CONTRIBUTION OF STRATEGIC COLLABORATIONS OF MOTORCYCLE INDUSTRY ON PERFORMANCE OF WHOLESALE AND RETAIL SECTOR IN KENYA

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DECLARATION

Declaration by the candidate

This thesis is my original work and it has not been presented for conferment of a degree in any other University or for any other award.

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Declaration by the supervisors

We confirm that the work reported in this thesis was carried out by the candidate under our supervision and has been submitted with our approval as university supervisors.

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DEDICATION

This thesis is dedicated to my loving and supportive wife Elizabeth and our children Joseph, Lawrence and Mitchelle.

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LIST OF ABBREVIATIONS AND ACRONYMS

B2B	Business-to-business
C2B	Consumer-to-business
C2C	Consumer-to-consumer
COO	Chief Operating Officer
COVID	Corona Virus Disease
DC	Developing Countries
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GNP	Gross National Product
GoK	Government of Kenya
GPS	Global Positioning System
ICT	Information and communications technology
KBTS	Kenya Bus Transport Services
LMIC	Low Income and Middle Income Countries
MPT	Motorcycles Public Transport
MTC	Motorcycle-related Traffic Congestion.
NACOSTI	National Commission for Science, Technology and Innovation
NACOWA	Nigerian Auto bike Commercial Owners and Workers Association
NEFABO	National Federation for Boda Boda Operators
NMIMTS	Non-Motorized and Intermediate Mode of Transport
NTSA	National Transport and Safety Authority
OLS	Ordinary Least Squares

PTC	Peoples' Transport Company
RTID	Road Traffic Injury and Deaths
SAP	Structural adjustment programs
SOTUC	Soci'ete' des transports Urbains du Cameroon
SSA	Sub Saharan Africa
UK	United Kingdom
UPS	United Parcel Service
USA	United States of America
USPS	U.S. Postal Service
UTC	Uganda Transport Company
WHO	World Health Organization

ABSTRACT

Wholesale and retail sector is one of key sectors that are expected to help the government in realizing vision 2030. They are great contributors to employment and GDP. However, of late, wholesale and retail businesses have faced a myriad of challenges in a performance and dynamic environment. The purpose of the study therefore was to investigate contribution of strategic collaborations of motorcycle industry on performance of wholesale and retail sector growth in Kenya. The study was guided by five research objectives which were to examine the influence of motorcycles delivery innovation, logistic cost, timeliness, motorcycles accessibility to the markets and to examine the moderating effect of road safety and compliance training of motorcycle riders on the relationship between strategic collaboration of motorcycle industry and the performance of wholesale and retail sector in Kenya. The study was anchored on social exchange theory, Greiner's Growth Model, Cost Leadership Strategy and neo-classical growth model. Descriptive research design was used. The study targeted all wholesales and retails shops in 47 counties in Kenya which employed commercial motorcycles for their last mile delivery of goods. Systematic sampling technique was employed to select the counties while in each County simple random sampling technique was employed to select a sample of 383 respondents. Closed ended questionnaire was used to collect quantitative data, while open ended questionnaire was used to collect qualitative data. Cronbach alpha was adopted to test the reliability of the data collection instruments. The questionnaires were self-administered to the respondents using a pick and drop method. Data analysis involved both quantitative (descriptive -frequencies, mean, standard deviation, percentages and inferential- Pearson correlation coefficient) and qualitative techniques where data was summarized in themes and presented in narrative form as well as raw data excerpts. The study achieved a response rate of 77.8% where a total of 298 out of 383 questionnaires were filled and returned back. The study findings indicated that motorcycle delivery innovation had been embraced by the wholesalers and retailers in their businesses resulting in improved performance. The study found that motorcycle logistics costs were low and manageable as compared to motor vehicles and this had helped the businesses realize more profits due to reduced cost of operations such as storage cost and distribution cost as well as improving the delivery time. The study further established that use of motorcycles by wholesalers and retailers had enhanced distribution of goods to the customers as well as reaching a wide range of customers hence improving customer satisfaction and customer retention. The study revealed that motorcyclists engaged by the wholesalers and retailers had been trained on road safety and they were all compliant with NTSA rules. The study concluded that delivery solution strategies, logistic cost, timeliness of motorcycles and their accessibility contributed to positive performance of the businesses. The study concluded that logistic cost is inversely proportional to performance of wholesale and retail businesses. The study concluded that road safety and compliance training of motorcycle riders had a significant moderating effect on the relationship between strategic collaboration of motorcycle industry and performance of wholesale and retail sector in Kenya. The study recommended that the government should embrace the use of electrical motorcycles as innovative delivery solution to help reduce pollution caused by increased use of petrol motorcycles. The study further recommended that the government should design specific lanes for commercial motorcycles especially in Nairobi to help increase their accessibility to the central businesses district to help promote wholesale and retail

businesses in major towns.

CHAPTER ONE

INTRODUCTION

Overview of the Chapter

This chapter discusses an introduction into the study, especially the background of the study. The chapter also presents the statement of the problem bringing out how and why the study should be undertaken by comparison of statistical evidence. The general, specific objectives as well as hypothesis that support the research study have been clearly outlined. Justification, scope of the study and limitations of the study are also discussed.

1.1 Background of Study

Wholesales and retails today are not only engaged in constant exploration for strategies to beat competition but also exploring strategies to help them stay relevant in this competitive market. The retail market consists of sales of goods to ultimate users by entities (organizations, sole traders and partnerships) that provide the service of making goods available in convenient quantities and locations. Retailing involves buying from wholesalers or direct from producers, breaking bulk, displaying goods for sale either physically or online, and sometimes delivery (Divall et al., 2021). Wholesalers are independent organizations in the distribution channel that buy in bulk and sell to resellers rather than to consumers. Both retailers and wholesalers take ownership of the goods and so bear the risk of carrying inventory. They also reduce the total number of transactions required for the process of transferring goods from producers to consumers.

In Kenya, wholesale and retail trade is the fifth largest contributor to Kenya's GDP and the third largest contributor to private sector employment. This is by the fact that, in

2016, wholesale and retail trade employed 238,500 Kenyans and accounted for 8.4% of Kenya's GDP (KNBS, 2018). In Africa, Kenya is the second-largest retail sector on the continent, where South Africa is leading. This industry has been growing over time since independence to date.

Due to the role played by retail sector, the government recognizes the role it can play to the growth of the economy. This has been well articulated in the government's Vision 2030 strategy where the retail sector is expected to play a significant part in the country's economy. One of six key sectors that constitutes more than half (57%) of Kenya's GDP is wholesale and retail (RoK, 2008). Growth in wholesale and retail trade increased from 7.3 and 6.4 per cent in 2011 and 2012 respectively (KNBS, 2012). The retail enterprises in Kenya comprise of the small, medium and large form of retail business. The history of shopping malls started in US and later spread to other countries in the world (Wang, 2018). Today's urban fabric and shopping malls integration is becoming more important as they are raising trends and changing retail landscape both globally and locally (Divall et al., 20212010).

The Kenyan wholesale and retail trade has been one of the fastest expanding sub-sectors ad in 2018, it accounted for 7.3% contribution to the Gross Domestic Product (GDP) (ROK, 2018). Kenya Institute of Public Policy Research and Analysis (Kippra) (2013) acknowledged that in the last decade, supermarkets have grown at a very high rate and that their development is expected to stimulate expansion in construction and property development especially at the county level. Drivers of rapid growth of supermarkets in Kenya as noted by Kippra (2013) are changing consumer lifestyles, increased urbanization, the likelihood of having a female household member in the

labor force, and the economic growth experienced through the past decade.

The rapid growth of motorcycles has been accompanied by an equal increase in road accidents and associated fatalities and injuries and a consequent high cost in terms of productivity and health care (Chitere et al., 2006). The annual cost of road traffic crashes in low- and middle-income countries is estimated to be between US $ 65-100 billion, more than the total annual obtained from development aid (Kudebong et al., 2011). The estimated costs as a percentage of the Gross National Product (GNP) in most African countries range from about 0.8% in Ethiopia and 1% in South Africa to 2.3 % in Zambia and 2.7% in Botswana to almost 5% in Kenya.

The retail sector on the other had is key in providing employment opportunity and contribution to GDP. Unfortunately, the sector is at crossroad due to COVID-19 Pandemic, characterized by inefficiencies along the supply chain from producer to consumer, and from the importer to the final buyer. Therefore, there is need for policy development that will bring order in the motorcycle industry since if this is not done more problems. By the fact that the motorcycle has become a driver in the retail and wholesale sector, if it fails to perform, it would have ripple effect on the retail and wholesale sector. This may result to unemployment, insecurity; high level of inequality and in the end, Vision 2030 may not be realized.

Though studies have indicated that there are benefits of motorcycle in the distribution channel, there is no conclusive study that has been conducted to investigate the strategic contribution of motorcycle strategic collaboration on performance of wholesale and retail sector growth in Kenya. This leaves a gap that need to be filled by

this study. Apart from filling the literature gap, the study will be helping authorities in coming up with policies that can help in governing both motorcycle sector and, wholesale and retail sector. Therefore, there is need for policy development that will bring organizational and harmony in operations of the motorcycle industry for better performance in the future. This is by the fact that the motorcycles have become a driver in the retail and wholesale sector, if it fails to perform, it will have ripple effect on the retail and wholesale sector. This may result to unemployment, insecurity; high level of inequality and in the end, Vision 2030 may not be realized.

1.1.1 Global Perspective of Wholesale and Retail Sector Distribution Channels

In the global arena, motorcycles have been the prime means of motorized transport. The business of motorcycle as a means of transport in London for example began in early 1990s to offer alternative means to the upper class passengers who felt fed up of sitting in traffic jams on their way to and from the airport. From that time, motorcycles have continued to offer cheaper, faster and convenient means of transport services compared to other modes of transport (Öbom, 2019). In Asia, commercial motorcycles transport has helped citizens connect to markets, health care facilities and schools where road infrastructures are either poor or lacking. In India, Bangladesh, Thailand, and Pakistan motorcycles are popular in transiting dwellers in cities. In India, for instance, 69% of the total number of motor vehicles are motorized two- wheelers (Chitere et al., 2006). In China, in 2019, it was estimated that more than 67 million motorcycles were registered in the country (WHO, 2020). In Vietnam, the number of motorcycles has grown from 500,000 to 10,000, 000 in the past 10 years (Asogwa & Dim, 2016). The high prevalence of commercial motorcycles makes them easy to

integrate in the implementation of growth strategies among the wholesale and retail businesses.

The usage of motorcycles has become popular in other parts of the world. In Taiwan, around one out of four people use automobiles while the ratio of motorcycles use is about 1:2. This shows that the motorcycles are quite popular in this country. The use of the motorcycles is for both human and goods transport. The use of motorcycle in Vietnam as for human transport and distribution of goods is even higher because of lack of public transport and the available automobiles are out of reach for many because of low-income levels (Nkede, 2012). In China, motorcycle taxis have played a very big role in supporting the lives of urban migrants' subgroups from Taiwan, Vietnam, and Asia (Qian, 2014).

In Europe motorcycle logistics indicates that there is great potential of usage of motorcycle where on average, 51% of all motorized journeys in European cities involving freight transport can be moved to motorcycles. Due to this, Lenz and Riehle (2013) suggest that cycle freight can make up about 25 percent of downtown commercial traffic in the medium term and that there is a potential market. Nkede (2012) in their quantitative analysis of operational and external costs, suggest that the usage of motorcycles is a viable solution to satisfy both public and private stakeholders. An important operational consideration here is that motorcycles are favorable in terms of cost, payload, which makes them well adapted to specific logistical challenges (Lenz & Riehle, 2013).

According to Chhorn et al., (2013) every year in Europe and Asia there has been

manufacturing of hundreds of motorcycles intended to be used for transportation. According to Turner (2014), commercial motorcycle business has emerged in many countries because of rapid urbanization and growth of economic and physical activities. The growing population in cities and towns has created a transportation demand that both private and public transport services can narrowly keep up with. According to Turner (2014), every day, more than 750 million Asians and Europeans depend on commercial transportation to get them to their places of work, school and or business. Due to unavailability of organized transport system in majority of the countries, it has resulted to the use of commercial motorcycles as an alternative means of transport to members of public.

Wang (2018) investigated the distribution of small packages in metropolitan area by motorcycle courier services. Small packages such as important documents, receipts and gifts were usually distributed in a short time window in a metropolitan area of congested traffic and limited parking spaces. While conventional four-wheel vehicles are not suitable for intra-city deliveries, motorcycles are perfect since they are more mobile. The study was investigating business models suitable for distributing small packages in metropolitan area by analyzing two courier networks: a point-to-point and a hub-and- spoke courier network.

In Pakistan there has been research done on the logistic cot and the company performance and also environmental effects which included different aspects of logistics including the costs, warehousing and outsourcing the logistics operations and their effect on the company performance. The result concluded that although sustainable logistics operations are difficult to obtain, but if they are properly

implemented including the environmental effect as well then the company and the country they can be sustainable in different ways like economic, social and environmental (Abbasi, 2013). The increase in retail sector of Pakistan is due to the minimized cost of operations, increased income, urbanization, and customer awareness, which gives a hint towards the expansion of the retail market in Pakistan. According to the report, it's not the thing that Pakistan's retail sector is transforming from small retailers to large retailers, but also giant stores like next, Metro, Makro are in the country now, and giants like Marks & Spencer, are also showing an interest to operate in the country.

In United States of America, there have been two major nationwide providers of home delivery which are United Parcel Service (UPS) and the U.S. Postal Service (USPS). With a national delivery network that had been built up over, UPS (12) has a truly comprehensive network and a tremendous volume, roughly 12 million packages per day nationwide to spread over its network, which results in a highly profitable package delivery business. While UPS is the only private company with such a comprehensive delivery network, there is another entity that has an even more comprehensive network. By law, the U.S. Postal Service must provide delivery to every address in the U.S. every business day of the week.

However, in contrast to the UPS, the USPS must provide this coverage regardless of profitability. The USPS delivers parcels to the home primarily through its Priority Mail product, which is predominantly a B2C and consumer-to-consumer (C2C) product (roughly 85%), and it has much lower exposure to the B2B market than its rival package carriers such as UPS, FedEx, and Airbone Express. The Priority Mail product

is not time- definite and does not have full track-and-trace capability yet, but it has lower pricing than UPS products (especially for items less than five pounds in weight). Priority Mail is primarily a two- or three-day product. On the other hand, UPS has almost exactly the opposite mix, with about 80%-85% of its package volume in the B2B category.

E-commerce enables businesses to sell their products and services directly to the consumers without establishing a physical point of sale. While some products can be delivered digitally to households for example, newspapers, airline tickets and music CDs, most products purchased online ultimately must be transported to the end-users in the physical world. An efficient and reliable delivery system is essential for gaining customer loyalty online and consequently obtaining profitability. Home delivery is increasingly becoming a key element in e-commerce. The logistical requirements of supply chains that extend to each customer's address may stimulate greater complexity in distribution systems management, potentially causing higher costs in carriers' fleet operations (World Bank, 2007). This thus calls for collaboration between the retailers and wholesalers and the motorcycle industry players.

An increase in time-sensitive goods results in an increase in the number of delivery vehicles. More frequent home-based local deliveries would likely add to traffic congestion and environmental problems in urban areas, making it more difficult for carriers to meet customer demands. These changes create challenges for the freight community. To counter the cost attribute to home deliveries majority of delivery companies employed cheap means of delivery such as electric motorcycles and bicycles. Field studies were carried out in 1968 and 1988, to describe the production

and market changes in the small farming community of Ibarapa in the supply hinterlands of Ibadan, Nigeria. The transport revolution of the 1970s lasted until the late 1980s and brought the whole farming area into the accessible hinterland (World Bank, 2007).

New configurations are mobilized by different social categories within the producer population who are struggling to establish viable footholds in the commercial economy, their members shifting and sorting themselves across the spectrum of possibilities for specialization: part-timing as the subsistence option, side-lining as the commercial option in complementarity to other income sources, narrow spectrum "cassava-plus" farming on an individuated or localized collective model, and broad-spectrum commercial engagement. It is argued that the level of consumer demand, rather than bottlenecks in production perse, will create the future of the niche economy. The inadequacy of demand accounts for severe limits, because of the inaccessibility by the ordinary market dynamics of a differentiated society, of the enclave created by the rich (Porter et al., 2013).

Over the past several years, researchers have investigated the likely impacts of online shopping driven by information technology on transportation, including the movements of freight (Gamberini, 2014; Porter et al., 2013). Although home delivery plays a crucial role in the distribution chain, limited attention has been paid to the issues associated with the home delivery in the transportation literature. This from the fact that, for the supply chain to be complete, businesses have to engage last mile connectivity players, in this case the motorcycles (Gamberini, 2014).

With the growing economy and the convenient communication channels, demands for more personalized and faster delivery services are increasing, especially in the metropolitan area where more enterprises are in high buildings. Therefore, the study was conducted to investigate the metropolitan courier service using motorcycles, which are mobile and convenient even in the limited parking space. This was attributed to the fact that motorcycles courier network incurs less capital investment owing to its simplicity in operations and organization structure, while the quality of its service is more erratic and becomes worse when the scale of demands increases and locations of demands are more scattered around (Wang, 2018).

The impact of COVID-19 was first felt in China due to the role it plays in global manufacturing, with Wuhan, the epicenter of the pandemic, playing a particularly significant role, with more than 200 of Fortune Global 500 Firms having a presence there. Major industries around the world, including automotive, electronics, pharmaceuticals, medical equipment and supplies, as well as consumer goods, were affected (Gonzalez-Galarza, 2020). The restrictions taken by global governments have been uncoordinated, disrupting the movement of people and goods. Global manufacturing processes have decreased due to the intermittent operation of the international supply chain. COVID-19 was severely impact growth across all regions, and the global economy is projected to contract sharply by 3% in 2021 (ESCAP, 2020). Hence, there's need to come up with better mitigation measures on transport system to improve services delivery solutions on manufacturers, wholesalers and retails sector.

1.1.2 Regional Perspective of Wholesale and Retail Sector Distribution Channels

Over the last decade the use of public motorcycle taxis in Sub-Saharan Africa, Latin America and Asia has been significant. Motorcycle transport is a popular mode of transport in eleven countries of South Asia due to unavailability of good infrastructures that could enable use of cars and vans (Santikarn, 2010). The ease of maneuverability of the motorcycles has been used to provide solution on delivery of goods from town to inner areas of the countries at a fair price as compared to cars and trucks. In 2009, the cumulative registered number of motorcycles was 55.7 million. The highest number was in India (29 million) followed by Indonesia (18.8 million) and Thailand (17.8 million). The percentage of registered motorcycles among all types of registered vehicle was 55.7 percent for the region. At country level, Nepal ranked first (81.8%) then Maldives (79.9%) and Indonesia (75.2%). This high percentage of registered motorcycles has not been seen in any high-income countries, where registered motorcycles is only less than 4% of all registered vehicles. With such a high number of motorcycles registration the wholesale and retail businesses could therefore employ them as a way of diversifying their market. This would add to the performance of the retail sector.

Just as in developed Countries, there has been tremendous growth of commercial motorcycles in Africa. In Nigeria for example, commercial motorcycles constitute one of the chief modes of transportation and by far, the most common form of informal transport system. There has been a phenomenal increase in the use of motorcycles for commercial purposes in most cities and rural areas of Nigeria. For instance, as of 2018, there were more than 1.2 million motorcyclists in Nigeria (Santikarn, 2010).

In Sub Sahara Africa (SSA), increasing use of MPT is due to difficult economic setting experienced since the 1980s and 1990s (Kumar, 2011). In Africa, there has been a significant growth in the use of motorcycles in the past decade as a commercial public transport. Commercial motorcycles offer certain transport in the form of easy maneuverability, ability to travel on poor roads, and demand responsiveness (Ajar, 2011). In Nigeria, motorcycles serve as a means of living to many people (Taruwere, 2012). Motorcycle operators look up to it as a source of income for survival of their households (Arosanyin, 2010). In Northern Ghana, lives of many urban residents have improved significantly due to the high levels of motorcycle ownership and use (Dinye, 2013). With poor roads and inadequate public transport system, many urban residents can easily move and transport goods even to the peri- urban areas because of the increase in use of motorcycles. The growth in use of motorcycles has also come along with a lot of employment opportunities to the operators. Motorcycle mechanics and motorcycle spare parts dealers have gotten employment and there has also been an increase in sources for revenue generation for the local government through licensing, motorcycle registration and levied taxes (Dinye, 2013).

In East Africa, Sentongo-Kibalama, Kisaalita and Josephat, (2007) found that Uganda motorcycle business has had a great impact on the youths through creation of employment opportunities. This is in facilitating movement of people and movement of goods. Howe (2002) also noted that the greatest impact that motorcycle business has had on the poor is through the employment provided. He said that each motorcycle business directly employs six people and on average, each operator supports six people including themselves. This demonstrates the popularity of the motorcycle. In Rwanda,

this sector has employed and supported a very large number of people who transport people and goods across regions. A total of 10,486 motorcyclists were recorded in official databases (Rollason, 2012). A conservative estimate suggested that as many as 4.5 percent of the city's population, equivalent to 47,187 people depended on motorcyclists for their livelihoods and that motorcyclists were not poor but enjoyed relatively high and stable incomes (Rollason, 2012).

There is low cost of acquisition of motorcycles in majority of developing countries. This is attributed to government-initiated tax exemption strategies as it is perceived to be a solution to unemployment among the youths. In Uganda for example, there was a Presidential intervention to influence growth of commercial motorcycles to address unemployment rates in the country (Goodfellow & Titeca, 2012). Commercial motorcycle mode of transport has offered s owing to the easy of maneuverability, the ability to travel on poor roads and paths, and the ability to quickly respond to demand. This has led to exponential growth of the business. This has not developed without their own share of problem such as road accidents, pervasive nose and air pollution in the environment (Olubomehin, 2012). According to Olubomehin (2012), any effort by Governments to regulate the commercial motorcycle industry has had the contrary impact, further compounding the problem due to the distortion market structures.

Motorcycle operators deliver and transport post, parcels or freight with a low volume or weight both for the retail and production industry. Motorcycles couriers are proofing to be fast and reliable within congested urban areas. In Europe some motorcycles courier markets are reasonably well developed. Motorcycle operators are picking up items from the wholesale and delivering to retail. Motorcycle Sacco are most often

found in the central business region of metropolitan areas, they work on a small scale, collecting packages and distribute them quickly throughout the city (Rugut, 2015). Motorcycles do suffer less from road congestion problems. It can even be stated that the more urban areas face congestion, the more these have an advantage. Delivery times are to be shorter. Reliability can be offered as motorcycle couriers, compared to the conventional transport, need a more stable period to do a certain trajectory which is regardless weather conditions, traffic jams, peak or off-peak times, strikes in public transport similar all year round.

1.1.3 Kenyan Perspective of Wholesale and Retail Sector Distribution Channels

The motorcycle industry in Kenya has grown over time where the number of registered motorcycles in Kenya increased from 4,136 in 2005 to 105,191 by 2016 (Ministry of Transport, 2017) and as at 2021, new registration of motorcycles had grown up to 291,553 (KNBS, 2022). The motorcycles have become popular as it can be used as an alternative channel of transporting goods, this is because they are cheaper in terms of fuel consumption, affordable and can easily maneuver through traffic congestion thus making delivery of products fast, convenient and cost effective (Goodfellow & Titeca, 2012). In 2018, the *bodaboda* industry in Kenya was ranked as an emerging biggest driver of the economy. The operators in the industry generated Ksh 219 billon revenue which was higher than the income of Safaricom which is the most profitable company in Kenya which earned Kshs 212 billion. According to a report released by the Motorcycles Assemblers Association of Kenya (MAAK), in 2018 there were about 600,000 commercial motorcycles on Kenyan Road and each motorcycle earned a minimum of Kshs 1000 per day.

The use of motorcycle has become popular in the supply chain and particularly in the retail sector (Nyabuta & Muindi, 2018). The wholesalers and retails must decide on how best to distribute their products; since they rely heavily on services delivery solution, and this is critical to customer retention as well as winning new ones; thus, resulting to immense progress. This calls for re-examination of the existing distribution channels, use of more pro-active platform and being innovative into reducing services delivery cost as well as giving thought to development plans and strategies. As a result, the wholesale and retail sector is widely turning to motorcycle (Starkey, 2016).

Without reliable transport, the wholesale and retail trade may fail to grow, yet this is a very critical sector to Kenya's economic development. The sector is the link between production, delivery of services and consumption, both of which are expected to expand substantially as the economy heads to a 10 per cent growth rate. The wholesale and retail sector comprises a sizeable part of the economy contributing 30 percent of Gross Domestic Product (GDP) and 50 percent of employment in both formal and informal establishments. It is extremely fragmented and highly informal as 97 percent of its employment and 70 percent of value is informal. It has very inefficient supply chain and there is need to formalize the sector (International Monetary Fund, 2008). To minimize the inefficiencies in the supply chain, the sector has embraced the use of motorcycle transport.

In Kenya, Commercial motorcycle business referred to the use of motorcycles to generate income (Muindi & Nyabuta, 2018). Motorcycles that are used for commercial transport have increasingly become popular (Starkey, 2016). During the period around 1960s, motorcycles were used for private transport. Few of them were used for

commercial business transport. They were used for smuggling of goods across the Kenya-Uganda border (Naddumba, 2009). It was from the transport business of crossing the border between Kenya and Uganda that the name boda boda (border-border) was coined to refer to commercial motorcycles in Kenya and East Africa region (Howe, 2003).

In Kenya, MPT was adopted largely as a solution to the escalating poverty levels in the late 1990s occasioned by acute job scarcity in the country. The government of Kenya waived motorcycle import duty in 2008 thus increasing importation of these vehicles such that the number rose from 51,412 registered motorcycles in 2008 to 91,151 in 2009, 117,266 in 2010 and 140, 215 in 2011 and 295,513 in 2021 (KNBS, 2022). This increasing trend has choked Kenyan towns with traffic have suffered uncontrolled Motorcycle-related Traffic Congestion (MTC). Thus, governments need to plan on how to provide research-based, safe and effective urban transport for efficiency (Onserio, 2014).

In the business arena as competition becomes more intense today, wholesale and retail are focusing on ways to grow their businesses. Growth is exciting and fast paced and for most businesses it is a key performance indicator (KPI) of success. According to Barringer et al., (2008), the seven primary reasons why business try to grow include the attainment of economies of scale which are generated when increasing production lowers the average cost of each unit of production, also to capture economies of scope whereby the firm deals with a range of products, to attain market leadership whereby the organizations want to be leaders in their markets. A business may decide to grow in order to execute a scalable business model where they ask how high in terms of

growth can the business go. Another reason would be for the business to gain influence, power and survivability. It could also be the need to accommodate growth of key customers while at the same time being able to attract, retain and win new ones. This growth can be achieved by expanding the customer base through distribution channels. To reach majority of the areas and large numbers of customers especially for small packages, motorcycle has been offering the solution (Muindi & Nyabuta, 2018).

Growing the business can also be taken to mean crafting and implementing strategies that will see the wholesale and retail deliver their products to their customers in time and cost effective; hence bringing profit to their business, attracting, and pleasing customers, competing successfully with other key players in the markets, conducting operations and improving its financial and market performance (Muindi & Nyabuta, 2018).

It is about claiming and maintaining a share of the market. Porter (1980) observed that having a growth strategy such as innovative distribution strategy enables a business to achieve a profitable and sustainable position in its market of operation.

There are many growth strategies that the wholesale and retail can undertake to grow and expand its operations though it is important to note that not every growth strategy is appropriate for every business. The wholesale and retail must decide how to deliver their products in time and cost effective to remain relevant in a highly performance business world. As competition becomes ferocious, retailers and wholesalers were wooed more persistently. Allegiance in trade will go down. This calls for re-appraisal of the existing distribution channels and development of new channels as well as give

thought to development plans and strategies (Starger & Bullock, 2016).

The adoption of motorcycle by wholesale and retail trade sector aligns itself well with the vision 2030 target where the Wholesale and Retail Trade sector should “Move towards a formal sector that has efficient transport system, multi-tiered, diversified in product range, and delivery innovative”. The motorcycle industry is a key driver towards realization of this target. According to Muriithi (2017), wholesale and retail trade are nowadays being viewed as an important player in even and equitable economic development due to the role they play in the economy and any strategy to expand it is well embraced. According to the Kenya Small and Medium Finance Survey (2018) Wholesale and retail trade up to date continue to create jobs and highly boost the gross domestic product of any country.

The growth of the wholesale and retail sector in Kenya is very important for attaining the national goals and vision 2030 (Wambui, 2019). According to Sitharam and Hoque (2016) a very strong wholesale and retail business enterprises contributes highly to the country’s economy, contributing to the Gross Domestic Product (GDP). According to Muriithi (2017), wholesale and retail trade is the driving stone of any economy both in the developed and developing countries. In the current global economy, all business enterprises are progressively being regarded as very powerful engines for economic empowerment and development for most economies in the world (Apalia, 2017)

According to White, Maru and Boit (2015) all businesses play a key role in economic growth by providing a source of innovation and in creating new products. Economies throughout the world are nowadays turning their attention to wholesale and retail

businesses due to the recognition as the powerful engines that drive the economic development of a country through job provision, contribution to GDP and tax provision among other things (Kangala, 2016). According to Nderitu and Githinji (2015) in the recent decades' wholesale and retail trade are proofing to be the primary engines of the performance of any economy in the world. Wholesale and retail trade is one of the key sectors that have been outlined by vision 2030 for transformation of the Kenyan economy to a trade performance economy. In 2015, the GDP of the Kenyan economy improved to 5.6 from 5.3 in 2014 and one of the key contributors to this growth was the wholesale and retail sector (KNBS economic survey, 2016).

The 2030 vision for wholesale and retail trade is to raise earnings by giving the large informal sector opportunities to transform itself into a part of the formal sector that is efficient in transportation, multi-tiered, diversified in product range and delivery innovative. This was realized through, first strengthening the capacity of informal retail sectors operators (including jua kali) so that they can gradually become integrated in the formal sector and can grow into sustainable small and medium sized businesses. This was done through security of tenure, training, research and development programmes, credit extensions and efficient transport system within local and international markets. Secondly, improving efficiency by reducing the number of players between the producer and the consumer. Thirdly, creating formal market outlets for small-scale operators who was then graduate from the informal sector. Fourth, encouraging more investment in retail trade; developing an outreach programme to expand retail trade. Finally, strengthening wholesale and retail activities through an improved business environment, provision of quality infrastructure and

certification of products; and establishing a duty-free zone to create a business hub for the Eastern African region.

Kenya's long-term vision as enshrined in vision 2030 is to transform the country from its status into a newly industrializing middle-income country providing a high quality of life to all its citizens by the year 2030. To support the priority sector strategies and projects, transversal reforms and enabling infrastructure development would be required. Specifically, Kenya would require creation of proactive delivery units in Government to drive implementation of flagship projects. Successful implementation of the vision would need building key roads to support the proposed resort cities, revitalize tourist circuits and wholesale hubs. The government has continued to build the necessary infrastructure for ease of doing business. It can be clearly observed that, transport is a key driver of the wholesale and retail sector. However the transport sector has been disrupted due to COVID-19 Pandemic, a survey by Kenya Private Sector Alliance (KPSA),(2020) on the corona virus pandemic impact on Kenya's economy indicate that 61% of business were affected by measures being taken around the world to contain virus. Supply chain was disrupted and the lockdowns are already affecting transport logistics. Operational constraints led to delivery delays, congestion, higher transport rates, fuelled by reduction of public and private transport capacity hence negatively affecting services delivery solutions on manufacturer, wholesalers, and retails sector.

1.1.4 Motor cycle Industry and Business

Transport is a crucial element for development and economic growth for the wholesale

and retail sector. It plays a key role and is concerned with the movement of goods and services, from one destination to another for business purpose. As the core center of economic integration, transport infrastructure and service facilities institute a foundation for facilitating trade and ease of flow of goods and services (Balikuddembe et al., 2017). When transport systems for the wholesale and retail sector are efficient, they provide economic and social opportunities and benefits that result to positive multipliers effects such as better accessibility to markets, fast in services delivery solutions, employment and additional investments. Moving to the places of work fast and in a much convenient manner increases working hours and increased productivity leading to better economic growth (Nyabuta & Muindi, 2018).

The wholesalers and retailers usually deal with final consumer of a product. Thus, the sector is keen on having the products delivered to the consumer at the right place and in the right time. To enhance the service delivery to these consumers, wholesales and retails have embraced motorcycle industry in service delivery solutions to deal with deficiencies that arises in the transport sector. Motorcycle industry resulted to assisting the retails and wholesales because of their ability to effect movement of goods particularly in situations where there few or no other options. This is extended to the fact that motorcycles do suffer less from road congestion problems. This makes delivery times shorter, and dependable compared to the conventional transport which needs a more stable period to do a certain trajectory which is regardless weather conditions, traffic jams, peak, or off-peak times. It reaches areas where commercial vehicles may not reach due to bad road. There is no road that is too narrow and there is no area too remote for motorcycles to reach (Global Retail Development Index (GRDI),

2019)

The origin and the growth of the use of motorcycles for commercial purposes can be traced fundamentally to the collapse of the Kenya bus transport services. The transport by bus was perceived as cheap. The other reason could have been the de-regulation of the transport market. The two factors involving transport led to the growth of informal sector in transport operations such as the use of commercial motorcycles (Kumar, 2011). The popularity of motorcycles mode of transport worldwide is attributed to low initial cost of acquiring a motorcycle and good fuel efficiency (Motorcycle Safety, 2009). According to Dinye (2013), in Ghana there was high ownership and use of motorcycles. This had resulted into improved living standards of residents in urban areas.

The estimated costs as a percentage of the Gross National Product (GNP) in most African countries range from about 0.8% in Ethiopia and 1% in South Africa to 2.3 % in Zambia and 2.7% in Botswana to almost 5% in Kenya. The significant growth in the use of motorcycles as a commercial mode of transport is not only in Kenya but also in Sub Saharan Africa, Latin America, and Asia (Kumar, 2011). The motorcycles business attracted more people when the Government of Kenya reduced the import duty on motorcycles in 2012. It was a deliberate move as an economic recovery strategy in Kenya. This policy was aimed at creating more jobs to the youths and increased mobility consequently leading to economic growth (Government of Kenya, 2012). The growth of commercial motorcycles can also be attributed to rapidly growth of urban population, inadequate and deteriorating road worthy infrastructure, poor facilities for non-motorized transport and inadequate formal public transport (Javid,

Okamura, Nakumura & Wang, 2013).

For motorcycles, unlike motor cars, they can deliver goods to customer doorsteps. Also, they are faster and save time than other means of transportation. Beyond all these, it is cheaper to maintain a motorcycle than a taxi or bus. The spare parts are cheaper and readily available than those of motor cars or buses. Above all, motorcycles consume less fuel than motor vehicles (Kumar, 2011). Given all these over other means of transportation, it clearly explains why wholesalers and retailers prefer to use motorcycles rather than other means of transportation. It should also appreciate why businessmen invest in its operations for intra-city transport. The above combination of factors contributed to the emergence and widespread use of motorcycles for commercial transportation in different countries and increase in the usage of the motorcycles by business people (ABI Research, 2018).

Motorcycles have been complimenting the distribution channel as part of transport infrastructure. In the global arena, motorcycles have been the prime means of motorized transport. The business of motorcycle as a means of transport in London for example began in early 1990s to offer alternative means to the upper-class passengers who felt fed up of sitting in traffic jams on their way to and from the airport. From that time, motorcycles have continued to offer cheaper, faster, and convenient means of transport services compared to other modes of transport (Öbom, 2019).

According to Kalua (2020), commercial motorcycles have become a preferable means of transport in majority of towns and rural areas because in major cities there is increased traffic jams, and the rural areas are marred by poor infrastructures.

Commercial motorcycles have also become a critical aspect in the delivery of supplies and parcels in both homes and businesses. MAAK (2019) observed that most of companies with operations in Nairobi had invested on motorbikes to help in their operations. Commercial Motorcycles were preferred by most companies because of their ease of maneuverability and their ability to bit traffic jams in a country where traffic jam is the order of the day. The commercial motorcycles are also cost effective as their petrol consumption is low as compared to motor vehicles. This is a clear indication that commercial motorcycles can be used to steer the economy by promoting the growth of wholesale and retail sector in an effort to promote the attainment of Vision 2030.

Transport is a crucial element for economic development and to achieve the Sustainable Development Goals. Transport provides access to educational facilities, jobs, markets, schools, essential services and to affordable food options for all. Logistics is also a necessity for inclusive economic growth, poverty reduction and social progress, and a resilient transport infrastructure is a key robust supply chain and good movements. However, in 2020, the transport sector globally had been affected by the outbreak of the COVID-19 pandemic. COVID-19 was first identified in Wuhan, China, in December 2019, with the earliest known symptomatic case being revealed on 1 December 2019. It was later declared as a Public Health Emergency by the World Health Organization on 30th January 2020, and, subsequently, as a pandemic on 11 March 2020. As of 17 June 2020, 7.94 million of cases of COVID-19 had been reported in the world, with about 435,000 deaths in approximately 185 countries (Butts et al., 2020).

Motorcycles transport system although viewed as for smaller packages and mail, mainly from A to B in one city centre kept the retail alive during restrictions. It studies noted that motorcycles operators can be part of a broader logistics network, where transport from one part of the city to another part is a relatively small section. As vans are polluting urban areas and furthermore losing an enormous amount of time and money in congested towns, motorcycles are gaining importance and especially during COVID -19 Pandemic period. Local governments want to decrease the number of vans and trucks running around in city centers which could give an advantage to commercial motorcycles.

1.1.4 Performance of Wholesale and Retail Sector

Growth can be measured using various parameters such as capital adequacy, sales turnovers, profitability assets, dividends payments and a business earnings and liquidity. Growth as discussed by Mintzberg (2004) can be influenced by factors such as political change whereby regime change through either a coup or a democratic election which can influence any future business strategy. Political uncertainty can lead to a fall in investments by a business and influence decisions on expansions of various business ventures. Political doctrines can affect the ease with which business is conducted. Economic factors such as the tax systems, monetary and fiscal policies, interest rates, internal regulations and exchange rates need to be considered in business venture in order to execute growth. Social factors such as social distance due COVID-19 pandemic, religious considerations, the impact of the business on local communities, ethnic considerations and cultural factors can also influence growth in a business.

Technological compatibility and development of technologies in business development and access to bandwidth also affects growth in any business. Growth presents challenges to the business owners, the employees, and the organization. It requires change, and successful change is facilitated by developing attitudes, behaviors, and processes focusing on tasks and organizational processes that lead to a successful and mature organization. It may call for addition of finances into the processes. It is a multi-faceted phenomenon that is commonly associated with business survival, achievement of business goals and success or the scaling up of activities (Nemoto, Storey, & Huang, 2004). This therefore means that everybody in the organization should be involved in the growth process entirely to achieve over all positive results. All organizations exist in complex commercial, economic, political, cultural, and social settings that are always under constant change and hence the need to come up with strategies that will ensure that the company grows amidst all the environmental challenges (Johnson, Scholes & Whittington, 2006). Every business should grow to create value for all its stakeholders including shareholders, employees and even its customers.

There are many other reasons why wholesale and retail would want to grow. These include being able to attain economies of scale which are generated when increasing production lowers the average cost of each unit of production and reducing the transportation cost. To capture economies of scope is another good reason to grow where by the company was dealing with a range of products hence a bigger market. A company should grow to attain market leadership whereby the organizations want to be leaders in their markets. A business may decide to grow to execute a scalable business

model where they ask how high in terms of growth can the business go. Another reason would be for the business to gain influence, power, and survivability. It could also be the need to accommodate growth of key customers thereby developing loyal customers. Developing loyal customers is a simple and proven tactic used by top performers to improve business growth in today's challenging economy.

The business can also decide to grow to attract, retain and win new ones (Barringer & Ireland, 2008). Good business growth aims at increasing profitability and efficiency of organizations and their enhanced ability to create wealth for shareholders, increased employment opportunities with better terms for workers and increased benefits to stakeholders. Business must grow to promote economic development and social progress. It is the engine of growth that is internationally and increasingly responsible for private services, goods, and infrastructure. Business growth is necessary to attract investors both local and foreign and assure them that their investments are secure and efficiently managed. Without efficient companies or business enterprises, the country would not create wealth or employment. Without investment, companies stagnate and collapse. If business enterprises do not prosper, there are no taxes paid, and invariably, the country does not develop. Businesses can decide to grow to attain power and respect status to be able to influence people. To be able to achieve optimal levels of productivity is another good reason for growth (Mintzberg, 2004).

The dynamism of the business environment in the current times is posing many challenges to all organizations. Some of the forces of change that have greatly influenced business growth include COVID-19 pandemic, intense competition, globalization and increased regulation which led to intense fighting for the raw material.

To remain performance, businesses must constantly adopt new innovative strategies in response to these changes. Since they must continue to be in existence despite the presence of many competitors and challenges in the industry, this clearly means that they must be responding positively to changes in their environment (Ronald, 2010). Kang'ethe, (2000) felt that to stay relevant in this performance market, the businesses need to come with new delivery services, keep on adding value to their products by selling different products, improving packaging, developing new products, and improving on quality. Business growth should be based on diversification through value addition by using simple and cost-effective methods of delivering their products.

Kenya's growth history for retail and wholesale has been a disappointment. Currently the sector is at crossroad due COVID-19 Pandemic, characterized by inefficiencies along the supply chain from producer to consumer, and from the importer to the final buyer. With improved efficiency and rising productivity, wholesale and retail trade have great potential to benefit both producers and consumers and to improve the service delivery solutions of the local and imported goods. Provided it is streamlined, wholesale and retail trade have the potential to lower the cost to consumers and to the intermediate producers. It is against this background that the study was conducted to investigate the contribution of motorcycle strategic collaboration on performance of wholesale and retail industry in Kenya.

1.2 Statement of the Problem

In Kenya, the retail sector has been undergoing difficult time that has seen some of the big retailers closing. For instance, Nakumatt which went into receivership in early 2018

after falling behind on its payments to suppliers, Uchumi also faced similar difficulties. Failure of the two big retailers had a big impact in the retail sector (Gamberini, 2014). The trend of struggling retail sector is threat to the economy as this sector is expected to play a role in realization of Vision 2030. One of the challenges faced by retail sector and has been affecting its growth is distribution. The manufacturers, wholesalers and retails must decide on how best to distribute their products; since they rely heavily on services delivery solution and this is critical to customer retention as well as winning new ones; thus, resulting to immense progress. This calls for re-examination of the existing distribution channels, use of more pro-active platform and being innovate into reducing services delivery solution cost as well as giving thought to development plans and strategies (Starger & Bullock, 2016).

Motorcycles can be used as an alternative channel of transporting goods, since they are cheaper, affordable and can easily maneuver through traffic congestion thus making delivery of products fast, convenient and cost effective. Several studies have been conducted in Kenya on public motorcycle transport. These studies have focused more on its growth and expansion (Mbugua, 2011), as a means of transport (Howe, 2002), means of livelihood (Muindi & Nyabuta, 2018). Though studies have indicated that there are benefits of motorcycle in the distribution channel, there is no conclusive study that has been conducted to investigate the strategic positioning and contribution of motorcycle strategic collaboration on performance of wholesale and retail sector growth in Kenya. This leaves a gap that need to be filled by this study. The aim of this study was to scientifically model the contribution of motorcycle strategic collaboration on performance of wholesale and retail businesses in Kenya. The study therefore came

up with a strategic model which can be used modeling the incorporation of motorcycle in the delivery system.

1.3 Research Main Objective

The main objective of this study was to evaluate the contribution of motorcycle industry strategic collaboration on performance of wholesale and retail sector growth in Kenya

1.3.1 Specific Objective

This study was guided by the following specific objectives:

i. To assess the influence of motorcycles delivery innovation on the performance of wholesale and retail business in Kenya.

ii. To explore the influence of motorcycles logistics cost on the performance of wholesale and retail business in Kenya.

iii. To find out influence motorcycles timely delivery on the performance of wholesale and retail sector in Kenya.

iv. To evaluate the influence of motorcycles accessibility to the markets on performance of wholesale and retail business in Kenya.

v. To determine the moderating effect of road safety and compliance training of motorcycle riders on the relationship between strategic collaboration of the motorcycle industry and performance of the wholesale and retail sector in Kenya.

1.3.2 Research Hypotheses

This study was guided by the following Research hypotheses:

H_{01} There is no significant influence of motorcycles delivery innovation on the performance of wholesale and retail business in Kenya.

H_{02} There is no significant influence of motorcycles logistic cost on the performance of wholesale and retail business in Kenya.

H_{03} There is no significant influence of motorcycles timely delivery on the performance of wholesale and retail sector in Kenya.

H_{04} There is no significant influence of motorcycles accessibility to market on the performance of retail and wholesale business growth in Kenya.

H_{05} There is no significant moderating influence of road safety and compliance training of motorcycle riders on the relationship between strategic collaboration of the motorcycle industry and performance of the wholesale and retail sector in Kenya.

1.4 Significance of the study

The findings of this study are important to several users:

The study sort to examine the strategic collaboration contribution of motorcycle industry service delivery on performance of wholesale and retail sector growth in Kenya. The policy makers can obtain knowledge on strategic contribution of motorcycle industry strategic collaboration on performance of wholesale and retail sector growth in Kenya. This will help them develop policies that will enhance the

usage of motorcycle in the industry. The wholesale and retail sectors can be able to understand how the use the motorcycles as an alternative channel of transporting goods and they maximize on profits of their businesses. This is because they are cheaper in terms of fuel consumption, affordable and can easily maneuver through traffic congestion thus making delivery of products fast, convenient and cost effective.

Lastly scholars, can be able to have references on the contribution of motorcycles to the wholesale and retail sectors. This study will also provide an opportunity for further research on other issues that may contribute to the growth of the motorcycle industry in strategic collaboration on performance of wholesale and retail sector growth in Kenya. The suppliers of motorcycles would also benefit from this study in the long run. If the retails sector embraces the use of motorcycles as per the recommendation of this enquiry, demand for the motorcycles will increase.

1.5 Scope of the Study

The context scope of the study was retail and wholesale businesses in Kenya and the use motorcycle and means of delivery of goods. The target was wholesalers and retailers who used motorcycles as a means of delivery. The content scope of study considered delivery innovation, logistic cost, accessibility, and timeliness as variables of study. There are other factors that may influence the growth and performance of wholesale and retail sector, but they were not considered in this study. The geographical scope of the study was 5 counties that were identified through sampling.

1.6 Limitation of the Study

The first limitation of this study was that retail and wholesale sector was usually operated by private individuals and there are no standard operational procedures and therefore, operations differ across different players. To mitigate this limitation, preliminary studies were done to understand the operations of the wholesale and retail and data collection tool was tested and corrected for it to make it possible to correct data. However, due to this limitation, the findings may not be generalized. Private businesses are highly competitive and the owners are always cautions in divulging business secrets. This posed a limitation as businesses may be hesitant in giving responses. To overcome this, respondents were assured of confidentiality of the information they gave and that responses are for academic purposes only and also letter from the University and from Nacosti were shared with respondents.

1.7 Operational Definition of terms

To the study and in the text, the following terms were used as follows:

Motorcycles Delivery Innovation

It refers to the use of modern technology such as Google apps, mobile phone and GPS to delivery services. In this study delivery innovation will referred to the use of mobile apps by motorcycle service providers, use of mobile money by service providers, Internet connectivity with motorcycle, use of GPS by motorcycle service providers (Dennis & Pullen, 2017)

Motorcycles Timeliness Delivery

Timeliness delivery refers to fast and reliable delivery services within stipulated time and the agreed upon cost and in a personalized manner (Smith, 2019). Timeliness of delivery in this study referred to time taken by motorcycles, convenient to customers, flexibility of motorcycles (Smith, 2019).

Motorcycles Logistics Cost

Involves making a standardized delivery cost of product and services in such a manner that the services are cheaper. In this study it referred to the delivery of products and services in a personalized manner to suit customer need by commercial motorcycles but at an affordable price (ABI, 2018). It also refers to the delivery of products and services to a wide range of customers within stipulated time by use of motorcycles and this helped in reduced need for storage, reduction in warehousing costs, reduction the distribution costs, management have more time to focus on improving logistics, and improving efficiently.

Motorcycles Accessibility to the Market

Motorcycles accessibility to market refer to ease of access of motorcycles services, ease of maneuverability of motorcycles even in rough roads, ability to reach more customers (Telma, 2020).

Road Safety and Compliance Training

In this study it refers to motorcyclist undergoing official training and having a valid driving license, outsourcing of qualified motorcyclists, participating in safety and security, ethical riding, motorcyclist have compliance documents such as protective

clothes, helmet and reflective clothes and compliance of commercial motorcycles with overloading and over-speeding regulations (NTSA, 2018)

Performance of the Wholesale and retail Sector:

Is the recording of financial and non-financial improvements within organizations that deal with the management of the flow of goods between two points. In this study, it is measured in terms of quality of service, market share, profitability, and sales volume. The increase in the number of employees, branches, market share, sales, and profits of a business (Asogwa & Dim, 2016).

Boda Boda Motorcycle: These are two wheeled vehicles that are powered by petrol which are used to offer transports services for both goods and people (Howe, 2014).

Retail business: The business that sells goods to the public in relatively small quantities for use or consumption rather than for resale. Retailing is a commercial activity that allows consumers to purchase goods and services from various merchants, providing the ultimate platform for the delivery of a broad range of products or services to final consumers (Hameli, 2018).

Wholesale business: The business of selling of goods in large quantities and at low prices, typically to be sold by retailers at profit. Wholesale also means a business that sells wholesale products to individual consumers at a profit (Hameli, 2018).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides literature review related to strategic contribution of motorcycle industry and performance of wholesale and retail sector growth in different countries globally and narrowing down to Kenya. According to Mugenda and Mugenda (2003), literature review involves systematic identification of documents containing any relevant information concerning the subject of interest under study in the research problem. Literature review should be extensive in nature so that it can provide detailed information concerning the subject matter under investigation. The primary objectives of the literature review is to assist the researcher to get in- depth of the studies or investigations that have been carried out by other researchers and more to it all is to help the researcher to avoid unnecessary duplication of the studies. The literature review was discussed as per the research objectives, the literature review helped to identify gaps, inconsistencies, contradictions, and critiques identifying the knowledge gaps to be filled by this current study. This chapter also provided theoretical framework on the contribution of motorcycle industry strategic collaboration on performance of wholesale and retail sector growth in Kenya.

2.2 Theoretical Framework

A theory refers to a set of statements that explain why people behave as they do (Putman, 2013). It includes interrelated ideas which usually provide the basis for

establishing the relationship between variables. In this section the research focused on explaining theoretical relationship and explanation of the phenomena at hand. In this case, the theory that was used in this research was the social exchange theory, Greiner Organizational Growth Model's and Porter's Generic Strategies: Cost Leadership Strategy. The investigation embarked on focusing on theory to explain the strategic collaboration of the motorcycles on services delivery solution on the wholesale and retail business growth in Kenya.

2.2.1 Social Exchange Theory

The social exchange theory explains the human relationship as a beneficial relationship that develops because of internalized cost benefit analysis by everyone in the engagement. It is argued that behavior is an internal process which is self-directed, and thus, not influenced by the environment (Homans, 1962). For instance, when one person sees a potential for getting into a relationship of any kind with another person, each one of them carried out a cost benefit analysis to find out what are the benefits of getting into a relationship with one another and if the benefits outweigh the cost, then they will enter into the relationship.

Basically, according to this theory, there are those factors that interplay to influence and motivate people choice on relationships in a social setup may it be friendships, acquaintances or otherwise. In this relationship, there is an aspect of a give and a take, although not mandatory that there is balance of exchange. There are those who will benefit more and those who will benefit less in that relationship. Therefore, naturally individuals will develop a comparison level to measure the ratio of give and take. This

kind of reciprocity involve cultural reciprocity comprising of the urban society (Malinowski, 2007).

Social exchange theory explains the feelings we endure within relationships set up between persons on their perception of what they receive against what they give which Homans describes us 'An exchange of activity, tangible or intangible, and more or less rewarding or costly between at least two persons'. So therefore, the theory sees our behavior as guided by rational calculation of the benefits and costs that we get in the interaction (Homans, 1962). An important criticism of social exchange theory; however, is that it lacks sufficient theoretical precision, and thus has limited utility. Scholars who apply social exchange theory are able to explain many social phenomena in post hoc manner but are severely limited in their ability to make useful a priori predictions regarding workplace behavior. Hence the need to look into other theories that support this study.

The retailers and wholesalers would always seek to see the benefits that they are drawing by use of boda-boda against the benefits that they get by use of other means of transport. The retailers and wholesalers would always look at the efficiency and effectiveness of the transport system in place within their reach. Social exchange theory argues that in that process of exchanging, human beings by nature would always want to maximize on the benefits and minimize the cost. They always look at potential benefits against social risks associated with the task and if the benefits outweigh the risks, they proceed with it but on the other hand, if the risks outweigh the benefits, the behavior extinct (Malinowski, 2007).

George Homans observed that, it is important to understand how individuals create and maintain social structures and how social structures influence their behavior in terms of rewards and stimuli (facilitator). He therefore proposed three elements of social behavior namely interactions ; which means 'being an event in which an action of one man is the stimulus of an action of another' (Homans, 1962) ,sentiment which means; behavior expressive of a person's attitude toward other persons and includes the liking and disliking of individuals, approval and disapproval of the things they do (Homans, 1947) and activity which is ; any action that people perform that may not require interactions with others or express interpersonal sentiments . A man in an exchange relation with another will expect that the rewards of each man be proportional to his costs—the greater the rewards, the greater the costs—and that then a rewards, or profits, of each man be proportional to his investments—the greater the investments, the greater the profit (Homans 1961).

According to (Homans, 1974) the retailers and wholesalers will be tempted and willing to undertake a particular action if they foresee a reward in that particular action. Therefore, the more likeliness of the reward the more likelihood of the performance of that specific action related to that reward. Bodaboda business has been viewed by the retailers and wholesalers to be a very good venture compared to other modes of transport This means that if the past happening of a successful action is related to a certain stimulus, then in the subsequent happening/occurrence of such stimulus will attract the similar action (Homans, 1974).The amount of transport cost that the retailers and wholesalers save on the daily basis form part of the stimulating factor that influence them to use motorcycles compared to other modes of transport. Previous

studies have shown that many retailers and wholesalers have benefitted from this motorcycle business (Muindi & Nyabuta, 2018; Nderitu & Githinji, 2015).

In choosing between alternative actions, a business will choose that one for which has perceived by the business owners at the time, will yield greater value based on the probability of achieving it (Homans, 1974). The retailers and wholesalers will always weigh the probability of the benefits of using one over the other. Thus, this theory supports this study as it indicates the theoretical reasoning of the strategic collaboration between wholesalers and retailers and the motorcycle sector. This theory anchored the study since it addressed the four variables of the study namely motorcycle delivery innovation, motorcycles logistic costs, motorcycles timeliness and motorcycle accessibility to the markets. This theory showed the benefits that outweighed the challenges of using motorcycles as a mode of distribution as a strategy to enhance business performance.

2.2.2 Greiner's Growth Model

Organizations go through some phases as being born, growing, maturity and death like every living organism. However, organization can be immortal contrary to live organisms in the theory. For immortalizing their lives, organizations have to manage organizational growth process successfully in the hyper competition periods. There are organizational growth models and applications, which were developed in the scope of organization life cycle, (Miller & Prisen, 2009; Churchill & Lewis, 2009) for not terminating and also maintaining organizational growth. Among these models, Larry E. Greiner's Organizational Growth Model (Greiner, 1972) is accepted as a classic in

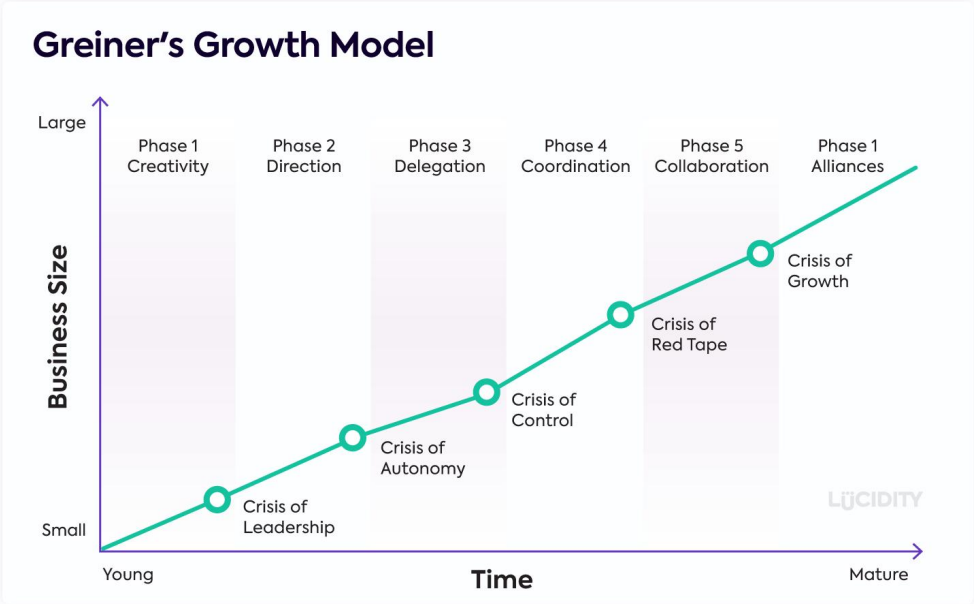
organization literature by organization theorists. Accordingly, Greiner Organizational Growth Model's theoretical ground consists of terminating evolutionary problems in organizational growth's different phases by using revolutionary solution approaches.

Organization theorists developed models trying to explain organizational growth phases. L. Greiner's article named "Evolution and Revolution as Organizations Growth" is the most valuable one and is accepted as a classic (Bedeian and Zammuto, 1999). In addition to this, also Kaplan and Johnston modeled organizational growth from the evolutionary and revolutionary dimensions (Kaplan and Jonston, 1998). Greiner propose that dissolution of every revolution time interval determines whether organization will arrive to next evolution phase or not. At the same time, finalization of growth phases causes the rise of management crises belonging to every phase (Tang, 2009). Greiner analyzed organizations' growth situations in six main dimensions.

Larry E. Greiner originally proposed this model in 1972 with five phases of growth. In the year 1998, the scholar added a sixth phase and gave an updated version. Greiner's Growth Model is associated with the growth stages of an entity and it describes phases that organizations go through as they grow. Different kinds of organizations whether small or big experience the stages. Each stage of growth is made up of a period of relatively stable growth, but later, it is faced with crises. The model indicates that, this is the point when the organization must plan how to navigate this stage for it to continue growing.

Greiner argued that, when an organizations come to an end of one phase, it faces a crisis which triggers the next phase. How an organization navigates from one phase to

the other can be a turning point for many organizations if they are able to put good strategies in place (Greiner, 1998). This so especially if the crises is affecting businesses in the industry and themselves are not able to navigate through. The different phases by Greiner (1998) as per the figure below;



Evolution and Revolution as Organizations Grow" by Larry E. Greiner, May 1998.

In phase one, it is phase of Growth through creativity where the entrepreneurs who started the organization are busy creating products and opening up markets. At this point, the number of staff are few and the kind on communication is informal. This phases ends with leadership crisis, where professional management becomes necessary. The founders may change their style and take on this role, but often someone new was brought in. Second phase is growth through direction where growth continues in an environment of more formal communications, budgets and focus on separate activities like marketing and production. At this stage, incentive schemes replace stock as a

financial reward. This phase ends with an autonomy crisis where new structures based on delegation becomes necessary (Huang & Chan, 2018).

The phase three is growth through delegation where mid-level managers are freed up to react fast to opportunities for new products or in new markets, the organization continues to grow, with top management just monitoring and dealing with the big. Many businesses flounder at this stage, as the manager whose directive approach solved the problems at the end of phase 1 finds it hard to let go, yet the mid-level managers' struggle with their new roles as leaders. The third phase ends with a control crisis as more sophisticated functions are required and separate parts of the business need to work together. Phase four sets in with growth through coordination and monitoring. The various business units running as isolated units are then re-organized into product groups or service practices. In the aspect of finance, investment finance is allocated centrally and managed according to Return on Investment (ROI), not focusing on profits alone. Because of the growth, the work becomes submerged under increasing amounts of bureaucracy, and growth may become stifled. At the end and because of bureaucracy, this phase ends with red-tape crisis and new culture and structure must be introduced (Drake, Aaron & Joseph, 2021; Greiner, 1998).

In phase five, the organization has grown in size and other phases are replaced by professional good sense as staff group and re-group flexibly in teams to deliver projects in a matrix structure supported by sophisticated information systems and team-based financial rewards. The phase thus focuses more on collaboration. This phase ends with a crisis of internal growth. Further growth can only come by developing partnerships with complementary organizations. The final stage is growth through extra-

organizational solutions. Greiner's recently added sixth phase suggests that growth may continue through merger, outsourcing, networks and other solutions involving other companies. Growth rates vary between and even within phases. The duration of each phase depends almost totally on the rate of growth of the market in which the organization operates. The longer a phase lasts, though, the harder it will be to implement a transition.

This model has however faced critique on a number of areas. One, it has been observed that the model is simplistic and may not apply in a very dynamic environment. Secondly, not every other business that will suffer crises as it grows as many organizations adapt easily without suffering any obvious panics or crises. Third, the model doesn't really take account of the pace of growth, particularly in an increasingly dynamic external environment (Drake et al., 2021).

The Greiner Growth Model helps organizations think about the growth for the organization, and therefore better plan for and cope with the next growth transitions. Studies have shown that most of the organization on the supply chain have grown up to phase five. At phase five, they are not able to navigate phase six which requires merger, outsourcing, networks and other solutions involving other companies. When organizations are not able to navigate stage six, they end up failing and this is the case why many supply chain businesses have been collapsing. This model is helpful to this study as it is looking at how wholesalers and retailers are networking with motorcycles to ensure growth. The networking helps the organization navigate the changing customers' needs by use of motorcycles through delivery innovations, ensuring timely delivery, accessibility to the markets and mitigating logistic cost and this has influence

on the performance of retail and wholesale. This theory addressed the dependent variable on the performance of wholesale and retail sector and how they grow due to different strategies applied by the business owners to improve their performance.

2.2.3 Porter's Generic Strategies: Cost Leadership Strategy

This study was anchored on Porter's five forces model (Porter, 1980). The model was proposed by Porter (1980) as a useful theory for evaluating a firm's industry structure in strategic processes. The basic premise of the framework is that organizational strategy should be informed by an assessment of the threats and opportunities facing the organization. The five performance forces that define each industry and market include; the threat of new entrants, threat of substitutes, bargaining power of suppliers, bargaining power of customers, and performance rivalry among existing players. A viable organizational strategy aims at modifying these forces in a manner that enhances the performance situation of the firm (Chesbrough & Appleyard, 2007). The models explain why and how different business industries can maintain profitability. The five forces model has been used in the industry by business leaders and scholars in evaluating the attractiveness, competition intensity, and profitability of a market or an industry.

To maintain profitability, Porter (1985) developed four generic models that businesses can adopt to gain a competitive advantage and maintain profitability. The strategies were cost leadership, differentiation, cost focus, and differentiation focus. Of the four strategies, the Cost Leadership Strategy is where this study is anchored. The Cost Leadership Strategy is the deliberate efforts by a business in reducing the cost of

delivering products or services to customers, making sure the business is profitable and therefore adding shareholder value or diversifying to other parts of the business. Thus for a company to improve performance, it needs to pursue the four or either of the models as depicted in figure 2-1,

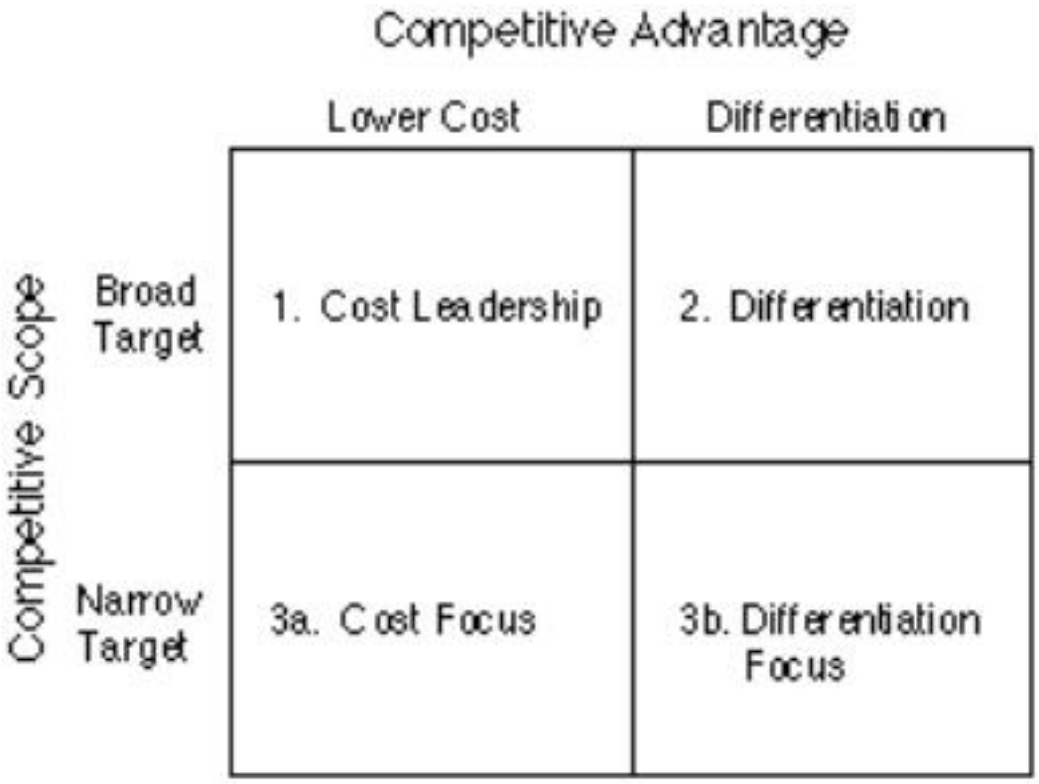


Figure 2.1: Porters Generic Model

Of the four strategies, the Cost Leadership Strategy is where this study is anchored. The Cost Leadership Strategy is the deliberate efforts by a business in reducing the cost of delivering products or services to customers, making sure the business is profitable and therefore adding shareholder value or diversifying to other parts of the business.

The cost leadership strategy calls for the selling of standard products at a minimal price (Porter, 1985) combined with aggressive pricing of goods (Porter, 1980). Further, a

business should enlarge its scope and strive to serve multiple industry segments at low cost due to economies of scale (Porter, 1985). Porter (1980) describes the core philosophy of this strategy as a vigorous pursuit of cost from experience, aggressive construction of efficient-scale facilities, managing customer accounts, tight cost and overhead control, and cost minimization in areas like sales force, research, and development, advertising, and service. Business leaders should have great attention to cost control in order to achieve business goals. Achieving low cost while maintaining high quality, good service, and paying attention to other areas should be the focus of the entire strategy. Therefore, the cost leadership strategy involves providing high-quality products and services while underpricing everybody else (Porter, 1985).

There are a number of factors to consider when a business is focusing on Cost Leadership. First, the business has to evaluate the impact of driving the costs down to the customers and employees. The business has also to focus on its total cost as compared to the costs of the competitors. The investment of the extra profits and maintaining the lowest cost are of key importance. When an organization is focusing on Cost Leadership Strategy, it should then review current supplier's costs, technology and innovations that can reduce processes, process speed and efficiency and management skills of the team. By use of motorcycles delivery innovation, having timely delivery and accessibility to customers has ensured that the retails and whole sale are able to reach more customers and at a lower cost. Again, the use of motorcycles minimizes logistics cost for the business and all this has influence on performance of wholesale and retail.

One of the reasons wholesalers and retailers are embracing motorcycles in their

delivery is to minimize the cost of delivery to gain cost leadership. Thus, the theory relates to this study because the wholesalers and retailers have to scan the environment and embrace a viable organizational strategy that aims at modifying these forces in a manner that enhances the performance situation of the firm. This theory addressed the moderating variable on road safety and compliance training of the motorcycle riders and the variable on motorcycle logistics costs.

2.3 Empirical Literature Review

This section reviews studies that have been done by other researchers in the area under study.

2.3.1 Motorcycle Business and Performance of Wholesale and Retail Sector

The wholesale and retail sector is key in providing employment opportunity and contribution to GDP. Unfortunately, the sector is at crossroad due to rising cost of doing business and disruption by COVID-19 Pandemic. Motorcycles have been complimenting the distribution channel as part of transport infrastructure. Motorcyclists constitute an important group of road users globally. In many Low Income and Middle Income Countries (LMIC), motorcycles are an increasingly common means of transport (Olvera, Plat & Maidadi. 2012).

Motorcycles Public Transport (MPT) is less common in the developed countries due highly organized public transport systems owned and run by the states and a high level of private car ownership in. In the DCs however, public transport is private and private car ownership is still very low. Besides, state-run public transport, where available in

the DCs, have not had the necessary capacity to meet the increasing travel demand as towns increase in number and expand in size (Spooner et al., 2020).

A study conducted by Kumar (2011) established that the popularity of motorcycles as a mode of transport in developing countries. This is because of its easy of maneuverability, ability to travel on poor roads and demand responsiveness. The study also established that despite these, commercial motorcycles led to increased road accidents, traffic management problems and increase in local air pollution. For examples in USA motorcycle fatalities represented approximately five percent of all fatalities (Naddumba, 2009)

According to Kumar (2011) traffic congestion occurs when the volume of vehicular traffic is greater than the available road capacity, a point commonly referred to as saturation Olvera et al., 2012). described a number of specific circumstances which cause or aggravate congestion most of are concerned with reduction in the capacity of road at a given point or over a certain length or increase in the number of vehicles required for the movement of people and goods. Urban transportation system in most developing countries is faced with increasing pressure due to increase in motor vehicle ownership and use, growing at a faster rate than population, with vehicle ownership annual growth rates of between 15% and 20% (World Bank, 2011).

Literature reviewed indicated that the growth of commercial motorcycles has been caused by decline in the organized public transport systems (Kumar, 2011). The decline led to a growth of unregulated informal and non-conventional public transport systems. The growth of commercial motorcycles business in Kenya has been caused by

high population of unemployed youths. Lack of employment has made more youths to consider commercial motorcycle business as alternative source of employment (Kumar, 2011).

2.3.2 Motorcycles Logistic Cost and Wholesale and Retail Growth in Kenya

As the business environment is uncertain nowadays, and it is very hard to be constant at success, so the business must respond to the uncertainty and meet the customer needs as they are changing day by day (Abbasi, 2013). The customer's awareness is increasing day by day and due to this they always need special treatment in design, product production and delivery. Flexibility is one of the major factors to consider, so flexible logistic services are more important than an equipment or the process perspective (Aro- Gordon, 2016). Logistics is such an important factor in any firm, which plays a key role in the differentiation in the market (Aro-Gordon, 2016). As the present business environment is more intense competition wise, the pressure is not only on the differentiation in the product and service but also on the factors which reduces the price as well.

According to Gil-Saura et al., (2010), when it comes to success and growth of a retail store or any business relating to the retail sector, then the role of logistics is very important. The performance of logistics is not only taken as the activity relating to operation but in fact it is taken as a strategic variable, and it plays a key role in the satisfaction of the consumer. Customer always expects something and when they are not met then, the consumer are dissatisfied. Dissatisfaction among customers cause them to switch to another retail competitor, and the former experience of dissatisfaction

is abandoned by the consumer (Bouzaabia *et al.*, 2013). As Jennet (2011) stated that customers are one of the stakeholders of the organization and they are one of the most important, as looking at their importance it is one of the main goals of the organization to satisfy the customer and their satisfaction is among the top of the list items for the management and this area which is customer satisfaction is in light by the organizations very much due to its importance. Previous research suggested that the quality of services is a reason for customer satisfaction. Customers always expect something from the organization and if those expectations are met then they are satisfied and it is proved that the behavior of customer is the foundation of the level of satisfaction for them (Walidin & Waskita, 2007).

Umair et al., (2019) investigated the impact of Logistics Management on Customer Satisfaction: A Case of Retail Stores of Islamabad and Rawalpindi. The main purpose of this study was to analyze the impact of logistics on the customer satisfaction of the retail stores, in the twin cities of the Islamabad and Rawalpindi. The factors of logistics in the study were inventory, lead time, transportation, and logistics costs. A survey questionnaire divided into two parts was adopted, one part for the factors of logistics and the other one for customer satisfaction for the measurement of variables in the research. Where the introductory portion deals with the demographic items and then the first part contain items tend to identify the score for each factor of logistics and then second part is for the customer satisfaction. In the study through convenient sample technique 200 stores of the twin cities of Islamabad and Rawalpindi were chosen for research. The findings of the research demonstrated that factors of logistics which are inventory, lead time, transportation and logistics does affect customer satisfaction.

Moreover, logistics has shown positive relationship with customer satisfaction of the retail stores. In conclusion, results have shown significant interaction of customer satisfaction with inventory, lead time, transportation and logistics leading to better financial performance. The study covered only the geography of Islamabad and Rawalpindi. Practices like multiple effective transportation system, which reduced the lead time and maintaining the inventory in the stores and made sure the availability of the products required by the customer was important for the customer satisfaction. Till date, few studies are done in this context, so this study will help in the academics and the customer satisfaction in the retail.

Zipper (2021) conducted a report on the need of Electric Delivery Bikes. This was attributed to the fact that shipping companies in European cities were replacing delivery vans with cargo bikes and trikes as there was need to adopt environmental friendly means of transport to and minimize operational costs. Electric motorcycles adoption has contributed to emissions reduction. Heavy-duty bikes and trikes equipped with batteries for extra pedal power were replacing many of the delivery vehicles that haul packages around cities. A recent study of London found that cargo bikes reduced emissions from package delivery by one-third compared with electric vans, and by 90% compared with diesel ones and they are cheaper to operate. Cargo bikes offer other substantial benefits, too. Unlike delivery vans, they seldom obstruct traffic lanes, cycle paths or crosswalks when idle. And they don't worsen street congestion by circling the block in search of a place to unload, which can consume up to 28% of van drivers' time, according to one Seattle study. With cities struggling to cope with a traffic-snarling surge in online purchases, cargo bikes offer a

way to address increasingly overloaded curbs and streets. Logistics companies had shift their last mile delivery strategies to cargo bikes due to their ability to deliver an average of seven packages per hour, compared with four for a van. This benefits are making retail and wholesale adopt motorcycle as a means of transport.

Due to benefits associated with bikes, Zipper (2021) highlighted that globally, the cargo bike market was expanding quickly, with one market research group projecting $900 million in worldwide sales in the year of 2021, 43% of which would come from cargo bikes sold to businesses. Europe has been a particular hotbed. Even long-lasting logistic companies such as DHL/Deutsche Post had embraced electric motorcycles as a delivery solution to congested and busy town with limited parking space in major towns for last mile delivery. Amazon an e-commerce company had also introduced electric motorcycles in New York City with over 100,000 electric motorcycles. Due to dense population in New York with a population of almost 14000 people per square mile, electric motorcycles provided a unique delivery solution to consumers.

E-commerce has the potential to offer wholesale and retail almost instant access to the global market. Small businesses can trade with a higher number of customers and partners than might otherwise walk past their door. In turn, several important enablers play a role in moving the e-commerce environment forward. Among these, logistics and delivery services are critical for ensuring goods ordered online physically reach the consumer and are returned when something is not right. Global logistics systems, both in terms of the industry evolution in response to e-commerce as well as specific challenges that need to be overcome to ensure that the benefits of global e-commerce are widely spread. The substantive focus is on issues relating to the physical delivery of

goods bought online and leaves aside any discussion of the digital delivery of e-commerce services.

The new retail environment has led to shifts in the associated logistics and transport sector. Companies agile enough to embrace changing distribution channels with a host of new services have prospered. Not least among these have been stakeholders responsible for last-mile business-to-consumer (B2C) and consumer-to-consumer (C2C) deliveries. New logistics service providers large and small have been born. The postal sector has also changed dramatically in the past two decades, with some previously nationalized postal operators transformed into commercial independent actors, and some postal operations riding the e-commerce wave offering services akin to couriers including motorcycles for door-to-door delivery of products (Bowersox & Cooper, 2010).

Majority of international express players, such as UPS, FedEx or DHL, have embraced home delivery due to the higher costs involved in the number of undelivered parcels caused by absent end-recipients. Failure of parcel collection by recipient is anticipated to increase the storage cost which is often not covered in the initial payment for the parcel which steal to the profit of the express player. To curb this, majority are in agreement with the recipient with home delivery and same day delivery which can only be achieved through innovative strategies such as use of commercial motorcycles especially in developing countries. E-commerce also required logistics companies to work with smaller businesses less used to shipping locally, much less globally. Yet today it is hard to convey the extent of the change in management sentiment as well as operational and technological focus, with B2C now an important part of the major

players' thinking and revenues. Several smaller new logistics players have also emerged, aiming to capture a share of the growing small-package trade in specifically targeting the needs of small businesses on fulfilment, warehousing, and logistics services. Examples include Direct and ILG who use electric motorcycles and bicycles to deliver good to customers.

Looking to the future, delivery times are getting ever shorter, with the number of same-day and one- or two-hour delivery services rising (WTO, 2020). This cannot be achieved in cities such as Nairobi due to increased cases of congestions. This has placed motorcycles in the limelight as alternative solution. The result is a knock-on effect on customer expectations. End-recipients are demanding greater flexibility as well as more delivery options, fitting around their lifestyles, rather than around the operational processes of parcel delivery companies. Technology is being harnessed to bridge the gap leading to more responsive customer service and convenience for both shippers and end-recipients. Technology solutions are, however, more frequently applied by large firms due to the high costs involved. Alternative strategic collaborations are being developed. Lockers, in-car and pick-up/drop-off networks are growing in popularity as retailers face rising cost pressures to ensure e-commerce orders are delivered first time. Many logistics providers have tailored value-added solutions for transport, fulfilment and returns.

A recent exception is the work of Campbell and Salvelsberg (2013), which examined consumer direct service problems faced by individual retailers providing home delivery. That work points to the necessity of integrating order capture (acceptance) and delivery. The speed at which the orders are delivered are of key importance to the customers and

therefore engaging home deliveries such as motorcycles which are not likely to be held up in jams is of great importance to the growth of the businesses. Businesses that are able to deliver good on time enjoy greater sales which translate to greater performance. Also worth to note is the need by the clients of personalized services such as in some cases they need food delivered to their door step which if it take a long time in jams can get stale and therefore require quick delivery services. This place motorcycles as compared to cars especially in town such as Nairobi where congestion is the order of the day.

Cairns et al., (2014) examined the key issues in grocery home delivery through a series of interviews with representatives from 35 organizations and proposed some schemes for foods home delivery that may be successfully implemented which include engagement of motorcycles and bicycles for short distances and congested town. This was attributed to the fact that grocery especially vegetables are high perishable thus need to be delivered as soon as possible to ensure that they are still fresh. This places motorcycles at a better place to deliver the good especially those in small quantities.

In more general studies, Nagarajan et al. (2012) and Golob and Regan (2009) have also contributed a comprehensive understanding of the potential impacts of information technology on freight transportation, addressing structural changes in the freight and logistics industry generated by e-commerce. A conceptual framework to evaluate the impacts of IT and ecommerce on urban logistics system has been proposed by Nemoto et al., (2019). That study identified the major stakeholders and examined their concerns related to urban logistics systems. It is important to encourage the development of a freight transportation system that would support the steady growth of e-commerce,

while avoiding the possible negative effects on society from these changes in freight transportation. Recognizing key issues related to home delivery has implications for developing innovative strategies that may lead to more efficient and reliable home delivery systems, which is the major purpose of this study. Freight transportation in both developed and developing countries should be engaged to support wholesale and retail business without discriminations.

A distinctive aspect of the digital economy is its ability to expedite information exchange and improve information accessibility for products, markets, and customers. While consumers frequently use the Internet to gather information about products, many are still purchasing off-line, depending on the perceived reliability of product quality and suitability. Physical shopping continues to be more attractive to many people. Online shopping eliminates the experiential aspect and recreational of shopping, but it increases the possible choice set. There is an emerging tendency for people to view goods at a shop and then buy them online at lower prices. There are several important reasons that explain why consumers choose to purchase goods online, including at-home convenience, 24hour/7day availability, low prices, and available product information. As s a result, e-commerce is growing at an annual growth rate of over 25% and the most recent estimates predict that more than 10% of all U.S. retail sales are expected to take place online by 2008 (2014). As the business at growing online, so is the need of transportation system especially for physical products The growth of e-commerce has impacted many aspects of business practices such as globalization of trade, small batch, customized production and just-in-time distribution, causing a number of changes in the volume and patterns of goods movements.

Although the extent to which e-commerce will affect transportation, may depend on the types of markets and products, smaller, more frequent shipments become the consequences of e-commerce as manufacturers and distributors communicate directly with consumers. E-Commerce customers are increasingly demanding faster transportation and with increased service quality. These changes driven by e-commerce bring business opportunities to the logistics service providers, particularly couriers handling parcel delivery, delivering goods to each customer's home quickly and reliably in small batches.

A recent survey by Huber *et al*., (2015) provides evidence of this tendency, showing that as measured by revenue and indexed by the year 1990 as 100, the parcel industry has been the fastest growing major segment of the freight transportation industry in the U.S. for the past several decades. Home delivery refers to deliveries of goods to the customers' homes (or another location of the customers' choice such as workplaces) rather than customers having to collect the goods in-person from a physical point of sale. In home delivery operations, therefore, the physical distribution of the goods from the point of purchase to the customer needs to be organized and carried out by specialized delivery companies rather than by the customer. Many other situations lead to home delivery including the delivery of traditional mail (or telephone) order products and the delivery of large and/or heavy items such as furniture. Accordingly, all e-commerce products involve home delivery, but all home deliveries are not generated by e-commerce. The success of home delivery are a success where there are cheaper means of delivery as compared to vehicles. The use of motorcycles as in the current study filled in the gap (Armstrong, 2016).

In a traditional store-based commerce, goods were distributed in sequence from the manufacturer to the wholesaler, to the retailer, and finally to the customer, although the distribution of goods varies, depending on the type of business. A relatively large share of the distribution of goods has occurred through distribution centers, owned by producers, wholesalers or logistics service providers. From a distribution point of view, retail shops function as the end points of the distribution chain that a delivery carrier involves. The customers mostly have to take care of the 'last-mile' transportation of goods, i.e., delivery from the physical point of purchase to home, though in some cases such as large and/or heavy items, the end of distribution chain may be extended to the consumer's households. However, this is not the case with e-commerce. As companies and consumers can easily contact more potential purchasers and suppliers, e-commerce has changed the shape of traditional supply chain. Products purchased online must be transported from a plant or distribution center directly to customer's home timely and reliably regardless of shipment size. This implies that e-commerce generates a different need for the transportation of goods from traditional delivery practices. This needs are fulfilled by motorcycles delivery services.

The distribution of goods to retail shops mostly involves the frequent delivery of packaged units, consisting of one or more boxes, pallets, or containers, filled with a number of homogeneous goods. In contrast, ecommerce delivery has usually only one (relatively small) item for each address. Even though there may be some level of bundling, it consists of the bundling of very different goods for one region, but the goods are not packaged together. Therefore, delivery of e-commerce goods requires a different service from that of traditional freight transportation. Therefore, while the

traditional freight transportation was reliant on cars, trucks and vans, e-commerce delivery may require small and more reliable cost-effective means of delivery such as the use of motorcycles to deliver products to the final consumer (Belvedere, Martinelli & Tunisini, 2021). According to Kumar (2011), modern trade is growing fast in Kenya. Wanjohi highlighted that through supermarket wholesale have billions of shilling sales annually, they cannot beat over ten thousand kiosks and small shops that operate in the country. This is attributed to the fact that the rural area and low-income earners still shop at small informal outlets. But despite the significant impact that the retail shops have on the economy, majority of the manufacturers still face immense difficulties in distributing goods to the far-flung traders. With mass market distribution being messy and risky. This prompt the Kaskazi to establish last mile distribution of products on behalf of fast-moving consumer goods companies. Kaskazi was established with 500 motorcycles which were hoped to supply good to the informal shops and kiosks. The company introduced motorcycles due to their ability to carry bulky goods as compared to foot soldiers. Kaskazi employed motorcycle for the logistic services because of their ease of maneuverability in remote areas that don't have well established road networks and the cost of delivery.

Mbugua (2011) investigated the effects of commercial motorcycles transport revolution on the economic growth in Kenya, a case study of Thika County. The study established that 97.7% of the respondents indicated that commercial motorcycles have improved the quality of their life. The findings indicated that 60% of the respondent had undergone thorough informal training. The study also indicated that, part of the services they offer is transport to people and delivery of goods. The study

recommended that the government should ensure that all commercial motorcyclists have undergo trough formal training in the driving schools before being issued with valid driving licenses. The study also recommended that there should be private-public partnership in the management of commercial motorcycles. The reviewed study was conducted in Thika County and focused on the influence of urban transport policy on the growth of motorcycles in Kenya.

Porter (2014) conducted a study on transport services and their impact on poverty and growth in rural Sub-Saharan Africa. This paper reviewed recent transport services research in rural sub-Saharan Africa, with reference to the crucial significance of transport services for reducing poverty and encouraging growth. It focused on issues key to improved well-being: generation of direct employment, broader economic effects on agricultural and off-farm activities, and social effects regarding health and education. Throughout, the emphasis is on implications for vulnerable groups. Attention is drawn to the potential of recent developments, notably connectivity's associated with motorcycle taxis and the rapid expansion of mobile phones. Significant knowledge gaps in the transport services arena were identified, from impacts of climate change, conflict and pedestrian patronage to the economic valuation of transport, village transport operations and road safety. Suggestions were made regarding the type of studies and methods which could help to reduce some of these gaps in the transport industry. The study noted immense contribution to the economy especially on the support of movement of goods.

2.3.3 Motorcycles Delivery Innovation and the Wholesale and Retail Business Growth in Kenya

In United States of America, consumer confidence of retail businesses has finally returned to pre-recession levels. Americans have seen their per capita, constant-dollar disposable income rise more than 20 percent between the beginning of 2014 and early 2019. However, despite the buoyant economic environment, many brick-and-mortar retail stores were struggling. In part, that's due to the rise of e-commerce, which since 2016 has accounted for more than 40 percent of US retail sales growth. In the most recent consumer survey, 82 percent of US shoppers reported spending money online in the previous three months, and the same percentage used their smartphones to make purchasing decisions. Not surprisingly, younger shoppers favor e-shopping even more: 42 percent of millennial say they prefer the online retail experience and avoid stores altogether when they can. Meanwhile, the strong economy and record-low unemployment are increasing wage pressure and store operating costs. In the last three years, more than 45 US retail chains have gone bankrupt. Retail stores have a real future yet rumors of the physical store's death are exaggerated. Even by 2023, e-commerce is forecast to account for only 21 percent of total retail sales and just 5 percent of grocery sales. In addition, with Amazon and other major internet players developing their own brick-and-mortar networks, it is becoming increasingly clear that the future of retail belongs to companies that can offer a true omni-channel experience (Verhoef, 2021).

Retailers are already wrestling with omni-channel's demands on their supply chains and back-office operations. Now they need to think about how they use emerging

technologies and rich, granular data on customers to transform the in-store experience. The rewards for those that get this right was significant: 83 percent of customers say they want their shopping experience to be personalized in some way, and our research suggests that effective personalization can increase store revenues by 20 to 30 percent (Cao & Li, 2015).

According to De Keyser, Schepers, and Konuş (2015), several new technologies have reached a tipping point and are set to spill over onto the retail floor. Machine learning and big-data analytics techniques are ready to crunch the vast quantities of customer data that retailers already accumulate. Robots and automation systems are moving out of factories and into warehouses and distribution centers. The Internet of Things allows products to be tracked across continents or on shelves with millimeter precision. Now is a great time for retailers to embrace that challenge of bringing technology and data together in the off-line world.

Over the past few years, several traditional transportation companies have introduced products specifically designed to benefit from the growth in the B2C e- commerce delivery business. For example, Federal Express (FedEx) and Airborne Express have recently added B2C-focused delivery services. Launched by FedEx's Ground in March 2000, FedEx Home Delivery product is designed to meet the needs of catalogers and online retailers and offers shippers and customer's standard evening and Saturday delivery as well as several premium service options such as day-specific appointments of delivery. For the fiscal year of 2002, FedEx Ground (15) reported a 21 percent increase in average daily package volume, one third of which was attributed to its home delivery. Airborne express has partnered with the U.S. Postal Service to create a

new kind of service for the home delivery of e-commerce goods. Delivery innovations are designed for business-to-residence shippers who desire a secure, cost-effective shipping solution, in which shipments are picked up by Airborne and delivered to the USPS post office closest to the recipient's home.

Companies selling goods online for home delivery currently offer several different delivery options, each of which different delivery charges have. However, few of these retailers and delivery companies offer their customers the option of timed delivery (either by day or time slot). A recent trend shows that e-commerce products involving quicker delivery, such as grocery delivery, continue to grow slowly but steadily, leading to the emergence of delivery companies specializing in same-day local pickup and delivery (Cicea, Marinescu, & Banacu, 2022).

Melacini et al., (2018) observed that same-day service delivery, times are further broken down within the time horizon of a single day. In general, there is a trade-off between the time of delivery and the price, and the unit cost per mile increases as time-in-transit decreases. Accordingly, increase in local express delivery demands may bring about increased productivity and profitability for transportation service providers. Transformation of traditional retailer in the era of New Retail as the retail sector continue to evolve, consumer‘s choice of shopping channel has become just as important as their choice of products. Nowadays, consumers tend to select shopping channel that provides optimized customer experience. Because of the changing habit, traditional retailers must figure out new solutions to transform their sales channel into the new era of retail and promote Omni channel. These actions play a vital role on occupying consumer-shopping channels and increasing sales conversion rate. But

traditional retailers are still facing lots of challenges. Efficiency improvement of supply chain management has been identified by most of the traditional retailers as their top priority for new retail transformation. In the new era of retail, supply chain should set “customer connectivity" and "operation & services improvement “as the new centers, and deepen integration between Inventory and Consumer.

E-commerce has transformed the retail sector over the past two decades. Well known players have faced restructuring, or even bankruptcy, amid fierce competition from emergent online platforms. The online platforms have developed innovative business models based on the spread of the internet and other technologies stores open 24/7 via a laptop or mobile device, the ability to compare products and prices, and delivery to the consumer’s door or even their fridge. The growth of online platforms has opened avenues for motorcycles growth in the delivery levels. As the customers are ordering their products online, they need that as soon as possible to their doorsteps which makes commercial motorcycles visible (Bernon, Cullen & Gorst, 2016).

Cross-border e-commerce is growing in popularity thanks to the borderless potential of the digital economy. Consultancy firm Forrester forecasts annual global e-commerce growth of 17% between 2017 and 2022, compared with 12% for overall e-commerce (cross-border and domestic, B2B and B2C). A report by DHL suggests that cross-border e-commerce already accounts for 15% of total e-commerce sales and was expand to 22% by 2020. One signal, however imprecise, of cross-border B2C e-commerce expansion can be seen in the uptick of international parcel shipments. According to the Universal Postal Union (UPU), these increased by 73% between 2011 and 2015 (Divall et al., 2021). The scope of what is sold globally online is also

changing. Fashion and electronics have long been cross-border top sellers, but consumers are now branching out further to produce categories including beauty and cosmetics, pet care, food and beverage items, pharmaceuticals, home decor and sporting goods. An increase in e-commerce on perishable goods or medicine refills undoubtedly requires rapid and efficient delivery logistics. Despite significant opportunities, however, the support systems for e-commerce may not always be up to scratch. Small businesses which are less able to shoulder frictional costs, point to trade challenges related to customs clearance and advanced knowledge of duties or taxes. Often, e-commerce operations rely on establishing separate warehouses or central locations in different countries, as a way of minimizing border hassle, shipping costs and other challenges related to global logistics. Although a workaround for some, the associated costs and inconvenience underscore the importance of examining logistics and delivery as a vital enabler of more inclusive global e-commerce (Dennis & Pullen. 2017). The logistics environment and its interaction with e-commerce is complex, with different types of providers and services, competing and cooperating

Performing the last-mile delivery has become increasingly critical as more e-commerce end-recipients look for quick, low-cost, convenient and high-quality delivery, requiring providers to reshape the way goods are moved through the final stage of their journey. Operational differences from traditional trade, particularly in B2C contexts, include more stops per route; greater spread of delivery locations; and a higher number of unsuccessful deliveries. A failure to successfully deliver goods the first time round means the last-mile provider usually incurs the expense of any subsequent delivery attempt. Higher last-mile delivery costs inherent in some residential destinations have

created new players, including domestic regional carriers, local couriers, and crowd-sourced independent contractors. Some e-commerce platforms are now using technology advances to deploy in-house last-mile strategic collaborations (Gielens, Gijsbrechts, & Gyeskens, 2021).

In majority of developing countries, there has been an increase in the use of motorcycles for transportation of goods. This has contributed to development of ride-hailing apps. The riding apps are mostly used in cities and urban areas, with little penetration into peri- urban and rural areas. The predominantly urban focus is due to a combination of factors: the existence of a critical mass of customers who can afford to use the services; existence of riders who can afford or are willing to purchase smartphones; and the availability of adequate signal coverage for the apps themselves. There is enormous potential for these services to be expanded into rural areas, but successful expansion depends on the commercial interests of the companies concerned; rural people's ability to afford smartphones; and the level of investment in the infrastructure that is required for efficient operation of smartphones. The ride – hailing apps market contains a mixture of locally established and foreign companies, with large-scale players such as Uber and Taxify competing with local start-ups. All the hailing apps use a mobile application that allows potential customers to request a taxi or private driver using their smartphone. Apps are developed using block chain technology to coordinate taxi riders and deliver transportation services (Wakhu & Bett, 2019).

Many of these companies now include motorcycle taxi or three-wheeler services, who use the same smart phone application as other taxi drivers. To sign up to a service,

riders must own a smartphone, with some companies providing these. Some riders are required to undergo rider training, which includes a road safety component. All the hailing apps require GPS so that riders can charge customers accurately. Some apps are exploring fixed charges, while others have gone further to offer free rides as part of their marketing campaigns. The services are geo-fenced (i.e. the app software triggers a response if the mobile device leaves a pre-defined service area (Yash & Gordon, 2017).

Little Cabs is a Kenyan ride-hailing app backed by telecoms operator Safaricom. Little Cabs allows customers to pay for their or another person's ride through Safaricom's mobile money service (M-Pesa), buy discounted airtime during the trip and access free Wi-Fi. It also lets women exclusively request female riders from 6pm to 6am for safety reasons. Safaricom provides the technology platform on which the app operates, with customers needing to have a smartphone to use the service. Fees are charged based on distance travelled and customers get notification of the fees on their mobile phones. A cash payment option also exists. By using the app, customers can also rate the driver. There is a hotline which can be used in case of accidents or to register complaints about the service. Little Cab allows non-smartphone users to hail a cab through a USSD system, thereby increasing access to the technology (Muhiu, 2019).

In Kenya, the Maramoja app runs like most ride-hailing apps. It uses social media platforms such as Facebook and artificial intelligence to assign the driver a trust score. Maramoja uses its trust-based taxi app franchise to grow its market based on trusted relationships created on social media. Customers are offered fixed prices and flexible payment options. Maramoja has a feature that lets passengers report accidents, attacks, or other emergencies. Riders accept mobile money, credit, cash, and corporate

invoicing (Muhiu, 2019).

In Tanzania, the Tigo Twende ride-hailing app was launched in 2017. The app links riders to passengers, both of whom need to have the application on their smartphones in order to use the service. The Tigo Twende app contains the contact details of motorcycle and three-wheeler taxi riders who are vetted by their respective riders' associations. The app uses live GPS maps to link riders to passengers, with payments made using mobile money. All 1,500-three-wheeler taxi (Bajaj) and motorcycle taxi (boda boda) riders who use the app are male. Tigo Twende currently provides mobile phones to recruited riders. Both riders and users download the app for free. Tigo Twende do not train riders themselves, but require that riders are trained by their unions, and that their vehicles obtain the adequate registration paperwork as required by law. Most users of the Tigo Twende app are males and females in the age range 25-30, who are young professionals with some college education. One issue that concerns riders who use the apps is the security of their mobile phone; once it is lost or broken, the driver is not able to participate on the network and revenue is lost for Tigo Twende. Phones can cost up to 80 percent of a months' taxi earnings, making them very expensive to replace. Tigo Twende believe that their application can be adapted for use in rural areas, mainly because it uses low-bandwidth internet and because it can be adapted to use USSD. Currently, the main barriers to using this technology in rural areas are poor connectivity, low availability of GPS, and the absence of a critical mass of users in each geographical area (Muhiu, 2019). Kinyua and Kiambati (2019) investigated impact of urban freight transport on Home Delivery. This review paper discussed the latest developments in internet shopping, home delivery and the potential

impacts on city logistics and alternative vehicle use. The review illustrated the rapid changes during the past few years and the potentially important impacts on patterns of transport within urban areas. Some of the changes result in increased pressure for road traffic networks in sensitive areas (for example residential areas). At the same time the changes also provided opportunities for the use of vehicles powered by alternative fuels thereby supporting certain sustainability strategies. However, the changes are complex, and patterns are not the same from one country to another thus the impacts on city logistics are also varied.

A major factor for the success of home delivery operations is whether there is someone at the customer's home to receive the delivery. Several social and economic factors are leading to homes being empty for longer periods in a day than they used to be. Some of these are inflexible working patterns, long commutes, increases in working women, and the growth in single-person households. This result in a relatively high proportion of first time delivery failure, causing higher operating costs for carriers and lower customer satisfaction (Olvera et al., 2012). There are some cases such as foods home delivery, in which prior arrangements for a time window for delivery are made between online retailers and their customers, although even this case may not guarantee that the customer was at home at the time of delivery. However, this is not the norm for most home deliveries. The reason is that such pre-arrangements of delivery time slots with customers would increase the inflexibility in carriers' fleet operations, leading to an extremely expensive delivery system for both retailers and carriers. If prearranging delivery times and days with customers does not prove attractive to companies delivering e-commerce products, then there is likely to be a growing need for these

companies to develop alternative delivery systems and strategies (Gamberini, 2014).

As reported in Nemoto et al., (2019), the concept of local pickup points using convenience stores has been already successfully implemented in Japan. Convenience stores, open almost all the time, offer this service both for extra revenue and because it generates more in-store traffic. With a growing number of houses empty during the daytime and the standard delivery times between 8am and 5pm, the difficulties are obvious. There is clearly a need to better understand when customers want to receive deliveries, and then meet these needs. Reducing the likelihood of these delivery problems would help to reduce operating costs of home delivery companies and increase customers' satisfaction for B2C-driven home delivery services, consequently smoothing the progress of e- commerce.

Increasing demand of faster and more reliable delivery is also an issue for retailers and delivery companies. Many people have a belief that online products must be shipped as soon as possible after the order is made. This is usually perceived as important by electronic retailers in order to match the service levels offered by their competitors. Although there are some customer demands for rapid home delivery (as witnessed by the emergence of same-day service provider serving precisely this needs), there is little evidence to show that the majority of customers expect such service or are prepared to pay extra for it (Gamberini, 2014).

Data on the UPS domestic package delivery operations provides insights into market trends. UPS services can be classified into three major categories, Overnight service, Deferred service (within 2 or 3 business day), and Ground (within 6 days for domestic

shipments). From the table, we can observe that while demands for Overnight service have been growing at the fastest rate of 7.9% in revenues and 8.4% in number of shipments annually, the largest portion of UPS operations is still Ground service, showing 66% in revenue and 83% in number of shipments. This implies that customers have widely differing lead-time expectations (Belvedere, Martinelli, & Tunisini, 2021).

The trend towards faster delivery means that express services are likely to become more important in the overall mix of home delivery services. For some products, such as computer chips, the cost of holding inventory already outweighs the relatively high cost of a premium shipment. The balance of that equation is slowly moving in favor of express delivery. As delivery time shortens, this can have the effect of reducing the delivery density and the potential for consolidation of deliveries, consequently increasing the operating cost and delivery vehicle trip generation. In our view, the time between taking customer's orders and making deliveries was certainly be faster than at present. Nonetheless, if it would be possible to increase the lead-time between ordering and delivery, this may help to improve delivery efficiency by increasing the delivery density and the potential for consolidation of deliveries, while maintaining a certain level of customer service (Trenz, Veit & Tan, 2020).

As noted by Von Falkenhausen, Fleischmann and Bode (2019) the logistical requirement of e-commerce goods that extend the end of the supply chain to each customer's address may generate many problems in local areas and potentially causes higher costs in carriers' fleet operations than it used to be. This is due to the small size and low density of e-commerce shipments. The reduction in average shipment sizes, consequently, leads to an increase in the number of truck trips and a reduction in

average vehicle sizes, consequently causing an increase in urban traffic. The low density also leads to an increase in the frequency of delivery stops and a growth in average vehicle mile traveled. More frequent local deliveries, additionally, involves a proliferation of commercial delivery vehicles to residential areas, which was likely be concerns about the social and environmental impacts of delivery vehicles in residential areas. The increasing demands for quicker and more reliable delivery are raising the weight of local delivery operations in the supply chain of e-commerce goods. In both local and long distance delivery services of ecommerce goods, local movements are a very important segment in the whole delivery process because local (typically urban) movements can take up a large segment of the overall delivery time. Some demands driven by e-commerce are extremely sensitive to the time in transit and time of delivery and the transit and delivery times are determined mostly by the traffic conditions in urban areas.

Multiple players are competing for space, very often at the same places and at the same times. In a 'just-in-time' environment, people and goods need to operate on the same cycle time. While it is often presumed that freight should be delivered on off-peak hours to relieve traffic congestion in an urban area, as a practical matter, this is often not a solution. The reason is that receivers may not be there to receive goods at off-peak hours and cost factors are often prohibitive. Successful solutions are focused on how to derive the most utility out of available capacity. Examples of desirable distribution strategies may include eliminating redundant delivery attempts, promoting personal deliveries to residential or office sites where package delivery services are already calling, and efficiently locating warehouse sites (Armstrong, 2016).

In planning the routes and schedules of commercial fleet in urban areas, particular interest should be paid to the flexibility of on-time delivery constraints affecting changes in routes and schedules, and the potential effectiveness of various policies intended to decrease redundant delivery attempts, consequently, mitigate traffic congestion in urban areas. For solutions that can be acceptable for trucking companies in major urban areas, there was a need of further research to examine the feasibility of various alternative operation schemes and to assess their effectiveness in the system. According to Boyer, Prud'homme and Chung (2009), among various potential strategies, as a way of eliminating redundant delivery attempts, an additional new service option called 'station-to-station service' can be introduced to the existing door-to-door delivery systems. The idea stems from customer dissatisfaction under a circumstance in which a customer cannot take its shipment at a time period convenient to the delivering company. The station-to-station service proposed could be a new option given to customers. In this strategy, carriers use 24-hour convenient stores or gas stations as local pick-up and delivery stations in their distribution system, which may be viable if appropriate partnerships between the trucking industry and other industries can be established. As an alternative, offices and apartment buildings can be designed or remodeled with secure delivery boxes for the occupants to allow package delivery firms to leave personal shipments with one-stop delivery.

Shipments can be delivered at the workplace or the apartment whether the recipient is on site or not. Providing alternative service option to the system was enhance customer satisfaction and also enable carriers to more flexible operate their vehicles. Eventually it was help in alleviating traffic congestion in urban areas by eliminating redundant

delivery attempts, consequently decreasing a number of truck trips. Faulty or damaged goods that are delivered to customers' home raise several problems, including: who is responsible and was pay for the damage, the additional transport requirements and transport cost to remove the goods and then deliver replacement goods, and the inconvenience caused to the customer in achieving a resolution to any dispute and the delay in receiving the goods purchased (Cao & Li, 2015).

Home deliveries that are damaged or faulty cause significant costs to supply chain partners both in terms of providing replacement goods, the fulfillment and transport costs of distributing these replacements and removing the damaged goods, the administrative costs of dealing with the problem and the costs that can arise from parties disputing the damage claim. In addition, this causes significant customer inconvenience in having to arrange for return of the goods as well as for the delivery of replacement goods. Reverse logistics is concerned with managing the movement of goods back to manufacturers, distributors, and retailers, because they are the wrong size, broken, out of date, or are not actually ordered (Olvera et al., 2012).

The market for managing the return of goods is growing as the pace of e-commerce retail sales accelerates. While the historical rate for returning merchandise is about 5%, some estimates suggest that online-driven products realize return rate in excess of 30%, which is a logistics headache. Although the market for forward logistics is much larger than that of reverse logistics, the market opportunity for reverse logistics is getting bigger. B2B e- commerce growth is further fueling the need to manage the return of goods purchased online. A relatively small number of delivery companies currently deliver the vast majority of goods purchased online to customers' homes in the U.S.

This means that at present many retailers are using the same delivery companies to perform home deliveries.

As a result, a high degree of consolidation takes place within these delivery companies' operations, helping to provide relatively high delivery densities. However, as more companies begin to offer home delivery services, this could result in lower delivery densities and an increase in delivery costs and vehicle trip generation. There are currently few delivery companies working together to improve the consolidation of e-commerce goods. However, this may become increasingly necessary for economic, traffic and environmental reasons if the number of delivery companies offering home delivery grows significantly in future. A fundamental premise of the home delivery business is that to operate profitably, a delivery company needs to have a certain density of goods to deliver within a given region. As density increases, the productivity and profits of delivery companies was also rise (Jindal et al., 2021).

A view by Raza and Govindaluri (2021) noted that home delivery services stimulate greater complexity in supply chain management. The delivery problem when the customer is not at home at the time of delivery is the most critical factor for the success of home delivery operations. Many home deliveries involve customer demands that are extremely time-sensitive and unsuitable for mixing with other home deliveries at the same time, leading to little opportunity for consolidation. These features cause higher operating costs for carriers and lower customer satisfactions for home delivery services. Increased demands for home delivery services could also lead to a significant increase of delivery vehicle trip generation in urban areas, raising social and environmental issues such as traffic congestion and noise. Some potential strategies for their solution

include the establishment of local pickup points to reduce redundant delivery attempts in home delivery and the possibility of the increase in the lead-time between ordering and delivery. The increasing importance of reverse logistics in e- commerce supply chain and consolidation strategies for smaller goods and between home delivery companies are additionally addressed.

Advances in home delivery have the potential to expedite the growth of e-commerce as well as to create sustainable urban freight transportation systems. There are still many other types of home deliveries that we have not explicitly examined in this research, including products bought and sold by customers over the internet such as auctions and online moving sales (C2C e-commerce) and delivery of cooked meals (Sorescu, 2017). There is also still a lack of evidence about whether the overall impacts of replacing customer's shopping trips with home delivery operations are positive or negative.

Rutter et al., (2017) investigated the how E-commerce Growth has impacted on the Transportation Network. The steady growth in online retailing continues to rattle long-established business models and the shopping patterns of consumers (who are also taxpayers, voters, and drivers). Those consumers are increasingly choosing shorter delivery cycles—opting in some cases to receive their goods within hours rather than days. The demand for more immediate delivery requires retailers to be nimbler and radically changes warehousing logistics. Sellers are augmenting their reliance on million-plus square foot facilities, adding smaller sorting and delivery hubs, and locating them closer to their customers.

Moreover, while retailers continue to employ traditional delivery services like FedEx,

UPS, and USPS, they also are looking to independent contractors who use personal vehicles to transport packages in the same way that transportation network companies like Uber ferry passengers. These changes can directly impact our transportation system, and they bring to light a number of challenges for transportation planners, operating agencies, and policy makers. For instance: Evolving delivery operations cloud the picture of how carriers are regulated. Much of the regulation of motor carriers in Texas relates directly to the weight capacity of the vehicles transporting cargo. Most traditional delivery operations fall under this statutory description, requiring certificates of operating authority from the Federal Motor Carrier Safety Administration. The use of personal autos by people acting as independent contractors may meet the basic definition of a motor carrier (transporting cargo for hire), but these contractors are not required to register as such because of the vehicles' smaller size. Consequently, they avoid a number of safety and operational requirements. Changes in urban logistics was impact roadway system use and needs. The further expansion of e-commerce was increase warehousing needs. These facilities, located increasingly within urban areas, require interstate highway access to accommodate more frequent daily truck traffic. Even with increased automation, these centers require larger workforces than traditional warehouses would, creating more trips by employees coming from areas with limited transit service options and working multiple shifts meals (Sorescu, 2017).

2.3.4 Motorcycle Timeliness on the Wholesale and Retail Business Growth in Kenya.

Telma (2020) investigated the power of retail: Delivering development impact in

emerging markets. This was attributed to the fact that in the mid-1990s, retail giants began to expand internationally, building operations in several emerging markets. But these retailers and wholesalers are crucial link in modern economy where people get the food clothing and other goods they want and need for performance prices. This has made leading giants in development institutions have focused on retailers. This is from the fact that there is evidence that international retailers contribute to job creation, drive down the price of food and other essential while raising local businesses. This is achieved through investment in technologies and processes which help them to achieve greater economies of scale and drive down cost contributing to lower prices to consumers. It is estimated that 142 million people work in the retail sector in developing counties (ILO, 2020)

Smith (2019) conducted a study on importance of delivery service in E-commerce. Smith highlighted that one thing that any person operating an E-commerce business is delivery solution. This is attributed to the fact that customers' needs have changed drastically with majority requiring fast and reliable delivery services. B2B and B2C online sales of physical goods have recently experienced a surge of demand in certain products due to the COVID-19 pandemic. Initially, many businesses and consumers responded by stocking up. Medical supplies, including hand sanitizers, disinfectants and surgical facemasks, as well as household essentials such as toilet paper and non-perishable foodstuffs were stockpiled. Businesses were faced with teleworking, and homebound consumers had to communicate and entertain themselves remotely. Many governments had enforced social distancing measures, instituted lockdowns and/or temporarily closed "non-essential" businesses.

The need for timely delivery has resulted to a spike in online purchases of some products, as well as an increased demand for a wide range of digital services, as many consumers resorted to online shopping – either internet enabled or by telephone. Several brick-and-mortar businesses have therefore shifted resources to e-commerce. The increase in the number of consumers flocking to digital services has spurred both suppliers of these services and telecommunications operators to enhance their network capacity and to offer advantageously priced or free data and service packages. Given the way in which commercial activities are intertwined and supply chains operate, the relative shift to online B2B and B2C sales by means of retail and wholesale distribution services is dependent on manufacturing activity and on the availability delivery services (Vishwanath & Mulvin, 2001).

In some developed countries, distribution service platforms have managed to address problems without government intervention. In developing countries, some governments have been more proactive than others, and in countries where face-to-face transactions had, until now, remained the norm. For example, in some African countries, to facilitate online purchases of essential food items, local governments have compiled and circulated, via social media and other means, the telephone contacts of coordinators of different food products in various markets to enable consumers to call and order groceries. Consumers then pay with mobile money (i.e., by means of their mobile phones) and have their purchases delivered by bicycle and motorcycle taxis known as tuku-tukus operated, for example, by Uber, SafeBoda, or other similar options. This expansion of delivery services has had positive knock-on effects for increased employment, even if these may be temporary (Chowdhury et al., 2020).

In a study by Yang et al., (2020), it was noted several telecommunications providers had made available data services for minimal or no costs. Central banks had temporarily permitted companies and banks to lower or scrap transaction costs and fees on digital payments and mobile money transfers to encourage the use of mobile money in preference to cash. Other authorities, including in the United Arab Emirates and the Russian Federation, had encouraged the use of mobile payments but are yet to formally unveil specific regulations.

In their study on The Effect of Lockdown Policies on International Trade: Evidence from Kenya, Socrates and Lashitew (2020) noted that there are some of the innovative measures/actions which have been employed to encourage regions in which, hitherto, populations did not fully trust online purchases, with a view to ensuring a continued flow of food supplies and essential household goods. Despite persistent challenges, considering the pandemic, online purchases and e-commerce have become de facto fall-back solutions. Due to the lockdowns instituted to contain the further spread of the virus, e-commerce in goods has faced supply chain disruptions. Many firms have continued to experience supply challenges because of the suspension of manufacturing activity, decreased production and labour shortages. Those with warehousing facilities in impacted areas have faced difficult decisions about how or whether to keep manufacturing their products. The pandemic has therefore brought to the fore the vulnerabilities of supply chains and tested the ability of businesses to adjust swiftly.

The international transport and logistics services on which all e-commerce and more traditional trade transactions rely have also been severely affected by the introduction of new health regulations that have disrupted land, sea and air cargo transportation. The

cancellation of more than a million passenger flights, which were typically used to transport postal shipments and other small consignments, has significantly reduced transport capacity and increased shipping prices for cross-border B2C and B2B transactions. According to the International Air Transport Association (IATA) and the Universal Postal Union (UPU), problems were aggravated by administrative and regulatory bottlenecks, as well as crew quarantine conditions, which prevented cargo flights from keeping pace with demand. Commercial B2B e-commerce relying on large- scale imports via maritime transport has also been affected. Customers have therefore been faced with delays or cancellations of their orders, even on the day of delivery (Yang et al., 2020).

Kureya et al., (2021) investigated the potential role of mobile phone technology in rural motorcycle and three-wheeler taxi services in Africa. Over the last two decades, motorcycle and motorized three-wheeler taxis have become important means of transport in many sub-Saharan African countries, including in rural areas. However, the emerging role of mobile phone technology in improving mobility in rural areas is currently under-explored in the literature. This paper presented the findings of a small-scale research study that was undertaken into the use of mobile phone technology in the context of motorcycle and three-wheeler taxi use, and its potential to improve rural access. Informed by a literature review, the research focused on four countries: Kenya, Rwanda, Tanzania and Uganda. Semi-structured interviews and focus group discussions were conducted with riders of motorcycle and motorized three-wheeler taxis and the developers of mobile phone-enabled transport technologies. Mobile technology linked to the utilization of motorcycle and three-wheeler taxis is increasing,

but ‘ridehailing’ applications (apps) are likely to be limited to urban areas for the foreseeable future due to various disincentives to their use in rural areas. The study identified several promising innovations that combine the use of motorcycles and three-wheelers with mobile technology to increase rural people’s access to essential services and opportunities. These have the potential to be scaled up or expanded to other countries.

Since trade restrictions with industrial countries were lifted in the 1990s, motorcycles and motorised three-wheeler taxis have become an important means of transport in many sub- Saharan African countries. These vehicles comprise an estimated one-third of all transport in the region (WHO, 2018). In Kenya and Tanzania, there is approximately one motorcycle or three-wheeler for every 60 people. In Kenya, the number of new registrations of motorcycles increased by 75% between 2015 and 2016 (ibid, 2018). Many rural villages in sub-Saharan Africa lack access to all-season roads, making the use of traditional four-wheel vehicles unfeasible. In contrast, motorcycles and three wheelers can negotiate poor quality road, tracks and paths that are in accessible by other vehicle types (Porter, 2014).

These vehicles play an important role in helping rural people access vital services such as healthcare, education, and markets. The fact that these taxi riders provide a door-to-door service is highly convenient for users, including individuals with restricted mobility. Gamberini (2014) studied the impact of motorcycle taxi services in rural Uganda and found that usage provided access to the wider economy and enabled social relations. Unlike some other countries in the region, motorcycle taxis were rarely used for educational or healthcare needs in rural Uganda, suggesting that their potential is

presently untapped. Motorised three-wheelers and trailers can carry loads of up to one tonne on rural roads when geared down to an appropriate speed, while the operating costs of these vehicles are approximately half of those compared to conventional vehicles (Dennis & Pullen, 2017). Profitable transport services developed using motorcycles and three-wheelers have the potential to aid development in rural areas. Overall, these vehicles are having a transformative effect on rural areas and the lives of rural people (Porter, 2014; Dennis & Pullen, 2017).

Olvera et al., (2006) studied the benefits of mobile phones in relation to long-distance trading. Mobile phones enabled efficient information exchange, increased profits, expedited new business relationships and provided payment channels. Although the benefits of mobile phones in relation to transport mobility are increasingly evident, there is a lack of research and evidence on this issue. In many parts of rural Africa, non-smart mobile phones play an important role in enabling mobility. Mobile phones help connect demand for travel to the supply of motorcycle and three-wheeler taxis. Mobile phones have increased the use of transport services by allowing riders to store customers' contact details for future business, while providing customers with a rider to call when needed (Porter et al., 2013).

Advances in technology can leave certain sub-groups of the population behind. For example, individuals who do not have a mobile phone or smartphone was not be able to benefit from the improved mobility and increased security offered by ride-hailing apps and mobile money, while older people with less access to or experience of mobile technology may be left out of fast-developing transport innovations. Research in Tanzania demonstrated that motorcycle taxis and mobile technology can have major

benefits for the mobility of older people in rural areas if support is provided (Porter, 2016). The use of motorcycle taxis and mobile phones helped improve older people's connectivity, especially in cases of limited mobility.

Mobile phones are used by some older people as a substitute for travel, for example, when sending riders to collect medication or undertake other errands (Porter et al., 2012; Samuel et al., 2005). They also allowed vulnerable passengers to choose riders who were aware of and responsive to their specific needs. Combining motorcycle and three-wheeler taxis with mobile phone technology also has the potential to help women overcome some of the challenges that they face when living in rural areas. As passengers, women can face cultural constraints that limit the use of motorcycle taxis, such as the need to sit in close proximity to male riders. However, the benefits that these vehicles offer women, such as reducing the time taken for daily tasks and decreasing the requirement for head loading are substantial. Women have embraced this mode of transport.

Kenyan economy to a trade performance economy. In 2015 the GDP of the Kenyan economy improved to 5.6 from 5.3 in 2014 and one of the key contributors to this growth was the wholesale and retail sector (KNBS economic survey, 2016). In the current global economy, all business enterprises are progressively being regarded as very powerful engines for economic empowerment and development for most economies in the world (Apalia, 2017). According to White et al., (2015) all businesses play a key role in economic growth by providing a source of innovation and in creating new products. Economies throughout the world are now days turning their attention to small and medium business enterprises due to the recognition as the powerful engines

that drive the economic development of a country through job provision, contribution to GDP and tax provision among other things (Kangala, 2016). According to Nderitu and Githinji (2015) in the recent decades small and medium business enterprises are proofing to be the primary engines of the performance of any economy in the world.

Small and medium business enterprises are now days being viewed as important players in even and equitable economic development (Muriithi, 2017). According to the Kenyan small and medium finance survey (2018), small and medium business enterprises up to date continue to create jobs and highly boost the gross domestic product of any country, but these business enterprises they still face challenges that hinder their growth and development in one way or the other. The significant contributions of small and medium business enterprises contribute to GDP, entrepreneurial skill development, employment generation and innovation to many developing economies (Sarbah & Quaye, 2014).

According to Muriithi (2017) small and medium business enterprises are the engine that drives world economies and push for industrialization for both developing and developed economies. Small and medium business enterprises are the centerpiece of any economy in the world however limited access to finance may adversely affect the business operations and seriously limit their development and growth (Nderitu & Githinji, 2015). According to Sarbah and Quaye (2014) access to credit and finance continue to pose a barrier to small and medium business operations and development in any given country. According to Kumar (2011) small and medium business enterprises are the vehicles that ensure increased industrial production and exports improvement.

According to Kangala (2016) there is no doubt that access to finance is of crucial importance for the ongoing and sustainable growth and profitability of small and medium business enterprises. Promotion of the wholesale and retail trade sector in Kenya is very important for attaining the national goals and vision 2030 (Wambui, 2019). According to Sitharam and Hoque (2016) a very strong small and medium business enterprises contributes highly to the country's economy, contributing to the gross domestic product (GDP) by reducing the level of unemployment, reduction in poverty levels and promotion of entrepreneurship activities. Any business enterprise is very important engine for job creation, innovation, poverty eradication hence main driver for economic growth and development (Katua, 2014; Emad, Suhail & Jabbar, 2014). Small and medium business enterprises are important for rapid technological development and provision of job opportunities in any country (Njeru, 2013).

One of the major causes of failure for small and medium business enterprise is limited access to finances (Njagi, Kimani & Kariuki, 2017). Small and medium business enterprises are very important and are the backbone of emerging economies and are a key source of income for most people in the country (Economic survey report, 2017). Finance helps catalyze savings and deploy capital into investments (Muriithi, 2014). However, accessing the right type of finance at an affordable cost is the fundamental financing difficulty for most of the business enterprises (Sarbah & Quaye, 2014). Sourcing finance is one of the big problems hindering start up and growth of business enterprises, in that the type of finance determines success of the business (Njeru , 2013). According to Njagi et al., (2017) when a wrong mix of funds are used then the performance of the business is adversely affected.

Small and medium business enterprises encounter many problems which make them perform poorly and reduce their growth (Kamunge, Njeru & Tirimba, 2014). Finance is very important for the betterment and development of any business enterprise (Kamau, 2021). According to Akinyi (2014) finance is very crucial to any business and is totally seen as the life- blood of any kind of business enterprise and no business unit can do well without enough monetary resources for investing. According to Muturi (2012), increasing the rate of economic growth depends heavily upon having the financial resources which are highly required for investment. Finance is usually an important aspect that contributes to development of business enterprises, whether at their initial stage or at their subsequent stages in life (Onyiego, Namusonge & Waiganjo, 2017).

Wholesale and retail trade sector as outlined in vision 2030 is one of the powerful sectors to improve the Kenyan economy through provision of products and creation of employment. Small and medium business enterprises have been recognized as a greater contributor to the Kenyan economy offering both employment and platform for innovative ideas (Wambui, 2019). The small and medium business enterprises offer about 75% of the general employment and contributing about 18% of the GDP in the Kenyan economy (Kangala, 2016). Businesses in Kenya serve as live blood to the poor; create employment opportunities, generate income and contribute to economic growth (Mukoma & Masini, 2015). According to Wangui et al., (2014) small and medium business enterprises play the role of job creation, alleviating poverty and promoting industrialization. According to Katua (2014) small business enterprises have been accepted as the core engine of economic growth and poverty eradication in the world and created 80% of the jobs in Kenya.

Kenyan wholesale and retail trade sector is growing in its importance; as small and medium business enterprises are estimated to account for 20% of GDP and 80% of employment hence business enterprises have the scope to catalyze further industrialization in Kenya (Phyllis, 2016). According to Mwangi (2021) in Kenya businesses are big contributors for economic growth and good financial performance of these entities is always very important and it is critically attributed with their economic contribution in one level or the other. Improved access to finance has high probability of benefiting business enterprises of all sizes (Kangala, 2016). The availability of finance has been highlighted as a major factor in the development, growth and successful of any business enterprise (Ebekozien, Abdul-Aziz & Jaafar, 2019). Different businesses differ in their financial decisions and behavior and then use different financing methods, it is important for every business to choose the best source of finance (Njeru, 2013). Wholesale and retail trade sector as stated in vision 2030 is one of the key sectors in economic development as the sector may be more efficient in provision of jobs, innovation and provision of goods and services and for this reason the government of Kenya pays a special attention to the development of more efficient wholesale and retail businesses in the country. In Kenya businesses are divided into agriculture, trade, manufacturing, and provision of services. This really shows a clear confirmation that Kenya business enterprises are mostly engaged in all sectors of the economy and then seen to have a big economic contribution and they support many live hoods (Kangala, 2016). The government of Kenya has specified several key sectors that was prove instrumental in reaching its goals and mostly a middle-income economy by 2030. In this plan, the government has aimed to create robust diversified and performance small and medium business enterprises.

Despite the critical role played by the wholesale and retail trade sector in the Kenyan economy in terms of growth and development through creation of employment, contribution to GDP, alleviation of poverty and provision of tax revenue among many other importance there are many factors that challenge the business growth and survival in the sector. Finance has been cited by many researchers as the major constraint which limit the ability to drive the economy growth and development as expected (Njeru, 2013, Muriithi, 2017).

As the retail sector continue to evolve, consumer ‘s choice of shopping channel has become just as important as their choice of products. Nowadays, consumers tend to select shopping channel that provides optimized customer experience. Because of the changing habit, traditional retailers must figure out new solutions to transform their sales channel into the new era of retail and promote Omni channel. These actions play a vital role on occupying consumer shopping channels and increasing sales conversion rate. But traditional retailers are still facing lots of challenges. Efficiency improvement of supply chain management has been identified by most of the traditional retailers as their top priority for new retail transformation (Njeru, 2013).

In the new era of retail, supply chain should set “customer connectivity" and "operation & services improvement” as the new centers, and deepen integration between Inventory and Consumer/Context. Thus, the future of supply chain management shall be driven by data; retailers should break the current distribution barriers and provide cross channel services to both internal and external customers that can ultimately optimize consumer experience and help the company win the competition. The Chinese retail market is known for its channel diversity, market volatility, quick evolution, and

increasing demand on fast delivery and personalized products. Moreover, imbalanced inventory level, high logistics cost, fierce market competition and data complexity have largely increased the level of difficulties for new retail transformation. In this white paper, we provide in-depth insights on how traditional brand retailers and manufacturers should transform to take lead in the era of New Retail, identify the main challenges of supply chain management and elaborate the optimized operation model. To help COO better understand the new journey of supply chain transformation, we conducted comprehensive analysis on current Chinese retail market trend, and share our opinions from the views of strategy, planning, inventory, logistics and data analysis. We hope to help the manufacturers and retailers winning the new retail battle.

Heightened customer expectations, massive advancements in technology, and the rise of Omni channel commerce are just a few of the trends reshaping the world of retail. In an industry already known for thin margins, these changes can increase cost pressures and uncertainty for retailers—all while opening the door to significant opportunities. Traditional approaches was no longer work in the face of change; now is the time to clearly define new aspirations, make fundamental changes to operating models, and rethink retail. Those that make moves now may enjoy a sustained for decades to come. In this publication we examine some of the most pressing challenges retailers face and the transformative journeys many are on right now. You was find a range of new perspectives across retail operations, including, store operations, supply chain, procurement, and information technology (IT). As the rules of retail are being redefined, these fundamental areas of retail operations need fresh thinking (Lagat, Chepkwony, Sang, & Kimitei, 2019).

Now should be a great time in US retail. Consumer confidence has finally returned to pre-recession levels. Americans have seen their per capita, constant-dollar disposable income rise more than 20 percent between the beginning of 2014 and early 2019. Yet despite the buoyant economic environment, many brick-and-mortar stores are struggling. In part, that's due to the rise of e-commerce, which since 2016 has accounted for more than 40 percent of US retail sales growth. In our most recent consumer survey, 82 percent of US shoppers reported spending money online in the previous three months, and the same percentage used their smartphones to make purchasing decisions. Not surprisingly, younger shoppers favor e-shopping even more: 42 percent of millennials say they prefer the online retail experience and avoid stores altogether when they can.

Meanwhile, the strong economy and record-low unemployment are increasing wage pressure and store operating costs. In the last three years, more than 45 US retail chains have gone bankrupt. Retail stores have a real future Yet rumors of the physical store's death are exaggerated. Even by 2023, e-commerce is forecast to account for only 21 percent of total retail sales and just 5 percent of grocery sales. And with Amazon and other major internet players developing their own brick-and-mortar networks, it is becoming increasingly clear that the future of retail belongs to companies that can offer a true omnichannel experience.

According to Maata and Ombui (2018), retailers are already wrestling with omnichannel's demands on their supply chains and back-office operations. Now they need to think about how they use emerging technologies and rich, granular data on customers to transform the in-store experience. The rewards for those that get this right

was significant: 83 percent of customers say they want their shopping experience to be personalized in some way, and our research suggests that effective personalization can increase store revenues by 20 to 30 percent.

Several new technologies have reached a tipping point and are set to spill over onto the retail floor. Machine learning and big-data analytics techniques are ready to crunch the vast quantities of customer data that retailers already accumulate. Robots and automation systems are moving out of factories and into warehouses and distribution centers. The Internet of Things allows products to be tracked across continents or on shelves with millimeter precision. Now is a great time for retailers to embrace that challenge of bringing technology and data together in the off-line world.

2.3.5 Motorcycles Accessibility to the Markets and Performance of Whole and Retail Business

Transport infrastructure and services are critical components of economic and social development since they enable the smooth flow of people and goods to facilitate trade and social cohesion. Given the vital role of transportation in economic and social development. All the nations worldwide invest in transport infrastructure and undertake interventions to strengthen transport service systems (Afolabi & Gbadamosi, 2017). One such response designed to enhance transport service systems was the zero-rating of motorcycles in the early years of the 21st Century by most countries in Africa, including Kenya. However, public transportation networks in developing nations are still inadequate and poorly designed (Guillen & Ishida, 2004), resulting in the increasing popularity of commercial motorcycles for transport in rural and urban areas

(Ackaah & Afukaar, 2010).

While virtually all countries in the world have challenges meeting their transport needs, Africa has perennially faced myriad transport challenges. At the transport infrastructure level, Africa faces the challenge of bad roads and sparse road networks. This problem is pronounced in rural areas, where many places are unreachable by road, especially in bad weather (Gamberini, 2014). At the transport service level, over 75% of the population in Africa cannot afford to own any private means of transport (Gumel, 2017) and are, therefore, compelled to use public transport. However, access to public transportation is still a challenge for many in Africa due to the high cost of the same, and the commensurately high poverty levels (Ackaah & Afukaar, 2010).

Access to transport is further constrained by availability challenges related to bad roads and sparse road networks, particularly in rural villages. Therefore, the increased utilization of motorcycles as commercial transportation vessels provides a much-needed respite from Africa's transportation challenges (Gamberini, 2014). This stems from the fact that because a two-wheeled motorcycle is smaller than motor vehicles, the former is more easily maneuverable than the latter and can operate off-road and access even remote areas with bad or no roads. Motorcycles are also more affordable to the common man and can easily reach the inaccessible parts through narrow and poorly paved roads (Bolbol & Zalat, 2018). They are cheaper to maintain than motor vehicles because the former have smaller engines and therefore have better fuel economy, and their parts are more affordable (Almeida et al., 2016). Congruently, acquiring motorcycles is easy. Its low maintenance cost, combined with the known flaws of public transport, has created an environment conducive to utilizing motorcycles as an

instrument of work, mostly informal.

Commercial motorcycles utilization is increasing in many nations worldwide (Olvera et al., 2012). This rise is attributable to the worldwide growth of motorisation and disorganised and unreliable transport networks in several developing countries (Muchira, 2016). In most developing countries, the business attracts small and medium-sized investors; youths and politicians also count MTs as alternative employment (Olvera et al., 2012). Using motorcycles is growing fastest in Asia, though significant growth occurs on most continents, including in highly motorized countries such as those in North America and Western Europe. The four largest motorcycle markets globally are all in Asia: China, India, Indonesia, and Vietnam. The motorcycle is also popular in Brazil's frontier towns. Bicycle taxis were used for the transportation of people and goods throughout the colonial period in sub-Saharan Africa. With a growing need for cheap public transport, MTs slowly modified bicycles. According to Michael (2012), the use of motorcycles for transport gained acceptance by as many retrenched employees after the economic recession by the Late General Murtala Mahomet administration of 1975/1976, and Nigeria's jobless youth took motorcycles as livelihood means. This use of motorbikes benefits the riders and their community, who get reliable and accessible transport services. Motorcycle taxi transport then spread to other West African nations such as Niger and Cameroon in the 1980s.

Starkey (2016) argued that motorcycle taxis are popular in the developing world because of their availability. Other inherent benefits, such as door-door operation and the capacity to enter narrow footpaths inaccessible by other driven modes, are fast speeds and cost- effectiveness compared with others. Door-to-door services by MTs

could be a starting point for harnessing social capital among MT riders and their communities regarding developing trust, networks, and even a sense of belonging from the interactions. These networks can be utilised for the advancement of all parties involved and the community.

According to Peters et al., (2018), the spread of commercial motorcycle's in Sierra Leone and Liberia began as civil wars ended in the early 2000s. This motorcycle taxis spread was because many car taxis in the neighboring countries were destroyed or driven to security during the war. Also, lower motorcycle purchase costs than cars and minibuses and the lack of road construction and maintenance have helped develop and rapidly spread motorcycle taxis in both countries, first in urban areas, then later in rural areas. This is from the fact that motorcycles can access these areas irrespective of the road network.

While commercial motorcycles is omnipresent in Uganda and Kenya as a boda boda, its use in West and Central Africa has grown under various local names: bendskin in Cameroon, zemidjan in Benin and Togo, okada or alalokin in Nigeria, oleyiain in Togo, and kabu-kabu in Niger (Singoro, Wakhungu & Obiri, 2016). The two-wheel transport services in East Africa are an invention from Uganda that had developed since the early 1960s at Uganda–Kenya border Busia District and became popular in the 1970s when the border was temporarily closed by Ugandan president, Idi Amin Dada. These two wheelers were used to smuggle goods across the border of Kenya and Uganda in Busia. Hence, boda boda was a phrase made from an English word “border border” in line with the commercial motorcycles cross border utilisation. Commercial two-wheelers initially appeared in bicycle taxis, which operated across the border of Kenya and

Uganda. Later these services were supplemented by motorcycles– both transport modes are called boda boda (Howe, 2003; Kumar, 2011). Today, the industry has spread to the different Uganda regions, and the term boda boda has spread across the Ugandan borders to the nearby borderland communities.

In Kenya, like Uganda, motorcycles were introduced in the 1960s in Busia town. They spread in both countries to other rural and urban areas, with a rapid spread in Uganda. Using motorcycles flourished significantly in 2008 after the Kenyan government abolished the import duty for motorcycles below 250cc to boost rural and urban transportation and job creation for the youth. The number of newly registered motorcycles went up by 55.1%, from 16,293 units in 2007 to 51,412 units in 2008 and 9 1,151 units in 2009 in 2008 (KNBS, 2010). The increase in using motorcycles coincided with the utilisation of motorcycle taxis for transport. The frequency of motorcycle taxis is also much higher, although walking remains a popular means of access to routes to the market and other rural areas. This popularity is because the MT services are easily accessible because of their relatively low-cost and availability (Pongprasert & Kubota, 2017).

According to Hansen (2015), motorcycles are probably the primary reason Hanoi's streets are not perpetually gridlock. With absent transport alternatives, people need to understand motorcycles because of their different uses and value. The situation would only get worse if emerging competitors replaced millions of motorbikes. There is increasing evidence that active journeys (cycling or non-leisure walking, such as business travel, shopping) can play a significant role in the overall physical activity levels (Mackett & Brown, 2011), with associated benefits for health. In addition, brief

periods of exercise have been shown to lead to physical and mental health (Warburton, Nicol & Bredin, 2006). Reduced physical activity is the primary cause of many lifestyle diseases (Bouchard et al., 2015). Rural residents of developing countries move to access a range of services and facilities not available at the beginning of their trips (Starkey, 2016b). Trips required to access basic needs and services dominate travel patterns in these rural areas (Paramita et al., 2018). The activities are organized for various purposes, including work, educational activities, shopping, and leisure.

Individuals create intricate travel patterns when they participate in day-to-day events in various places and periods (Hoang & Okamura, 2020). A daily schedule of rural inhabitants in the villages comprises a set of decision- making. These decision-making activities include regular trip patterns, primary trip time, main trip mode choices, and secondary trip mode choices (Vaziri et al., 2014). The emphasis on rural public transport has not decreased, especially as public transport services are restricted to rural villages (Kaplan & Johnston, 2007). Rural communities have implemented many coping mechanisms to mitigate the negative consequences of inadequate infrastructure in public transport. The most critical one, for instance, is to restrict the times of travel by postponing the journey (Ackaah & Afukaar, 2010. The weekly market visit also involves the use of other facilities. Such an outrageous demand can mask suppressed overall demand on market days. However, the use of motorcycles helps the people access various destinations without the restrictions.

Ng and Yi (2016) conducted a study on motorcycle taxis in Kampala, Uganda. They found that MT trips corresponded to prevailing activities, with residential areas being low-income margins and formal business areas peaking. MT begins in urban areas

where point-to- point transport is required, spreading to rural villages (Starkey, 2016). The motorbike is often the first transport choice in Indonesia, and with introducing an online application program, Ojek Online that was trendy for taxi services. Ojek Online had a high demand in Depok City, Indonesia. Its customers fill almost the entire square on the streets. Especially at peak times (between 4 pm and 8 pm), they often offer transport services on pavements and sometimes even on the road (Nurhafizhah et al., 2018). This is a clear indication of the need for motorcycles in the transport industry to enhance access.

Motorcycle taxis offer services on the footways, particularly during rush hours (Pongprasert & Kubota, 2017). They serve rural villages and provide transport services to people's homes, typically within a six-kilometre radius (Mbabazi, 2019). Rural MT services are available in nearby small towns usually connected to the national road network and are served by minibuses, buses, and trucks, where people and cargo are collected. These small towns are becoming hubs for those who need to travel further (Al-Hasan et al., 2015; Starkey, 2016b, 2016a). MTs provide point-to-point demand-driven transportation services for travellers and goods. They operate on a relatively small distance (Starkey, 2016a). Motorbike taxis are used mainly for medium distances (5-10 km), similar to private motorcycles, whereas buses are used primarily for long distances, usually over 10 kilometres (Tuan & Mateo-Babiano, 2013).

Motorcycle taxis also have other qualities that make them an attractive and convenient means of transport. For instance, their services are easily accessible (Pongprasert & Kubota, 2017). They are not restricted to specific routes like is the case with other public transport vehicles, do not have a fixed schedule, and can provide services in a

timely and personalized manner (Jenkins & Peters, 2016). Operators enjoy significant economic benefits and regulatory autonomy, as this industry is still largely informal. Any person with a motorcycle, regardless of their capacities or skills to maneuver and operate the vehicle, could offer taxi services to those in need of it (Cano et al., 2018). Given the preceding s, there has been a marked increase in the utilization of motorcycle taxis, especially in sub-Saharan Africa. Nigeria, South Africa, and Tanzania have the highest number of motorcycle taxis in Africa, followed by Kenya, Algeria, Uganda, Egypt, Morocco, Angola, and Ethiopia in that order (Research & Markets, 4/25/2017). Nigeria has the highest number of motorcycles, with about eight million MTs operating across Nigeria (George, 1/29/2020). In East Africa, rapid motorcycle growth was mainly driven by a lucrative fiscal stimulus that decreased two wheelers' price. In 2016, Tanzania had the most motorcycle taxis in the region at around one million. Uganda had the smallest number of about 200,000 MTs (Muchira, 2016).

In Kenya, there is evidence of increased usage of motorcycle taxis in Africa, including Kenya (Olvera et al., 2012). This increase is attributable to the worldwide growth of motorisation, the poor and unreliable transport infrastructure systems, and low- cost motorcycles in terms of purchase and maintenance compared to motor vehicles. Motorcycles are considered reliable and more readily available (Starkey, 2016). However, contradictory findings by Pongprasert and Kubota (2017) suggest that in rural areas, motorcycle taxisuse is more prevalent than in urban areas, while walking remains the most popular means of transportation in rural villages. Similarly, Ackaah & Afukaar et al. (2019)) argue that rural communities restrict their travel times by postponing journeys and combining trips, thus minimizing the use of motorcycle taxis.

Therefore, there is an apparent lack of consensus on the prevalence of motorcycle taxis in rural areas.

Jenkins and Peters (2016) conducted a study to investigate rural connectivity in Africa: motorcycle track construction. Motorcycle transportation has burgeoned in war-affected West Africa over the past decade. The penetration of motorcycle taxis deep into isolated rural communities has spread spontaneously and created direct and indirect employment opportunities for low-skilled youth, a category most susceptible to militia recruitment. Equally important, it has significantly contributed to lifting smallholder farmers out of poverty by reducing the costs of moving produce to markets, with motorcycles able to visit villages connected to feeder roads solely by footpaths. Nevertheless, state actors and international donors remain reluctant to allocate funds to rural track building/ upgrading, preferring to stick to more conventional, but expensive, construction/rehabilitation of rural roads accessible to four-wheeled vehicles. Through a case study of Liberia – still recovering from two civil wars and an Ebola health crisis – this paper argued that the impact of bringing community access through track construction/footpath upgrading is significant, particularly because track construction lends itself par excellence to the involvement of the rural communities themselves. Despite the lack of infrastructure for other types of vehicles, motorcycles can still access these areas.

Macharia, Mumo, and Okiro (2019) investigated the Modelling geographical accessibility to urban centres in Kenya in 2019. Access to major services, often located in urban centres, is key to the realisation of numerous Sustainable Development Goals (SDGs). In Kenya, there are no up-to-date and localised estimates of spatial access to

urban centres. It is estimated the travel time to urban centres and identified marginalised populations for prioritisation and targeting. Urban centres were mapped from the 2019 Kenya population census and combined with spatial databases of road networks, elevation, land use and travel barriers within a cost-friction algorithm to compute travel time. Seven travel scenarios were considered: walking only (least optimistic); bicycle only; motorcycle only; vehicle only (most optimistic); walking followed by motorcycle transport; walking followed by vehicle transport; and walking followed by motorcycle and then vehicle transport (most pragmatic). Mean travel time, and proportion of the population within 1-hour and 2-hours of the urban centers were summarized at sub- national units (counties) used for devolved planning. Inequities were explored and correlations between the proportion of the population within 1-hour of an urban center and ten SDG indicators were computed.

A total of 307 urban centers were digitized. Nationally, the mean travel time was 4.5-hours for the walking-only scenario, 1.0-hours for the vehicle only (most optimistic) scenario and 1.5-hours for the walking-motorcycle-vehicle (most pragmatic) scenario. Forty-five per cent (21.3 million people) and 87% (41.6 million people) of Kenya's population resided within 1 hour of the nearest urban centre for the least optimistic and most pragmatic scenarios respectively. Over 3.2 million people were considered marginalized or living outside the 2-hour threshold in the pragmatic scenario, 16.0 million Kenyans for walking only, and 2.2 million for the most optimistic scenario. County-level spatial access was highly heterogeneous ranging between 8%-100% and 32%-100% of people within the 1-hour threshold for the least and most optimistic scenarios, respectively. Counties in northern and eastern parts of Kenya were generally

most marginalized. The correlation coefficients for nine SDG indicators ranged between 0.45 to 0.78 and were statistically significant. Travel time to urban centers in Kenya is heterogeneous. Therefore, marginalized populations should be prioritized during resource allocation and policies should be formulated to enhance equitable access to public services and opportunities in urban areas and especially policies that will improve access of motorcycles

2.3.6 Road Safety and Compliance Training and Performance of Wholesale and Retail Sector

Luchidio (2015) conducted an assessment of the training and safety status of motorcycle transportation in Kakamega County in Kenya. The objective of the study was to assess the training and safety levels of the motorcycle transportation in Kakamega County. The study found that the majority of the boda boda operators were operating without valid licenses; only 35.6% of the operators were licensed; contrary to the Kenyan Traffic Act which requires each operator to have a valid license. The study indicated that 51% of the operators were trained in motorcycle riding through apprenticeship; 33% through driving school and 16% through self-training.

The inferential statistics in Luchidio's study showed that there was significant statistical relationship between the number of years in operation of the boda boda and involvement in an accident ($\chi 2= 3.299$, df= 3, $p < 0.05$). The results also showed that there was significant statistical difference between the licensed boda boda operators who had an accident ($\chi 2= 1.172.$; df = 1 $p < 0.05$). Licensed operators who had undergone training in the driving school were aware of the risks and hazards involved

while riding the boda boda hence observed road safety measures. Operators who did not have safety training but were involved in accidents constituted 53% compared to 47% who had gone through training. Those who had undergone through safety training and had got accidents ($\chi 2=4.744$, df=1, $p<0.05$) was significant. The results also indicated that most accidents involving boda boda riders were as a result of nonexistent road safety measures and lack of training. The study has demonstrated that there is a gap in training and awareness on boda boda safety measures hence an urgent need to implement training and awareness programmes to improve the knowledge, perceptions and practices of boda boda operators in Kakamega County.

A study by Odera (2009) indicated that accidents involving motorcycles were on the increase in Naivasha and its environs mainly due to lack of proper training among riders, over-speeding and overloading. Odera further cited limited research on motorcycle injuries as one impediment in addressing the issue hence the need for this study. A research by Lutomia and Khanbhai (2012) indicated that injuries related to motorcycles contribute significantly to the number of road traffic injuries. The study determined the pattern of injuries sustained after the motorcycle crash among patients that were examined at Kakamega Provincial General Hospital.

In most sub-Saharan countries, concerns about motorcycle taxis accidents and safety are rising. Motorcycle taxis can be dangerous, especially for motorcycle taxis that stop, drive, and service sidewalks and pedestrians (Pongprasert & Kubota, 2017). Motorcycles in Kenya, for instance, accounted for nearly 14% of the fatalities in 2018 (KNPS, 2018), with riders of motorizedmotorised two- and three-wheelers accounting for 24% of total fatalities from road accidents (WHO, 2018). The law permits only one

driver and one passenger in specific countries: in others, only two or three (Bishop & Amos, 2015). Motorcycle taxis, despite strict adherence in the urban area, avoid only the nearby towns (Starkey, 2016a). Four or five passengers can be seen on one motorcycle taxis in rural areas, exceeding legal limits for motorcyclists (Starkey, 2016b). Rural people also use motorcycle taxis to transport their fundamental needs, such as food, water, clothes, and medicines. These range from everyday items, including foodstuffs and boxes, to unusual items, such as furniture (Ng & Yi, 2016), coffins, and human corpses (Ayanwuyi, 2013). Sometimes the MTs transport quantities of goods strapped on MT are more massive than their capacity (Jenkins & Peters, 2016). Cases of riders loading passengers, livestock, and food bags (sometimes all of them at once) on the back of their motorcycle (Carayannis & Pangburn, 2020) compromises the safety.

Starkey (2016) investigated the benefits and challenges of increasing motorcycle use for rural access. In many countries in Africa, Asia and Latin America, most vehicles on low- volume rural roads are now motorcycles. In ten years, motorcycles in Tanzania increased from under 10,000 to 800,000. In Cameroun, Ghana, Kenya, Nigeria, Rwanda, Sierra Leone and Tanzania motorcycle taxi services have developed and spread rapidly, often becoming an essential part of rural living. Motorcycle taxis operate in the informal private sector. Their spontaneous spread has had little regulatory control. They provide many benefits. Travelling on tracks and footpaths, motorcycle taxis effectively extend the reach of roads as villagers can request the motorcycle taxis using mobile phones. Where there is no alternative means of transport, even pregnant women and sick people praise the access provided by motorcycle taxis.

On some rural roads, 70-80% or more of the annual passenger transport and goods transport is now provided by motorcycle taxis. However, this is expensive, as the cost per passenger-kilometre and per tonne-kilometre of motorcycle services is much higher than the cost of 'conventional' transport (buses, minibuses, and light trucks). Motorcycle taxis provide employment, and their profitable operation allows private financing. Regulatory frameworks and enforcement are often weak. Many motorcycles operate without regulatory or fiscal compliance and may carry excessive loads. Road traffic injuries are high, often due to poor driver behaviour. Few driver training services exist. Poor regulatory compliance fuels petty corruption. Motorcycle operator associations can improve standards and safety through self- regulation. There is a need for research and greater understanding of appropriate ways to effectively regulate (and self-regulate) motorcycle operators for improved safety and ensuring the benefits of improved access are shared by all rural people.

2.4 Conceptual Framework

According to Mugenda and Mugenda (2003) a conceptual framework is model that gives an in-depth explanation on connection between the independent and dependent variables. The purpose of a conceptual framework is to assist the readers to quickly see the proposed relationship between independent and dependent variables (Membo,

2011).

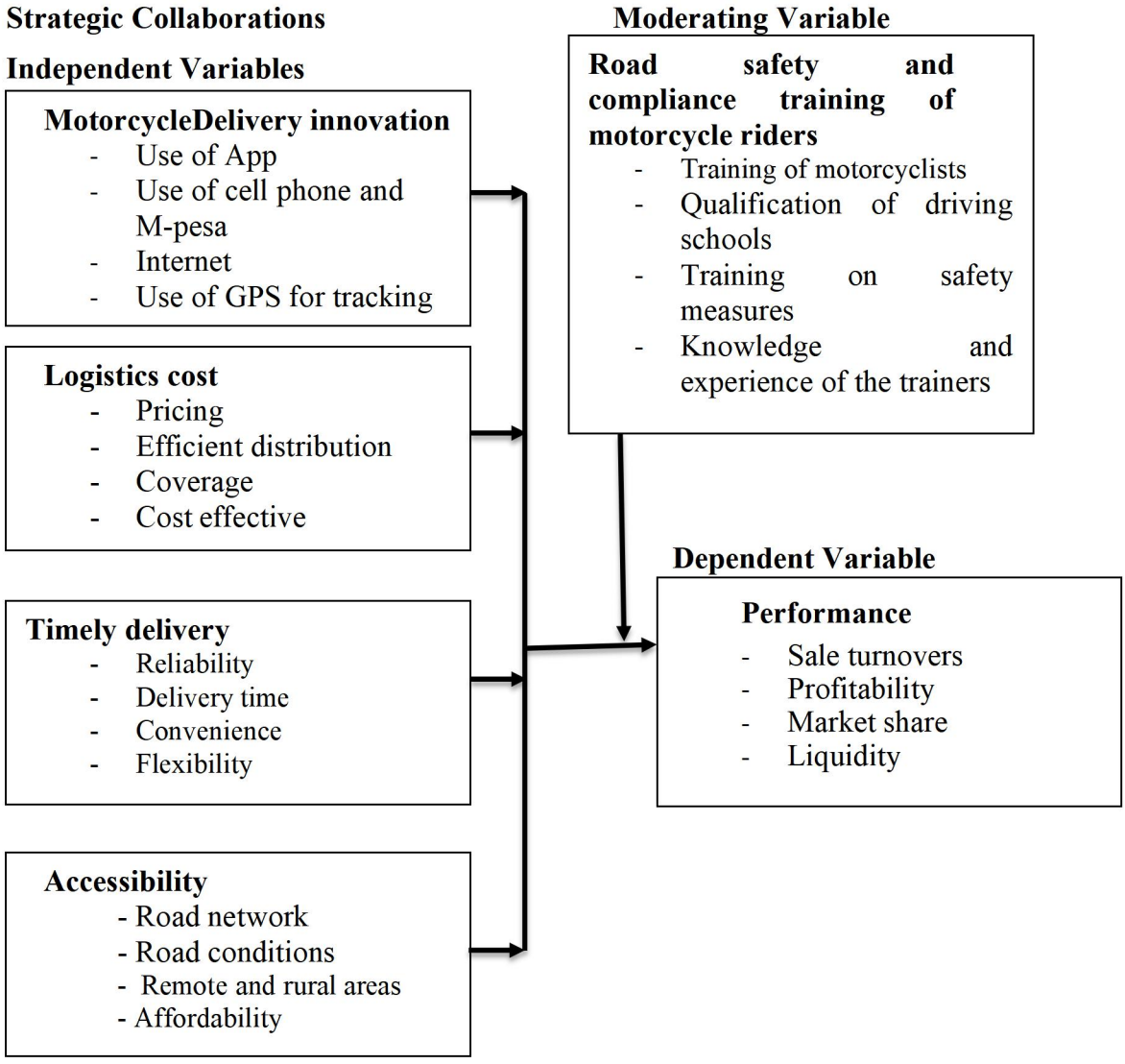


Figure 2.2: Conceptual Framework

Source: Author (2019)

2.4.1 Delivery Innovation and Performance

Wholesalers and retailers are faced with a challenge of increasing delivery cost and delayed deliveries while using the conventional delivery channels. To mitigate this, the

use of motorcycles is turning to be a solution. The wholesalers and retailers are embracing the use of motorcycles especially those who have adopted new technologies. Motorcycles that can be accessed through mobile apps, can be located through GPS, whose riders are techno savvy and accepts mobile payments are coming in hardy (Boyer et al., 2009). It is expected that, use of the motorcycle would increase efficiency in goods delivery and at a cheaper cost. This will in the long run have satisfied customers and the retail business will grow.

2.4.2 Logistics costs and Performance

The use of motorcycle is helping the retailers minimize logistics costs. To start with, the fuel consumption of the motorcycles and other maintenance costs are lower for motorcycles. Use of motorcycle has seen retailers getting products from manufacturers are delivering them directly to the consumers and thus avoiding inventory and other warehousing costs. This will leave the management with ample time for strategic focus of the enterprises.

2.4.3 Timely Delivery and Growth

Motorcycles have an advantage over the conventional vehicles as they can access areas that cannot be accessed by other vehicles and on time. During the traffic snarl-up, motorcycles are always able to maneuver and deliver the products to the customers. The motorcycles thus are very critical as support to the growth of retail and wholesale business. The wholesalers and retailers are turning to motorcycles in order to reach their far-flung customers. The motorcycles have also been found to be very useful during the covid-19 when there was restriction of movement (Nyaboga, Marwa &

Kabata, 2015). For the business to remain relevant and grow at the period of high competition and where the customers' needs the goods delivered as soon as practicable, the use of motorcycles is turning out to be the option.

2.4.4 Motorcycles Accessibility to the Market

Transport infrastructure and services are critical components of economic and social development since they enable the smooth flow of people and goods to facilitate trade and social cohesion. Given the vital role of transportation in economic and social development, all the nations worldwide invest in transport infrastructure and undertake interventions to strengthen transport service systems (Afolabi & Gbadamosi, 2017). One such response designed to enhance transport service systems was the zero-rating of motorcycles in the early years of the 21st Century by most countries in Africa, including Kenya. However, public transportation networks in developing nations are still inadequate and poorly designed (Guillen & Ishida 2013), resulting in the increasing popularity of commercial motorcycles for transport in rural and urban areas (Ackaah & Afukaar et al., 2019). Motorcycles accessibility to market refer to ease of access of motorcycles services, ease of maneuverability of motorcycles even in rough roads, ability to reach more customers has had a positive influence of our customer base, Motorcycles helps us reach more customers due to their ease of access to remote areas, Motorcycles have helped reach bigger customer base (Telma, 2020).

2.4.5 Road Safety and Compliance Training

Transport connectivity on service strategic collaborations plays a key role for the growth and economic development for the manufacturers, wholesalers, and retails

sector. In this study it refers to motorcyclist undergoing official training and having a valid driving license, outsourcing of qualified motorcyclists, participating in safety and security, ethical riding, motorcyclist have compliance documents such as protective clothes, helmet and reflective clothes and compliance of commercial motorcycles with overloading and over-speeding regulations (Connor & Loo, 2016).

2.4.6 Performance of the Wholesale and retail Sector

Is the recording of financial and non-financial improvements within organizations that deal with the management of the flow of goods between two points? In this study, it is measured in terms of quality of service, market share, profitability, and sales volume. The increase in the number of employees, branches, market share, sales, and profits of an SME business (Asogwa & Dim, 2016).

2.5 Research Gap

From the empirical literature review, it has been noted that, research has been done on the contribution of motorcycle to the economy. To start with Dynamex (2012), Kosmo, Webvan, Sameday and Urbanfetch (2018) and Nemoto et al., (2019) studied motorcycle innovation and growth. The studies noted that, there was a relationship between innovation and business growth. Abbasi, (2013); Aro-Gordon, (2016). On the other hand studied logistic costs and strategic growth of business. These studies noted a relationship between logistics and strategic business growth.

On timely delivery of motorcycles several scholars which included Kureya et al., (2020), WHO, (2018), Gamberini (2014). These studies found that, there was a

relationship between timeliness of delivery and growth of business. However, these studies did not focus on the contribution of motorcycle strategic collaboration on the performance of retail and wholesale business. This is a gap that this study intended to fill. This study filled this gap by finding out the contribution of the motorcycle solutions during the pandemic.

CHAPTER THREE

RESEARCH METHODOLOGY

According to Liwin (2005), methodology refers to the choices that we make about cases we want to study, methods of data gathering and other forms of data analysis which links methodology to rules followed in carrying out an inquiry. This component of methodology consists of the research design, target population, sample size and sampling procedures. It also gives a description of research instruments, piloting, validity, instrument reliability, data collection procedures, data analysis techniques. This chapter also elaborated on how ethical considerations were dealt with in the study.

3.1 Research Philosophy

Research philosophy relates to the development of knowledge and the nature of that knowledge, and contains important assumptions about the way in which researchers view the world (Saunders, Lewis & Thornhill, 2009). There are two extreme philosophical views regarding knowledge and reality. These are Positivism, sometimes referred to as deduction research and Phenomenology, also known as induction research. This study adopted a positivist paradigm which was also called the scientific paradigm. Under the positivistic philosophical approach, the study set up the hypotheses on the basis of the existing relevant theories. Then the hypotheses were tested and confirmed or disapproved by quantitative and statistical methods in order to answer the research questions and accomplish the research objectives. Remenyi et al., (2005) claimed the final result of such research can be applicable through the positivist approach.

The principles of positivism are observable social reality which preferred to be studied and only observable phenomena produce credible data (Saunders et al., 2009; Remenyi, et al., 2005). Under positivism, the role of research is to test theories and to provide material for the development of laws. The research should be conducted in a way that is value free-in and objective (Saunders, et al., 2009). The researcher is independent and should neither affect nor be affected by the subject of research. The end product of research is aimed to be law, like generalizations similar to those that are produced by natural scientists, and positivism emphasizes quantifiable observations that are used for statistical analysis (Remenyi, et al., 2005).

This study employed a positivism paradigm which adheres to the view that only factual knowledge gained through observation (the senses), including measurement, is trustworthy. In positivism studies, the role of the researcher is limited to data collection and interpretation in an objective way. Positivism depends on quantifiable observations that lead to statistical analyses. It has been noted that as a philosophy, positivism is in accordance with the empiricist view that knowledge stems from human experience. It has an ontological view of the world as comprising discrete, observable elements and events that interact in an observable, determined and regular manner (Remenyi, et al., 2005).

3.2 Research Design

A research design is the plan for selecting the sources and types of information to be used to answer the research question. A research design assists the researcher to establish whether there exists a significant association between the variables at a

particular point in time. A research design can be descriptive, exploratory or explanatory, and involves advanced statistical analyses (Mugenda & Mugenda, 2003). The goal of descriptive research is to describe or define a particular phenomenon or pattern as it is. Descriptive design deals with what, how and who of a phenomenon, but does not ask the "why" questions. Exploratory research design seeks to investigate areas that have not been previously studied, or to investigate a problem that is not clearly defined. This study adopted descriptive research design and quantitative method was applied.

A descriptive research design seeks to describe a phenomenon or pattern as it is, while the correlational research is a type of non-experimental research in which the researcher is interested in the relationship between variables without influencing the variables (Sheppard et al., 2023). The research design adopted was helpful in answering the research questions and more specific got to understand the strategic contribution of motorcycle industry on performance of wholesale and retail sector in Kenya. Thus, this study matches the research design provided for by the above authors and was of great importance since it helped to analyze the contribution of motorcycle industry strategic collaborations on performance of the wholesale and retail sector in Kenya. This kind of research, therefore, aimed at establishing the contribution of strategic collaboration of motorcycle industry on the performance of wholesale and retail sector in Kenya.

3.3 Target Population

According to Oso and Onen (2005), target population consists of the complete set of

components that share some common characteristics and from which a sample can be obtained. Ott and Longnecker (2015) describes a target population as the total group of individuals that the research undertaking intends to collect data on and draw conclusions from. Target population is a particular group of people that is identified as the recipient for the set for the purpose of the study or a set of elements having a trait of concern that are being investigated (Mugenda & Mugenda,2003; Kombo and Tromp, 2006). Target population is the accessible population within the area of study and which the researcher intends to study.

In this research, the population of interest was all the retail and wholesale businesses in Kenya, which employ commercial motorcycles for their last mile delivery of goods. The target population was retailers and wholesalers in the Counties which are 17,000 in the 47 Counties (KNBS, 2019). However due to the expanse and the spread of wholesale and retailers across all the 47 counties and the tremendous resources and time implications, the study targeted wholesale and retail businesses in 10% of the counties which translates to 5 Counties. Mugenda and Mugenda (2003) assert that 10% to 30% of the entire population is enough representatives for a survey. The unit of analysis was all the wholesale and retail businesses in the five Counties namely; Mandera, Nyandarua, Uasin Gishu. Bomet and Nairobi, while the unit of observation was the business owners and managers in the wholesale and retail sector. This target population helped the researcher to assess the level of efficiency of contribution of motorcycle industry strategic collaboration on the performance of wholesale and retail sectors in Kenya. The choice of this population was due to the critical role it plays to the economy in terms of GDP, employment creation and taxation to government

(KNBS, 2020).

Table 3.1: Target Population

County	Wholesale	Retails
Nairobi	2409	3613
Uasin Gishu County	893	1421
Nyandarua County	118	389
Bomet County	101	229
Mandera County	54	119
Total	**3575**	**5771**

Source: KNBS, 2020

3.4 Sample Size and Sampling Procedures

Sample is a smaller group obtained from the accessible population in which each member in the sample is referred to as subject, respondent, or interviewee hence an important feature of any empirical study in which the goal is to make inferences about a population from a sample in practice (Mugenda & Mugenda, 2003). Buglear (2003) described a sample as a subset of the population; it is a smaller number of items picked from the population. Lavrakas (2008) described a sample as a subset of elements drawn from a larger population. Kombo and Tromp (2006) described a sample as a collection of units chosen from the universe to represent it. Gerstman (2003) indicated that a sample is needed because a study that is not precise due to large number of respondents lacks the power to reject a false null hypothesis and it may be a waste of time and money.

Kothari (2004) describes sampling design as an explicit plan for obtaining a sample from the population. It is the technique of the procedure that a researcher would use in

selecting sample units from a population (Kothari, 2004). Sampling is a statistical method of obtaining representative data from a group hence a process used in statistical analysis in which a predetermined number of observations was taken from a larger population (Scott & Wild, 1986). According to Blumberg, Cooper and Schindler (2003) sampling plan is a tool used to describe sampling unit, sampling frame, sampling procedures and sample size and the list of all population units from which the sample was selected. To identify the number of counties to be included in the study, the study considered the counties as clusters where respondents were drawn from. From the counties, a sample size of 10% of all counties was selected. This is according to Mugenda and Mugenda (2003) who argue that a sample of 1-10% of the target population is appropriate for scientific studies. After determining the number of counties, a systematic sampling technique was employed in which every 9th county based on their county code was selected to participate in the study. The counties that were involved in the study were Mandera, Nyandarua, Uasin Gishu. Bomet and Nairobi Counties. The sample size with be determined by use of Krejice Morgan table that gives a sample size of 383 as shown in Appendix I.

Table 3.2: Sample size

County	Wholesale	Retails	Sample size
Nairobi	2409	3613	246
Uasin Gishu County	893	1421	95
Nyandarua County	118	389	21
Bomet County	101	229	14
Mandera County	54	119	7
Total	3575	5771	383

Source: KNBS, 2020

The sample size established by the use of the Krejie table in Appendix I has been found

to be representative of studies and the same can be generalized (Krejice Morgan, 1970). Other scholars who used this table to determine the sample size and considered the sample size representative included Gawlik et al., (2016). The researchers believed that by using the table, the sample size was a representative of the population.

3.5 Data Collection Instruments

Creswell (2013) defines data collection as a means by which information is obtained from the selected subjects of an investigation. The study employed questionnaire and secondary data sheet as data collection instruments. The primary data for analyses was obtained from the respondents using questionnaires. Data was collected from the primary sources using structured questionnaires. The method is chosen owing to its considerable s in administration, easy data system collection and accumulation of data.

3.5.1 Questionnaires

Saunders et al., (2009) postulates that questionnaires are appropriate when doing descriptive research. Self-administered structured print questionnaires were used because they minimize response variation, allow for collection of quantitative data and increased response rate. Mugenda and Mugenda (2003) suggest that structured questionnaires are appropriate when collecting data from large sample while Blumberg et al., (2001) argue that data collected using questionnaire is easy to analyze. The questionnaire was designed as per the specific research objectives and in line with literature review. Two sets of questionnaires were developed; one set of questionnaires for Retailers and another one for Wholesales to obtain as much information from the respondents as possible. The questionnaires were tailored to each category of the

respondents. The questionnaires contained both close-ended and open-ended questions. A questionnaire with open- ended and closed- ended questions allows every possible question to have a response (Grove, Burns & Gray, 2005). Close-ended questions provide data that is easy to compute and analyze whereas open-ended questions permit a greater depth of responses for qualitative data. Questionnaires are preferred because they are more objective hence the responses gathered are standardized in some way. Hughes (1994) argued that standardized questions make measurement more precise by enforcing uniform definitions upon the participant because questionnaires are used to ask people about their experiences, behaviors or attitudes which was very relevant and applicable to the current study.

3.5.2 Secondary data

Secondary data was collected by use of a data collection sheet. Secondary data is a published or unpublished data which has been gathered and scrutinized by someone else. Secondary data has to be scrutinized further by the researcher so as to make it suitable and adequate in the context of the problem the researcher is studying (Mugenda,& Mugenda, 2003) . Secondary data was obtained from the library which involved reading written sources which included books, dissertations, journals, periodicals, seminar papers, public documents, bulletins, and official records. Texts and scholarly works related to the area of study consulted.

3.6 Pilot Survey

Blumberg et al., (2014) indicated that a pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability

sample. Saunder, Lewis and Thornhill, (2007) indicate that the purpose of a pilot study is to establish the accuracy and appropriateness of research design and instruments for data collection. Pilot testing is necessary for testing the reliability and validity of the research instruments and the viability of the study. A sample of 10% of the sample size of the study is considered adequate (Saunder, Lewis & Thornhill, 2007). This study therefore carried a pilot study on 38 respondents from Kiambu County, but they were not included in the final study. The choice of carrying the pilot study in Kiambu County was to ensure that the characteristics of the participants in the pilot are the same as those who participated in the final study. The wholesale and retail trade activities in Kiambu County are enmeshed in a wide range including but not limited to agricultural sector, business enterprises, fabrication, manufacturing, micro financing, cyber cafés among others conducting their businesses locally and internationally. The firms operate in varying markets, in the urban, rural, local, national, regional and international settings. They exemplify different levels of skills, capital, sophistication and growth orientation, and operate in the formal or the informal economy.

3.6.1 Validity of the Data Collection Instruments

Validity is the accuracy and meaningfulness of inferences which are based on the research results, hence the degree to which results obtained from the analysis of the data represent the phenomenon under study. It is the extent to which a research instrument measures what it is expected to measure (Creswell, 2013; Mugenda and Mugenda, 2003). Validity is the degrees to which variances originate with a calculating gadget reflect true differences among those being tested (Kothari 2004). Testing the validity of research instruments is considered important because it helps in ensuring

that the items measure the required constructs.

Validity is described as the degree to which the research findings accurately reflect the phenomena under study (Vosloo, 2014). The content validity was achieved by ensuring relevance of the research results with theoretical approaches and literature reviews (Du Plooy, 2002). To ensure face validity, the researcher read and analyzed the questionnaire to ensure it is making sense (Saunders et al., 2000). Validity was also achieved through a pilot study and Training of the research assistants on administration of questionnaires used in data collection. Careful sampling of items was also done, thus ensuring their representativeness.

The study sought content and face validity to measure the correctness, importance, appeal and appearance of the tools for data collection. Validity of a data assortment tool is the accomplishment of a gauge in gauging what it sets out to measure so that the differences in individual scores can be taken as representing true differences on the characteristics under study (Koul, 1992) while content validity refers to the independent arrangement among specialists that a gauge reasonably performs to replicate accurateness in what it purports to quantify (Kothari, 2004). Face to face validity was sought by reading the research items in the questionnaire to establish that they were gauging what they were envisioned to measure.

3.6.2 Reliability of Research Instrument results

Reliability is the extent to which research instruments come up with consistent results. Reliability can be external or internal where internal reliability is the extent to which data collection, analysis and interpretation are consistent, and if multiple data

collection is used, they should agree. On the other hand, external reliability is the extent to which the results can be replicated. In this study, the questionnaire's reliability was statistically established by measuring the internal consistency. In turn, internal consistency was measured using Cronbach's Alpha (α) Greener (2008).

Testing reliability of research instruments helps in checking for internal consistency of scores obtained by a research instrument. Reliability of a research instrument is the consistency of scores obtained and has two aspects: stability and equivalence. Reliability then is said to be achieved if it gives consistent results with repeated measurements of the same object with the same instrument. Equivalency is the measure of how much error gets introduced by different investigators or different samples of the items being studied. Researchers have various optional methods available to obtain reliability of research instruments. In this study, the test-retest method was also used. The method involves administering the same test twice to the same group after a certain time interval since the previous test (Blumberg et al., 2003). However, in the current study the dominant choice is, Cronbach's Alpha (α) model which is;

i^2 = var*iance associated with i*

σ^2 = var*iance associated with the observed total scores*

A time lapse of two weeks was allowed between the first and the second administration of the research instruments while testing for reliability of the research instruments. To measure the reliability coefficient of the research instruments, Cronbach's Alpha Reliability Coefficient was obtained for all the variables in the study. Like the

probability range, Cronbach's Alpha Reliability Coefficients range between zero and one. A coefficient of zero implies the tool has no internal consistency while that of one implies complete internal consistency. Creswell (2013) indicates that a reliable research instrument should have a complete Cronbach Alpha Reliability Coefficient of at least 0.7 for all items under study; where Alpha < 0.7, the research instruments was revised before going for field work to acceptable levels.

Table 3.3: Integrating alpha

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

The study ensured that there was no inaccurate coding and ambiguous instructions by using a research process that minimizes the random error, examining and appraising the questionnaire critically to enhance the reliability of the instrument. The summary results show that all the variables had a Cronbach Alpha coefficients of above 0.70 hence no modification of the items was undertaken. The measures of all the variables were considered reliable for the analysis and generalization of the results on the study population as shown in Table 3.4.

Table 3.4: Reliability Test Results

Variable	**Cronbach's Alpha**	**Number of Items**	**Conclusion**

Delivery Innovation solutions	0.754	9	Reliable
Logistic cost	0.787	11	Reliable
Timeliness	0.879	8	Reliable
Accessibility of commercial motorcycles	0.741	8	Reliable
Road safety and compliance training	0.766	9	Reliable

3.6.3 Correlation Analysis

In using correlation method of analysis, various independent and dependent variables were ascertained for example, whether there is growth in wholesale and retail sector growth in Kenya as outlined in vision 2030. Correlation analysis is the traditional method in statistics which is quick and easy to apply and is widely employed (Castle & Engberg, 1982).

An index number for each strategy is to be drawn for example, sales and service strategic collaboration and compute strength of the association between sales and service delivery solutions which is the correlation coefficient “r”. Fitting a line to many different sets of sales and service delivery solutions in all the randomly chosen wholesale and retails was to give results which hold under a wide range of conditions of observation that lead to the law-like relationship of science. This was done by a computer programme using SPSS version 23. The data was classified in each area to cover various questionnaires for different clusters of the population as indicated which are wholesales and retails.

Additional information and analysis was necessary before making the final decision

which involved multiple matrices by use of SPSS version 23 to include various strategic contributions of motorcycle industry delivery solutions on wholesale and retail sector growth in Kenya.

3.7 Data Collection Procedure

Data collection procedure involves the strategy used in gathering information from the respondents for analysis by use of data collection instruments. It assists in ensuring that the data collection instruments are applied correctly and efficiently so as to tackle issues affecting data collection process negatively (Sekaran & Bougie, 2011). In each county simple random sampling technique was employed to select representative sample. Simple random sampling technique was used to ensure that all the wholesalers and retailers representatives were given an equal chance of participating in the study.

The researcher sought an introductory letter from the Karatina University. The introduction letter was used to apply for a research permit from The National Council for Science, Technology, and Innovation (NACOSTI). Notification letters were thereafter sent to the County and Sub County education officers. Before administration of the research instruments, it was important for all research assistants to be thoroughly trained on research ethics; made to understand the instructions and content of the instruments; instructed to take all measurements in the most consistent manner across all respondents; and record and compile data accurately.

The study data using structured questionnaires administered by trained research assistants. A checklist was used to monitor the dispatch and return of questionnaires. The questionnaires were administered through a drop and pick approach. This method

is deemed useful because it gives the respondents ample time to respond to the questions. Structured questionnaires were used because they save time, money and facilitate easy analysis.

3.8 Data Analysis Techniques

According to Kombo and Tromp (2006), data analysis involves examining the coded data critically and making inferences. Data analysis involves examining what has been collected and making deductions and inferences hence a process which involves uncovering underlying structures, extracting important variables, detecting any anomalies and testing any underlying assumptions. After data collection, the researcher cross checked to ascertain that all the questionnaires are duly completed.

Then the data on the questionnaires was serialized, coded, and entered Statistical Package for Social Sciences (SPSS) version 23 sheet for analysis purposes. Data from the questionnaires was analyzed in the following process; first, data collected was inspected thoroughly for its completeness, to identify mistakes such as inappropriately answered questions and wrongly spelt words. Second, after correction of mistakes, the data was sorted into various categories such as retail and wholesale. Third, the data was coded, processed, analyzed, and tabulated in the form of graphs, tables, and pie charts by SPSS. Using thematic content analysis, qualitative data was categorized into themes and sub-themes for easier analysis. Guided by the objectives of this study, the data was analyzed to verify the relationship on the contribution of motorcycles strategic collaboration on performance of wholesale and retail sector growth in Kenya.

This study used mixed methods data analysis techniques which incorporates both

qualitative and quantitative data analysis. The study also used both descriptive statistics and inferential statistics to analyse quantitative data. Descriptive statistics was used to summarize both the primary and secondary data for the purposes of enabling meaningful interpretation and description. Descriptive statistical analysis is considered suitable because it limits generalization to the group of individuals observed. The descriptive analysis techniques that were used in this study are percentages, means, overall mean and standard deviation. Standard deviation (SD) provides an indication of how far the individual responds to a question, vary or deviate from the mean. Likert item mean and overall mean was analyzed despite the ordinal nature of Likert items. Inferential statistics included the regression and Pearson correlation. The study employed linear regression analysis to test the research hypothesis.

3.8.1 Diagnostic Tests

Some econometric issues have the potential to render the findings of regression biased and spurious unless they are discovered and dealt with as a result. Different assumptions are tested to diagnose these prospective econometric issues and ultimately needed steps are taken to fix them. Typically, when identified or suspected, there are various methods to deal with econometric issues. While all hypotheses are anticipated to have the same prospective econometric issues due to the comparable nature of the regression processes in this research. A general discussion on significant econometric problems was addressed in this study for simplicity and brevity.

3.8.1.1 Multicollinearity

Multicollinearity happens when there is a similarity in the relative movement of two or

more independent variables. In this, it becomes impossible to differentiate between variables by standard OLS estimates. Since many other independent variables in this research can be suspected of multicollinearity, Variance Inflation Factors (VIF) was assessed to examine the amount of correlation between variables after each normal OLS regression. If V if is around 1, there is no multicollinearity but if it is around 5, there is the presence of multicollinearity. One of the solutions to this problem is that if there are two or more factors with a high VIF, the variable causing multicollinearity was removed from the model.

3.8.1.2 Heteroscedasticity

Heteroscedasticity happens when the regression residuals are heteroskedastic. That is, for all observations, the residual variance is not constant. In such a situation, minimum variance is no longer produced by the standard OLS estimators. The coefficients ' standard error provides erroneous estimates. The estimated parameters can stay coherent but inefficient in the presence of heteroscedasticity. A scatterplot of residuals versus predicted values was used to check for homoscedasticity. If there is a cone-shaped pattern it is understood that the data is heteroscedastic. The solution to heteroscedasticity is to use modified standard error by using robust options.

3.8.1.3 Normality Test

In addition, the research performed a normality test was taken from the Jarque-Bera test, as proposed by Jarque and Bera (1987) for omnibus testing, skewing and kurtosis. Jarque-Bera statistics follow the two-degree distribution of chi-squares. Under the theory of normality null, the expected value of the stats is two. A normal distribution

has a skew of zero (i.e., the mean is entirely symmetrical) and a kurtosis of three; it provides an idea of how high the distribution is and how much information is in the tails. If the data set is not normally distributed, the box plots technique was used to determine the presence of outliers for individual variables. Therefore, all prospective far outliers are eliminated in order to achieve a comparatively normal distributed information set. The goodness of fit test is used to test Normality, the study specifically used the Kolmogorov- Smirnov test.

3.8.2 Regression Analysis

Regression analysis was used to show the relationship between variables i.e. to ascertain the causal effect of one variable upon another. Multiple regression technique was used when there was new set of data with several variables, and one was considered as important. The study the influence of motorcycle solutions to the growth of retail and wholesale business. Growth was measured in Sale turnovers, Profitability, Market share and Liquidity

Regression analysis was used to show the relationship between variables i.e., to ascertain the causal effect of one variable upon another. The regression was calculated using the basic regression model

General Model

The first model illustrates the single effect of Delivery Innovation on the performance of retail and wholesale business in Kenya.

$Yit = \beta 0 + \beta 1X1it + Ɛ$ ……. (i)

Y**it** = Performance

β0 = Intercept

X1 = Delivery Innovation

β1 = Regression Coefficient

Ɛ = error term.

The second model illustrates the single effect of Logistics Cost on the performance of retail and wholesale business in Kenya.

Yit = β0 + β2X2it + Ɛ ……. (ii)

Y**it** = Performance

β0 = Intercept

X2= Logistic Cost

β2 = Regression Coefficient

Ɛ = error term.

The third model illustrates the single effect of Timeliness on the performance of retail and wholesale business in Kenya.

Yit = β0 + β3X3it + Ɛ ……. (iii)

Y**it** = Performance

$\beta 0$ = Intercept

X3= Timelines

$\beta 3$ = Regression Coefficient

Ɛ = error term.

The fourth model illustrates the single effect of Accessibility on the performance of retail and wholesale business in Kenya.

Yit = $\beta 0$ + $\beta 4X4it$ + ………………………………………………………………......(iv)

Y**it** = Performance

$\beta 0$ = Intercept

X4= Accessibility

$\beta 3$ = Regression Coefficient

Ɛ = error term.

The fifth model tests the combined effect of motorcycle solutions on the performance of retail and wholesale business in Kenya.

Yit = $\beta 0 + \beta 1X1it + \beta 2X2it + \beta 3X3it + \beta 4X4it$ + Ɛ……………………………………(v)

Y**it** = Performance

$\beta 0$ = Intercept

$X1$ = Delivery Innovation

$X2$=Logistic Cost

$X3$= Timeliness

$X4$= Accessibility

$\beta 1 - \beta 4$ = Regression Coefficients

ε = error term.

Moderation Function

To facilitate the application of the joint effect regression model, weighted averages of the three independent variables were computed using the following equation:

$MS = \sum (W_1X_1+W_2X_2+W_3X_3+W_4X_4)/4$.. (vi)

Where

MS= Composite index of delivery innovation, logistic cost, timeliness and accessibility to the markets

W_1, W_2, W_3, W_4= Relative weight given to each component in a particular variable

/= Division

$Yit = \beta 0 + \beta 4MS4it + \varepsilon$……………………………………………………………….

(vii)

Y**it** = Performance

β0 = Intercept

MS= Motorcyclist Solutions

β3 = Regression Coefficient

Ɛ = error term.

The eighth model illustrates moderation function with an interaction variable. It demonstrates how Motorcyclist Training moderates the effect of Motorcycle Solutions as a whole on performance.

$$Yit = \beta 0 + \beta 1MSit + \beta 2MTit + \beta 3\ MS*MTit + Ɛ$$

……..….(viii)

Where; Y**it** = Performance

MS = Motorcycle Solutions

MT = Motorcyclist Training

β0 = Intercept

Ɛ = error term.

3

3.9 Ethical Considerations

This research maintained a high level of ethics. Ethics are the morals of conduct that guide ethical selections about the conduct of researchers and their associations with others. The core intention of ethics is to make sure no harm or adverse costs are endured during any research activity (Sekaran & Bougie, 2011). The researcher requested for authority to collect data from relevant authorities before the origination of data collection. First, a letter was acquired from Karatina University, School of Business permitting the researcher to carry out the research. This offered an avenue to start collecting data essential for the study. Secondly, the researcher sought authorization from the National Commission for Science, Technology and Innovation (NACOSTI) to collect relevant data for the research. Further, an authorization was sought from all county governments under the collect data from the wholesalers and retailers in the counties. The researcher guaranteed the confidentiality and safe custody of the data gathered from the respondents and it was only utilized for academic purposes.

The respondents were informed both verbally and in the questionnaire of rights and they stand no benefits to direct incentives because of their participation in this research. The respondents were informed that they are at liberty to answer questions fully or partly and that confidentiality of their identity was guaranteed. Respondents were given the opportunity to express themselves in relation to the study to ensure that all valuable information that they possessed, and which was helpful to this study was incorporated.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents analysis of the findings of the study as set out in the research objectives and research methodology. The results presented here are organized based on research objectives of the study. The first section focused on demographic characteristics of wholesale and retail businesses in the study area. The second section focused on the descriptive statistics of specific variables of the study. The third section focused on the inferential statistics based on the research objectives. This chapter also consisted of the discussion and interpretations of the findings.

4.2. Response Rate

The study sought response from a target population of 17,000 wholesalers and retail business owners. The number of questionnaires, administered to all the respondents, was 383. A total of 298 questionnaires were properly filled and returned from the wholesale and retail business owners in Kenya. This represented an overall successful response rate of 77.8%. According to Kothari (2004), a response rate of 50% or more is adequate. Babbie (2004) also asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. Thus, the response rate was adequate for further analysis.

Table 4.1 Overall Response Rate

Response Rate	Frequency	Percent
Returned	298	77.8%
Unreturned	85	22.2%
Total	383	100%

4.3 Demographic Characteristics

This section describes the general demographic characteristic of the respondents who participated in the study. The study sought to find out the background information of business owners and their businesses such as length of operation of the business, age group of the owners, gender and educational level. The findings are presented in Table 4.2.

Table 4.2: Demographic Information of the Respondents

Variable	Value	Frequency	Percent
Length of operation	Less than 2 years	48	16.1
	3 to 5 years	92	30.9
	6 to 10 years	131	43.9
	Over10 years	27	9.1
	Total	298	100
Age group	18- 30 years	11	3.7
	21-30 years	14	4.6
	31-40 years	75	25.2
	41-50 years	113	37.9
	51-60 years	38	12.8
	61 and above	47	15.8
	Total	298	100
Gender	Male	155	52
	Female	143	48
	Total	298	100
Educational level	Technical	73	24.5
	Diploma	122	40.9
	Degree	92	30.9
	Postgraduate	11	3.7
	Total	298	100

The respondents were asked to indicate the period their businesses have been in operation since inception. Table 4.2 illustrates that 43.9% of the respondents indicated that their businesses had been in operation for a period of 6-10 years, while 30.9% indicated between 3-5 years and 16.1% indicated a period less than 2 years. Only 9.1% of the respondents indicated that their businesses had been in operation for over 10 years. This means that the business owners had seen their business grow over the years

and therefore could share their experiences on running the businesses and the strategies they have employed over the years to improve their performance (Fishman & Cherry, 2015).

On age bracket, 37.9% of the respondents were aged between 41-50 years, 25.2% were between 31-40 years while 15.8% were over 61 years. In addition, 12.8% of the wholesale and retail business owners and operators were aged between 51-60 years, 4.6% were between 21-30 years and 3.7% were between 18-30 years. The findings imply that the age of respondents were well distributed across different age groups hence diversity of responses which could aid in strategic collaboration of motorcycle industry in wholesale and retail sector.

Results on Table 4.2 illustrates that 52% of the respondents were male and 48% were female. This is an indication that there are more male business owners in wholesale and retail sector with a slight margin than their female counterparts. From the results, 40.9% of the respondents had reached diploma level of education, while 30.9% had a bachelors' degree, 24.5% had a technical training certificate, and only 3.7% of the business owners had attained a postgraduate degree in their academic qualifications. The findings imply that all the respondents had high qualifications of education and thus accurate responses to the research questions. The findings imply that the respondents were well placed in the business sector and therefore would give insights on what strategies could make their businesses grow (Fishman & Cherry, 2015).

4.3 Descriptive Statistics

This section provides a report on the descriptive statistics for the study variables

namely; motorcycles delivery innovation, logistic cost, timely delivery, motorcycle accessibility to the markets, road safety and compliance training of motorcycle riders. The descriptive statistics summarize the main features of the study variables.

The respondents were asked to rate their level of agreements or disagreements with the statements in relations to study variables on a scale of 1 to 5. Where 5 represents "strongly agree" and 1 "strongly disagree". The mean provided the average response while standard deviation provided the deviation of response from the mean. The higher the standard deviation, the higher the variation of responses across the respondents. The larger the standard deviation indicated high variation of responses across the respondents. A mean of above 3.5 pointed out that majority of the respondents agreed or strongly agreed with the statement while below a mean of 3.5 indicated a disagreement with the statement.

4.3.1 Motorcycle Delivery Innovation

The first objective of the study was to examine the influence of motorcycles delivery innovation on the wholesale and retail business growth in Kenya. The respondents were asked to indicate their level of agreement with motorcycle delivery innovations using this key SA= Strongly Agree, A= Agree, N= Neutral, D=Disagree and SDA=Strongly Disagree. The findings are presented herein in Table 4.3.

Table 4.3: Responses on Motorcycle Delivery Innovation

Statement	SA	A	N	D	SDA	Mean	S. Dev
The mobile app by motorcycle service providers has enhanced business Performance	103(34.5)	177(59.4)	16(5.4)	2(0.7)	0(0)	4.27	0.62
Use of mobile money by service providers has enhanced business growth	77(25.8)	197(66.1)	22(7.4)	2(0.7)	0(0)	4.19	0.61
Internet connectivity with motorcycle has increased efficiency in our business	69(23.2)	168(56.4)	60(20.1)	1(0.3)	0(0)	4.07	0.69
Use of GPS by motorcycle service providers has seen our business thrive	49(16.4)	188(63.1)	59(19.8)	2(0.7)	0(0)	4.01	0.66
The use of Mobile App for booking motorcycles services has ensured convenience for business which has resulted into improved performance	100(33.6)	139(46.6)	57(19.1)	2(0.7)	0(0)	4.12	0.74
Booking of designated motorcycles via Mobile App has reduced risk of losses cause by theft from wholesale and retail which has improved on their performance	85(28.5)	161(54)	44(14.8)	8(2.7)	0(0)	4.16	0.73
Motorcycles delivery are fast in delivery of products from retailer and wholesalers which has promoted on their performance	108(36.2)	144(48.3)	43(14.4)	3(1.1)	0(0)	4.21	0.7
The fact that the customer can order a variety of items from different retailers and wholesalers at the comfort of their home has led to increased customer satisfaction which has promoted their performance	105(35.2)	121(40.6)	67(22.5)	5(1.7)	0(0)	4.13	0.79
The ability of the motorcycles to access remote areas which has no proper road network has made them more reliable for wholesalers and retails and has led to improved performance	138(46.3)	132(44.3)	24(8.1)	4(1.3)	0(0)	4.34	0.7
Mean of Means						4.17	0.69

Table 4.3 shows that 59.4% of the respondents agreed, while 34.5% strongly agreed that the mobile app by motorcycle service providers had enhanced business performance. The statement scored a mean of 4.27 which confirmed that majority of

the respondent agreed with the statement. The standard deviation of 0.62 showed that responses varied slightly from the mean score. The study sought to examine whether use of mobile money by service providers has enhanced business growth and the findings showed that 66.1% of the respondents agreed and 25.8% strongly agreed with the statement which recorded a mean score of 4.19. The study findings further revealed that 56.4% of the respondents agreed while 23.2% strongly agreed that internet connectivity with motorcycle had increased efficiency in their businesses.

In addition, the study sought to establish whether use of GPS by motorcycle service providers has seen their businesses thrive. The study findings showed that 63.1% of the respondents agreed while 16.4% strongly agreed with the statement. The statement recorded a mean response of 4.01 which was a confirmation that use of GPS by motorcycle service providers had seen their businesses thrive. Furthermore, 46.6% of the respondents agreed and 33.6% strongly agreed that the use of Mobile App for booking motorcycles services had ensured convenience for business which had resulted into improved performance. This was confirmed by a mean score of 4.12 which implies that use of Mobile App for booking motorcycles services had ensured convenience for business resulting to improved performance.

Further, the study sought to assess whether booking of designated motorcycles via Mobile App has reduced risk of losses caused by theft from wholesale and retail which has improved on their performance, the results showed that 54%, 28.5% agreed and strongly agreed, the statement had a mean of 4.16 confirming that majority of the respondents agreed. The respondents were asked to indicate whether motorcycles delivery are fast in delivery of products from retailers and wholesalers which has

promoted on their performance. The study findings established that 48.3% agreed and 36.2% strongly agreed that motorcycles delivery were fast in delivery and promoted performance of their businesses. The findings as shown by a mean of 4.13 indicated that the respondents agreed that the fact that the customer can order a variety of items from different retailers and wholesalers at the comfort of their home had led to increased customer satisfaction which has promoted their performance. The results further showed that majority (46.3% and 44.3%) strongly agreed and agreed that the ability of the motorcycles to access remote areas which has no proper road network has made them more reliable for wholesalers and retails and has led to improved performance. The findings are in tandem with those of Dynamex (2012) whose study established that companies selling goods online for home delivery currently offer several different delivery options including commercial motorcycles with a few of these retailers and delivery companies offer their customers the option of timed delivery.

The study findings revealed that the respondents agreed with the statements used to measure the use of motorcycle delivery innovations and the influence it has on performance with an average mean score of 4.17 and a standard deviation of 0.69. The findings imply that the wholesalers and retailers have embraced motorcycles delivery innovations as a solution to enhance fast, timely, effective and efficient delivery thus improved performance on their businesses. The findings were in support of Roberts (2022) study in South Africa which established that the increased need of professional delivery services due to increased online services promoted the use of motorcycles in delivery solution. The motorcycles were considered useful due to their ease of mobility

even in congested areas. Similarly, Mwangi (2021) opined that on demand delivery service made Glovo to open up a new technical center in Nairobi, to provide faster and localized rider and customer support, and in turn faster deliveries, convenience and customer experience to the users.

The study sought an explanation from the business owners on ways through which delivery of innovations can be improved. The respondents indicated that delivery innovation can be improved through new technologies like developing devices that allow for real-time display of navigation and speed, coming up with new applications that will help in identifying congestion on the roads, slow routes and availability of options for parking at the doorstep. The respondents also stated that delivery innovations can be improved by increasing the use of green transport modes such as e-bikes or cargo bikes, the need for motorcyclists to have a highly advanced system which is able to read and provide alerts in relation to traffic, obstacle, road curves and potholes among others. The respondents further opined that delivery innovations can be improved through networking with other stakeholders on matters to do with innovations of delivery, improving communications, carrying out market research to understand customers better, creating good relationship among the stakeholders, using marketing activities and good planning (Wilson & Makau, 2018).

The finding were in support of studies by Melacini et al., (2018) who had observed that there is a trade-off between the time of delivery and the price, and the unit cost per mile increases as time-in-transit decreases. For the corroboration to be successful, the stakeholders must know how to manage costs for all parties. Further, for the increase in local express delivery demands, this may bring about increased productivity and

profitability for transportation service providers.

There must be deliberate efforts to ensure that the delivery is done as per the expectation of the customer. Failure to successfully deliver goods the first time round means the last-mile provider usually incurs the expense of any subsequent delivery attempt. Higher last-mile delivery costs inherent in some residential destinations have created new players, including domestic regional carriers, local couriers, and crowd-sourced independent contractors. Some e-commerce platforms are now using technology advances to deploy in-house last-mile strategic collaborations (Gielens, Gijsbrechts, & Gyeskens, 2021).

4.3.2 Logistics Cost of Commercial Motorcycles

The second objective of the study was to investigate the influence of motorcycles logistic cost on the wholesale and retail business growth in Kenya. The study used percentages, mean and standard deviation to descriptively analyse how the respondents responded to the statements adapted to measure motorcycles logistics cost. The study findings are presented in Table 4.4.

Table 4.4: Responses on Logistics Cost of Motorcycles

Statement	SA	A	N	D	SDA	Mean	S. Dev
Motorcycles have enhanced distribution of goods to our customers	131(43.9)	146(49)	17(5.7)	4(1.4)	(0)0	4.37	0.62
Motorcycles have enhanced reaching wide range of customers	93(31.2)	167(56)	35(11.7)	3(1.1)	(0)0	4.21	0.64
Use of motorcycles has helped reduce need for storage	69(23.1)	176(59.1)	48(16.1)	5(1.7)	(0)0	4.23	0.68
Use of motorcycles has helped reduce warehousing costs	56(18.8)	207(69.5)	33(11.1)	2(0.7)	(0)0	4.09	0.63
Motorcycles have helped reduce the distribution costs	107(35.9)	153(51.3)	36(12.1)	2(0.7)	(0)0	4.23	0.69
Use of motorcycles has left the management with more time to focus on improving logistics	101(33.9)	157(52.7)	37(12.4)	3(1)	(0)0	4.24	0.68
Use of motorcycles has improved on market coverage more efficiently	139(46.6)	126(42.3)	30(10.1)	3(1)	(0)0	4.34	0.67
Use of motorcycles has reduced cost associated with congestion in busy towns and has led to reduced cost and improved performance	128(42.9)	132(44.3)	37(12.4)	1(0.4)	(0)0	4.3	0.69
Flexibility of logistic services associated by the use of motorcycles has improved the delivery time which has resulted into improved performance	152(51)	109(36.6)	33(11.1)	4(1.3)	(0)0	4.38	0.68
Outsourcing of logistics operations and services from the motorcycles association has led to improved performance of wholesalers and retailers and the result which was concluded from the research that although sustainable logistics operations	106(35.6)	147(49.3)	42(14.1)	3(1.1)	(0)0	4.21	0.71
Use of commercial motorcycles had led to sustainable logistics operations for wholesalers and retailers which has promoted their performance	118(39.6)	154(51.7)	24(8)	2(0.7)	(0)0	4.31	0.63
Mean of Means						4.26	0.67

The study sought to establish whether the motorcycles have enhanced distribution of goods to their customers. The study findings showed that 49% of the respondents agreed with the statement while 43.9% strongly agreed. The statement recorded a mean score of 4.37 which implied that majority of the respondents agreed with the statement

while standard deviation of 0.62 indicated that there was a slight variation in the responses on this statement. The study findings also revealed that motorcycles had enhanced reaching a wide range of customers as indicated by 56% and 31.2% of the respondents who agreed and strongly agreed with the statement. In addition, 59.1% of the respondents agreed that use of motorcycles had helped reduce need for storage while 23.1% strongly agreed with the statement attracting a mean score of 4.23.

The study further sought to find out whether use of motorcycles has helped reduce warehousing costs, 69.5% of the respondents agreed while 18.8% strongly agreed with the statement. The study findings showed that 51.3% of the respondents agreed while 35.9% strongly agreed that motorcycles have helped reduce the distribution costs. The results implied that use of motorcycles had helped reduce warehousing and distribution costs. In regards to whether use of motorcycles has left the management with more time to focus on improving logistics; 52.7% of the respondents agreed while 33.9% strongly agreed that use of motorcycles had left the management with more time to focus on improving logistics attracting a mean score of 4.24. The findings are in agreement with those of Umair et al., (2019) who demonstrated that factors of logistics which are inventory, lead time and transportation and logistics do affect customer satisfaction. Moreover, the results showed significant interaction of customer satisfaction with inventory, lead time, transportation and logistics.

The study further sought to establish whether use of motorcycles has improved market coverage more efficiently. The study findings pointed out that the majority of the respondents agreed as indicated by the mean score of 4.34. On whether use of motorcycles has reduced cost associated with congestion in busy towns and has led to

reduced cost and improved performance, 44.3% of the respondents agreed and 42.9% strongly agreed. The study findings further showed that the respondents agreed as shown by the mean score of 4.33 that flexibility of logistic services associated with the use of motorcycles had improved the delivery time which resulted into improved performance. Additionally, the majority (49.3%, 35.6%) of the respondents agreed that outsourcing of logistics operations and services from the motorcycles association had led to improved performance of wholesalers and retailers hence resulting to sustainable logistics operations. Finally, the study findings revealed that 51.7 of the respondents agreed that use of commercial motorcycles had led to sustainable logistics operations for wholesalers and retailers which promoted their performance. The statement recorded a mean score of 4.31 confirming that majority of the respondents agreed to the statement. Results are in support of Campbell and Salvelsberg, (2013) who asserted that businesses that are able to deliver good on time enjoy greater sales which translate to greater performance.

The findings indicated that motorcycles logistics cost influenced growth of wholesale and retail businesses in Kenya with a mean score of 4.26 and a standard deviation of 0.67. This implied that use of motorcycles by wholesalers and retailers had enhanced distribution of goods to the customers, use of motorcycles had enhanced reaching wide range of customers, use of motorcycles helped to reduce storage costs and distribution costs as well as improving the delivery time. The findings are in support of a study by Abele and Hauke (2020) which highlighted that use of cars in delivery channel had proven difficult due to more frequent home-based local deliveries which added to traffic congestion and environmental problems in urban areas. Increased congestion

affected delivery time of the products to the final customers which affected customer satisfaction. This led to emergence of motorcycles and bicycles as cheap alternative of delivery.

On the ways logistics costs can be managed better in the wholesale and retail businesses, the respondents stated that logistics costs can be managed through increasing the value of goods delivered per round-trip from the depot to customers, realizing that there is no one-size-fits-all for doorstep delivery and thus right sizing motorcyclist individual trip characteristics, create solutions that are able to meet customer expectations of rapid delivery and increased without passing this costs to customers, improving on customer relations and carrying out regular research on how to manage logistics costs (Kumar, 2011). In addition, the respondents asserted that logistics costs can be managed through lowering costs of repairs, employing more competent people, offering frequent trainings to the riders, adopting new technologies that can make delivery efficient thus lower logistical costs and ensuring that communication is effective. Further the respondents argued that logistical costs can be managed through improved customer registration, collaborative teamwork among stakeholders and carrying out marketing activities. The respondents also stated logistical costs can be managed through optimization of levels of inventory, charting networks that better, creation of better processes and improvement on third part relationships.

4.3.3 Motorcycles Timely Delivery

This section sought to find out the influence of motorcycles' timely delivery on the

growth of the wholesale and retail sector in Kenya. Results from the descriptive analysis of the statements used to gauge the impact of motorcycle timely delivery are shown in Table 4.5.

Table 4.5: Responses on Motorcycles Time Delivery

Statement	SA	A	U	D	SD	Mean	S. Dev
The shorter time taken by motorcycles has helped the business growth and performance	121(40.6)	159(53.4)	15(5)	3(1)	0(0)	4.33	0.62
The fast movement of motorcycles has helped in enhancing delivery time	97(32.6)	162(54.4)	35(11.7)	4(1.3)	0(0)	4.23	0.65
Motorcycles are more convenient to our customers, and this has improved customer satisfaction	94(31.5)	157(52.7)	44(14.8)	3(1)	0(0)	4.17	0.69
Flexibility of motorcycles has helped reach more customers in time	65(21.8)	199(66.7)	30(10)	4(1.3)	0(0)	4.13	0.63
Use of motorcycle has helped the business meet the dynamic needs of customers on time	88(29.5)	162(54.4)	46(15.4)	2(0.7)	0(0)	4.39	0.68
The motorcycles can easily maneuver through congested road which make delivery fast	115(38.6)	147(49.3)	34(11.4)	2(0.7)	0(0)	4.27	0.66
Wholesalers and retailers use motorcycles in order to reach their far-flung customers which had improved their performance	93(31.2)	166(55.7)	36(12.1)	3(1)	0(0)	4.19	0.67
Wholesalers and retailers remain relevant and grow at the period off high competition and where the customers' needs the goods delivered as soon as practicable, the use of motorcycle is turning out to be the option.	103(24.6)	150(50.3)	43(14.4)	2(0.7)	0(0)	4.21	0.7
Mean of Means						4.26	0.66

The third objective of the study was to find out the influence of motorcycles timely delivery on the growth of wholesale and retail sector in Kenya. The study findings

illustrated that motorcycle timely delivery influenced the growth of wholesale and retail sector in Kenya to a large extent recording a mean score of 4.26 and a standard deviation of 0.66. This was supported by responses from the respondents on various statements regarding motorcycle timely delivery.

The study sought to evaluate whether the shorter time taken by motorcycles had helped the business growth and performance, 53.4% of the respondents agreed while 40.6% strongly agreed as shown in Table 4.5. The statement recorded a mean score of 4.26 which implied that majority of the respondents agreed with the statement while standard deviation of 0.66 indicated that there was a slight variation in the responses on this statement. The study findings revealed that 54.4% of the respondents agreed that the fast movement of motorcycles had helped in enhancing delivery time while 32.6% of the respondents strongly agreed with the statement. In addition, 52.7% of the respondents agreed while 31.5% strongly agreed that motorcycles were more convenient to their customers, and this had improved customer satisfaction. The statement attracted a mean score of 4.17 confirming that the majority of the respondents agreed with the statement.

On whether flexibility of motorcycles has helped reach more customers in time; the study results showed that 66.7% of the respondents agreed. The study findings further showed that the respondents agreed as shown by the mean score of 4.39 that use of motorcycles had helped the business meet the dynamic needs of customers on time. Furthermore, the study findings revealed that 49.3% of the respondents agreed that the motorcycles could easily maneuver through congested roads which made delivery fast while 38.6% strongly agreed with the statement. The percentage of respondents who

agreed and strongly agreed with the statement that wholesalers and retailers use motorcycles in order to reach their far-flung customers which had improved their performance. The study also aimed to determine if wholesalers and retailers remained relevant and grew at the period of high competition and where the customers' need the goods delivered as soon as practicable, the use of motorcycles is turning out to be the option.

The results showed that 50.3% and 24.6% of respondents, agreed and strongly agreed respectively. The findings indicated that motorcycles are very critical as support to the growth of retail and wholesale business. The findings further agreed that wholesalers and retailers were turning to motorcycles in order to reach their far-flung customers and during the traffic snarl-up, motorcycles are always able to maneuver and deliver the products to the customers on time. The findings are in agreement with Telma (2020) who revealed that use of commercial motorcycles created sustainable last mile delivery solutions to retail and wholesale businesses, which then resulted in improved performance. Additionally, the findings agreed with those of Olvera et al., (2016) who established that use of mobile phones app by motorcycles enabled efficient information exchange which reduced distance of accessing goods which increased profits, expedited new business relationships and provided payment channels.

4.3.4 Motorcycles Accessibility to the Markets

The fourth objective of the study was to identify the influence of motorcycle accessibility to the markets on wholesale and retail business growth in Kenya. The findings presented in Table 4.6 indicate how the respondents responded to the

statements that were used to examine the motorcycles accessibility to the markets on wholesale and retail business growth in Kenya.

Table 4.6: Responses on Motorcycles Accessibilities to the Markets

Statement	SA	A	N	D	SDA	Mean	S. Dev
The ease of access of motorcycles services has had a positive influence of our customer base	139(46.6)	133(44.6)	22(7.4)	4(1.4)	0(0)	4.19	0.70
Motorcycles helps us reach more customers due to their ease of access to remote areas	117(39.3)	140(46.9)	39(13.1)	2(0.7)	0(0)	4.32	0.69
Motorcycles have helped reach bigger customer base faster	110(36.9)	147(49.3)	39(13.1)	2(0.7)	0(0)	4.2	0.70
Motorcycles are also more affordable to the common man and can easily reach the inaccessible parts through narrow and poorly paved roads	100(33.6)	143(48)	51(17.1)	4(1.3)	0(0)	3.09	0.84
Inadequate and poorly designed road have resulting in the increasing need of motorcycle transport in rural and urban areas which is imperative for wholesalers and retailers	98(32.9)	157(52.7)	41(13.7)	2(0.7)	0(0)	4.14	0.81
Increased accessibility of motorcycles to remote customers have increased their satisfaction which has increased their purchase in the wholesalers and retailers which employ motorcycles for delivery services	118(39.6)	159(53.4)	18(6)	3(1)	0(0)	4.16	0.64
The increased availability of commercial motorcycles make transportation of good easy in rural and remote areas.	59(19.8)	193(64.7)	44(14.8)	2(0.7)	0(0)	4.15	0.63
There are many motorcycles which can be accessed at any time for small amount of money which has promoted the performance of wholesalers and retailers	93(31.2)	136(45.6)	67(22.5)	2(0.7)	0(0)	3.99	0.71
Mean of Means						**4.03**	**0.72**

The respondents were asked to indicate whether the ease of access of motorcycle services has had a positive influence on their customer base; according to the findings

46.6% and 44.6% strongly agreed and agreed respectively. The statement recorded a mean score of 4.19 implying that majority of the respondents agreed with the statement while a standard deviation of 0.7 indicated that there was a small variation in the responses on this statement. The study findings further showed that the majority of the respondents agreed that motorcycles helped them reach more customers due to their ease of access to remote areas as shown by a mean score of 4.32. On whether motorcycles have helped reach a bigger customer base faster, the study results showed that 49.3% and 36.9% of the respondents agreed and strongly agreed respectively. These findings agree with those of Michael (2012), who found that use of motorbikes benefits the riders and their community, who get reliable and accessible transport services.

The percentage of respondents who agreed and strongly agreed with the statement that motorcycles were also more affordable to the common man and could easily reach the inaccessible parts through narrow and poorly paved roads was 48% and 33.6% respectively. In addition, 52.7% of the respondents agreed while 32.9% of the respondents strongly agreed that inadequate and poorly designed roads have resulted in the increasing need of motorcycle transport in rural and urban areas which is imperative for wholesalers and retailers. Similarly, the findings revealed that 53.4% of the respondents agreed while 39.6% of the respondents strongly agreed that increased accessibility of motorcycles to remote customers have increased their satisfaction which has increased their purchase in the wholesalers and retailers which employ motorcycles for delivery services.

The study further sought to establish whether the increased availability of commercial

motorcycles make transportation of goods easy in rural and remote areas. The study findings showed that 64.7% of the respondents agreed with the statement. The study finally revealed that 45.6% of the respondents agreed while 31.2% strongly agreed that there were many motorcycles which can be accessed at any time for a small amount of money which has promoted the performance of wholesalers and retailers. The aggregate mean score for this section was 4.03 indicating that the majority of the respondents agreed that motorcycle accessibilities to the markets had enhanced growth of wholesaler and retailer businesses in Kenya. The study findings are contradictory to Pongprasert and Kubota (2017) who suggested that in rural areas, MTs use is more prevalent than in urban areas, while walking remains the most popular means of transportation in rural villages.

4.3.5 Road Safety and Compliance of Motorcycle Riders

The fifth and last objective of the study was to explore the moderating effect of road safety and compliance training of motorcycle riders on the relationship between strategic collaboration of the motorcycle industry and performance of the wholesale and retail sector in Kenya. The study examined whether the motorcycle riders had been trained on road safety and whether they were compliant with the safety rules. The findings are presented in Table 4.7.

Table 4.7: Responses on Road Safety and Compliance Training of Motorcycle Riders

Statement	SA	A	N	D	SD	Mean	S. Dev
The Motorcyclist operating have undergone through official training and have a driving license	69(23.2)	137(45.9)	72(24.2)	14(4.7)	6(2)	3.81	0.87
The Wholesalers and retailers engage qualified driving schools while outsourcing for qualified motorcyclists to operate in their businesses	75(25.2)	142(47.6)	56(18.8)	15(5)	10(3.4)	3.76	0.83
The motorcyclists undergo frequent training safety and security	48(16.1)	158(53)	72(24.2)	13(4.4)	7(2.3)	4	0.82
Motorcyclist have undergone through ethical riding training before starting to working with wholesalers and retailers	84(28.2)	122(40.9)	81(27.2)	11(3.7)	0(0)	3.9	0.89
The knowledge and experience of trainers is important for wholesalers and retailers which has promoted their performance	71(23.8)	123(41.3)	82(27.5)	19(6.4)	3(1)	3.81	0.82
The motorcycles operating with wholesalers and retailers have all the compliance documents require for commercial motorcycles	41(13.8)	150(50.3)	87(29.2)	17(5.7)	3(1)	3.83	0.83
All the motorcyclist always wear protective clothes such as helmet, reflective gears which ensure their safety which doing delivery of protect	71(23.9)	132(44.3)	80(26.8)	12(4)	3(1)	3.61	0.96
The wholesalers and retailers always cross check on the accident free motorcycles to engage in their businesses	53(17.8)	116(38.9)	97(32.5)	16(5.4)	16(5.4)	3.76	0.89
The commercial motorcycles comply with the loading and speeding regulation as stipulated in NTSA.	73(24.5)	108(36.2)	99(33.2)	13(4.4)	5(1.7)	4.54	0.98
Mean od Means						3.89	0.88

The study sought to examine whether motorcyclists operating have undergone official training and have a driving license, the results confirmed that 45.9% of the respondents agreed while 23.2% of the respondents strongly agreed with the statement. The statement recorded a mean score of 0.871 which implied that the respondents agreed that the motorcyclists operating had undergone official training and they all had driving licenses. The respondents were further asked to explain whether the wholesalers and retailers engaged qualified driving schools while outsourcing for qualified

motorcyclists to operate in their businesses. The finding showed that 47.6% of the respondents agreed with the statement while 25.2% of the respondents strongly agreed with the statement. Further, 53% of the respondents agreed that the motorcyclists underwent frequent training on safety and security attracting a mean score of 4.

The statement seeking to understand whether motorcyclists have undergone ethical riding training before starting to work with wholesalers and retailers showed that 40.9% of the respondents agreed while 28.3% strongly agreed. Similarly, 41.3% and 23.8% of the respondents agreed and strongly agreed that the knowledge and experience of trainers was important for wholesalers and retailers which has promoted their performance. The study further sought to establish whether the motorcycles operating with wholesalers and retailers have all the compliance documents required for commercial motorcycles. The results showed that 50.3% and 13.8% of the respondents agreed and strongly agreed respectively with the statement. In regards to whether all motorcyclists always wear protective clothes such as helmet, reflective gears which ensure their safety whilst doing delivery; 44.3% and 23.9% of the respondents agreed and strongly agreed respectively.

The study further sought to assess whether the wholesalers and retailers always cross checked on the accident free motorcycles to engage in their businesses. The findings revealed that the respondents agreed as shown by a mean score of 3.76. The findings imply that the respondents always cross checked on the motorcycles they engaged in their businesses to avoid those that have been involved in accidents. The study finally revealed that 36.2% of the respondents agreed that the commercial motorcycles complied with the loading and speeding regulation as stipulated in NTSA while 24.5%

strongly agreed. The study findings indicated that the motorcycle riders had been trained on safety and they were compliant with NTSA rules recording a mean score of 3.89.

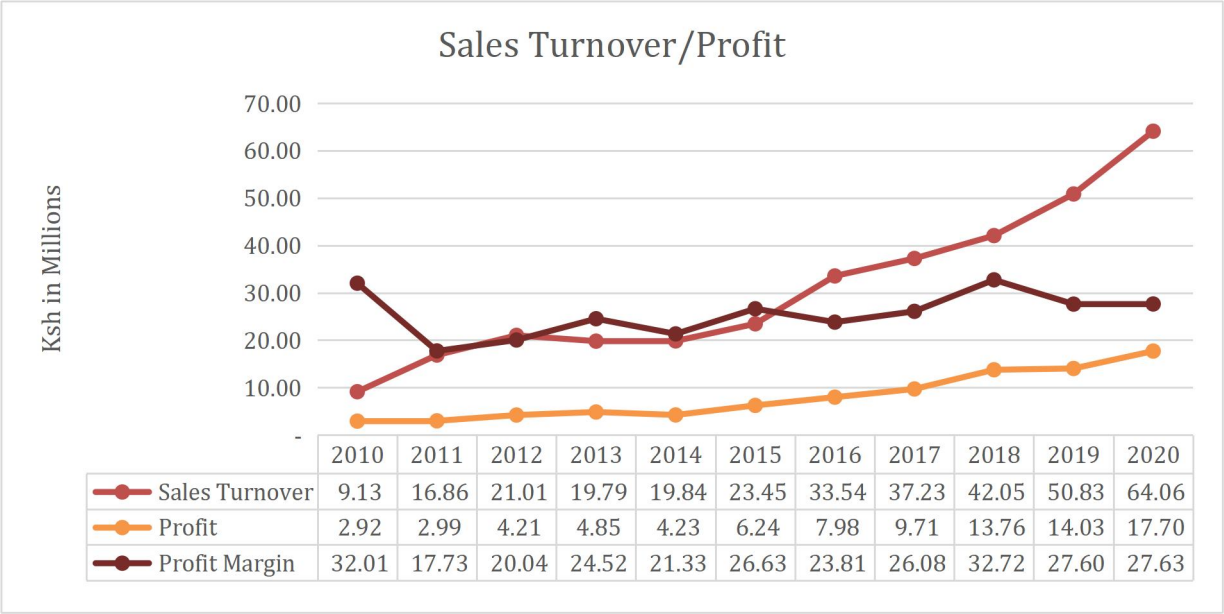
For there to be safety in our roads the level of compliance should be 100% (Kumar, 2011). However, from this study, the compliance is wanting. Thus, the findings of this study are consistent with those of Odera (2011) indicating that accidents involving motorcycles were on the increase in Naivasha and its environs mainly due to lack of proper training among riders, over-speeding and overloading.

Other studies indicated that, in most sub-Saharan countries, cases of motorcycle taxis accidents and safety were on the rise (Song, Song & Sun, 2019). It was noted that motorcycle taxis can be dangerous, especially for motorcycle taxis that stop, drive, and service sidewalks and pedestrians (Pongprasert & Kubota, 2017) for the riders who are not well trained. Motorcycles in Kenya, for instance, accounted for nearly 14% of the fatalities in 2018 (KNPS, 2018), with riders of motorized two- and three-wheelers accounting for 24% of total fatalities from road accidents (WHO, 2018). Observing the provision of the law, it is permitted only one driver and one passenger in specific countries, however, this is not adhered to (Bishop & Amos, 2015). Motorcycle taxis, despite strict adherence in the urban area, avoid only the nearby towns (Starkey, 2016a). Four or five passengers can be seen on one motorcycle taxis in rural areas, exceeding legal limits for motorcyclists (Starkey, 2016b). Rural people also use motorcycle taxis to transport their fundamental needs, such as food, water, clothes, and medicines. These range from everyday items, including foodstuffs and boxes, to unusual items, such as furniture (Ng & Yi, 2016), coffins, and human corpses (Ayanwuyi, 2013).

Sometimes the MTs transport quantities of goods strapped on MT are more massive than their capacity (Jenkins & Peters, 2016). Cases of riders loading passengers, livestock, and food bags (sometimes all of them at once) on the back of their motorcycle (Carayannis & Pangburn, 2020) compromises the safety.

4.3.6 Performance of Wholesale and Retail Sector

The study sought to find out the performance of the wholesale and retail sector in Kenya. Secondary data on sales turnover, market share and profitability was collected over a duration of ten years from 2010 to 2020. Sales turnover and profitability was in Kenya shillings in millions and market share was on percentage. Results are presented in Figure 4.1 and 4.2 below.



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Sales Turnover	9.13	16.86	21.01	19.79	19.84	23.45	33.54	37.23	42.05	50.83	64.06
Profit	2.92	2.99	4.21	4.85	4.23	6.24	7.98	9.71	13.76	14.03	17.70
Profit Margin	32.01	17.73	20.04	24.52	21.33	26.63	23.81	26.08	32.72	27.60	27.63

Figure 4.1: Trend Analysis for Sales Turnover and Profitability

Figure 4.1 illustrates that sales turnover and profitability were on an increasing trend over the period of study. The sales turnover increased from an average of 9 million

Kenyans shilling in 2010 to 64 million shillings in the year 2020. On the other hand, profitability rose from an average of 2.92 million Kenyan shillings to an average of 17 million shillings in the year 2020. The findings imply that the wholesale and retail sector performance improved over the years as the businesses also embraced different strategies to improve on their performance as well as their growth across the country. However, the profit margin has remained almost constant in the year 2019 and 2020, it dropped. This indicates the unfavorable business environment and especially after covid-19 pandemic (KPSA, 2020).

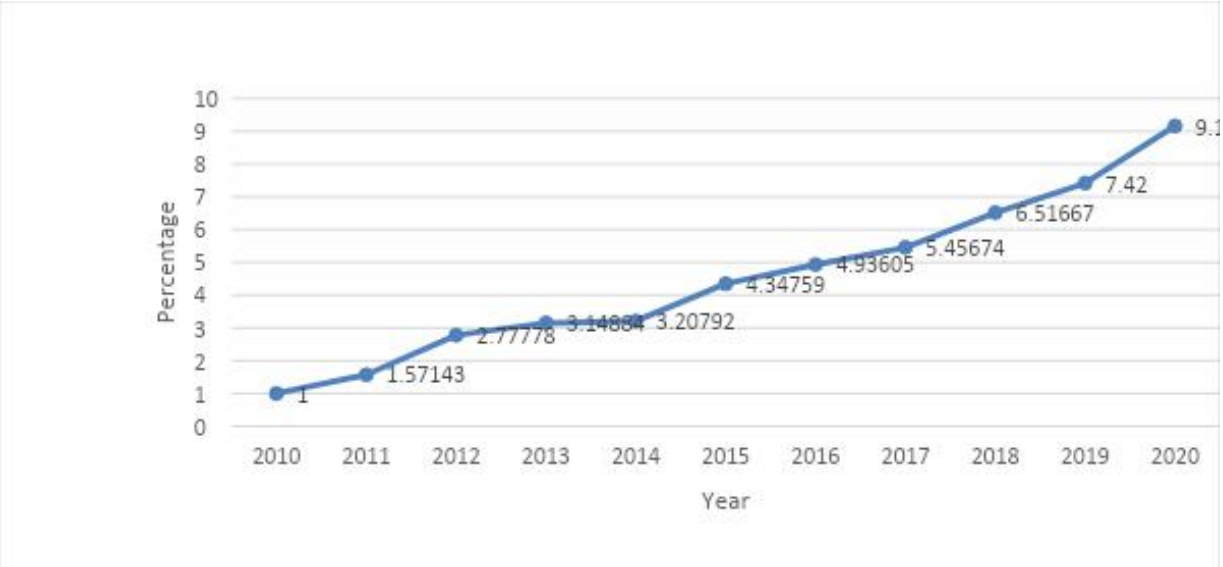


Figure 4.2: Trend Analysis for Market Share

Figure 4.2 illustrates the trend analysis for market share for the wholesale and retail sector over the years in Kenya. Results reveal that the sector has been on an upward trend over the years from 2010 to 2020. The findings show that in the year 2010 wholesale and retail sectors controlled only 1% of the retail sector market increasing steadily to an average of 9.2% in the year 2020. The findings imply that the retail

sector has been on upward trend due to the strategic interventions being employed over the years to improve growth and performance of the businesses like what is already documented in Vision 2030 (KNBS, 2021).

4.4 Diagnostic Tests

Tests of assumptions of multiple regression are necessary to justify the use of multiple regression analysis for the purpose of drawing inferences in making predictions. This section presents the diagnostic tests conducted in this study which included normality, Homoscedasticity and multicollinearity.

4.4.1 Jarque-Bera test for Normality

To test for normality, the study employed the Jarque-Bera test, as proposed by Jarque and Bera (1987). The decision rule of Jarque-Bera Test, is that if the p-value is lower than the Chi (2) value then the null hypothesis cannot be rejected. It can therefore be concluded that the residuals are normally distributed.

Table 4.8: Jarque-Bera test for Normality

Skewness/Kurtosis tests for Normality						
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj	chi2(2)	Prob>chi2
My residuals	298	0.648	0.3789		0.99	0.609
Jarque-Bera normality test: .6769 Chi (2) .7129						
Jarque-Bera test for Ho: normality:						

According to table 4.8, the chi (2) statistics is 0.7129 which is greater than 0.05 meaning that the null hypothesis cannot be rejected. The implication is that there is no

violation of the normal distribution assumption of error terms as the residuals are coming out to be normal. Similarly, SK test shows the number of observations (which is 298) and the probability of Skewness which is 0.648 implying that Skewness is normally distributed (p-value of Skewness > 0.05). Similarly, Pr (Kurtosis) indicates that kurtosis is also normally distributed (p-value of kurtosis > 0.05). Finally, chi (2) is 0.609 which is greater than 0.05 implying its significance at 5% level. Consequently, the null hypothesis cannot be rejected.

Regression assumes that variables have normal distributions. Non-normally distributed variables can distort relationships and significance tests. The goodness of fit test was used to test Normality, the study specifically used the Kolmogorov-Smirnov test. The study assumed that all the variables have a normal distribution. Kolmogorov-Smirnov test (K-S) one sample test was used in order to test the assumption of the normality of the population distribution, whereby a significance value of less than 0.05 indicates that the data is normal and if the significance value is greater than 0.05, then data significantly deviates from a normal distribution (Tabachnick & Fidell, 2007). This is shown on Table 4.9.

Table 4.9 Kolmogorov-Smirnov Test (K-S) of Normality Results

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Delivery Innovation	0.253	298	0.000
Logistic Cost	0.155	298	0.000
Timeliness	0.095	298	0.000
Accessibility	0.1	298	0.000
Performance	0.086	298	0.000

a. Lilliefors Significance Correction=0.05 level of significance

Results obtained confirmed that the K-S statistic for all the variables was less than the critical value of 1.96 with a P-value of 0.05 which was the level of significance. The findings revealed that the data used in this study is normally distributed and hence further tests can be carried out on data. Since the p-value is less than 0.05; we fail to accept the null hypothesis and accept the alternative hypothesis and conclude that the data was normally distributed.

4.4.2 Multicollinearity

Multicollinearity is a phenomenon whereby high correlation exists between the independent variables. It occurs in a multiple regression model when high correlation exists between these predictor variables prompting questionable assessments of regression coefficients. This leads to strange outcomes when attempts are made to decide the degree to which the independent variables explain the changes in the outcome variable (Creswell, 2013). Multicollinearity assumption accurately estimates the relationship between dependent and independent variables; it tests if the

relationships are linear in nature. High Multicollinearity of the regression analysis under-estimate the true relationship between the study variables. The assumption of multicollinearity implies that there is no correlation between independent variables.

Test for multicollinearity among study variables was conducted using Tolerance and Variance Inflation Factor (VIF). Variance Inflation Factor was checked for evidence of multicollinearity where their numerical values were all well below the cut-off value of 10 suggested by Neter et al., (1996). Gujarati and Porter (2010), view that as a rule of the thumb if VIF of independent variables exceeds 10, that variable is collinear.

Table 4.10: Test for Multi-Collinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Delivery Innovation	.424	2.360
	Logistic Cost	.432	2.315
	Timelessness	.949	1.054
	Accessibility	.674	1.657
	Mean	.620	1.847

Source: Survey Data, 2022

A common rule of thumb is that VIFs of 10 or higher (conservatively over 5) points to severe multi-collinearity that affects the study. Table 4.10 shows that the VIF for delivery innovation was 2.360, logistics cost was 2.315, timeliness was 1.054, Accessibility was 1.657. The mean VIF for the variables is 1.847. The findings presented indicate that all the variables have a VIF that is less than 10 and tolerance value more than 0.1 ruling out the possibility of multicolliearity. Therefore, the results

imply that there was no multicollinearity problem among the variables and hence all the variables could be used in the regression analysis.

4.4.3 Homoscedasticity Assumptions

Homoscedasticity means that the variance of errors is similar across all levels of the independent variables. This was checked by use of Levene test to assess the equality of the variances for the four variables calculated (Delivery solutions logistic cost, timeliness and perceived brand quality). The assumption of homoscedasticity refers to equal variance of errors across all levels of the independent variables (Osborne & Waters, 2019). This means that researchers assume that errors are spread out consistently between the variables (Keith, 2006). This is evident when the variance around the regression line is the same for all values of the predictor variable. When heteroscedasticity is marked it can lead to distortion of the findings and weaken the overall analysis and statistical power of the analysis (Osborne & Waters, 2019). The results are as shown in Table 4.11.

Table 4.11: Results of Homoscedasticity Test

	Test Value = 0					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Delivery Solutions	76.972	298	.000	4.05636	3.9523	4.1604
Logistic Cost	75.881	298	.000	4.10983	4.0029	4.2167
Timelessness	68.091	298	.000	4.03179	3.9149	4.1487
Accessibility	65.021	298	.000	3.98988	3.8688	4.1110
Performance	of76.599	298	.000	4.12283	4.0166	4.2291

Results in Table 4.11 shows that the Sig. level (2-tailed) delivery solutions (p=0.00), logistic cost (p=0.00), timeliness (p=0.00), accessibility and performance of wholesale and retail (p=0.00) were significant because their significance level was less than 0.05. It was therefore concluded that homogeneity of variances was supported.

4.5 Regression Analysis

Regression is the determination of a statistical relationship between two or more variables (Kothari, 2014). In simple regression, there are two variables, one variable (defined as independent) is the cause of the behaviour of another one (defined as dependent variable). The study used both univariate and multivariate to test the effect of independent variables on dependent variable. Univariate regression was used to test the effect of each variable while holding other factors constant. Multivariate regression analysis was used to test the effect of combined predictor variables on the dependent variable.

4.5.1 Relationship between Delivery Innovation and Performance of Wholesale and Retail Sector

In order to examine the influence of motorcycles delivery innovation on the wholesale and retail business growth in Kenya, the study ultimately used univariate regression analysis. The findings are presented in Table.4.12.

Table 4.12 Model Summary for Delivery Innovations and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785[a]	.616	.614	.44001

a. Predictors: (Constant), Delivery solutions

The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of association between delivery innovations and performance of the wholesale and retail businesses. The results indicate that R^2 =0.616 and R = 0.785. R value gives an indication that there is a strong and positive relationship between delivery solutions and performance of wholesale and retail businesses. According to the model summary output in Table 4.12, the variables were significantly correlated where R (coefficient of correlation) was a positive correlation of 0.785 indicating that delivery solutions was strongly related to performance of wholesale and retail businesses. The R^2 value of 0.616 indicates that motorcycle delivery innovation explains 61.6% of variations in performance of wholesale and retail businesses. This implies that 38.4% of the unexplained variations in performance is accounted for by the other variables including logistics cost, timeliness, accessibilities to the markets. Results are in line with those of Mwangi (2021) opined that on demand delivery service made Glovo to open up a new technical center in Nairobi, to provide faster and localized rider and customer support, and in turn faster deliveries, convenience and customer experience to the users.

Table 4.13: ANOVA for Delivery Innovation and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.096	5	53.096	274.246	.000[b]
	Residual	33.107	293	.194		
	Total	86.202	298			

a. Dependent Variable: performance

b. Predictors: (Constant), Delivery solutions

From Table 4.13 the F test provides an overall test of significance of the fitted regression model. The ANOVA F-statistics (F = 274.246) and p=0.000 indicates that the model used to examine the influence of motorcycle delivery innovation on performance was statistically significant. The relationship was significant at critical value (0.05) since the reported p-value (0.000) was less than the critical value. This confirms the positive relationship between motorcycle delivery innovations/solutions and performance of wholesale and retail sector.

Table 4.14: Regression Coefficients for Delivery Solutions and Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.871	.199		4.375	.000
	Delivery solutions	.802	.048	.785	16.560	.000

a. Dependent Variable: Performance

The study findings in Table 4.14 showed that the constant had an unstandardized

coefficient of 0.871 meaning that holding motorcycle delivery innovation constant at zero (0), the performance of wholesale and retailer businesses would be equal to 0.871. Table 4.14 indicates that there was positive linear relationship between delivery solutions and performance as shown by a regression coefficient = 0.802, p=0.000. The results showed that motorcycle delivery innovation/solutions increase of one unit resulted in an increase of 0.802 in the performance of wholesale and retail businesses in Kenya. The study findings imply that there is a higher likelihood of recording better performance by having or embracing motor cycle delivery innovations and solutions in place. The findings were in support of Roberts (2022) study in South Africa which established that the increased need of professional delivery services due to increased online services promoted the use of motorcycles in delivery solution. The motorcycles were considered useful due to their ease of mobility even in congested areas. Similarly, Mwangi (2021) opined that on demand delivery service made Glovo to open up a new technical center in Nairobi, to provide faster and localized rider and customer support, and in turn faster deliveries, convenience and customer experience to the users.

The regression equation obtained from this output is:-

Performance = 0.871 + 0.802 motorcycle delivery solutions

4.5.2 Relationship between Logistic Cost and Performance

Regression analysis was used in the study to further examine the connection between motorcycle logistics cost and performance of wholesale and retail businesses. The findings are summarized in Table 4.15.

Table 4.15: Model Summary for Logistic Cost and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856[a]	.733	.732	.36653

a. Predictors: (Constant), Logistic Cost

According to the model summary output, the variables were significantly correlated where R (coefficient of correlation) was a positive correlation of 0.856 indicating that logistics cost was strongly related to performance of wholesale and retail sector. The study findings imply that logistics cost had a strong and positive relationship with performance. The identified independent variable (logistics cost), explains only 73.3% variation in the dependent variable (performance of wholesale and retail sector). From the model summary in Table 4.15 the adjusted R^2 was 0.732 this indicates that logistics cost explains 73.2% of variations in performance of wholesale and retail sector. Therefore, the remaining percentage of 26.8% is explained by other variables such as delivery innovations, timeliness, accessibility to the market and road safety and compliance of riders. The findings are in agreement with those of Umair et al., (2019) who demonstrated that factors of logistics which are inventory, lead time and transportation and logistics do affect customer satisfaction. Moreover, the results showed significant interaction of customer satisfaction with inventory, lead time, transportation and logistics.

Table 4.16: ANOVA for Logistic Cost and Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	63.229	5	63.229	470.649	.000[b]
	Residual	22.973	293	.134		
	Total	86.202	298			

a. Dependent Variable: Performance

b. Predictors: (Constant), Logistic Cost

From the ANOVA Table 4.16 of the stepwise linear regression analysis, it is clear that the model is significant in predicting how logistics cost determines performance of wholesale and retail sector. The regression model achieved a high degree of fit as reflected by an ($F = 470.649$; $P = 0.000 < 0.05$). The relationship was significant at critical value (0.05) since the reported p-value (0.000) was less than the critical value. This confirms the positive relationship between logistic cost and performance of wholesale and retail sector.

Table 4.17: Regression Coefficients for Logistic Cost and Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.625	.164		3.819	.000
	Logistic cost	.851	.039	.856	21.694	.000

a. Dependent Variable: Performance

The study findings in Table 4.17 showed that the constant had an unstandardized coefficient of 0.625 meaning that holding motorcycle logistics cost constant at zero (0), the performance of wholesale and retail businesses would be equal to 0.625. Regression coefficients indicate that there was positive and significant relationship between logistic cost and performance ($\beta = 0.840$, $p<0.05$). These results suggested that a unit increase in motorcycle logistics cost effectiveness will result in a 0.851-unit increase in performance of wholesale and retail sector. The results suggested that using motor cycles for delivery will reduce the logistics costs and increase the likelihood of achieving high performance. Results are in support of Campbell and Salvelsberg, (2013) who asserted that businesses that are able to deliver good on time enjoy greater sales which translate to greater performance.

The regression equation obtained from this output is: -

Performance = 0.625 + 0.851 motorcycle logistics cost

4.5.3 Relationship between Timeliness of Commercial Motorcycles and Performance

Regression analysis was carried out to establish the relationship between motorcycle timely delivery and performance of wholesale and retail sector in Kenya. The findings are presented in Table 4:18.

Table 4.18: Model Summary for Timeliness of Commercial Motorcycles and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837[a]	.701	.699	.38837

a. Predictors: (Constant), Timeliness

The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of between motorcycles timely delivery and performance of wholesale and retail businesses. Results showed that R^2 =0.701 and R = 0.837. An R value of 0.837 indicates that there is a strong and positive relationship between motorcycles timely delivery and performance of wholesale and retail businesses. According to the findings an R^2 =0.701 indicates that motorcycle timely delivery explained 70.1% of the variations in performance of wholesale and retail sector in Kenya. The remaining 31.9 % is explained by other factors in the study. This confirms a strong and positive relationship between timely delivery of motorcycles and performance of wholesale and retail businesses in Kenya. The findings are in agreement with Telma (2020) who revealed that use of commercial motorcycles created sustainable last mile delivery solution to retail and wholesale businesses, these then results to improved performance.

Table 4.19: ANOVA for Timeliness and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60.410	1	60.410	400.512	.000[b]
	Residual	25.792	297	.151		
	Total	86.202	298			

a. Dependent Variable: Performance

b. Predictors: (Constant), Timeliness of Commercial Motorcycles

From Table 4.19 the F test provides an overall test of significance of the fitted regression model. The F-statistics (F = 400.512, p=0.000) indicates that the model used to examine the influence of motorcycle timely delivery on performance was statistically significant. The relationship was significant at critical value (0.05) since the reported p-value (0.000) was less than the critical value. This confirms the positive relationship between motorcycle timely delivery and performance of wholesale and retail sector.

Table 4.20: Coefficients for Timeliness and Performance of wholesale and retail

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.055	.156		6.756	.000
	Timeliness	.729	.038	.561	20.013	.000

a. Dependent Variable: Performance of wholesale and retail

Table 4.20 indicates that there was positive linear relationship between timely delivery and performance as shown by a regression coefficient = 0.729, p=0.000. The results

showed that motorcycle timely delivery increase of one unit resulted in an increase of 0.729 in the performance of wholesale and retail businesses in Kenya. The study findings imply that there is a higher likelihood of recording better performance by having in place motorcycles for timely delivery. The study findings further showed that the constant had an unstandardized coefficient of 1.055 meaning that holding motorcycle timeliness constant at zero (0), the performance of wholesaler and retailer businesses would be equal to 1.055. The findings agreed with those of Olvera et al., (2016) who established that use of mobile phones app by motorcycles enabled efficient information exchange which reduced distance of accessing goods which increased profits, expedited new business relationships and provided payment channels.

The regression equation obtained from this output is: -

Performance = 1.055 + 0.729 motorcycle timely delivery

4.5.4 Relationship between Accessibility of Commercial Motorcycles and Performance

This section presented the study findings examined to assess the relationship between performance of wholesale and retail businesses and accessibility of commercial motorcycles to the markets. The results are shown in Table 4.21.

Table 4.21: Model Summary for Accessibility of commercial motorcycles and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.896[a]	.802	.801	.31571

a. Predictors: (Constant), Accessibility

The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of between accessibility of commercial motorcycles and performance of wholesale and retail businesses. Results showed that R^2 =0.802 and R = 0.896. An R value of 0.896 indicates that there is a strong and positive relationship between accessibility of commercial motorcycles and performance of wholesale and retail businesses. Further, the results showed that the variation in performance of wholesale and retail business was 80.2% (R-Square = 0.802) explained by accessibilities of commercial motorcycles to the markets. These findings agree with those of Michael (2012), who found that use of motorbikes benefits the riders and their community, who get reliable and accessible transport services.

Table 4.22: ANOVA for Accessibility of Commercial Motorcycles and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.158	1	69.158	693.857	.000[b]
	Residual	17.044	297	.100		
	Total	86.202	298			

a. Dependent Variable: Performance

b. Predictors: (Constant), Accessibility of commercial motorcycles

From the ANOVA Table 4.22 of the stepwise linear regression analysis, it is clear that the model is significant in predicting how accessibility of commercial motorcycles

determines performance of wholesale and retail sector. The regression model achieved a high degree of fit as reflected by an (F = 693.857; P = 0.000 < 0.05). The relationship was significant at critical value (0.05) since the reported p-value (0.000) was less than the critical value. This confirms the positive relationship between motorcycle accessibility to the market and performance of wholesale and retail sector.

Table 4.23 Coefficients of Accessibility of Commercial Motorcycles and Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.988	.121		8.140	.000
	Accessibility	.786	.030	.896	26.341	.000

a. Dependent Variable: performance

The study findings in Table 4.23 showed that the constant had an unstandardized coefficient of 0.988 meaning that holding accessibility of commercial motorcycles to the markets constant at zero (0), the performance of wholesale and retail businesses would be equal to 0.988. Accessibility of commercial motorcycles to the markets had a significant influence on the performance of wholesale and retail businesses, according to the regression coefficients of β= 0.786 and p=0.000. The study also showed that an increase of one unit in accessibility of commercial motorcycles to the markets would lead to an increase of 0.786 units in performance. The study's conclusions showed that accessibility of commercial motorcycles to the markets significantly and favorably

affected performance of wholesale and retail businesses.

The regression equation obtained from this output is: -

Performance = 0.988 + 0.786 Accessibility of commercial motorcycles to the markets

4.6 Overall Multiple Regression Analysis

Multiple Linear Regression analysis for strategic collaboration and performance of wholesale and retail businesses in Kenya was done to find out the relationship between strategic collaboration of commercial motorcycles and performance of wholesale and retail businesses in Kenya. The study adopted multivariate regression to test the joint influence of all the independent variables on the dependent variable. Results are presented in Table 4.24.

Table 4.24: Multivariate regression Model Summary Results

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	F	Sig.
1	0.930[a]	0.865	0.863	0.17102	8.827	0.000

a. Predictors: (Constant), Delivery solutions, logistic cost, timeliness and accessibility of commercial motorcycles
b. Dependent Variable: Performance of Wholesale and retail businesses

The findings revealed that jointly, strategic collaborations of motorcycle industry (Delivery solutions, logistic cost, timeliness and accessibility of commercial motorcycles) accounted for 86.5% (R-Squared=0.865) of the variation in performance of wholesale and retail businesses. The results confirmed that strategic collaborations

of motorcycles were significant predictor variables of performance of wholesale and retail businesses in Kenya. The remaining 13.5% of the variations in performance of wholesale and retail businesses is explained by other factors not captured in the model.

Table 4.25: Multivariate Regression ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	73.046	9	18.261	233.184	.000[b]
	Residual	13.157	289	.078		
	Total	86.203	298			

a. Dependent Variable: Performance

b. Predictors: (Constant), Delivery solutions, Logistic cost, timeliness, Accessibility of Commercial motorcycles

Table 4.25 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. This was supported by an F statistic of 233.184 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level. These results imply that the independent variables are good predictors of performance. The findings concluded that there is statistically significant relationship between strategic collaboration in relation to delivery innovation solution, logistic cost, accessibility and timeliness of commercial motorcycles and performance of wholesale and retail businesses in Kenya.

Table 4.26 Overall Regression Coefficients of Performance and Strategic Collaboration

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.36	0.118		3.05	0.003
	Delivery Innovation solutions	0.324	0.047	0.488	6.944	0.000
	Logistic cost	0.302	0.05	0.415	6.036	0.000
	Timeliness	0.049	0.022	0.059	2.203	0.028
	Accessibility of commercial motorcycles	0.243	0.018	0.319	13.885	0.000

a. Dependent Variable: Performance of Commercial Motorcycles

The study findings in Table 4.26 showed that the constant had an unstandardized coefficient of 0.36 meaning that holding motorcycle delivery solutions, motorcycle logistics cost, motorcycle timeliness and accessibility of commercial motorcycles to the markets constant at zero (0), the performance of wholesale and retail businesses would be equal to 0.36. Results on Table 4.26 indicated that all the independent variables that is delivery solutions, logistic cost, timeliness and accessibility of commercial motorcycles were statistically significant in explaining performance of wholesale and retail businesses. This means that all the postulated null hypotheses were not supported by P value less than 0.05 which is less than the critical value. The P values for variables are delivery solutions p=0.00, logistic cost p=0.000, timeliness p=0.028, perceived logistic cost p=0.000 are predictor variables for performance of wholesale and retail businesses in Kenya. These were supported by beta coefficients of 0.324,

0.302, 0.049 and 0.243 respectively. These results show that a change in either of the variables will definitely lead to a positive change in performance.

Thus the regression equation becomes;

Performance = 0.36+ 0.324 delivery innovation solutions + 0.302 motorcycle logistics cost + 0.049 Motorcycle timely delivery + 0.243 accessibility of commercial motorcycles+0.118

4.6.1 The Moderating effect of road safety and compliance training on the relationship between Motorcycle Solutions and Performance

The fifth objective of the study was to explore the moderating effect of road safety and compliance training of motorcycle riders on the relationship between motorcycle solutions and performance of the wholesale and retail sector in Kenya.

Table 4.27: Moderation Tests Using R Square and Significance Change

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.870a	0.758	0.757	1.24771	0.758	921.588	1	295	0.000
2	.982b	0.963	0.963	0.48559	0.206	1653.63	1	294	0.000

a Predictors: (Constant), Motorcycle solutions
b Predictors: (Constant), Motorcycle solutions, MS*MT

This section provides results of analysis on the effect of the independent variable on the dependent variable before and after introducing a moderating variable. The

independent variable herein is; motorcycle solutions with road safety and compliance training of motorcycle riders as the moderating variable. R square also referred to as coefficient of determination and significance tests were done to determine the effects of the predictor variables on the dependent variable. The R square and the overall significance of the model were analyzed before and after introducing the moderating variable to independent variable. The introduction of the moderating variable introduces an interaction effect on the prediction strength of the independent variable on the dependent variable. The interaction effect leads to either a stronger or weaker prediction power of the independent variable on the dependent variable. In this study, interaction effect was created by use of the product between predictor variable and the moderating variable.

Table 4.28 shows the results of the R-square before involving the moderating variable (road safety and compliance training of motorcycle riders) and after incorporating the moderating variable to the independent variable (motorcycle solutions). The results indicate road safety and compliance training of motorcycle riders had a positive moderating effect on motorcycle solutions (Rsquared change of 0.206) which translates to 21.39% change in the R-square. Results show that after introducing the moderating variable (road safety and compliance training of motorcycle riders) the R- square improved from 0.758 to 0.963 and was significant (0.000) since the R-square became stronger. This means road safety and compliance training of motorcycle riders moderate motorcycle solutions and performance positively and statistically significant. The findings imply that training of motorcycle riders on road safety and compliance is very important in improving the performance of wholesale and retail sector in Kenya.

The findings shows that majority of the motorcycle riders have been trained on road safety and they are compliance with the rules and regulations laid down by NTSA.

Table 4.28: ANOVA Test for Motor Cycle Solutions with Moderating Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1434.72	1	1434.72	921.588	.000b
	Residual	459.253	295	1.557		
	Total	1893.97	296			
2	Regression	1824.64	2	912.322	3869.03	.000c
	Residual	69.326	294	0.236		
	Total	1893.97	296			

a Dependent Variable: Performance_1

b Predictors: (Constant), Motorcyclesolutions

c Predictors: (Constant), Motorcyclesolutions, MS*MT

The ANOVA results for motorcycle solutions with moderating variable in Table 4.28 indicates that the model was significant with F=3869.03 and p=0.000<0.05 meaning that motorcycle solutions and road safety and compliance training of motorcycle riders had significant effect on performance of wholesale and retail sector. A further test on the beta coefficient of the resulting model in Table 4.29 shows a significant change in the beta coefficients before and after the introduction of the moderating variable. The model remained statistically significant with p value= 0.000 < 0.05.

Table 4.29: Overall Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-15.603	0.668		-23.349	0.000
	Motorcycle solutions	4.811	0.158	0.87	30.358	0.000
2	(Constant)	-0.044	0.463		-0.096	0.924

Motorcycle solutions	-1.218	0.161	-0.22	-7.587	0.000
Motorcycle Solutions*Motorcycle riders Training	0.588	0.014	1.181	40.665	0.000

a Dependent Variable: Performance

In order to determine the significance of coefficients Table 4.29 shows the coefficients of the regression equations for both models. The equations for moderations were captured in the following equations;

Performance =-15.603+ 4.811Motorcycle Solutions +ε

*Performance= -0.044 -1.218Motorcycle Solutions+ 0.588Motorcycle Solutions*Motorcycle riders training + ε*

Model 1 indicates that the coefficient of for motorcycle solutions (4.811) was positive and significant. In model 2 the interaction term for motorcycle solutions* road safety and compliance training of riders was found to be significant implying that road safety and compliance training of motorcycle riders was found to have significant moderation effect in the relationship between strategic collaborations of motorcycle industry and performance of wholesale and retail sector in Kenya. This was shown by the beta values of -1.218 for motor solutions and 0.588 for motorcycle solutions* road safety and compliance training of riders.

4.6.2 Hypotheses Testing

Hypothesis is a statement that predicts the relationship between the independent variable and the dependent variable (Kothari & Garg, 2014). When formulating a research hypothesis, at least an independent variable and the dependent variable must

form part of the research hypothesis. Creswell (2013) asserts that hypothesis is a statement whereby the researcher predicts the outcome of the relationship between variables. Mugenda and Mugenda (2003) noted that multiple regression attempts to determine whether a group of variables together predict a given dependent variable. The following hypotheses were tested at 5% level of confidence. The study was guided by null hypotheses, $p<0.05$ implied the study failed to reject the research hypotheses while $p>0.05$ led to rejection of research hypothesis.

Table 4.30: Summary for Hypotheses Test Results

Hypothesis	R2, t. and P values	Decision
H_{01}There is no statistically significant relationship between Delivery solutions and performance of wholesale and retail businesses in Kenya	R^2= 0.616 β=0.324, p=0.000<0.05	Reject H_{o1}
H_{02}There is no statistically significant relationship between logistic cost and performance of wholesale and retail businesses in Kenya	R^2= 0.733 β=0.302 p=0.000<0.05,	Reject H_{o2}
H_{03}There is no statistically significant relationship between timeliness and performance of wholesale and retail businesses in Kenya	R^2= 0.701 β=0.049 p=0.028<0.05,	Reject H_{o3}
H_{04}There is no statistically significant relationship between accessibility of commercial motorcycles and performance of wholesale and retail businesses in Kenya.	R^2= 0.802 β=0.243 p=0.000<0.05,	Reject H_{o4}
H_{05}There is no statistically moderating influence of road safety and compliance training of motorcycle riders on the relationship between motorcycle solutions and performance of wholesale and retail sector in Kenya.	R^2= 0.963 β=0.588 p=0.000<0.05,	Reject H_{o5}

H_{o1} There is no significant relationship between delivery innovation solutions and performance of wholesale and retail businesses in Kenya

The study's first hypothesis stated that motorcycles delivery innovation does not significantly influence performance of wholesale and retail business in Kenya. However, the findings in table 4.30 showed that motorcycle delivery innovation solutions had a positive and significant effect on performance of wholesale and retail businesses ($\beta = 0.324$, $p=0.000$, $p<0.05$). The t-statistic and corresponding p-value were 6.944 and 0.000 respectively. Therefore, at $P < 0.005$ level of significance the null hypothesis (H_0) is rejected and accepts the alternate hypotheses (H_A) implying that motorcycles delivery innovation has significant influence on performance of wholesale and retail business in Kenya.

H_{o2} There is no significant relationship between logistic cost and performance of wholesale and retail businesses in Kenya.

The second hypothesis postulated there is no significant influence of motorcycles logistic cost on the performance of wholesale and retail business in Kenya. The study findings showed that motorcycle logistic cost had a positive and significant effect on performance of wholesale and retail businesses ($\beta = 0.302$, $p=0.000$, $p<0.05$). The t-statistic and corresponding p-value were 6.036 and 0.000 respectively. Therefore, at $P < 0.005$ level of significance the null hypothesis (H_0) is rejected and accepts the alternate hypotheses (H_A) implying that there existed a significant relationship between logistic cost and performance of wholesale and retail businesses in Kenya.

H_{o3} There is no significant relationship between timeliness and performance of wholesale and retail businesses in Kenya

The third hypothesis stated there is no significant relationship between timeliness and

performance of wholesale and retail businesses in Kenya. However, the study findings revealed that motorcycle timely delivery had a positive and significant effect on performance of wholesale and retail businesses in Kenya ($\beta = 0.049$, $p=0.028$, $p<0.05$). The t-statistic and corresponding p-value were 2.023 and 0.000 respectively. Therefore, at $P < 0.005$ level of significance the null hypothesis (H_0) is rejected and accepts the alternate hypotheses (H_A) implying that there existed a significant relationship between motorcycle timely delivery and performance of wholesale and retail businesses in Kenya

H_{o4} There is no significant relationship between accessibility of commercial motorcycles and performance of wholesale and retail businesses in Kenya

To determine whether motorcycle accessibility to the markets significantly affected performance of wholesale and retail businesses in Kenya, the fourth hypothesis was tested. The study findings revealed that motorcycle accessibility had a positive and significant effect on performance of wholesale and retail businesses in Kenya ($\beta = 0.243$, $p=0.000$, $p<0.05$). The t-statistic and corresponding p-value were 13.885 and 0.000 respectively. Therefore, at $P < 0.005$ level of significance the null hypothesis (H_0) is rejected and accepts the alternate hypotheses (H_A) implying that there existed a significant relationship between motorcycle accessibility and performance of wholesale and retail businesses in Kenya.

H_{05} There is no statistically moderating influence of road safety and compliance training of motorcycle riders on the relationship between motorcycle solutions and performance of wholesale and retail sector in Kenya.

The fifth hypothesis stated there is no significant statistically moderating influence of road safety and compliance training of motorcycle riders on the relationship between motorcycle solutions and performance of wholesale and retail sector in Kenya. However, the study findings revealed that road safety and compliance training of motorcycle riders had a positive and significant moderating effect on the relationship between motorcycle solutions and performance of wholesale and retail sector in Kenya ($\beta = 0.588$, $p=0.000$, $p<0.05$). The t-statistic and corresponding p-value were 40.665 and 0.000 respectively. Therefore, at $P < 0.005$ level of significance the null hypothesis (H_0) is rejected and accepts the alternate hypotheses (H_A) implying that road safety and compliance training of motorcycle riders was found to have significant moderation effect in the relationship between strategic collaborations of motorcycle industry and performance of wholesale and retail sector in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter covered a summary of the major findings based on the research objectives. The summary presented in this section was based on the findings of joint relationship between independent variables and dependent variable. The chapter further consisted of conclusions made based on research findings. The chapter finally presented the recommendations made to help improve performance of the wholesale and retail sector. Areas for further study are also suggested.

5.2 Summary of Findings

The purpose of this study was to investigate the contribution of strategic collaborations of the motorcycle industry on performance of the wholesale and retail sector in Kenya. The study sought to examine the influence of motorcycle delivery innovation, motorcycle logistic cost, motorcycles timely delivery, motorcycles accessibility to the markets on performance of wholesale and retail sector in Kenya. In addition, the study assessed the moderating effect of road safety and compliance training of motorcycle riders on the relationship between strategic collaborations of motorcycle industry and performance of wholesale and retail sector in Kenya. This research targeted all wholesales and retails shops in 47 Counties in Kenya that engaged commercial motorcycles for their last mile delivery of goods. Univariate and multivariate regression analysis were used to test the influence independent variables had on

dependent variable.

5.2.1 Motorcycle Delivery Innovation and Performance of Wholesale and Retail Businesses

The study objective was to examine the influence of motorcycle delivery innovation on the performance of wholesale and retail businesses in Kenya. The study found that motorcycle delivery innovation had been embraced by the wholesalers and retailers in their businesses resulting in improved performance. Results showed that use of motorcycles for delivery had provided a solution to the business owners since motorcycle innovations such as use of mobile App to book for a ride, use of mobile money, internet connectivity and the ability of motorcycles to access remote areas had enhanced fast, timely, effective and efficient delivery thus improved performance on their businesses due to customer satisfaction realized from the comfort of ordering goods from their places. A positive and significant association between motorcycle delivery innovation and performance of wholesale and retail businesses was found using regression analysis. The study affirmed that businesses that have employed and embraced motor cycle delivery innovations and solutions have higher chances of recording better performance than those that have not employed such strategy in place.

5.2.2 Motorcycle Logistic Cost and Performance of Wholesale and Retail Businesses

The second aim of the study was to investigate the influence of motorcycles logistic cost on the performance of wholesale and retail business in Kenya. The study found that motorcycle logistics costs were low and manageable as compared to motor

vehicles and this had helped the businesses realize more profits due to reduced cost of operations such as storage cost and distribution cost as well as improving the delivery time. The study further established that use of motorcycles by wholesalers and retailers had enhanced distribution of goods to the customers as well as reaching a wide range of customers hence improving customer satisfaction and customer retention. Moreover, the study found that outsourcing of logistics operations and services from the motorcycles association had led to improved performance of wholesalers and retailers hence resulting in sustainable logistics operations. Regression and correlation analysis pointed out that there was a strong and positive relationship between motorcycles' logistic costs and performance of wholesale and retail businesses in Kenya.

5.2.3 Motorcycle Timely Delivery and Performance of Wholesale and Retail Businesses

The third objective of the study was to find out the influence of motorcycles timely delivery on the performance of wholesale and retail sector in Kenya. Results revealed that motorcycles were very crucial in supporting the growth and performance of retail and wholesale businesses. The study established that wholesalers and retailers were turning to motorcycles in order to reach their far-flung customers and during the traffic snarl-ups the motorcycles are always able to maneuver and deliver the products to the customers on time. The motorcycles have enabled fast and efficient delivery of goods to customers' even those that are in remote areas. A positive and significant relationship between timeliness and performance of wholesale and retail businesses in Kenya. The findings implied that there was a higher likelihood of recording better performance by having in place motorcycles for timely delivery.

5.2.4 Motorcycles Accessibility to the Markets and Performance of Wholesale and Retail Businesses

The fourth objective of the study was to identify the influence of motorcycles accessibility to the markets on the performance of wholesale and retail businesses in Kenya. The study found that motorcycle accessibilities to the markets had enhanced growth of wholesaler and retailer businesses in Kenya. This was attributed to by the fact that there were many motorcycles which could be accessed at any time for small amount of money, motorcycles were also more affordable to the common man and could easily reach the inaccessible parts through narrow and poorly paved roads and inadequate and poorly designed roads had resulted in the increasing need of motorcycle transport in rural and urban areas which was imperative for wholesalers and retailers. The study established a strong and significant correlation between accessibility to the markets and performance of wholesale and retail businesses. The study's conclusions showed that accessibility of commercial motorcycles to the markets significantly and favorably affected performance of wholesale and retail businesses.

5.2.5 Moderating Role of Road Safety and Compliance on Strategic Collaborations and Performance of Wholesale and Retail Businesses

The last objective of the study was to explore the moderating effect of road safety and compliance training of motorcycle riders on the relationship between strategic collaborations of motorcycle industry and performance of wholesale and retail sector in Kenya. Descriptive statistics revealed that motorcyclists engaged by the wholesalers and retailers had been trained on road safety and they were all compliant with NTSA

rules. The findings imply that the business owners had trust with riders who were well trained and compliant as compared to those that their motorcycles had had accidents and were not compliant with NTSA rules. Regression results indicated that road safety and compliance training of motorcycle riders moderated motorcycle solutions and performance positively and statistically significant. The findings imply that training of motorcycle riders on road safety and compliance is very important in improving the performance of wholesale and retail sector in Kenya. The findings shows that majority of the motorcycle riders have been trained on road safety and they are compliance with the rules and regulations laid down by NTSA

5.3 Conclusions

The study concluded that motorcycle delivery innovations / solutions have a strong relationship with performance of wholesale and retail businesses. This was attributed to by the technological changes happening in the world where customers are purchasing goods online or via phone hence necessitating the wholesalers and retailers to embrace the changes and turn to motorcycles to provide a solution. The study concluded that use of mobile application by commercial motorcycles has assisted most business owners in delivering their goods to their consumers efficiently since the motorcycles use GPS which enables tracking of the delivery process thus guaranteeing safety. Use of motorcycles for delivery has ensured convenience, efficiency and timely deliveries resulting to improved performance.

This study concluded that performance of wholesale and retail businesses significantly depends on motorcycle logistics costs. Commercial motorcycles have helped business

owners to have cheaper and convenient means of delivery to serve their customers. The study also concluded that commercial motorcycles are readily available and the retailers can share the delivery costs with the final customers making motorcycles delivery strategies cost effective. The fast delivery of goods to the customers through motorcycles has led to reduction of warehousing costs, storage costs, distribution costs, and costs associated with congestion in busy towns. Equally, commercial motorcycles provide flexibility logistic services. The retailers and wholesale businesses also outsourced logistics operations from SACCOs which reduced investment in the logistic services like using vans and Lorries to deliver products to the final customers which requires the businesses to have startup capital.

In conclusion there is positive linear relationship between timeliness and performance of wholesale and retail businesses in Kenya since commercial motorcycles take shorter time as compared to conventional vehicles. In addition, flexibility, ability to reach even customers in the remote areas, ease of maneuverability through congested roads has helped to meet the dynamic needs of customers which has improved the competitiveness of wholesale and retail businesses leading to improved performance. The study thus concludes that use of motorcycles has helped improve performance of wholesale and retail businesses due to timely delivery.

The study concluded that accessibility of commercial motorcycles to the markets and performance of wholesale and retail businesses in Kenya were statistically significant. The ease of commercial motorcycles to reach customers faster, accessing remote areas and their ability to access narrow and poorly paved roads has made the motorcycles useful in solving transportation issues. The study concluded that increased availability

of commercial motorcycles has made transportation of goods easy in rural and remote areas which has promoted the wholesale and retail businesses in return.

In relation to the moderating role of safety compliance and strategic collaborations of commercial motorcycles and performance of wholesale and retail businesses, the study concluded that majority of motorcyclists had valid driving licenses, had undergone ethical training, were experienced and complied with safety and security. In addition, they were compliant with NTSA regulations and were wearing protective clothes while delivering products from the wholesale and retails which ensured on their safety. This helped to reduce risk associated with incompetent motorcyclist which contributes losses to the businesses. The study concludes that road safety and compliance training of motorcycle riders had a significant moderating effect on the relationship between strategic collaboration of motorcycle industry and performance of wholesale and retail sector in Kenya.

5.4 Recommendations

From the findings of this study, several policy implications can be drawn for effective application of strategic collaborations with motorcycle industry in the wholesale and retail businesses in Kenya. The policy implications are presented as per the study objectives.

The study recommends that the government should encourage and sensitize the motorcycle service providers to embrace and uphold the use of mobile apps for more enhanced execution of their roles. The sector should take advantage and tap benefits of the robust and gradual growth of the ICT environment in the country and reap from the

intended and accruing benefits of it. This includes GPS locating, mobile app among other innovations.

The study recommends that wholesale and retail businesses should contract motorcyclists from logistic companies that have proper track record to help reduce cases of vandalism of wholesale and retail businesses by unknown motorcyclists. At the same time, the sector should adopt and fully employ motorcycle delivery innovations to enhance distribution of goods and services faster and at the same time minimize the logistics costs.

On timeliness and performance of wholesale and retail businesses growth, the study recommends that the government encourages wholesalers and retailers to fully utilize commercial motorcycles for delivery in order to reduce time taken in delivery of goods and services hence promoting faster, convenience, efficiency and time delivery.

Due to motorcycles accessibility to the markets, the study recommends that there is need to engage motorcycle delivery services so as to easily access more customers in remote areas, thus reaching more customer base faster. The government should formalize and regulate the activities of commercial motorcycle operators to strengthen the business.

It is also recommended that those in charge of road safety and compliance, in this case NTSA, should uphold and enhance official training of the commercial motorcycle delivery solution providers. On the part of providers, it recommended that they equally take advantage of the training and acquire the requisite compliance certification of road safety. In addition to this the study further recommends that wholesalers and retailers to

strictly employ trained and qualified motorcycle delivery providers.

5.5 Suggestions for Further Studies

Owing to the current study findings and limitations faced by the researcher further studies are recommended on the following topics: a study on contribution of motorcycle industry strategic collaboration on performance of other sectors growth in Kenya for example public transport for purposes of comparing the results. Further studies can be carried out on use of commercial motorcycles by logistic companies and the influence it has on delivery service of small and medium businesses in Kenya and an investigation on the influence of embracing motorcycles by online businesses on their performance and growth.

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APPENDICES

APPENDIX I: KREJICE MORGAN TABLE

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

APPENDIX II: QUESTIONARE

This questionnaire has been designed to solicit information for purely academic purposes. This is to enable the researcher complete her project on the topic; **The contribution of motorcycle industry strategic collaboration on performance of wholesale and retail sector growth in Kenya.**

NB. All information given was treated with utmost confidentiality. Thank you

Instructions

- ✔ Please kindly respond to all items in these questionnaire
- ✔ Put a (Tick) alongside the option that is most applicable to you or fill in the spaces provided
- ✔ Do not write your name in this questionnaire

SECTION A: Demographic Data

For how long has the business been in operation

Less than two years [ ]

Three to five years [ ]

Six to ten years [ ]

Over ten years [ ]

Kindly indicate your age group. 18-20_____

21-25_____

25-30_____

31-35_____

35-40_____

41-50 _____

51 -60

Above 60_____

Kindly indicate your
Gender?

Male

[ ]
Female
[ ]

A.3. What is your highest educational level?

Technical certificate [ ]
Diploma [ ]
Degree [ ]
Masters Degree [ ]

Others (Specify)……

SECTION B: DELIVERY INNOVATION

Kindly rate the extent to which agree with the following statements on how delivery innovation is applied in your firm

Rate your response on a five point Likert scale on which 1= Strongly Disagree (SDA) 2= Disagree, (D) 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

Statement		**SA**	**A**	**N**	**D**	**SDA**
		5	4	3	2	1
1	The mobile app by motorcycle service providers has enhanced business Performance					
2	Use of mobile money by service providers has enhanced business growth					
3	Internet connectivity with motorcycle has increased efficiency in our business					
4	Use of GPS by motorcycle service providers has seen our business thrive					
5	The use of Mobile App for booking motorcycles services has ensured convenience for business which has resulted into improved performance					
6	Booking of designated motorcycles via Mobile App has reduced risk of losses cause by theft from wholesale and retail which has improved on their					

	performance					
7	Motorcycles delivery are fast in delivery of products from retailer and wholesalers which has promoted on their performance					
8	The fact that the customer can order a variety of items from different retailers and wholesalers at the comfort of their home has led to increased customer satisfaction which has promoted their performance					
9	The ability of the motorcycles to access remote areas which has no proper road network has made them more reliable for wholesalers and retails and has led to improved performance					

How can delivery innovation be improved? Explain.

……..…

SECTION C: LOGISTIC COST

Kindly rate the extent to which agree with the following statements on how logistic is applied in your firm

Rate your response on a five-point Likert scale on which 1= Strongly Disagree (SDA) 2= Disagree, (D) 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

Statement		**SA**	**A**	**N**	**D**	**SDA**
		5	4	3	2	1
1	Motorcycles have enhanced distribution of goods to our customers					
2	Motorcycles have enhanced reaching wide range of customers					
3	Use of motorcycles has helped reduce need for storage					
4	Use of motorcycles has helped reduce warehousing costs					
5	Motorcycles have helped reduce the distribution costs					
6	Use of motorcycles has left the management with more time to focus on improving logistics					
7	Use of motorcycles has improved on market coverage more efficiently					
8	Use of motorcycles has reduced cost associated with congestion in busy towns and					

	has led to reduced cost and improved performance					
9	Flexibility of logistic services associated by the use of motorcycles has improved the delivery time which has resulted into improved performance					
10	Outsourcing of logistics operations and services from the motorcycles association has led to improved performance of wholesalers and retailers and the result which was concluded from the research that although sustainable logistics operations					
11	Use of commercial motorcycles had led to sustainable logistics operations for wholesalers and retailers which has promoted their performance					

How can logistical costs be managed better?
Explain……
…….

SECTION D: TIMELINESS

Kindly rate the extent to which agree with the following statements on timelines in your firm. Rate your response on a five-point Likert scale on which 1= Strongly Disagree (SDA) 2= Disagree, (D) 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

		5	4	3	2	1
1	The shorter time taken by motorcycles has helped the business growth and performance					
2	The fast movement of motorcycles has helped in enhancing delivery time					
3	Motorcycles are more convenient to our customers, and this has improved customer satisfaction					
4	Flexibility of motorcycles has helped reach more customers in time					
5	Use of motorcycle has helped the business meet the dynamic needs of customers on time					
6	The motorcycles can easily maneuver through congested road which make delivery fast					
7	Wholesalers and retailers use motorcycles in order to reach their far-flung customers which					

	had improved their performance					
8	Wholesalers and retailers remain relevant and grow at the period off high competition and where the customers' needs the goods delivered as soon as practicable, the use of motorcycle is turning out to be the option.					

SECTION E: ACCESSIBILITY

Kindly rate the extent to which agree with the following statements on accessibility in your firm. Rate your response on a five-point Likert scale on which 1= Strongly Disagree (SDA) 2= Disagree, (D) 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

Statement		**SA**	**A**	**N**	**D**	**SDA**
		5	4	3	2	1
1	The ease of access of motorcycles services has had a positive influence of our customer base					
2	Motorcycles helps us reach more customers due to their ease of access to remote areas					
3	Motorcycles have helped reach bigger customer base faster					
4	Motorcycles are also more affordable to the common man and can easily reach the inaccessible parts through narrow and poorly paved roads					
5	Inadequate and poorly designed road have resulting in the increasing need of motorcycle transport in rural and urban areas which is imperative for wholesalers and retailers					
6	Increased accessibility of motorcycles to remote customers have increased their satisfaction which has increased their purchase in the wholesalers and retailers which employ motorcycles for delivery services					
7	The increased availability of commercial motorcycles make transportation of good easy in rural and remote areas.					
8	There are many motorcycles which can be accessed at any time for small amount of money which has promoted the performance of wholesalers and retailers					

SECTION E: ROAD SAFETY AND COMPLIANCE TRAINING OF MOTORCYCLE RIDERS

Kindly rate the extent to which agree with the following statements on accessibility in

your firm. Rate your response on a five-point Likert scale on which 1= Strongly Disagree (SDA) 2= Disagree, (D) 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

Statement		**SA**	**A**	**N**	**D**	**SDA**
		5	4	3	2	1
1	The Motorcyclist operating have undergone through official training and have a driving license					
2	The Wholesalers and retailers engage qualified driving schools while outsourcing for qualified motorcyclists to operate in their businesses					
3	The motorcyclists undergo frequent training safety and security					
4	Motorcyclist have undergone through ethical riding training before starting to working with wholesalers and retailers					
5	The knowledge and experience of trainers is important for wholesalers and retailers which has promoted their performance					
6	The motorcycles operating with wholesalers and retailers have all the compliance documents require for commercial motorcycles					
7	All the motorcyclist always wear protective clothes such as helmet, reflective gears which ensure their safety which doing delivery of protect					
8	The wholesalers and retailers always cross check on the accident free motorcycles to engage in their businesses					
9	The commercial motorcycles comply with the loading and speeding regulation as stipulated in NTSA.					

APPENDIX III: DOCUMENT ANALYSIS ON BUSINESS GROWTH

This documentary analysis guide was used to guide my research while analyzing company's documents.

YEAR	Sale turnover	Market share	Profitability	Profitability
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				

confirm *

APPENDIX IV: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 804267

Date of Issue: 21/July/2022

RESEARCH LICENSE

This is to Certify that Mr.. Christopher kinyua WANJAU of Karatina University, has been licensed to conduct research in Bomet, Mandera, Nairobi, Nyandarua, Uasin-Gishu on the topic: CONTRIBUTION OF STRATEGIC COLLABORATION OF MOTORCYCLE INDUSTRY ON PERFORMANCE OF WHOLESALE AND RETAIL SECTOR IN KENYA for the period ending : 21/July/2023.

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