

Influence of Transport Sector Reforms on Performance of Public Transport Sector, A Case Study of Nairobi City County

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Abstract

For many years, the transport industry in Kenya was plagued by violations of human rights and traffic rules. This resulted in constant complaints from commuters, fatal accidents, and serious injuries. In a bid to regulate the sector, the Government introduced the Michuki rules (via Legal Notice No. 161 of 2003). These were a broad range of reforms that sought to improve road safety and discipline in the sector. As a way of establishing the effectiveness of these measures, the purpose of this study was to determine the influence of three transport sector reforms on the performance of the public transport sector. The research design was a cross-sectional descriptive survey design. The target population, who were the primary respondents, were the commuters who used matatus. Key informants were drawn from savings and credit cooperative organization management. The sample size was 385 respondents who were selected using a simple random sampling method. The research instruments were a semi-structured questionnaire and a key informant interview guide. Data analysis entailed descriptive statistics. The influence of matatu SACCOs had the highest level of influence on safety and discipline. The influence of Michuki rules had the second highest level of influence on safety and discipline. Finally, the effects of the proposed phasing out of the 14-seater matatus had the lowest level of influence on safety and discipline. Based on the findings, the study recommended further enforcing and entrenching the role of SACCOs, and the Michuki rules to increase safety and discipline in the matatu transport industry in Nairobi City County.

Keywords: Sacco, Transport Sector Reforms, Performance, Public Transport Sector

1.0 Introduction

The current study is largely focused on the matatu mode of public transportation in Kenya today. Addo-Abedi et al. (2007) observe that in many urban areas, there are numerous types of transportation systems working in complementary roles. However, urban planners in developing nations have been unable to develop sustainable transport solutions that satisfy the increasing demand. Part of the problem lies in the high cost of setting up advanced supporting modern infrastructure. This kind of infrastructure would then enable the introduction of bullet trains and subway systems that are widely used in developed countries.

A more affordable alternative for developing nations is the para-transit model, which is now operational in most parts of Kenya. In Kenya, the dominant mode of paratransit transport commonly used is the matatu (Okeyo, 2016), and to a lesser extent the motorcycles or boda bodas. Kimani et al. (2004) observe that the commercialization of the sector attracted investments from a wide cross-

section of Kenyans. This in turn led to the proliferation of matatus in both the urban and rural areas, offering services across the board. With the increase in urbanization, the demand for transportation has increased posing a big challenge for urban planners.

This coupled with poor infrastructure, has led to a deterioration of public transport services. This in turn has led to a gap in the provision of these services. As such increased numbers of informal and private paratransit modes have proliferated in the city of Nairobi.

In Kenya and other African cities, the paratransit mode of transport has been seen as too commercialized at the expense of safety and discipline requirements (Bhushan, 1993). Oftentimes, this has prompted Government intervention in attempts to regulate the sector. Such interventions have taken the shape of key reforms over the years. This is motivated by the fact that the regulatory framework before 2003, the Traffic Act Cap 403 of 1954, did not fully address issues related to safety and discipline in the sector. Safety and discipline are among some of the key elements of performance that needed to be enhanced within the sector.

In response, the Government promulgated Legal Notice Number 161 (LN No. 161) of 2003. This was an amendment to the existing Traffic Act Cap 403 that introduced far-reaching new requirements. Among these were the requirements that every public service vehicle (PSV) including private hire vehicles, matatu, and motor omnibuses be fitted with a seatbelt. Another requirement was that every commercial vehicle exceeding 3,048 kg tare weight be fitted with a speed governor. This would be adjusted at all times to ensure that the vehicle does not exceed 80 kph in any load condition. There was also the requirement for every conductor and driver to wear special badges and uniforms. Further to this, every driver of a PSV was to undergo compulsory testing biannually to ascertain their competencies. There was also the need to restrict matatu operators to one driver and tout per matatu.

These two should also have been vetted to ensure compliance with good conduct legal guidelines. They were to also be employed permanently and paid a permanent salary. All matatus and taxicabs were also required to be painted on both sides and the rear, a continuous horizontal yellow band. Finally, Onsafe (2013) observes that a photograph of the head and shoulders of the driver shall be prominently displayed in the taxicab or matatu.

In 2011, additional measures were proposed whose aim was to decongest the Central Business District (CBD). This policy measure, which was the proposed phasing out of 14-seater matatus, was informed by the Integrated National Transport Policy (INTP) (GoK, 2010). The rationale behind the INTP was to progressively phase out existing low-capacity vehicles in the medium term (five to seven years). This was to be achieved through encouraging investments in higher-capacity vehicles, such as buses.

The primary objective was to reduce congestion on the roads by increasing vehicle capacity per unit. Ultimately, this would lead to the introduction of a Bus Rapid Transit (BRT) system. McCormick et al. (2011a) note that higher capacity vehicles were found to be more orderly and compliant with traffic laws and regulations and were therefore preferred.

According to Mitullah and Onsafe (2013), the last measure that was proposed to enhance discipline and safety in the sector was the formation of matatu SACCOs. These SACCOs were proposed as a means of enforcing self-regulation, improving the efficiency of operations, and cushioning matatu operators from the influence of cartels. Further to this, to prevent and eliminate cartels, the Transport Licensing Board (TLB) mandated that only genuine matatu owners were to be registered.

Registration requirements included proof of ownership such as copies of vehicle logbooks, a list of vehicles belonging to the SACCO, a SACCO certificate of registration, and a list of SACCO members and officials.

1.1 Statement of the Problem

Rapid urbanization in Nairobi County, which also hosts Kenya's capital city, has increased demand for affordable transportation services. This has resulted in a proliferation of public transportation service vehicles in the city and its environs. This has brought about challenges relating to safety and discipline in the sector. This has been because of the tendency of matatu operators to conduct their activities in non-conformance with the law. As such, the sector was characterized by chaos which led to a deterioration in overall performance.

To restore sanity within the sector, the Government enacted the Michuki rules (LN No. 161). These were a series of legal requirements that sought to improve safety and discipline. Increased demand for transportation services also led to congestion on the city's roads. This led to the enactment of a policy directive whose aim was to phase out 14-seater matatus to decongest the roads. The requirement that matatus should belong to SACCOs was a third legal reform aimed at further instilling and deepening safety and discipline.

Although these three legal measures were intended to restore sanity in the sector, they have largely failed in doing so. Mitullah and Onsate (2013) argue that the failure has been a result of their commercial implications. To conform with the Michuki rules, operators had to incur costs to comply. This meant a reduction in vehicle capacity and increased fares. At the same time, they still had to service debts and meet other obligations. Ommeh et al. (2015) also argue that politics and resistance by sector stakeholders have hindered the proposed phasing out of 14-seater matatus.

Mitullah and Onsate (2013) further argue that matatu SACCOs have been largely ineffective. This has been due to poor management, intimidation by cartels, and low levels of registration along some routes. As such, it is important to ascertain how the matatu sector is faring in light of these failures. There have been many studies that have sought to illuminate this state of affairs.

These include Kimani (2019), Obure, (2017), Okoth (2017), Mwendwa (2016), Okeyo (2016), Ngui (2014), King'oina (2010), Ommeh (2010), Mumenya (2005), Muchilwa (2004), and Oluoch (1998). These studies have captured the situation in the sector at various times. However, owing to continuous changes in the general business environment, the influence of the matatu reforms in the sector keeps changing. Therefore, the purpose of this study was to determine the influence of the three transport sector reforms on the performance of the public transport sector.

1.2 Objectives of the Study

The study has three main objectives which were:

- i. To determine the influence of the Michuki rules on safety and discipline in the matatu transport industry in Nairobi City County.
- ii. To find out the effects of the proposed phasing out of 14-seater matatus on safety and discipline within the matatu transport industry in Nairobi City County.
- iii. To establish the influence of matatu SACCOs on safety and discipline within the matatu transport industry in Nairobi City County.

2.0 Literature Review

2.1 Theoretical Review

The theoretical framework for this study will be based on the rational choice theory (RCT) and the human factors theory (HFT). The RCT proposes the use of axioms as a means of understanding social and economic behavior. The RCT has its origin in the eighteenth century. It may be traced back to the thinking of Adam Smith, the political economist, and philosopher (Paternoster, Jaynes, & Wilson, 2017). According to Nickerson (2021), the RCT suggests that people make choices based on an assessment of costs and rewards.

People are motivated to do something when the benefit of doing it outweighs the cost. Similarly, they will cease doing the action when the costs exceed the benefits of doing it. Also, individuals will optimize the rewards using the resources at their disposal. In this study, this theory will assist in determining whether matatu operators choose which rules to obey to maximize their financial gain and avoid losses.

The second theory, the HFT, postulates that accidents are due to a chain of events resulting from human error. This theory was proposed by Dr. Russell Ferrell and outlines three wide-ranging factors that lead to human error. These are overload, inappropriate responses, and improper activities (DeCamp & Herskovitz, 2015). Overload consists of three factors, which are the emotional state, capacity, and load of the individual. The individual's emotional state refers to their intrinsic qualities: such as being agitated or unmotivated.

Capacity on the other hand refers to the individual's educational and physical background. These could be job-related pressures and stressors. Finally, the load factors in the danger level and difficulty of the task, and the positive or negative effects of the environment (such as noise and distractions). In the HFT, inappropriate responses refer to incorrect responses by the individual in any given situation. Improper activities may be seen as being occasioned by two scenarios. The first is that the individual may have genuinely committed the accident. On the other hand, they may have deliberately committed the accident. The rationale behind the HFT will assist in analyzing the matatu industry in light of the sector's high rate of accidents and poor safety record.

2.2 Empirical Review

2.2.1 Michuki Rules

There are numerous empirical studies done in Kenya about the Michuki rules. For example, Kimani (2019) examined the effect of creativity on the entrepreneurial performance of matatu SACCOs along the Ongata Rongai-Nairobi City route. This was a descriptive survey that collected primary data using questionnaires. The target population consisted of staff employed by eight SACCOs along this route. Data were analyzed using regression and correlational analysis. The findings indicated that creativity positively influenced the entrepreneurial performance of the SACCOs. The study recommended upscaling and enhancing the role of creativity in performance management. On the downside, with the enactment of LN No. 161 of 2003, there are many restrictions to the extent to which creativity may be implemented. Kimani (2019) does not examine the impact of LN No. 161 of 2003 in this regard. Neither does Kimani's study examine any issues concerning the objectives of this study.

In a separate study, McCormick et al. (2011b) studies the main features of the paratransit strategy implementation and development amongst operators in Nairobi. This was a qualitative study that used key informant interviews (KIIs) to collect insights on matatu business strategies. Analysis of

the primary and secondary data collected revealed the existence of low-quality, poor service delivery. The sector generated negative externalities owing to rampant corruption and poor enforcement of the law. McCormick et al. study is dated, and the current study will examine the scenario a decade later. This will shed light on the current practices in the sector concerning LN No. 161.

One major objective of legal reforms in the matatu industry has always been to eliminate cartels. In one study, King'oina (2010) investigated the origin, existence, and involvement of cartels in the matatu industry. The study focused specifically on route number 36 (Dandora). The specific objectives included establishing the stakeholders in the management of matatu routes, determining the relationship between cartels and public institutions, and establishing the viability of cartels in the matatu industry. From the findings, the lack of proper enforcement of laws enabled the proliferation of cartels. Cartels on this route were found to have taken over the running of matatu operations, to the exclusion of Government laws and regulations.

In yet another study, Cheche (2017) examined matatu operators' perception of Government regulations in the Kikuyu sub-county, Kiambu County. The goal of these regulations was the streamlining of matatu operations in the area. The specific objectives included establishing measures placed to streamline matatu operations, tactics used by the operators to avoid penalties for breaking the law, the perception of operators towards the law, and the success of regulations in streamlining the sector. The survey entailed the collection of primary data using KIIs and questionnaires. Key findings indicate that compliance was low, despite operators being aware of the laws. The reason for poor compliance was because of the rules were too unreasonable and strict. To avoid tedious litigation arising from non-compliance, bribery of law enforcers was common. This study was conducted in Kiambu County and the current study would like to study the effect in Nairobi County as well.

2.2.2 Phasing out of 14-Seater Matatus

Some studies offer insight into the potential impact of the proposed phasing out of 14-seater matatus. For example, Ommeh et al. (2015) conducted a case study on the politics underlying the proposed phasing out of 14-seater matatus in Kenya. The objectives were to examine what stakeholders thought about the proposed phasing out, and how various vested interests affected the implementation process. The study examined the reasoning underlying the directive, implementation outcomes, and stakeholder views concerning the industry. Primary data was collected from 15 matatu owners using a purposive multistage sampling design. Non-participant observation of matatu operators and local newspapers was a source of secondary data. Vested political interests, the misconception of 14-seater vehicles, limited stakeholder participation, and poor policy formulation contributed to unsuccessful implementation. As such, the directive was only implemented for two years, and this study will seek to establish what the effects were.

Aduwo (1990) did a geographical analysis of the role, efficiency, and quality of service of the matatu mode of transport. This was about employment generation and incomes, the percentage of commuters using them, and their reasons for doing so despite the inherent dangers. Key findings indicate that matatu services were popular in the densely populated low-income zones in Nairobi. Also, due to the high demand for transport, commuters tended to use these transport modes as they were most available. As such, the speed, frequency, and availability of matatus should be considered in their future roles. These findings have policy implications on whether or not to phase out 14-seater matatus. The proposed phasing out of these matatus would have serious implications on the demand and supply of affordable transport. The current study will try to establish the situation concerning

some of these aspects. This will be the case in light of the temporal differences between Aduwo (1990) and the current study.

In Kisumu Municipality, Awino (1998) investigated the role of matatus in public transport. The specific objectives were to examine the role and prospects of matatu transport, how their operational and organizational characteristics contribute to the efficiency and reliability of urban transport, how the private sector provides and controls matatus to achieve urban transport goals, the nature of employment provided by matatu transport and contribution to urban unemployment, and finally, the constraints affecting urban transport and potential solutions. The findings indicate that urban public transport was inefficient and inadequate both in quality and quantity of service. Urban transport was dominated by matatus, which were popular and offered employment opportunities. Also, the urban public transport in Kisumu municipality was inadequate and inefficient. This was concerning both the quantity and quality of the service on offer. Matatus were also found to be key in satisfying transport needs in Kisumu. They generated profits for their owners as well as being a source of employment. Most of the investors in the sector were from the private sector. The sector also experienced challenges such as increased demand, poor road infrastructure, poorly maintained vehicles, inadequate termini, competition for road space with non-motorized transport, and poor policy formulation. The study did not investigate the proposed phasing out of 14-seater matatus, which this study will investigate.

2.2.3 Matatu SACCOs

Various studies have examined the role of SACCOs in the public transportation industry. Wagerika (2010) investigated the effect of regulations on enhancing investments in public transport SACCOs in Nairobi. The objectives included establishing the extent to which SACCOs have implemented Government financial regulations, established their level of investment performance, and analyzing the relationship between investment regulation implementation and investment performance. The study was a descriptive survey that deployed both primary and secondary datasets. From the findings, implementation of financial regulations was moderate (mean=2.5978). The investment performance level of the SACCOs was moderate (mean=2.1522). Government financial regulations were found to influence the investment performance of the SACCOs to a little extent. This study focused on SACCOs regulation and financial performance but was not specific to the LN 161 of 2003, nor the proposed reforms therein.

Ngui (2014) investigated strategies adopted by the Government in the implementation of traffic regulations in the public transport sector in Nairobi County. The specific objectives were to determine what these strategies were and to establish the factors affecting their implementation. This was a descriptive survey that collected primary data using a questionnaire. The findings revealed the use of passengers, PSV drivers, matatu SACCO officials, and National Transport and Safety Authority (NTSA) officers to implement traffic regulations. Thus, SACCOs have played a positive role in the implementation of road traffic regulations. However, this study did not factor in the influence of LN No. 161 nor the effects of the proposed phasing out of 14-seater matatus.

Matatu SACCOs are particularly important in controlling gender-based violence (GBV) in the sector. In this regard, Obure (2017) examined the factors that lead to GBV against women in Nairobi's public transport sector. Specifically, Obure investigated how the capacity and structure of PSVs, poor governance, and the conduct of matatu operators, all led to GBV. The study used a mixed methods design that collected qualitative and quantitative data. The findings indicate that the lack of proper inspection and gender-sensitive policies by SACCOs/owners, the type of music played, congestion, and random sitting arrangements, all contributed to GBV. Management of SACCOs could reduce

GBV using vehicle designs and policies that address these issues. Additionally, they could also empower women through advocacy. Obure's study does not address the issue of safety and discipline, which this study seeks to do.

Finally, Mwendwa (2016) surveyed factors that influenced the performance of certain matatu SACCOs in Kitui County. The descriptive survey revealed that competition, training of SACCO owners and employees, information and communication technology (ICT), management skills and practices, and Government policies, all influenced performance. Favorable Government policies were key to improving SACCOs' level of operation.

The use of ICT was instrumental in improving customer satisfaction, security, control, and efficiency. Healthy competition led to high standards of operations, thus improving comparative advantage. Training improved service delivery and improved operational effectiveness. Finally, good management skills helped in promoting proper resource allocation, monitoring, and transparency. Given the rapidly evolving micro- and macro-environmental landscape, this study will also query come of these parameters to find out the current (2022) scenario.

3.0 Research Methodology

3.1 Introduction

This section introduced the research design, the variables/categories of analysis, the location/site of the study, the target population, the sampling techniques and sample size, the research instruments, the pre-testing/pilot study of the research instruments, the validity and reliability of the research instruments, the data collection techniques, the data analysis, and presentation techniques, and the logistical and ethical considerations.

3.2 Research Design

The research design adopted in this study was a cross-sectional survey design. According to Babbie (2020), this kind of design is useful for this study as it involves the collection of data at a given time. Further, Babbie observes that descriptive research helps to describe the characteristics of a population. This assisted in obtaining data that answered the issue of what, when, and how public sector reforms influenced safety and discipline in the transport industry.

3.3 Variables/Categories of Analysis

Public sector reforms were the independent variable and the performance of the public transportation industry was the dependent variable. Public sector reforms were operationalized using the Michuki rules (provisions of LN No. 161 of the Traffic Amendment rules of 2003), the proposed phasing out of 14-seater matatus, and the influence of matatu SACCOs in the sector.

The Michuki rules were further measured using certain provisions. These were the requirements that matatu operators wear badges and uniforms, the existence and use of seatbelts, and the use of speed governors. The proposed phasing out of the 14-seater matatus was operationalized through the contribution to decongestion on the roads, the possibility of lack of transport due to shortage of PSV vehicles, and the politics underlying the proposed phasing out of the 14-seater matatus.

The influence of SACCOs was seen through their role in the inspection, policy implementation, and training of matatu operators. The dependent variable, that is performance, was measured using the aspects of safety and discipline on the roads. Thus, the study sought to establish how the three key reforms influenced safety and discipline on the roads. The study was focused on preselected matatu

routes within the Nairobi City County that were randomly selected to form a representative sample of matatu routes in the County.

3.4 Location/Site of the Study

This study was focused on the public transport scenario in Nairobi City County. The County hosts the capital city of Kenya, which also doubles up as the political and commercial capital of Kenya. The County had experienced intensive and extensive urbanization in recent times. According to the 2019 census by the Kenya National Bureau of Statistics [KNBS] (2019), Nairobi County had an estimated population of 4,397,073 persons. These numbers implied a huge demand for affordable transport daily.

In this regard, the most common mode of transport for the general public was matatus. The matatus were however notorious for their poor safety and discipline records. The underlying reason was reckless driving, intense competition, and overcrowding. This lack of safety and discipline is what motivated the promulgation and implementation of reforms over time. Some of these reforms were the basis upon which this study was founded.

3.5 Target Population

The target population was those commuters that used matatus within Nairobi City County. These were the respondents, who filled out the survey questionnaire, and who understood the challenges involved in using matatus. The KIIs matatu SACCO management.

3.6 Sampling Techniques and Sample Size

This section described the sampling methodology used. The section further expanded on how the sample size was computed.

3.6.1 Sampling Techniques

For the survey, the study adopted the simple random sampling technique. According to Saunders et al. (2016), this is where the researcher selects a random subset of participants from the target population. In this technique, each unit of the population had an equal chance of selection. This mode of sampling was ideal for this study as matatu commuters were readily accessible at many locations. Data was then collected from as large a percentage as possible of this random subset.

3.6.2 Sampling Size

Cochran (1963) proposed the equation below to calculate a representative sample for large populations. The application of this formula yielded a sample size of 385 primary respondents for the survey. When conducting the KIIs, the rule of thumb is that respondents are interviewed until saturation. This implies that incremental respondents yield no further information value. In this regard, the KIIs interviewed nine respondents.

3.7 Research Instruments

Primary data was collected using a semi-structured questionnaire. According to Saunders et al. (2016), the questionnaire is ideal as it offers flexibility, cost savings, anonymity, data accuracy, and easy reach. The questions were a composite of Likert-type scales, closed-ended, and open-ended questions. Likert-type responses were desirable as they easily lend themselves to statistical computations and comparative analysis. Closed-ended questions increased the response rate and were easy to answer. Finally, open-ended questions allowed respondents to explain their reasoning

and deepen their overall understanding of the topic (Babbie, 2020). Additionally, key informant interview guides were conducted with members of SACCO management.

3.8 Pre-testing/Pilot Study

To test and refine the entire research process, a pilot study was undertaken. Saunders et al. (2016) observe that this helps in refining the research instruments and protocols, the sample recruitment strategies, and other research techniques in preparation for the main study.

Pernecky (2016) notes that this will assist in testing for the reliability and validity of the research instruments. Pretesting was done using 1-10% of the actual sample size selected from a population similar to the one under study. For large samples, a smaller percentage is used and vice versa (Pernecky, 2016). Respondents from the main study cannot be used for piloting. Therefore, pre-test subjects were obtained from a matatu route, preferably in Kiambu County. This borders Nairobi County and shares similar characteristics to Nairobi County, given the proximity of the two counties.

3.8.1 Validity

According to Creswell (2018), validity refers to whether a given measurement is an accurate representation of the real scenario. The pilot study assessed the construct and content validity of the research instruments. Content validity refers to the extent to which the research instruments cover the subject matter being researched. This was verified using feedback from the supervisor.

Construct validity is whether the individual scale items correctly measure the various aspects of public sector reforms and their relation to safety and discipline. Construct validity was verified by ensuring that the scale items were developed from the empirical literature on the subject matter. In all cases, supervisor feedback was sought to ensure the overall validity of the research instruments.

Scale items in the research instruments were aligned with the research objectives. Within each objective, the items were also aligned with the key aspects that defined the independent and dependent variables as revealed in the literature review. This helped in enhancing the internal validity of the study.

As Babbie (2020) observes, internal validity is ensuring that the causal relationship between public sector reforms and performance is a true and fair representation of the situation on the ground. That is to say that this relationship is not unduly influenced by other factors other than those being measured.

3.8.2 Reliability

Flick (2020) argues that reliability exists if the same result is obtained using the same instruments multiple times. Reliability was assessed during the piloting phase and also after collecting data for the main study. The technique that was used to test for reliability is the Cronbach alpha (α) method. This statistic was ideal as it measured how well the scale items as a group defined each set of independent variables.

This measured the internal consistency of the research instrument. To assess whether the items measured each independent variable adequately, an exploratory factor analysis was conducted. This assessed whether the measurement scale was unidimensional. According to Fornell and Larcker (1981), the rule of thumb is that the data collection tools are acceptable if they yield reliability coefficients of 0.70 and above. The test yielded α values of .908 (N=4), .861 (N=4), and .945 (N=3). This indicated good reliability levels.

3.9 Data Collection Techniques

Before engaging in data collection, a letter of introduction was obtained from Kenyatta University. This was accompanied by a research permit from the National Commission for Science, Technology, and Innovation (NaCoSTI). This formal procedure ensured easy interaction with the respondents. Data collection used online Google forms. Initial contact with the respondents entailed obtaining their contact information and briefing them on the objectives of the study. Follow-up was then done via telephone or electronic mail.

3.10 Data Analysis and Presentation

Qualitative data was analyzed through thematic analysis. According to Frankfort-Nachmias et al. (2015), this entailed coding data to describe the content, looking for patterns or themes in the codes, and reviewing that the themes accurately represented the data and supported the theoretical frameworks. The final step was ensuring that the themes were aligned with the research objectives, and finalizing the report with this in mind. Quantitative data analysis was done using Google forms and Microsoft Excel spreadsheets. Frequency distributions, percentages, and standard deviations were generated for describing the data. These were descriptive statistics that summarized the data and described its basic format. Visual illustration consisted of tables, histograms, and pie charts.

3.11 Logistical and Ethical Considerations

To ease the conduct of the study, a letter of introduction from Kenyatta University, a research permit from NaCoSTI, and clearance from the Ministry of Transport, Infrastructure, Housing and Urban Development (MoTIHUD) were sought. The ethical framework revolved around respect for persons, beneficence, and justice. Respect for persons who recognized their right to self-determination. Hence there was a need to obtain informed consent. Beneficence ensured that the respondents faced no harm during the research process. This also ensured that they derived maximum benefit from the study. The principle of justice ensured fairness and equality when conducting the actual study. Gender balancing was an important component in determining fairness and equality. Risks and benefits were also equitably and fairly distributed, without bias.

4.0 Summary, Conclusions, and Recommendations

4.1 Introduction

This chapter presents a summary of the findings of this study, conclusions, recommendations, and suggestions for further research.

4.2 Summary of the Findings of the Research

The overall response rate was 52% (n=199, N=385).

4.2.1 The Influence of Michuki Rules on Safety and Discipline

The findings indicated that the wearing of badges and uniforms by matatu operators, which assisted in the easy identification and monitoring of staff had the highest level of influence on safety and discipline. The wearing of seatbelts by commuters that reduced injuries arising from accidents had the second highest

level of influence. Finally, the fitting of speed governors in PSVs, which improved road safety through speed controls had the lowest level of influence on safety and discipline.

4.2.2 Effects of the Proposed Phasing Out of 14-Seater Matatus on Safety and Discipline

From the findings, decongestion of the roads had the highest level of influence on safety and discipline. Politics occasioned by resistance from vested stakeholder interests e.g. loss of employment and income had the second highest level of influence on safety and discipline. A potential lack of transport (especially in the densely populated low-income areas), had the least level of influence on safety and discipline.

4.2.3 The Influence of Matatu SACCOs on Safety and Discipline

The third objective was to establish the influence of matatu SACCOs on safety and discipline within the matatu transport industry in Nairobi City County. The role of matatu SACCOs in enhancing service delivery through the development and implementation of appropriate policies at the SACCO level was the highest rated in influencing safety and discipline. Regular training of employees that helped in maintaining standards and effectiveness in operations and therefore focusing on customer satisfaction received the second highest rating. The role of matatu SACCOs in improved inspection to ensure conformity with Government regulations was the lowest rated.

4.3 Conclusion

Taken together, of the three matatu sector reforms the influence of matatu SACCO's had the highest level of influence on safety and discipline. The influence of Michuki rules had the second highest level of influence on safety and discipline. Finally, the effects of the proposed phasing out of the 14-seater matatus had the lowest level of influence on safety and discipline.

4.4 Recommendations

Based on the findings, the study recommends further enforcing and entrenching the role of SACCOs, and the Michuki rules to increase safety and discipline in the matatu transport industry in Nairobi City County. Also, there should be a healthy discussion on whether public transport should be solely provided by the government, with the idea of making regulation and bringing sanity into the sector easier.

4.5 Research and Policy Implications

This study examines antecedents of the safety and performance of the public sector transport industry in Nairobi City County, taking into account the influence of the Michuki rules, the proposed phasing out of 14-seater matatus, and the influence of matatu SACCOs. However, the factors that influence safety and discipline, such as individual and organizational factors tend to be multifaceted.

Thus, safety and discipline are likely to be the consequence of the combined effect of firm/group/job and individual characteristics. This research does not integrate all these factors. Future research could therefore examine the role of various other factors on safety and discipline. For example, the role of COVID-19 in influencing safety and performance in the matatu sector.

In terms of the research design, the causal effect of matatu sector reforms on safety and discipline has not been fully revealed. The cross-sectional research design only allows the examination of all the variables at one point in time. Future studies may use longitudinal research designs that involve multiple-time measurements of the variables. This would help in detecting dynamic causalities between the variables and improve the persuasiveness of the research findings. This would further be validated through the use of predictive statistical analysis methods such as regression analysis.

Finally, the public transport industry has various motorized offerings. It ranges from the use of motorcycles, tuk tuk's, 14-seater matatus, buses, taxicabs, and passenger trains, among others. These also serve different geographical and social-economic areas. Future research could also focus on the various other modes of public transport. This study focuses only on Nairobi City County, while other research may also focus on other geographical locations.

From a policy perspective, the proposed phasing out of the 14-seater matatus was seen to influence safety and discipline. The study will also recommend that this policy measure, which was suspended, be implemented. The Government should also allocate more resources to the enforcement of the Michuki rules. This would also be accompanied by intensive, and proactive SACCO supervisions to enhance compliance.

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