Int Journal of Social Sciences Management and Entrepreneurship 8(4): 533-548 2024

ISSN 2411-7323

www.sagepublishers.com

RISK FACTORS AND PERFORMANCE OF APP-BASED TAXI OPERATORS IN NAIROBI COUNTY, KENYA

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ABSTRACT

The frequency of strikes among app-based taxi operators in Kenya has escalated significantly in recent years, with at least four actual and threatened strikes occurring within a year, primarily originating in Nairobi County. These strikes, some lasting over a day, pose a direct threat to the daily household income of drivers, with reports indicating that on strike days, drivers lose income averaging up to KSh. 3000 a day in Nairobi. Additionally, strikes in Nairobi have broader implications, causing traffic delays, reduced mobility, and, in extreme cases, resulting in damage to public and private property, as well as loss of life. The general objective of this study was to identify the risk factors faced by app-based taxi operators (drivers)in Nairobi County, and how these risk factors affect their performance. The study was guided by the following specific objectives; To identify the technological risks and financial risks experienced by app-based taxi operators in Nairobi County and their effects on performance. This study was guided by protection motivation theory and prospect theory. This study used descriptive research design. The unit of analysis for this study was Uber,Bolt, and Little while the unit of observation was the operators. Yamane's formula was used to determine the study sample size. From the formula, the appropriate sample size for the study was 340 operators. The study sample was selected using stratified random sampling technique. This study used primary data collected using close-ended questionnaires. In thepilot study 34 participants were invited to participate in filling the questionnaires. The Statistical Package for Social Scientists (SPSS) version 28 was used for analysis. Quantitative data collected was analyzed using descriptive statistics techniques. Pearson R correlation will be used to measure the strength and direction of linear relationship between variables. Multiple regression models will be fitted to the data in order to determine how the independent variables influence the dependent variable. The findings were presented in tables and figures. The pilot study, involving 34 participants (10% of the study sample), demonstrated strong validity and reliability of the research instrument. The findings revealed that technological risks (Beta = 0.351, p = .000) positively influence performance, highlighting the importance of reliable technological infrastructure and effective training. Financial risks (Beta = 0.315, p = .000) were found to affect performance, underscoring the importance of robust financial management practices. The study concludes that effective management of these risks is crucial for enhancing the performance of app-based taxi operators. Recommendations include prioritizing advanced technologies, implementing financial risk management strategies.

Key Words: Risk Factors, App-Based Taxi Operators, Performance, Technological Risks, Financial Risks

Background Information

The unavoidable population growth in cities has inevitably resulted in congestion on the roads and inadequate parking spaces in the cities (Smith, 2018). With this, there is a heightened need for efforts to ease the flow of people from location to location, reduce the number of self-drivers, and increase the use of public transportation (Jones et al., 2019). Thanks to the improvement of technology and the spread of the internet, the traditional means of transportation in comfort is shifting to cater to these issues. The rise of an advanced taxi transportation model has helped cater to these issues. In this model, app-based taxi companies connect passengers with drivers in real time, making the traditional taxi services automated (Brown, 2020). The growth of technology related to Global Positioning System (GPS) has had major implications on automated transport systems, particularly ride-hailing services (Smith & Johnson, 2017).

Companies offering app-based transportation services are categorized as Transportation Network Companies (TNCs) (Doe & Smith, 2018). These companies offer two major services: passenger transportation and service facilitation. Under passenger transportation, passengers are linked with drivers in real time, transporting them to their desired destinations (Johnson, 2019). Businesses have also embraced the use of ride-hailing services for the easy transportation of their employees and customers (Black et al., 2020). In service facilitation, the companies offer delivery services for various businesses, such as Uber Eats (White & Brown, 2019). Often, e-hailing transportation services are used for short-distance trips like running errands or commuting to work (Adams & Rogers, 2021).

The widespread affordability of smartphones and easy internet access have also largely contributed to the success of app-based taxi services (Delaunay, 2021). With an inexpensive smartphone and internet connection riders are able to access convenient, affordable, point-to-point mobility services. Customers can choose different vehicle types like cars, vans and motorcycles to transport them to their desired locations. This rapid growth of ride-hailing services continues to play an increasing role in mobility in many urban areas globally, the Global South included (Young & Farber, 2019).

The global ride-hailing services market is estimated to grow to USD 104.93 billion by 2030, a CAGR expansion of 15.7% from 2022 to 2030 (Wood, 2023). This growth could be attributed to various aspects. The most significant aspect is the expansion of key players to new countries, increasing the consumer ridership due to the convenience and comfort they offer. In cities with high congestion and traffic, consumers are inclined to avoid the overhead cost of car ownership and its maintenance, avoid traffic, and inadequate parking spaces. The increase in ride-hailing apps in different countries coupled with increased availability of internet connection and inexpensive smartphones is also driving the global ride-hailing services market (Wood, 2023). E-hailing is emerging as a popular transportation model due to inadequate parking spaces in most cities.

Statement of the Problem

Between 2019 and 2021, there were at least two actual and threatened strikes by the app-based taxi operators in Kenya. Most recently, the frequency of the strikes has increased to at least four actual and threatened strikes, all of which happened in a span of a year originating in Nairobi County. Some of these strikes go on for more than a day. In 2019, for example, the strike lasted over 8 days (Waweru, 2019). Bolt Blog (2021) reported that on a good day, a Bolt driver makes up to KSh. 3000 a day in Nairobi. The loss of this income on a strike day, and more if the strike proceeds over a day is a direct blow to the daily household income. Moreover, strikes in Nairobi often result in a trickle down effect to other sectors of the economy by causing traffic delays, lowered movement of people, and in some cases strikes have caused destruction of public and private property, and even the death of citizens (Ombati, 2019).

In 2019, ride hailing was estimated to have contributed approximately $45million out of the

$109million generated from online gig economy (MercyCops, 2019). Kenya's projected revenue from ride-hailing services is expected to reach $144.8million in 2023, with a projected continuing annual growth rate of 1.72%, resulting in a projected market volume of $155million in 2027 (Statista, 2023). With this high revenue estimation that could have an immense impact on the Kenyan economy, it is more crucial now, than ever, to come up with measures that ensures that these revenue estimations are achieved.

There are several studies that have been done in relation to the app-based taxi industry in Nairobi County, Kenya. Such studies include research on customer satisfaction levels (Mwangi & Otieno, 2018), driver behavior and safety practices (Smith & Kimani, 2019), and the impact of technology adoption on taxi operations (Murithi et al., 2022). However, the studies were limited in their focus on specific aspects of the industry, such as customer satisfaction or regulatory compliance, rather than comprehensively addressing the risk factors faced by app-based taxi operators and their implications for performance. This study therefore sought to fill the gaps by examining the risk factors faced by app-based taxi operators (drivers) in Nairobi County and how these risk factors affect their performance.

Research Objectives

The general objective of this study was to identify the risk factors faced by app-based taxi operators (drivers) in Nairobi County, and how these risk factors affect their performance.

The study was guided by the following specific objectives;

i. To identify the technological risks endured by app-based taxi operators in Nairobi County and how they affect performance
ii. To determine the financial risks experienced by app-based taxi operators in Nairobi County and their effects on performance

LITERATURE REVIEW

Theoretical Framework

Protection Motivation Theory (PMT)

Protection motivation theory originally created by R.W. Rogers in 1975 to explain human responses to fear appeals. Maddux and Rogers (1983) described a fear appeal as "a persuasive message that attempts to arouse fear in order to divert behavior through the threat of impending danger or harm." It presents a risk, the vulnerability to the risk and could recommend a response to either act or refrain as a protective action. PMT posits that there are two influencersto people protecting themselves; threat appraisal and coping appraisal (Rogers, 1975). Threat appraisal evaluates how severe a situation is and its likelihood (vulnerability) of occurring. Coping appraisal is basically how a person responds to the situation, and consists of the difficulty in executing the response (response cost), the perceived response efficacy and self- efficacy. Response efficacy refers to a person's expectation that carrying out the recommendedresponse will eliminate the threat, whereas self-efficacy describes the perception of theindividual's ability to implement the recommended action successfully.

If the threat appraisal is deemed higher than the coping appraisal, a maladaptive response is carried out. This could include actions like minimizing the threat, denial or ignoring the risk. On the other hand, if the coping response is stronger, protection motivation is attained (Hoog, Stroebe, & Wit, 2005). It could be argued that strikes are a coping response actions in response to unmet corporate needs, where those striking, drivers in the case of the study, feel threatened by the ultimate consequences of having their grievances unsettled. When the reward from striking (coping appeal) is considered higher than the status quo, the app-based taxi operators' protection motivation is achieved and they go on strike. This study therefore leaned on this theory to gain further understanding of this phenomenon.

PMT posits that individuals protect themselves based on threat appraisal and coping appraisal. In the context of technological risks faced by app-based taxi operators, PMT can help

understand how they perceive threats related to technological changes, such as cybersecurity threats or platform malfunctions, and how they assess their ability to cope with these risks.

Prospect Theory

Prospect Theory, introduced by Daniel Kahneman and Amos Tversky in 1979, revolutionized our understanding of decision-making under risk and uncertainty (Kahneman & Tversky, 1979). This seminal theory has found widespread applications across various disciplines, including economics, finance, psychology, and behavioral economics. Departing from traditional economic models, Prospect Theory acknowledges that individuals' decisions are not always driven by rationality but are heavily influenced by cognitive biases and psychological factors.

Prospect Theory proposes that individuals evaluate potential outcomes based on perceived gains and losses relative to a reference point, rather than absolute levels of wealth or utility (Kahneman & Tversky, 1979). The theory introduces key concepts such as the value function and loss aversion to explain how people psychologically weigh potential gains and losses. The value function describes the diminishing sensitivity to gains and losses, suggesting that individuals' marginal utility of gains decreases as wealth increases, while losses loom larger than equivalent gains, illustrating the phenomenon of loss aversion.

In the realm of financial risks, Prospect Theory provides valuable insights into how investors perceive and respond to uncertainties in financial markets. Individuals' risk preferences are not solely determined by objective probabilities and expected returns but are also shaped by subjective perceptions of gains and losses. Research by Barberis, Huang, and Santos (2001) found empirical support for Prospect Theory's predictions, demonstrating that investors exhibit risk aversion in the domain of gains and risk-seeking behavior in the domain of losses, consistent with the theory's principles.

Furthermore, Prospect Theory underscores the importance of framing effects in influencing financial decision-making. The way information is presented or framed can significantly alter individuals' risk perceptions and preferences (Tversky & Kahneman, 1981; Thaler, 1985). For example, individuals may exhibit different risk attitudes when presented with investment options framed as potential gains versus potential losses, even if the underlying probabilities and outcomes remain unchanged. This phenomenon has been empirically documented, highlighting the pervasive influence of framing on financial choices.

Despite its widespread acclaim, Prospect Theory has faced criticism regarding its descriptive accuracy and generalizability. Critics argue that the theory's parameters, such as the shape of the value function and the magnitude of loss aversion, may vary among individuals and are subject to context-dependent effects. Nonetheless, Prospect Theory continues to serve as a foundational framework for understanding financial decision-making and remains a central pillar in the study of behavioral finance.

Therefore, Prospect Theory offers a comprehensive lens through which to analyze financial risks and decision-making behavior. By integrating insights from psychology and economics, the theory sheds light on the complex interplay between cognitive biases, risk perceptions, and investment choices. Its applicability extends beyond academic research to practical implications for investors, financial institutions, and policymakers, making Prospect Theory an indispensable tool in understanding the dynamics of financial markets.

Conceptual Framework

A conceptual framework is a diagrammatic representation of variables that depict the relationship between the independent variables and dependent (Orodho, 2009). It takes into consideration the theoretical and conceptual issues surrounding research work and forms a coherent and consistent foundation that underpins the identification and development of existing variables (Mugenda, 2008). It shows the expected relationship between the dependent and independent variables. The independent variables to be studied in this research include

technology risks and financial risks. The dependent variable to be studied were performance. The diagrammatic representation of the study variables is as indicated in Figure 2.1.

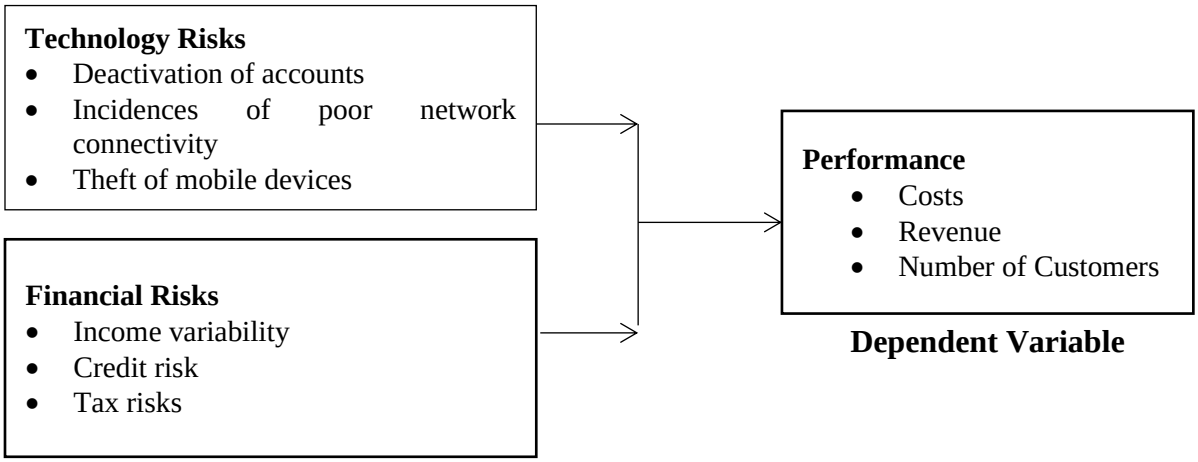

Figure 2. 1: Conceptual Framework

Technology Risks

Digitalization is essentially altering the operations and models of businesses and organizations. These transformations towards digitalization are resulting in major benefits in different areas of the economy e.g. decreased lead time, increased value-added tasks, and varied workload among others (Bencsik, Hargitai, Kulachinskaya, 2022). For some businesses like ride-hailing, their models are fully dependent on technology, centered on the usage of technology apps, and Global Positioning System (GPS). Through the use of these two, a consumer can order a ride to their precise location, while the taxi operator can easily find them with the help of this technology.

With this heavy reliance on technology, there are risks to consider to prevent business failures or disruptions. To overcome these and more risks, organizations need to be aware of the risks their technological applications are subject to. This study centers on the technological risks faced by the app-based taxi operators, which influence their performance. This study will focus on deactivation of accounts, incidences of network connectivity and theft of mobile devices.

App-based taxis fall under the category of the gig economy referred to as on demand service workers. App-based taxi operators operate on their own clock, depending on their availability or their economic needs. A huge challenge faced by these service providers is the untimely deactivation of their service accounts, most times without formal communication from the app's organization. Organizations have set parameters that lead to deactivation of user accounts. They use algorithms to deactivate accounts, either temporarily or permanently, without testimony or evidence from its user (Merchant, 2023). Deactivation can happen if the rating of the driver falls below a predetermined level and/or if a complaint is made by a customer against the driver. These two factors put a lot of power on the hands of the clients and the app (Mpofu, et al., 2020).

A recent survey conducted in California with 810 Uber and Lyft drivers showed that two-thirds have been deactivated at least once, a third of whom never got an explanation for the deactivation from the app companies (ALC, 2023). With many app-based taxi operators using these applications as their only source of income, an abrupt deactivation of an account could be detrimental. Giving technological algorithms the mandate to 'fire' a user without consideration is cruel and adds challenges to an already challenging job, especially when deactivation is for minor infractions. Deactivations of drivers on ride-hailing apps can keep the drivers from earning money on the apps for long periods or even permanently. These incidences are common enough that some governments are trying to address the issue, failure to which frequent deactivations result in lowered performance at the operators level, but

ultimately it could result in a reduction of the revenue brought from this industry.

With ride-hailing being technology based, it requires its users to have constant network coverage and internet connectivity. Although these apps mainly operate in urban areas where there is good network coverage, there are areas of these urban centers that still face poor network coverage (Sovacool, Daniels & AbdulRafiu, 2022). Third world countries are still plagued with poor network connectivity. Poor network connectivity has diverse implications on ride-hailing. First, since the Covid-19 Pandemic, most consumers have adapted cashless payment, where they pay through online bank transfers or through mobile money transfer systems like M-pesa. E- Payments often experience problems, arguably, resulting from the number of electronic transactions and frequent untimed downtime of the transfer systems (Mafuru, 2023). Poor connectivity results in delayed transfers and sometimes it takes a while for payments to reflect on the operator's end.

Poor network connectivity also causes problems in accessing the apps. Connectivity is not only determined by network coverage, but also by an individual's phone connectivity. Lyft (2023) argues that how strong a person's phone connection is to their cellular network determines the connectivity. Poor connection could also arguably cause long wait times as poor network coverage causes delay in loading data. In times of poor connections app-based taxi operators are bound to either have challenges in receiving payment, lose customers due to delays resulting from connection problems. Markets with poor connectivity often go untapped by app-based drivers for this primary reason (Sovacool, Daniels & AbdulRafiu, 2022). Improving network connectivity by reducing or abolishing downtimes or increasing the coverage areas would go a long way to increasing the performance of app-based taxi operators.

Mobile phone theft is a huge problem in different parts of the world. It is estimated that over 250 phones are stolen in London per day, Sao Paulo had a record of over 200,000 cases of mobile phone robberies in 2022, while it is believed the number of phones stolen in Nairobi per day to be larger than this number (Etike, 2023). The streets are offices to the app-based taxi operators, leaving them exposed to theft and muggings, even from the safety of their cars.

Loss of mobile devices for app-based taxi operators causes a huge setback for them, it is losing access to their livelihood. In some cases such a problem can compound into more especially if it was in the middle of a ride. A good smartphone that can enable them to work well could go for about Ksh 10,000 and above. This amount of money is difficult for most app-based taxi operators to come about without a prior plan for it in their budget. This implies that it might be a while before an individual can replace the stolen mobile device, resulting in lost job opportunities, earnings and an end result of lower performance.

Financial Risks

Like any other business, gig workers like ride-hailing drivers are susceptible to certain inherent financial risks that have a significant effect on their overall performance. This section will discuss income variability, credit risk, and tax risks as sub-variables to financial risks faced by app-based taxi drivers. Unlike the 'classic' form of employment where workers are guaranteed a salary at the end of the month, app-based taxi operators depend on the number of clients they transport, and the value of each trip (Chen et al., 2020). The prices of trips fluctuate depending on various factorssuch as weather conditions, influx of customers, time of the day, availability of drivers, and locations. App-based taxi operators have no say on the prices set by their companies, but the rates are adjusted by the company's dynamic pricing algorithms depending on time, distance,traffic, and rider to driver demand (Cramer et al., 2016). This implies periods of temporary increase in price during busy periods, and lower prices off-peak periods.

This uncertainty in prices leads to income variability, which poses a significant financial risk for app-based taxi operators. Fluctuations in earnings make it challenging for drivers to predict their monthly income, plan their expenses, and meet their financial obligations such as loan repayments and household bills (Chen et al., 2020). The unpredictable nature of income variability can cause financial stress and instability, impacting drivers' overall well-being and

performance on the job.

Credit risk is another financial risk faced by app-based taxi operators, particularly those who rely on loans or credit facilities to finance their vehicles or cover other business expenses. Credit risk refers to the potential loss that lenders or investors may incur if borrowers fail to repay their debts (Merton, 1974). For ride-hailing drivers, defaulting on loan repayments due to income variability or unforeseen financial setbacks could result in adverse consequences such as repossession of vehicles or damage to credit scores, making it difficult to access credit in the future (Merton, 1974). This can further exacerbate financial stress and hinder drivers' ability to sustain their livelihoods.

Tax risks pose a significant financial threat to app-based taxi operators, as they are responsible for managing their tax obligations independently (Huff, 2018). Unlike traditional employees who have taxes deducted automatically from their salaries, self-employed gig workers must navigate complex tax regulations and ensure compliance with tax laws (Huff, 2018). Failure to accurately report income, track deductible expenses, and meet tax filing deadlines can resultin penalties, fines, and legal consequences, further straining drivers' financial resources and jeopardizing their business operations (Huff, 2018).

Therefore, income variability, credit risk, and tax risks are key financial risks faced by app-based taxi operators that can have detrimental effects on their financial well-being and performance. These risks underscore the need for effective risk management strategies, financial planning tools, and regulatory support to mitigate the adverse impacts and ensure the sustainability of the gig economy workforce.

Performance

Performance in the context of app-based taxi operators encompasses various dimensions, including costs, revenue generation, and customer satisfaction (Yaghoubi-Farani et al., 2021). Performance can be defined as the effectiveness and efficiency with which drivers carry out their tasks and achieve their objectives within the gig economy landscape (DeStefano & Aloisi, 2020). Each of these factors plays a critical role in determining the overall success and sustainability of drivers in the gig economy.

Cost management is a fundamental aspect of performance for app-based taxi operators, as it directly impacts their profitability and financial stability (Debnath et al., 2020). Drivers incur various expenses, including fuel, vehicle maintenance, insurance, and platform commissions, which can significantly affect their earnings. Effective cost management involves optimizing resource allocation, minimizing overheads, and adopting efficient driving practices to maximize profitability (Zhang et al., 2020). By controlling costs, drivers can enhance their financial viability and competitiveness in the market, thereby improving their overall performance.

Revenue generation is another key metric of performance for app-based taxi operators, as it reflects their ability to generate income and sustain their livelihoods (Cui et al., 2021). Drivers rely on fares from passengers as their primary source of revenue, which is influenced by factors such as demand fluctuations, pricing strategies, and service quality (Xu & Fan, 2020). Maximizing revenue requires drivers to leverage peak demand periods, implement dynamic pricing mechanisms, and provide exceptional customer experiences to attract repeat business (Zhao et al., 2021). By optimizing revenue streams, drivers can enhance their earning potential and achieve greater financial success in the competitive ride-hailing market.

Customer satisfaction is a crucial determinant of performance for app-based taxi operators, as it directly impacts their reputation, loyalty, and business growth (Chen et al., 2021). Satisfied customers are more likely to provide positive ratings, recommend the service to others, and choose the same driver for future rides (Liu et al., 2019). To enhance customer satisfaction, drivers must prioritize factors such as punctuality, professionalism, cleanliness, and safety (Wu et al., 2020). Additionally, effective communication and conflict resolution skills are essential

for addressing customer concerns and maintaining positive interactions throughout the ride (Zhao & Chen, 2021). By delivering exceptional service and fostering positive relationships with customers, drivers can improve their performance metrics and drive long-term success in the ride-hailing industry.

Therefore, performance for app-based taxi operators is multifaceted, encompassing cost management, revenue generation, and customer satisfaction. By effectively managing costs, maximizing revenue, and prioritizing customer experiences, drivers can enhance their overall performance and achieve greater success in the dynamic and competitive gig economy.

Empirical Review

Technological Risks on Performance

This paper investigated the impact of mobile hailing technology on taxi driving behaviors. A controversial feature of mobile hailing applications in China is the disclosure of not only pickup locations but also drop-off destinations before drivers accept offers. It provides taxi drivers two different mechanisms to improve their hourly earnings: reducing cruising time andselecting more profitable trips. It examined 3.6-terabyte minute-by-minute geolocation data of2,106 single-shift drivers in Beijing. A modified change-point model is proposed to infer the adoption decisions and estimate the changes in driving behaviors. The study show that mobilehailing technology adoption is associated with an average increase of 6.8% in hourly earnings, equivalent to an extra CNY 750 monthly income. A typical taxi driver greatly improves hourly earnings through trip selection in favor of longer trips rather than aiming for cruising-time reduction. It also finds that the relative importance of cruising-time reduction and trip selection depends on driver skills and market conditions. The study did not find market expansions on the number of trips or working hours, but rather a redistribution of realized trips toward long distances.

Akbulaev (2020) studied the impact of the taxi service mobile applications on the financial condition of taxi companies. The article considers the impact of using taxi order mobile applications on the financial condition and activities of the entire industry. The study conducted a comparative analysis of the activities being carried out by the largest taxi mobile applications: Yandex Taxi and Uber as well as companies providing taxi transportation. The data obtained from the performed analysis formed the basis of some conclusions. In particular, some problems encountered during the activities of taxi companies were identified: a constant price reduction that displace competitors from the market, the reduction of service quality in the companies providing services via the taxi order mobile applications, and the reduction of income in companies using traditional taxi services. The Results showed that the increase in the companies' revenue generated by providing services of mobile taxi applications rising above 1000 million rubles led to a drop in the revenue of taxi companies that use traditional forms of activity. So, the main directions of the market's development connected with the provision of passenger transportation services by means of a car taxi are offered. For this purpose, there is need to integrate modern ways of doing business into the routine activities of the enterprises that are engaged in taxi transportation.

The main purpose of the study by Methu (2018) was to determine the effect of Modern Technology on Performance of Taxi Businesses in Nairobi City County, Kenya. The study was anchored on two theories: the technology Acceptance Model and the diffusion of innovation theory The study adopted descriptive research design to establish the effect of modern technology on performance. The target population of the study was 34 top management staff of taxi companies operating within Nairobi City County. The study carried out census since the population of the study was small. The study relied on primary data that was collected by use of primary data. The collected data was coded into SPSS Version 23.0 for analysis and presentation. The study found out that coefficient of adjusted R squared of 0.611 which translates to 61.1%, this shows that performance of taxi businesses can be explained by accessibility to customers, diverse payments and flexibility of taxi businesses. The study

concluded that all taxi businesses companies had adopted tract and trace technology and global positioning system technology. All of the taxi companies are engaged in mobile phone technology all the time. Taxi companies had a database for their customers to increase repeat purchases, respondents agreed that social networking (WhatsApp, Facebook, twitter, Instagram) platforms increased the number of customers and use of technology allowed taxi businesses customers to download applications that aided in hailing a cab. The study recommends taxi companies to engage in mobile phone technology all the time.

Murithi, Gichunge and Cherono, (2022) sought to determine the effect of technological development on the sustainability of the motorcycle business in Nairobi County. The study was conducted among motorcycle taxi operators. The descriptive research design was adopted.A sample of 249 motorcycle taxi operators in Nairobi County was selected using a systematic random sampling technique. Data was collected using questionnaires. Before data collection, piloting, instrument reliability, and validity, a pilot study was conducted. Data were computed for descriptive statistics (frequencies, means, and percentages) and inferential statistics such as Pearson correlations and Regression analysis. The findings were presented using tables, graphs, and charts. The study revealed that technology development did not have a significantinfluence on Motorcycle Taxi Businesses' sustainability in Kenya. Most motorcycle operators,however, reported that technological innovation had contributed to stiff competition for the motorcycle taxi business which is healthy for business sustainability. Slightly more than 50% of the respondents indicated that technological innovation in the alternative transport sector has enhanced transaction processes between motorcycle taxi operators and their customers. Following this, the study recommended that motorcycle taxi operators should be encouraged to increasingly embrace technology to improve their efficiency and hence business sustainability. The government on the other hand should formulate technological policies that are aimed at improving the sector.

Njuru (2018) examined the impact of mobile technology in the operations of the taxi industry in Kenya. This research focuses on the impact of mobile devices in the taxi industry, how it has increased communication between commuters and cab drivers, how it has enhanced security due to the trust built through the use of applications to identify clients or drivers, how it has enhanced the cashless payment of fares therefore enhancing convenience. The research also looks at the new opportunities presented by mobile technology which are yet to be exploited and the challenges thereof. The study found that mobile technology has indeed revolutionized the taxi industry in Kenya, with notable improvements in communication, security, and payment systems. By enabling seamless interaction between commuters and drivers, mobile applications have streamlined the booking process and facilitated real-time communication, resulting in more efficient transportation services.

Financial Risks on Performance

Rodríguez et, al., (2022) study was on financial risks in the operation of special service transportation in the hotel sector in Bogota, Colombia. The objective of this research article was to characterise the financial risks incurred by the owners of special service transportation in the hotel sector in Bogota, taking into account the importance of financial risk management in the contemporary business management scenario. Methodologically, from a quantitative scope and a descriptive and correlational approach, the main financial risks that impact the management of the organisations belonging to the special transportation sector of the hotel sector in the Colombian capital are established. Among the main results it is determined that the risk of price variation to customers, the risk of non-payment on the service provided, the risk of pre-productive activities, the risk of contracting and the risk of personnel management are the most relevant for this economic activity. It is important to point out that investors must maintain a reserve against the risk of non-payment in the future, since the obligations that allow the operation and provision of the service, such as bearings, insurance, salaries, social security, among others, must be paid in order to continue generating income.

Noor (2019) sought to determine the effects of financial risks on performance of transport firms

in Mombasa County. Specific objective of this study was to analyse the effect of credit risk, liquidity risk, market risk and foreign exchange risk. The scope of the study was to analyse the effects of financial risks on transport firms in Mombasa. This research was based on the theories of Tobin's separation theory, Capital Market Pricing Theory (CAPM), Stakeholder's Theory and the Modigliani and Miller's Irrelevance of Risk theory to ascertain if their assumptions best explain the relationship between financial risks and performance of transport firms. The research design adopted by this study was mixed design (Triangulation) that employed both qualitative and quantitative design. Primary data was acquired through administering questionnaires to a sample of senior managers within the transport firms. Secondary data was extracted from Kenya Transporters Association (KTA) database, Mombasa County Transport Department, National Transport Service Authority (NTSA) database, Transport journals and other publications. Target population for this study was 2,013 logistics and long distance passenger bus carriers firms senior managers and a sample size of the study was 172 transport firms' senior managers sampled through stratified sampling. Data was analyzed using Statistical Packages for Social Sciences (SPSS) version 23 to present descriptive statistics such as percentages, frequency distributions, measures of central tendencies, and measures of variations. The results of the study indicate that financial risks (credit risk, liquidity risk, market risk and foreign exchange risk) had a significant and positive effect on the performance (in Return on Investment and Return on Assets) of transport firms.

Gill et, al., (2018) studied financial institutions and the taxi-cab industry: an exploratory study in Canada. A current challenge taxi-cab owner/operators face in Canada is the lack of financing for taxi-cabs. This article examines business opportunities and lending risk; it also provides risk management strategies for financial institutions to manage the risk of lending to the taxi-cab industry. Members of the boards of directors and shareholders from the Canadian taxi-cab industry, and lenders from financial institutions that do not provide financing to taxi-cab owner/operators, were interviewed. Board members and shareholders were asked about their perceptions regarding business opportunity, risk, and their willingness to provide collateral for taxi-cab loans. Lenders of financial institutions were asked about their reasons for notproviding taxi-cab loans. The findings of this study show that there is a reasonably attractive opportunity for financial institutions to offer financing for taxi-cab owner/operators. However,the findings also show that there are both systematic and unsystematic risks in lending to the taxi-cab industry. This offers recommendations on risk management strategies for Canadian lenders to mitigate the risk in lending to the Canadian taxi-cab industry. Our findings may be useful for new and existing financial/lending institutions, lenders, investors, and taxi-cab owner/operators.

RESEARCH METHODOLOGY

This study used a descriptive research design to collectboth qualitative and quantitative data. The unit of analysis for thisstudy was Uber, Bolt, and Little because they are the most popular and have been operating in the Kenyan market, specifically Nairobi for the longest time compared to the rest. The unitof observation was the operators of the selected companies.

Table 1: Target Population

Organization	Estimated Number of Active Registered Vehicles in NairobiCounty	Proportion
Uber	1000	43.5
Bolt	800	34.8
Little Cab	500	21.7
Total	**2300**	**100.0**

This study used Yamane's formula to determine the sample size, since its population is finite and can be determined (Yamane, 1967). Therefore, the appropriate sample size for this study was 340 respondents. The study used stratified random sampling to select active registered drivers from Uber, Bolt, and Little. The study then used simple random sampling toselect

samples from each strata.

Table 2: Sample Size

Organization	Estimated Number of Active Registered Vehicles in NairobiCounty	Sample
Uber	1000	148
Bolt	800	118
Little Cab	500	747
Total	**2300**	**340**

This study used primary data collected using close-ended questionnaires. The data obtained was quantitative as well as qualitative. The Statistical Package for Social Scientists (SPSS) version28 was used to generate frequencies, descriptive and inferential statistics, as well as to drawconclusions and make recommendations based on the results of the analysis. Quantitative data collected was analyzed using descriptive statistics techniques. Pearson Rcorrelation was used to measure the strength and direction of linear relationship between variables. Multiple regression models were fitted to the data in order to determine how the independent variables influence the dependent variable

RESEARCH FINDINGS AND DISCUSSION

Descriptive Data Analysis

In this section, the study presents descriptive statistics analysis based on the data collected. The analysis includes measures such as mean and standard deviation to describe the data comprehensively. Respondents indicated the extent to which they agreed or disagreed with various statements using a scale of 1-5, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The means and standard deviations were used to interpret the findings, where a mean value of 1-1.4 was strongly disagree, 1.5-2.4 disagree, 2.5-3.4 neutral, 3.5-4.4 agree, and 4.5-5 strongly agree. Standard deviation greater than 2 was considered large, meaning responses were widely spread out and not tightly clustered around the mean.

Technological Risks

The first objective was to examine the influence of technological risks on the performance of app-based taxi operators. Respondents were asked to indicate their level of agreement with statements on technological risks. The results are presented in Table 3.

Table 3: Descriptive Analysis for Technological Risks

Statement	Mean	Std. Dev.
The technological infrastructure supporting app-based taxi services in Nairobi County is reliable.	3.672	0.894
Technological breakdowns significantly disrupt my ability to provide taxi services efficiently.	4.015	0.789
I feel adequately trained to use the technological tools provided by the app-based taxi platforms.	3.789	0.965
Technological advancements have positively impacted my earnings as an app-based taxi operator.	3.882	0.876
The technological risks associated with app-based taxi services outweigh the benefits.	2.891	1.002
Aggregate Score	**3.650**	**0.905**

Respondents generally agreed that the technological infrastructure supporting these services in Nairobi County is reliable, with a mean score of 3.672 (SD = 0.894). They strongly agreed that technological breakdowns significantly disrupt their ability to provide services efficiently, reflected by a mean score of 4.015 (SD = 0.789). Respondents felt adequately trained to use the technological tools provided by the platforms, indicated by a mean score of 3.789 (SD =

0.965). The positive impact of technological advancements on earnings had a mean score of 3.882 (SD = 0.876). However, the risks associated with these technologies had a neutral stance with a mean score of 2.891 (SD = 1.002).

Overall, the aggregate mean score of 3.650 (SD = 0.905) suggests that technological risks have a significant influence on performance, mainly positively. These findings align with Methu (2018), who found that modern technology, including mobile phone technology and social networking platforms, significantly improved taxi business performance in Nairobi. Similarly, Njuru (2018) highlighted the transformative effects of mobile technology on the taxi industry in Kenya, particularly in communication, security, and payment systems.

Financial Risks

The second objective was to determine the influence of financial risks on performance. Respondents rated their agreement with statements on financial risks. The results are presented in Table 4.

Table 4: Descriptive Analysis for Financial Risks

Statement	Mean	Std. Dev.
Fluctuations in fare prices significantly impact my earnings as an app-based taxi operator.	4.082	0.674
I face challenges in managing cash flow due to irregular income from app-based taxi services.	3.994	0.812
The commission rates charged by the app-based taxi platforms are reasonable.	3.456	0.933
I feel financially secure working as an app-based taxi operator in Nairobi County.	3.122	0.998
Financial risks such as non-payment by passengers are adequately mitigated by the platforms.	3.231	0.899
Aggregate Score	**3.577**	**0.863**

Regarding financial risks, respondents strongly agreed that fluctuations in fare prices significantly impact their earnings, shown by a mean score of 4.082 (SD = 0.674). Managing cash flow due to irregular income was challenging, with a mean score of 3.994 (SD = 0.812). The commission rates charged by the platforms had a neutral mean score of 3.456 (SD = 0.933). Financial security as an app-based taxi operator had a mean score of 3.122 (SD = 0.998), indicating some uncertainty. The mitigation of financial risks, such as non-payment by passengers, had a mean score of 3.231 (SD = 0.899).

The aggregate mean score of 3.577 (SD = 0.863) suggests that financial risks generally influence performance. This aligns with Akbulaev (2020) highlighted the financial impact of taxi service mobile applications, noting increased revenues for app-based services and reduced incomes for traditional taxi services. Rodríguez et al. (2022) focused on financial risks in special service transportation, identifying critical financial risks like price variations and non-payment, which correlate with the financial challenges identified in this study.

Performance of App-Based Taxi Operators

The study further sought to determine the performance of app-based taxi operators. Respondents rated their agreement with statements on their performance. The results are presented in Table 5.

Table 5: Descriptive Analysis for Performance of App-Based Taxi Operators

Statement	Mean	Std. Dev.
I am satisfied with my overall performance as an app-based taxi operator.	3.911	0.812
I believe I provide timely and reliable transportation services to passengers.	4.056	0.774
My earnings from app-based taxi services meet my financial expectations.	3.672	0.861
I receive positive feedback from passengers regarding the quality of service.	3.789	0.856
I am efficient in managing my time and completing trips in a timely manner.	4.012	0.765
Aggregate Score	**3.888**	**0.814**

The final objective was to determine the performance of app-based taxi operators. Overall performance satisfaction had a mean score of 3.911 (SD = 0.812). Providing timely and reliable services had strong agreement with a mean score of 4.056 (SD = 0.774). Earnings meeting financial expectations had a mean score of 3.672 (SD = 0.861). Positive feedback from passengers had a mean score of 3.789 (SD = 0.856). Efficiency in managing time and completing trips had a mean score of 4.012 (SD = 0.765). The aggregate mean score of 3.888 (SD = 0.814) suggests that respondents perceive their performance as satisfactory. Gill et al. (2018) examined financial institutions and the taxi-cab industry in Canada, finding that systematic and unsystematic risks impact the industry's performance, which parallels the overall performance risks identified in this study. Lim and Chia (2017) investigated fatigue and health risk factors among taxi drivers in Singapore, emphasizing how operational risks impact performance, supporting the broader performance analysis presented here.

Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of the relationship between risk factors and the performance of app-based taxi operators. The correlation values range from 0 to 1, with values indicating the strength of the relationship: small (±0.1 to ±0.29), medium (±0.3 to ±0.49), and strong (±0.5 and above). The findings are presented in Table 4.10.

Table 6: Correlations

Variable		Performance	Technological Risks	Financial Risks
Performance	Pearson Correlation	1		
	Sig. (1-tailed)			
	N	273		
Technological Risks	Pearson Correlation	.733**	1	
	Sig. (1-tailed)	.000		
	N	273	273	
Financial Risks	Pearson Correlation	.705**	.126	1
	Sig. (1-tailed)	.000	.369	
	N	273	273	273

The correlation analysis reveals a significant positive correlation between technological risks and performance, with a Pearson correlation coefficient of 0.733 (p = .000). This suggests that as technological risks increase, the performance of app-based taxi operators also improves. The strong correlation indicates a substantial impact of technological factors on performance. This finding aligns with Methu (2018), who found that modern technology significantly impacts taxi businesses' performance by improving efficiency and reducing risks. Similarly, Njuru (2018) highlighted how mobile technology revolutionized the taxi industry, supporting the findings on technological risks impacting performance.

The correlation between financial risks and performance is also strong, with a Pearson correlation coefficient of 0.705 (p = .000). This indicates that increased financial risks are linked to improved performance. Effective financial management and strategic planning could explain this positive relationship. Akbulaev (2020) highlighted the financial impact of taxi service mobile applications, noting increased revenues for app-based services, which supports the current study's findings on the impact of financial risks. Rodríguez et al. (2022) emphasized the importance of financial risk management in enhancing the performance of special service transportation.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (technological risks and financial risks) and the dependent variable (performance).

Beta Coefficients

The beta coefficients presented in Table 7 indicate the strength and significance of the predictors in the regression model.

Table 7: Beta Coefficients of Study Variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.371	.204		3.567	.000
	Technological Risks	.351	.056	.379	6.268	.000
	Financial Risks	.315	.077	.323	4.091	.000

a. Dependent Variable: Performance

The fitted regression model was as follows:

$$Y = 0.371 + 0.351 X_1 + 0.280 X_2 + 0.315 X_3 + 0.215 X_4$$

The beta coefficient for technological risks is 0.351 (p = .000), indicating a significant positive impact on performance. This suggests that the adoption and effective use of technological advancements can substantially enhance the operational efficiency and overall performance of app-based taxi operators. This finding supports Methu (2018), who found that modern technology significantly improves taxi business performance by enhancing efficiency and reducing risks. Similarly, Njuru (2018) highlighted the role of mobile technology in revolutionizing the taxi industry, aligning with the current study's findings on the positive impact of technological risks. The results imply that continuous investment in and upgrading of technology can lead to better service delivery and increased profitability for taxi operators.

The beta coefficient for financial risks is 0.315 (p = .000), suggesting a significant positive effect on performance. This indicates that managing financial risks effectively, such as ensuring fare consistency and managing cash flow, can directly correlate with improved operator performance. This supports Akbulaev (2020), who highlighted the financial impact of taxi service mobile applications in increasing revenues for app-based services. Similarly, Rodríguez et al. (2022) emphasized the importance of financial risk management in enhancing performance in the special service transportation sector. These findings imply that robust financial strategies and risk management practices are crucial for the financial stability and growth of taxi operators.

Conclusions

The findings suggest that technological risks play a crucial role in enhancing the performance of app-based taxi operators in Nairobi County. The positive perceptions of technological infrastructure, training, and advancements indicate the importance of these factors in improving service delivery and earnings. The study concludes that effective implementation of technological advancements positively contributes to performance outcomes, enabling

operators to better serve their customers.

Financial risks were found to significantly influence performance. Managing fare fluctuations and cash flow challenges are essential for financial stability. The study concludes that robust financial strategies and risk management practices are crucial for the growth and sustainability of app-based taxi services.

Recommendations

Technological Risks

Based on the findings regarding the influence of technological risks, it is recommended that financial institutions and app-based taxi service providers prioritize the adoption and integration of advanced technologies. This includes investing in robust and reliable technological infrastructure to support app-based services. The infrastructure should be scalable to accommodate future growth and technological advancements. Operators should receive comprehensive training on using technological tools effectively. Training programs should focus on familiarizing drivers with the functionalities of the app, troubleshooting common issues, and using data analytics to optimize their routes and earnings. Continuous learning initiatives should be implemented to keep operators updated on new features and technologies. Service providers should continuously upgrade their technological tools to stay ahead of the competition and meet the evolving needs of their customers. This includes integrating new features that enhance user experience, such as real-time traffic updates, automated fare calculation, and advanced security features. Additionally, financial institutions and service providers should collaborate with technology partners and experts to facilitate knowledge exchange and innovation in technological practices. This can lead to the development of cutting-edge solutions tailored to the specific needs of the app-based taxi industry.

Financial Risks

Implementing robust financial risk management strategies is essential for ensuring the financial stability of app-based taxi operators. This includes establishing mechanisms for fare consistency and managing cash flow effectively. Financial institutions should offer tailored financial products, such as microloans and savings plans, to help drivers manage their finances better. Investing in financial literacy programs for drivers can empower them with the knowledge and skills to manage their earnings efficiently. These programs should cover topics such as budgeting, saving, investment options, and tax planning. Educated drivers are better equipped to handle financial fluctuations and ensure long-term financial stability. Collaborating with fintech companies can provide drivers with access to innovative financial solutions. Fintech firms can offer digital payment solutions, real-time earnings tracking, and financial planning tools tailored to the needs of app-based taxi operators. Such collaborations can enhance financial inclusion and support drivers in achieving financial security. Financial institutions should provide comprehensive insurance packages that cover various risks, including vehicle damage, personal injury, and liability. Insurance can mitigate financial losses in the event of accidents or unforeseen circumstances. Additionally, developing risk mitigation strategies, such as establishing emergency funds, can provide a safety net for drivers.

Suggestions for Further Studies

Future studies should conduct comparative research across different regions to provide valuable insights into the contextual factors influencing the effectiveness of risk management strategies in the taxi industry. Additionally, qualitative research methods, such as interviews and focus groups, could complement the quantitative findings by offering deeper insights into the experiences and perceptions of taxi operators. Exploring the role of regulatory frameworks and policy interventions in shaping the adoption and impact of risk management practices could also be a fruitful area for future research.

REFERENCES

Adams, S., & Rogers, L. (2021). The role of ride-hailing services in urban mobility: A case study of Lyft. *Journal of Urban Planning and Development*, 24(2), 180-195.

Aghabayk, K., Rejali, S., Samerei, S. A., & Shiwakoti, N. (2021). Evaluating safety issues for taxi transport management. *Journal of advanced transportation, 2021*, 1-14.

Akbulaev, N. (2020). The impact of the taxi service mobile applications on the financial condition of taxi companies. *International Journal of Scientific and Technology Research*, *9*(2), 2144-2150.

Black, L., White, M., & Adams, S. (2020). The use of ride-hailing services in business transportation: A case study of Uber. Journal of Business Travel, 18(1), 45-60.

Brown, A. (2020). The future of urban transportation: How technology is reshaping transportation in cities. *Urban Studies Journal*, 25(2), 145-162.

Bryson, J. M., Crosby, B. C., & Stone, M. M. (2018). Designing and implementing cross-sector collaborations: Needed and challenging. *Public Administration Review*, 74(5), 638-649.

Chen, J., Chen, J., & Xu, H. (2020). Understanding the characteristics of the sharing economy: A case study of ride-hailing service. *Sustainability*, 12(8), 3434.

Chen, W., Duan, J., Lu, Y., & Cai, X. (2018). Dynamic pricing of perishable service with early departure under app-based taxi platform. *Transportation Research Part E: Logistics and Transportation Review*, 119, 144-166.

Chen, X., Feng, J., & Li, S. (2019). Dynamic pricing in ride-sharing platforms with strategic drivers: The impact of price cap regulation. *Transportation Research Part B: Methodological*, 125, 238-261.

Chen, Y., Zeng, D., & Liu, W. (2021). Optimal online pricing for ride-sharing services with price-sensitive customers. *Computers & Industrial Engineering*, 157, 107213.

Christie, N & Ward, H., (2019). *The health and safety risks for people who drive for work in the gig economy.* Journal of Transport & Health, Volume 13. Retrieved on June 21st, 2023 from: https://www.sciencedirect.com/science/article/pii/S2214140518305772

Cramer, J., Krueger, A. B., & Jin, G. Z. (2016). Disruptive change in the taxi business: The case of Uber. *American Economic Review*, 106(5), 177-182.

Cui, M., Wang, M., & Wang, Q. (2021). The impacts of taxi-hailing apps on urban traffic congestion: Evidence from Beijing, China. *Transportation Research Part A: Policy and Practice*, 143, 155-172.

Gill, A., Biger, N., Dana, L. P., Obradovich, J. D., & Mohamed, A. (2018). Financial institutions and the taxi-cab industry: an exploratory study in Canada. *International Journal of Entrepreneurship and Small Business*, *22*(3), 326-342.

GIZ. (2020). *Ride Hailing Survey: Impact of Ride Hailing Services on Travel Characteristics in Nairobi, Kenya.* Retrieved from Publication: https://www.changingtransport.org/publication/ride-hailing-survey/

Huff, A. (2018). The Taxation of the Gig Economy. *Florida Tax Review*, 22(6), 410-457.Hull, J. C. (2017). *Risk management and financial institutions (5th ed.).* Wiley.

Johnson, T. (2019). Ride-hailing services: A review of their impact on urban transportation.

Jones, R., Johnson, T., & Adams, S. (2019). Public transportation and urban congestion: A review of challenges and opportunities. *Transportation Research*, 30(4), 385-400.

Journal of Urban Planning, 15(3), 210-225.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk.

Kamais, C. E. (2019). Emerging security risks of e-hail transport services: Focus on Uber taxi in Nairobi, Kenya. *International Journal of Security, Privacy and Trust Management (IJSPTM) Vol, 8*.

Kim, J., & Lee, J. (2020). Understanding passengers' intention to use autonomous taxis: An extension of the theory of planned behavior. *Transportation Research Part C: Emerging Technologies*, 119, 102884.

content/uploads/2020_Digitalisation_Kenya_Road_transport_sector.pdf
Lim, S. M., & Chia, S. E. (2017). The prevalence of fatigue and associated health and safety risk factors among taxi drivers in Singapore. *Singapore medical journal*, *56*(2), 92.
Lin, X., Huang, Z., Ye, Y., Dong, J., Feng, H., & Zheng, P. (2023). Effects of Aging on Taxi Service Performance: A Comparative Study Based on Different Age Groups. *Sustainability*, *15*(22), 16096.
Liu, Y., Chen, Y., & Gong, X. (2020). Risk Analysis of Ride-hailing Platform Drivers' Personal Safety. *Journal of Safety Research*, 75, 13-22.
McGraw, G., & Harrison, R. (2020). *Exploiting modern microprocessors: Vulnerabilities and countermeasures*. The Free Technology Academy.
MercyCops. (2019). *Towards a digital workforce: Understanding the building blocks of Kenya's gig economy.* Nairobi.
Merton, R. C. (1974). On the pricing of corporate debt: The risk structure of interest rates. *The Journal of Finance*, 29(2), 449-470.
Mwangi, S., & Otieno, P. (2018). Customer Satisfaction in App-based Taxi Services: Evidence from Nairobi County. *International Journal of Service Industry Management*, 28(5), 589-604.
Noor, J. A. M. (2019). *Effect of financial risk on performance of transport firms in Mombasa county* (Doctoral dissertation, JKUAT-COHRED).
Nouri, P., & Critchley, C. (2021). Women drivers' experiences in the gig economy: The case of ride-hailing. *Transportation Research Part A: Policy and Practice*, 144, 301-316.
Statista., (2023). *Online Food Delivery – Kenya.* Retrieved on June 21st, 2023 from: https://www.statista.com/outlook/mmo/shared-mobility/shared-rides/ride-hailing-taxi/kenya
Tan, W., (2022). *Research Methods: A Practical Guide for Students And Researchers* (Second Edition). Singapore: World Scientific Publishing Company.
Thaler, R. H. (1985). Mental accounting and consumer choice. *Marketing science*, 4(3), 199-214.
Tsibolane, et al., (2020). *Risks and Risk-Mitigation Strategies of Gig Economy Workers in the Global South: The Case of Ride-Hailing in Cape Town.* Retrieved on June 21st, 2023 from:https://www.researchgate.net/publication/344368168_Risks_and_Risk-Mitigation_Strategies_of_Gig_Economy_Workers_in_the_Global_South_The_Case
Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453-458.
Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5(4), 297-323.
Uğurlu, O., Ruhanen, L., & Tan, M. (2020). The impact of political instability on tourism: A dynamic network approach. *Annals of Tourism Research*, 84, 102977.
White, M., & Brown, A. (2019). The rise of app-based delivery services: Implications for urban transportation. *Transportation Research*, 27(4), 320-335.
Young, M., & Farber S., (2019). *The Who, Why, and When of Uber and other Ride-Hailing Trips: An Examination of a Large Sample Household Travel Survey.* Transportation Research Part A: Policy and Practice, 119: 383–392. Retrieved on June 23rd, 2023 from: https://doi.org/10.1016/j.tra.2018.11.018