving Concerns

Three major themes of drivers' concerns were independently mentioned by respondents during the interviews and FGD. First, the issue of low fares and high commission rates, a result of the tense competition between ride-hailing companies and an increased number of drivers which presses down the profits (e.g., FRD 3,4,6,7). During the FGD, it was raised that standardisation of pricing between ride-hailing companies would improve the working conditions for drivers. As an effect, drivers would compete on the quality of service provided instead of the lowest price (e.g., FRD 7,10).

Second, the personal safety of drivers. There was a generic annoyance with the security of the ride-hailing companies (e.g., FRD 3,4). Here, it was suggested that all ride-hailing apps should have a function where the driver would be able to share her live-location with the company. Drivers who currently switch off unsafe apps at night indicated that they would consider working with the company if the security saw some improvements.

Third, though respondents understand the purpose of ratings – work performance, hence client interaction is evaluated by the ride-hailing firm – it unfairly demotivates the driver where the client has the final word.

Caroline describes how some clients use the rating as 'a punishment' at times when she did not allow the client to smoke in the car. Subsequently, she often 'tolerates' a client's rude behaviour. This constant stress over one's ratings is shared by several drivers. All confirm that the scorings determine whether a driver is eligible to work or not, as the ride-hailing firm blocks a driver's account with rates below 4,6 (out of 5). Meanwhile, a client with low ratings is still allowed to use the services offered by the ride-hailing company. One of the FGD participants suggested that clients should be denied cancelling a ride (Field Notes, 10 March 2020). Overall, drivers feel that the ride-hailing companies consider the rider rather than the driver (FRD 3,4,6,10).

> For a client, it doesn't matter because even at some point you get [a] client with ratings as low as 3, but as a driver, you cannot work with ratings less than 4,5, but you get a rider with 3. And they are still active. Literally, they [ride-hailing firms] don't consider that like the rider is low rated, that is not an issue to them. (Scola, FRD3)

On a similar note, if a driver decides to cancel a trip after accepting the request, her ratings will go done. Even in the case when she cancelled because of safety concerns.

> Somebody has requested, they are drunk they can barely give you the directions (...) Honesty, you are just scared the way he is talking. It is not safe (...) so we cancel...It doesn't matter, there is no option like – he was taking me to an insecure place – there is not that option. (Julie, FRD4)

Only one driver, Lillian, mentions her concerns for the government to guide the industry through regulations. Something which according to her further has the potential to empower women if they feel that they are supported and protected. "Women can do much more if they can get the support from the ground, from all corners of maybe our society. If we can just get that support. We can do much better" (Lillian, FRD 1). One participant from the FGD similarly wishes that the ride-hailing industry would consider that existing challenges affect female drivers more than men because of her role as a single-mother (Field Notes, 10 March 2020). Some suggested that ride-hailing firms could favour and promote female drivers through improved marketing. Finally, there was a desire to get accepted and appreciated as FRDs by the whole Kenyan society (Field Notes, 10 March 2020).

## 5.7 Discussion

Going back to the specific research question: What Do Commuters' Attitudes Towards Women Operating in Nairobi's Public Transport Sector Reveal About Gender Roles? Rather than separating attitudes towards women operating in the matatu and ride-hailing sector, experiences of interviewees and participants propose that there is a generally negative perception about female drivers and conductors among passengers and riders. Like some of the FRDs who feel that they are perceived as prostitutes and desperate

by some clients, Ruth (formerly employed matatu driver) and Mercy (current matatu conductor) had faced similar attitudes.

> I started to go for driving school, then after two years, I managed to drive. Though it was challenging, like (…) many people could even call my mother: like how can you take somebody to school and this is the kind of [job] that she is going to do? Many used to think that you… you spoil, like the ladies… it is a male-dominated sector [so] they think that you sleep with those men. (Ruth, FMD 1)

Data collected on commuters' attitudes towards women operating in the transport sector shows that less than 6 per cent of the matatu commuters would prefer a female driver compared to more than 20 per cent who would prefer a male driver. Male drivers were by many perceived as 'tougher' (Field Notes, 11 February 2020) and understood as a needed character to manage the work successfully. On the contrary, a larger proportion preferred a female conductor over a male as women were considered as 'more caring', 'nicer' and less likely greedy (16 per cent compared to 9 per cent). This suggests that stereotypical perceptions about gender roles and the labour division within the transport sector remain dominant among the surveyed. Women are perceived as good caretakers of passengers as conductors while men are the tough and hard-working drivers furthermore the matatu environment reinforces traditional gender roles (Preston and Ustundag, 2005; Warf, 2010).

These stereotypical attitudes among surveyed commuters are in some way corresponding with the experiences of FRDs. Cancellations from clients as well as requests for sexual favours are perhaps the most obvious expressed perceptions about female drivers felt by themselves. Women's driving skills and motives are doubted simply because of her femininity. For instance, Naomi (FRD 7) emphasizes that her vehicle is her office and she will, therefore, dress officially as she takes proud in her job. However, she swims against the streams of norms for what is culturally appropriate in different spatial settings. The stereotypical role of female drivers is bolstered in the subjective portraits by local reportages reviewed in chapter two. Bhalla (2018) starts off her reportage by describing typical girly interests (such as makeup and dressing) of female drivers as something unexpected for a woman who is operating in the transport industry. But, not to forget, to some extent also maintained by a couple of FRDs who perceive themselves as 'safer drivers' than their male peers since they, in fact, are more caring. In the same time, several respondents indicate that they are perceived as 'less feminine' by friends and relatives after signing up as independent ride-hailing contractors. This is found to be similar with the experience of female drivers in Tehran who explain how their driving behaviour (fast and tough) make them feel more masculine (Beigi, Nayyeri and Shirmohammadi, 2020:9). In either way, the womanliness (too high or too low) of FRDs seem to determine the attitudes she faces in a male-dominated field.

A result of these sociocultural factors is the adoption of several forms of avoidance behaviour influenced by drivers' perceived vulnerability. But fear of crime seems to significantly fluctuate between women working in the two transport sectors. Following section analyse this statement by bringing in the RAT to address the main research question: How are Driving Patterns of Female Ride-hailing Drivers in Nairobi Shaped by Spatial Reasoning and Perceived Safety?

### 5.7.1 Routine Activity Theory

Mentioned in chapter three, in a scenario where a guardian is absent, but a potential target and offender is present, crime might occur. Respondents within this case fear victimization and harassment in terms of hijacking, gender, and sexual harassment. Although some fear hijacking even during the day (e.g., Umoja), the fear is most prevalent at night, when drivers strategically avoid driving to areas outside Nairobi county. A form of avoidance behaviour which also was recognized in the study of female drivers in Tehran (Beigi, Nayyeri and Shirmohammadi, 2020).

At times, drivers pick a client and feel scared because of his or her behaviour. Most of them wish ride-hailing firms would improve the safety and protection of drivers by improving the app's in-built functions, such as sharing one's live-location. This suggests that the presence of a 'watcher' has a potential impact on the perceived safety of a driver who currently feels alone.

> Because even if it is at night, I will call my family and I will connect them to me and I will tell them that I am going to get a ride so you can follow me, so they follow me from their phone and they see me where I am going, so I would feel safer. (Veronica, FRD 2)

Some drivers, however, doubt that ride-hailing firms would be able to assist a driver in case of an emergency even though an SOS-button already is provided in all apps. Instead, drivers put their personal safety on the reliance of God (e.g., FRD 3.4, 5).

> You are out there on your own, it is about you and your safety... So if people [clients] are telling me: remove your clothes! I press SOS they [the safety team of ride-hailing firms] are going to call back, or yeah they are going to come, but...they have to check my location, it's not like they are outside here. By the time they come, I have been raped, I have been killed, I have been kidnapped, it is mostly the SOS button is for making it is for them to trace you. But nothing like, haha, your safety; [it is] you and your God. (Julie, FRD 4)

In comparison, the two interviewees who had experiences from the matatu sector, share that they felt supported by the matatu conductor, driver and even passengers in those cases when incidents related to misconduct of passengers had arisen. And according to Ruth (FMD 1) something which preserved her from fearing any type of crime during the six years she worked as a driver. Similarly, Mercy says: "I have feared sometimes… but the good thing [is] I have the people I am working with [and they] always have

my back. If a thing happens…even the passengers, they will back you up" (Mercy, FMC 1). It becomes clear that the presence of passengers, thus an audience infuses some increased security. In contrast, in the case a ride-hailing client is the one to misbehave (as in most cases based on the FRDs' experiences) the only potential guardian is the perpetrator him- or herself which might increase her perceived vulnerability.

> That's why I am saying when I am with a man rider I am most scared than being with lady (...) when I come near your home I feel the surrounding is not safe I ran away with this woman and she won't do anything to me, but I can't run away with a man. He can kill me. He can try to do something bad to me. (Veronica, FRD 2)

The missing potential guardianship in the ride-hailing sector could explain why the FRDs express a lower perceived safety than the interviewees operating in the matatu sector. The issue of FRDs as exposed to crime due to the lone situation is brought up by both Brown (2017) and Beigi, Nayyeri and Shirmohammadi (2020). Some female drivers in Teheran adjust driving patterns and carrying tools to be able to avoid or defend themselves from victimization (Beigi, Nayyeri and Shirmohammadi, 2020:10). Although Brown (2017) focuses on current policies in the US which hinder gender-specific ride-hailing platforms to freely operate, the main concern is the safety of female riders and drivers. For this purpose, the author suggests the importance of rethinking the ride-hailing business as intimate work instead of public. Simply, because the ride-hailing services are considered as 'public', but the public itself is absent.

> Because the ride is private, there are no onlookers who might inhibit or prevent an attack on either the rider or the driver. There are no potential witnesses to any form of assault as there is nobody in the car who is not a party to the transaction. (Brown, 2017:395)

Even when drivers carry a rider who does not have bad intentions, some of the interviewees (e.g., FRD 4,5) fear crime before picking or after dropping a client in an unknown area. In these occasions, the physical environment affects the perceived safety as offenders can lurk in the dark, behind a corner or curve. The RAT could help to understand the distinct driving patterns of FRDs at day and night. At night, drivers avoid areas located outside Nairobi county because the fear of hijacking. The increased perceived vulnerability in these areas might be explained by the combination of more criminals present and guardians missing since these areas are not avoided during the day. Instead, FRDs avoid the heart of Nairobi which is highly congested during the day where high density of people and the presence of the City Council raise the risk of victimization. Less crowded during the nights, but by no means empty, it is possible that the city centre is perceived as safer to work within than the suburbs because of its well-known roads and generally good built environment.

### 5.7.2 Subjective Well-being

Illustrated in the conceptual framework, the driving behaviour can affect one's mobility, earning and subjective well-being. The findings on avoidance behaviour among female drivers and the mapped avoided areas because fear of different types of crime proves that the mobility of FRDs' is restricted. She cannot drive freely without fearing victimization in Nairobi City during the day and outside Nairobi County at night. Several FRDs share that they had refused to finish a ride and take the client to his or her destination, thereby they often give up that trip's earnings. Subsequently, drivers balance her perceived vulnerability with the possible loss or gain as an effect of spatial decision-making.

> When I dropped them, actually at first they refused to pay. Because they said we are not paying you have not taken us to our destination. I told them "why should you not pay, I am not comfortable" (...) I just decided that I am not going to argue with you; if you pay, if you don't pay I am okay. (Scola, FRD 3)

Subjective well-being refers to satisfaction with one's life. A term which easily can trap a person into philosophical discussion and confusion about life itself; what is the purpose? The grandiose term is perhaps easier understood when realising that satisfaction entails six dimensions of job satisfaction, financial satisfaction, house satisfaction, health satisfaction, leisure satisfaction and environmental satisfaction (OECD, 2013:30). At first, it was believed that the study's focus would be on job satisfaction of FRDs. However, the findings on driving patterns and working hours suggest that job satisfaction ties into both financial and leisure satisfaction which emerged as 'codes of conceptual interests' (Creswell and Creswell, 2018:193) during the analysis. The safety and pricing concerns expressed by the participants reflect a general disappointment with ride-hailing firms' protection and care of its independent contractors. This can be compared with case study form Teheran, where female drivers feel supported by the ride-hailing firms. For instance, digital taxi platforms 'allow' female drivers to cancel rides without affecting their rates. Something which as well could be implemented by ride-hailing firms in Nairobi to acknowledge the security concerns of drivers.

Several drivers enjoy driving and one driver, Julie (FRD 4), describe driving as a form of therapy. The enjoyment of driving in combination with the possibility to gain economic autonomy is perceived as the main reasons to engage in the ride-hailing industry for many FRDs. In the IFC-report (2018), 74 per cent of the female drivers surveyed enjoy the 'flexibility' which comes with being an Uber driver and one in seven further manages to invest the generated income in a side-business. This is far from the reality for the FRDs in this case study. Instead, even the drivers who seem to be financially satisfied as independent contractors stress that it requires them to work more than 12 hours a day and sacrifice their leisure time, an aspect which is not even mentioned in the IFC report (2018). At least three FRDs share that the profit they make from the ride-hailing businesses is not enough to sustain their family, let alone to save for

pension, medical insurance, or a bad day when work is low. To make it go around, some respondents consider side-hustling as an alternative while the majority instead choose to work longer days, or even at night. At such, women operating as FRDs in Nairobi risk their safety and loose time with their children to meet the cost of their expenses.

#### 5.7.2.1 Additional Comment: The Covid-19 Pandemic

With regard to the current ongoing pandemic Covid-19, it feels important to briefly reflect upon the effects this might have on FRDs. Kenya reported its first case of Corona on the 12th of March 2020 in Nairobi. The Ministry of Health announced that all public gatherings should be suspended the following day (Ministry of Health, 2020a). By the 17th of March 2020, President Kenyatta directed the closure of all schools, banned foreigners from a Corona infected country to enter, and encouraged management to allow employees to work from home (Ministry of Health, 2020b).

The public transport worldwide is like other sectors, hit hard by global lockdowns which restrict the movement of people. By March 18, the ride-hailing firm Little Cab announced that they would remove the commission of 15 per cent for cash trips during the pandemic to support its drivers (Mbaka, 2020). Bolt, on the other hand, offers hand sanitizers to drivers but the commission remains (15 per cent) (Bolt, 2020). Similar to this, drivers contracted by Uber are also required to pay the commission of 25 per cent to ensure that drivers continuously get assisted by the firm's security team (Njanja, 2020). In this sense, the ride-hailing industry can be equated with the informal sector where the protection of workers is not guaranteed.

Female drivers in this study have already proven that they break their backs and Covid-19 could lead to a smash of their financial independence. Lacking revenues further pressures her to seek income from another source to meet her needs. One of the drivers, Esther, wrote in a message to the student that she has been forced to sell DVDs to stretch out her earnings after the landlord locked her house. Several organisations[5] have warned that the indirect mortality rates of Covid-19 will be devastating for poverty eradication and socio-economic development in many developing countries. The measurements taken by ride-hailing firms in Nairobi to ease the consequences amid the pandemic reflect how low-prioritized the needs, safety and satisfaction of ride-hailing drivers truly are.

[5] For instance, see the report on "*Covid-19 in Africa, Protecting Lives and Economies"* by UNECA and statement by Measles and Rubella Initiative.

# Chapter 6. Conclusion

The aim of this case study has been to increase the understanding of female ride-hailing drivers' behavioural geography and their perceived safety in Nairobi by seeking to answer the main research question: How are Driving Patterns of Female Ride-hailing Drivers in Nairobi Shaped by Spatial Reasoning and Perceived Safety? The more specific research question was stated as follows: What Do Commuters' Attitudes Towards Women Operating in Nairobi's Public Transport Sector Reveal About Gender Roles?

A conceptual framework of Driving Behaviour was developed to guide the data collection and analysis of both quantitative and qualitative data from a total of 149 respondents. The student conducted seven in-depth interviews, one focus group discussion and a short survey which yielded 137 responses. Among the matatu commuters surveyed, it was found that although the majority do not care about the gender of drivers or conductors, the ones who in fact have gender preferences, prefer a male driver and female conductor. It was motivated that men have the required driving skills, that is, to drive tough while women possess hospitality skills. On a similar line, several FRDs shared how they feel judged and doubted as drivers because of their gender and taken as prostitutes when working at night. Equally important, appreciated as 'safe drivers' by some clients and as 'tough workers' by male ride-hailing drivers. It can further be concluded that attitudes towards women operating in the transport public sector are influenced by traditional gender roles with a dominant view of a traditional division of labour even within the workspace.

Attitudes are part of the personal characteristics and sociocultural factors of individual spatial reasoning, in turn, one of three core concepts in behavioural geography. Driving patterns in the study have been understood as an effect of repeated driving behaviour. The study came to identify nine types of avoidance behaviour frequently adopted by the FRDs and caused by three types of stimulus – Neighbourhood, Unknown Area, and Client – affecting their perceived vulnerability. A visual mapping activity during the FGD sought to increase the understanding of drivers' fear of victimization and restricted mobility. It was found that FRDs avoid the city centre of Nairobi during the day because fear of harassment (verbal, gender and sexual) from clients and the City Council. At night, the drivers mainly avoid the neighbouring counties to Nairobi due to fear of hijacking and harassment. With reference to the RAT, the perceived safety of women operating in the ride-hailing industry was discussed to be considerably lower compared to the matatu industry due to the absence of a potential guardian. As a result, the perceived vulnerability and spatial reasoning of FRDs shape their driving behaviour and patterns. The study finished by discussing how operating as an independent female contractor in Nairobi's ride-hailing sector affects the well-being of the respondent with an added concern for the consequences of the Covid-19 pandemic.

Based upon these findings it can be concluded that FRDs within the case of Nairobi fear victimization in their workspace. Therefore, adjust their driving behaviour to space and time which are reflected in driving patterns. It has been shown that women operating in Nairobi's ride-hailing industry enjoy the fruits of financial independence at the expense of their safety and leisure time as firms and policymakers forget to fully support Kenyan women who are driving for a living.

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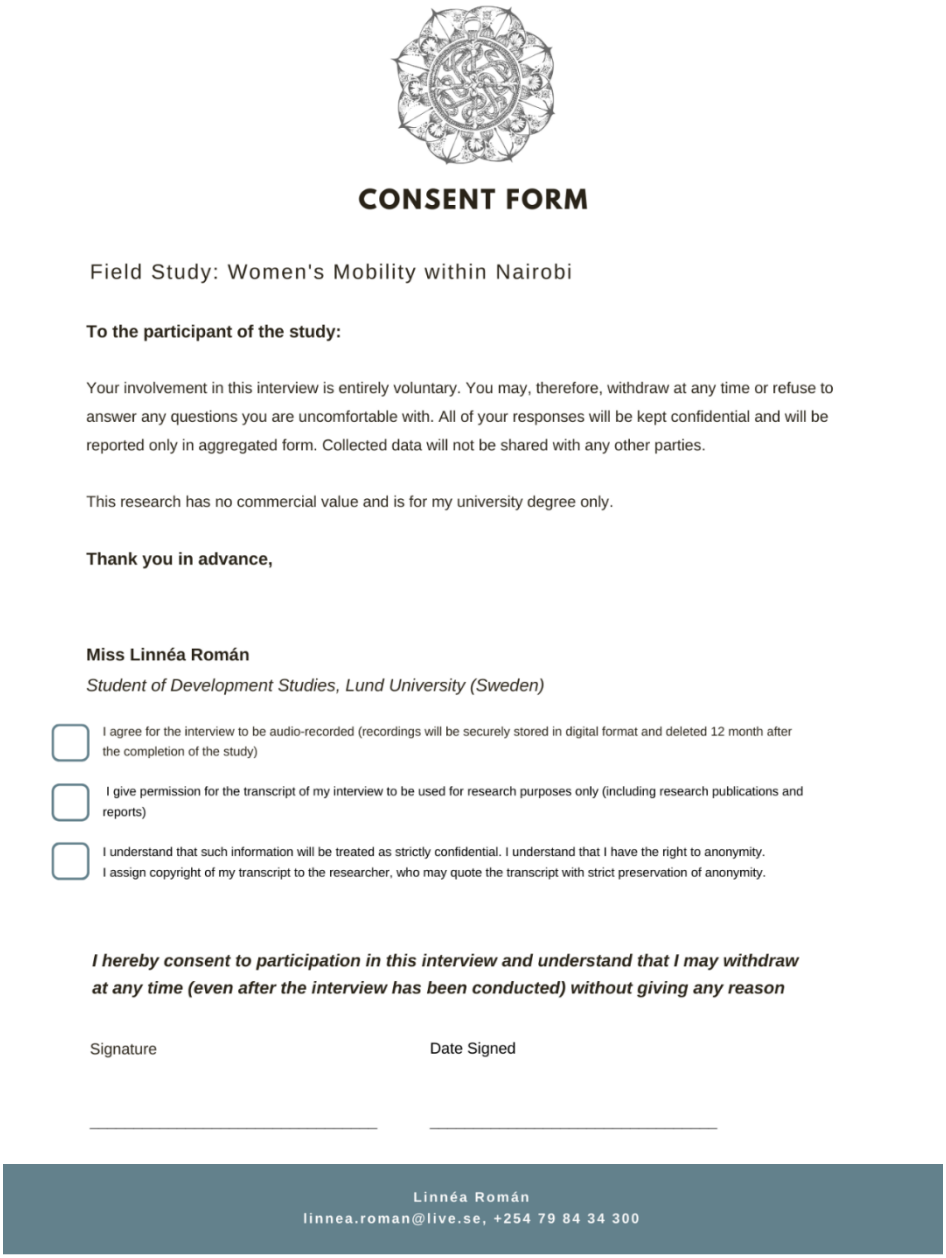
# Appendices A



**CONSENT FORM**

Field Study: Women's Mobility within Nairobi

**To the participant of the study:**

Your involvement in this interview is entirely voluntary. You may, therefore, withdraw at any time or refuse to answer any questions you are uncomfortable with. All of your responses will be kept confidential and will be reported only in aggregated form. Collected data will not be shared with any other parties.

This research has no commercial value and is for my university degree only.

**Thank you in advance,**

**Miss Linnéa Román**

*Student of Development Studies, Lund University (Sweden)*

☐ I agree for the interview to be audio-recorded (recordings will be securely stored in digital format and deleted 12 month after the completion of the study)

☐ I give permission for the transcript of my interview to be used for research purposes only (including research publications and reports)

☐ I understand that such information will be treated as strictly confidential. I understand that I have the right to anonymity. I assign copyright of my transcript to the researcher, who may quote the transcript with strict preservation of anonymity.

***I hereby consent to participation in this interview and understand that I may withdraw at any time (even after the interview has been conducted) without giving any reason***

Signature _____ Date Signed _____

Linnéa Román
linnea.roman@live.se, +254 79 84 34 300

Figure A1.
*Consent Form Signed by All Interviewees and Participants of FGD*

# Appendices B

Table B1.

*Short Survey: Public Attitudes and Fear of Crime Within in Nairobi's Public Transport Sector*

| Respondent | Sex of respondent | QUESTION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 0 = Matatu<br>1 = Private car<br>2 = Little C/Uber/Bolt<br>4 = Cycling<br>5 = Walking<br>6 = Boda Boda<br>7 = other | 2 | 0 = Not safe at all<br>1 = Neither safe nor unsafe<br>2 = Very safe | 3 | 0 = Harassment (verbal, physical, sexual)<br>1 = Robbery/theft/pickpocket<br>2 = Sexual Assault<br>3 = Road Safety | 4 | 0 = Male<br>1 = Female |
| #1. | | | | | | | | | |
| #2. | | | | | | | | | |
| #3. | | | | | | | | | |
| #4. | | | | | | | | | |

Table B2.

*Qualitative Data: Date of Activity and Pseudo Name of Interviewees and Participants*

| Interviewee/Participant | Pseudo Name | Date of Interview | Length of Interview |
|---|---|---|---|
| **Ride-hailing Sector: In-Depth Interviews** | | | |
| FRD1 | Lillian | 16-02-2020 | 50:50 |
| FRD2 | Veronica | 18-02-2020 | 1:05:35 |
| FRD3 | Scola | 22-02-2020 | 1:09:52 |
| FRD4 | Julie | 26-02-2020 | 1:30:10 |
| FRD5 | Esther | 03-03-2020 | 1:16:08 |
| **Ride-hailing Sector: Focus Group Discussion** | | | |
| FRD6 | Caroline | 10-03-2020 | 1:10:41 |
| FRD7 | Naomi | | |
| FRD8 | Precious | | |
| FRD9 | Rose | | |
| FRD10 | Almasi | | |
| **Matatu Sector: In-depth Interviews** | | | |
| FMD1 | Ruth | 02-03-2020 | 45:40 |
| FMC1 | Mercy | 14-03-2020 | 31:54 |

# Appendices C

Table C1.

*Primary Mode of Transport: Women*

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| Mode of Transport[a] | Matatu | 63 | 79.7% | 88.7% |
| | Private Car | 4 | 5.1% | 5.6% |
| | Ride Hailing Cab | 5 | 6.3% | 7.0% |
| | Walking | 4 | 5.1% | 5.6% |
| | Boda Boda | 3 | 3.8% | 4.2% |
| Total | | 79 | 100.0% | 111.3% |

a. Dichotomy group tabulated at value 0.

*Note.* The total number of responses N (79) are more than number of female respondents (72) as some gave multiple answers

Table C2.

*Primary Mode of Transport: Men*

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| Mode of Transport[a] | Matatu | 59 | 79.7% | 90.8% |
| | Private Car | 2 | 2.7% | 3.1% |
| | Ride Hailing Cab | 4 | 5.4% | 6.2% |
| | Cycling | 1 | 1.4% | 1.5% |
| | Walking | 5 | 6.8% | 7.7% |
| | Boda Boda | 3 | 4.1% | 4.6% |
| Total | | 74 | 100.0% | 113.8% |

a. Dichotomy group tabulated at value 0.

*Note.* The total number of responses N (74) are more than number of male respondents (65) as some gave multiple answers

Table C3.

*Perceived Safety: All Respondents*

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Not safe at all | 12 | 8.8 | 8.8 | 8.8 |
| | Depends on time/route of travel | 86 | 62.8 | 62.8 | 71.5 |
| | Very safe | 39 | 28.5 | 28.5 | 100.0 |
| | Total | 137 | 100.0 | 100.0 | |

Table C4.

*Perceived Safety: Women*

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Not safe at all | 11 | 15.3 | 15.3 | 15.3 |
| | Depends on time/route of travel | 46 | 63.9 | 63.9 | 79.2 |
| | Very safe | 15 | 20.8 | 20.8 | 100.0 |
| | Total | 72 | 100.0 | 100.0 | |

Table C5.

*Perceived Safety: Men*

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Not safe at all | 1 | 1.5 | 1.5 | 1.5 |
| | Depends on time/route of travel | 40 | 61.5 | 61.5 | 63.1 |
| | Very safe | 24 | 36.9 | 36.9 | 100.0 |
| | Total | 65 | 100.0 | 100.0 | |

Table C6.

*Fear of Crime – Frequencies: Women*

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| Fear of Crime[a] | Verbal, Physical and/or Sexual Harassment | 17 | 21.0% | 30.9% |
| | Theft and/or pickpocketing | 44 | 54.3% | 80.0% |
| | Sexual Assault | 12 | 14.8% | 21.8% |
| | Road Safety | 8 | 9.9% | 14.5% |
| Total | | 81 | 100.0% | 147.3% |

a. Dichotomy group tabulated at value 0.

*Note:* Type of Crime feared among the female respondents who does not feel safe at all or depending on time and route. Total number of responses N (81) exceeds umber of responses (57) as some gave multiple answers

Table C7.

*Fear of Crime – Frequencies: Men*

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| Fear of Crime[a] | Verbal, Physical and/or Sexual | 7 | 14.9% | 16.7% |
| | Theft and/or pickpocketing | 34 | 72.3% | 81.0% |
| | Sexual Assault | 1 | 2.1% | 2.4% |
| | Road Safety | 5 | 10.6% | 11.9% |
| Total | | 47 | 100.0% | 111.9% |

a. Dichotomy group tabulated at value 0.

*Note:* Type of Crime feared among the mal respondents who does not feel safe at all or depending on time and route. Total number of responses N (47) exceeds umber of responses (41) as some gave multiple answers

Table C8.

*Primary Mode of Transport and Fear of Crime: Women*

| | | | Verbal, Physical and/or Sexual | Theft and/or pickpocketing | Sexual Assault | Road Safety | Total |
|---|---|---|---|---|---|---|---|
| Mode of Transport[a] | Matatu | Count | 14 | 40 | 10 | 8 | 50 |
| | Ride Hailing Cab | Count | 0 | 2 | 0 | 0 | 2 |
| | Boda Boda | Count | 1 | 2 | 1 | 0 | 2 |
| | Private Car | Count | 1 | 3 | 1 | 0 | 3 |
| | Walking | Count | 1 | 3 | 0 | 0 | 4 |
| Total | | Count | 17 | 44 | 12 | 8 | 55 |

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 0.

Table C9.

*Primary Mode of Transport and Fear of Crime: Men*

| | | | Verbal, Physical and/or Sexual | Theft and/or pickpocketing | Sexual Assault | Road Safety | Total |
|---|---|---|---|---|---|---|---|
| Mode of Transport[a] | Matatu | Count | 7 | 33 | 1 | 4 | 40 |
| | Ride Hailing Cab | Count | 1 | 1 | 0 | 0 | 2 |
| | Boda Boda | Count | 1 | 2 | 0 | 2 | 3 |
| | Private Car | Count | 0 | 1 | 0 | 0 | 1 |
| | Walking | Count | 2 | 4 | 0 | 1 | 4 |
| Total | | Count | 7 | 34 | 1 | 5 | 42 |

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 0.

Table C10.

*Female Preferences in the Transport Sector: All Respondents*

| | | | Mode of Transport | | | |
|---|---|---|---|---|---|---|
| | | | Matatu | Ride Hailing Cab | Private Car | Total |
| Gender Preferences[a] | Female Conductor | Count | 20 | 0 | 0 | 20 |
| | Female Driver | Count | 7 | 0 | 0 | 7 |
| Total | | Count | 20 | 0 | 0 | 20 |

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

b. Dichotomy group tabulated at value 0.

Table C11.

*Male Preferences in the Transport Sector: All Respondents*

| | | | Mode of Transport | | | | |
|---|---|---|---|---|---|---|---|
| | | | Matatu | Ride Hailing Cab | Boda Boda | Private Car | Total |
| Gender Preferences[a] | Male Conductor | Count | 11 | 0 | 0 | 0 | 11 |
| | Male Driver | Count | 25 | 3 | 2 | 2 | 30 |
| Total | | Count | 25 | 3 | 2 | 2 | 30 |

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 0.

Table C12.

*Female Preferences and Fear of Crime in the Matatu Sector: Women*

| Fear of Crime | | | | Matatu |
|---|---|---|---|---|
| Verbal, Physical and/or Sexual | Gender Preferences[b] | Female Conductor | Count | 4 |
| | | Female Driver | Count | 2 |
| Theft and/or pickpocketing | Gender Preferences[b] | Female Conductor | Count | 10 |
| | | Female Driver | Count | 5 |
| Sexual Assault | Gender Preferences[b] | Female Conductor | Count | 3 |
| | Total | | Count | 3 |