

**AN ANALYSIS OF MONTHLY FUEL PRICE ADJUSTMENTS ON THE SALES OF
COURIER SERVICE OPERATORS IN SELECTED PARTS OF LUSAKA DISTRICT
FOR THE PERIOD 2020-2022**

BY

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**A Dissertation submitted to the University of Zambia in collaboration with Zimbabwe
Open University in partial fulfilment of the requirements for the award of Master of
Business Administration Degree**

THE UNIVERSITY OF ZAMBIA

LUSAKA

@ 2023

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DECLARATION

I, Theophister Thope, do hereby declare that this dissertation entitled; “Analysis of Monthly Fuel Price Adjustments on the Sales of Courier Service Operators in Selected Parts of Lusaka District for the Period 2020-2021” is my original work and has not been submitted to any institution before. All sources used have been thoroughly acknowledged.

Signed (Candidate)..... Date.....

CERTIFICATE OF APPROVAL

This dissertation by Theophister Thope has been approved as partial fulfilment of the requirements for the award of the Partial Fulfillment of Master Degree in Business Administration (MBA General)

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ABSTRACT

Fuel prices play a significant role in the operational costs of courier service operators. As fuel prices increase or decrease, it directly affects the sales and profits of courier services due to cost of running delivery services. When fuel prices rise, courier companies experiences an increase in sales but faced higher expenses for fueling their vehicles, which can lead to increased operational costs. Therefore, this study was analyzing monthly fuel price adjustments for the sales of courier service operators. The Study was guided by Theoretical Framework using the Law of Demand Theory. This study's approach was quantitative in that it was able to generate numerical data, which was converted into statistical analysis. Questionnaires were used to collect data from respondents, and a simple random sampling was used to determine participants. The Chi-Square T-test was used to analyze the collected data. The first objective was to compare the demand for courier services in relation to charge prices and fuel adjustments for the period 2020-2022 in Lusaka and the study discovered that 68 (52%) indicated that it had increased, 42 (32%) said that it remained the same and 20 (15%) indicated that it had decreased. The findings suggest a positive outlook for the courier service industry in 2022, with more than half of the participants noting an increase in demand. The second objective was to assess whether courier service operators in Lusaka District are making profitable sales to an adjustment of fuel prices and the study revealed that the majority 62 (48%) believed it was very positive, while a notable percentage 25(19%) considered it slightly positive. On the other hand, there were smaller proportions who viewed it negatively, with 22 (17%) stating it was slightly negative and 9% indicating it was very negative. The minority 9 (7%) felt that there was no impact on profits due to these adjustments. The last objective was to find out the influence of fuel prices on the rate of business transactions on the Courier Services in Lusaka and the study established that 51 (39%) strongly agree, 42 (32%) agreed, 4 (3%) were neutral, 18 (14%) disagreed and 15 (12%) strongly Disagree. It can be observed that a majority of participants either strongly agreed or agreed that the monthly adjustments of fuel prices in 2022 had an influence on business transactions due to the increase in online purchases by customers who tried to lessen transportation costs as a result of high fuel prices. The study recommendation that courier service operators implement dynamic pricing strategies that will allow for adjustments based on fluctuating fuel prices while remaining competitive in the market. It is also recommended that courier service operators should invest in fuel-efficient vehicles to reduce operational costs and minimize the impact of fuel price fluctuations on overall expenses. It is recommended also that Government adopt a strategy for price shocks by locking the fuel price or buying in bulk when it is cheaper at the international market to avoid suppliers buying at higher prices and also re-introduce a form subsidy on fuel to caution high fuel prices.

Keywords: *Sales, Fuel, liquid fuel, Courier Services, monthly Adjustments and Operator*

DEDICATION

This work is dedicated to my adorable husband Mr. Kelvin Chileshe Chimanga, my children Bernard Chimanga, Joshua Chimanga, Kelvin Chileshe Chimanga Junior and Jemimah Precious Chimanga for their diligent support during the period of writing this dissertation. I will always be grateful for their love, inspiration, and encouragement, rendered to me.

To my Grandparents Mr. Gilelme Tope, Mrs. Mirriam Muyapekwa Nawa Tope and my mother Mrs. Ruth Tope am so grateful for their sacrifices and good upbringing that inspired me to write the dissertation.

May God bless you all!

ACKNOWLEDGEMENTS

I hereby acknowledge and appreciate Dr. Martin Kabwe my dissertation supervisor at the University of Zambia, Directorate of Research and Graduate Studies. Dr. Kabwe was supportive to the building up of the dissertation and offered valuable advice which increased my understanding and knowledge in research. He tirelessly guided me on every step without giving up on me. I further wish to acknowledge Prof William Abwino Phiri for his principles and guidance in statistics and advanced research methods, Mr. Namangala the course coordinator for his support in the programme and the panel of judges who guided through the research which include; Dr. Chibale, Dr. Kamanga and Mr. Fulai.

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LIST OF ABBREVIATIONS

ARDL	Autoregressive Distributed Lag Model
CPM	Cost-Plus Model
ECM	Error Correction Model
ERB	Energy Regulation Board
MOE	Ministry of Energy
NDP	National Development Plan
NPP	National Postal Policy
OMC's	Oil Marketing Companies
VAR	Vector Autogressive Technique
ZAMPOST	Zambia Postal Services Corporation
ZAMSTATS	Zambia Statistical Agency
ZICTA	Zambia Information and Communications Technology Authority

CHAPTER ONE

INTRODUCTION

1.0 Overview

Fuel price fluctuations can significantly impact the sales and profitability of courier service operators. These businesses rely heavily on transportation, any slight changes in fuel prices can result in substantial cost variations as well as increase in operational expenses. This study aimed to explore the analysis of monthly fuel price adjustments on the sales of courier service operators in selected parts of Lusaka District. The chapter presented the background of the study, which led to the problem discussion of the research. It outlined study objectives, specific objectives, research questions and hypothesis. Further, it described the significance of research, scope of study and operational definition of key terms were viewed.

1.1 Background of the Study

Fuel is a valuable resource that plays a key role in the development of any business and nation worldwide, according to the World Bank, the global economy had experienced a high volatility of petroleum products (World Bank 2023). Petroleum products are a common and influential source of energy, the principal sources being fuel (comprising diesel, petrol, and kerosene) and a range of compound fuels (Jet Oil) (MOE,2011). Petrol and Diesel is essential in meeting the world's transportation needs as many businesses in the transportation industry relied on the use of petroleum products. In addition to being used in fuels that power automobiles, heavy-duty vehicles and airplanes, it is a component in the synthetic rubber that forms their tires. Experts predicted that rising fuel prices would have a negative effect on overall businesses' activities and economic growth as it lowers consumer spending (Shivashankar, 2023).

According to Asim (2019), fuel price adjustments referred to changes in the cost of fuel over a specific period, often measured monthly. These adjustments were influenced by various factors, which included global oil production levels, geopolitical events, economic indicators, and natural disasters. For courier service operators, fuel price adjustments could directly affect their operational costs, as fuel was one of their most significant expenses (Mohammed, 2019).

In Zambia, Vision 2030 outcome 4 stipulated provisions on the energy sector in relation to: "improved energy production and distribution for sustainable development to ensure universal access to clean, safe, reliable, and affordable energy at the least costs (7th NDP,2017-2021)."

The country had no known proven reserves of crude oil, hence, petroleum products requirements were imported and accounted for 12% of the national energy demand (Zamstats, 2007). The transport sector was the highest consumer of petroleum products, representing 53% consumption, followed by the mining sector at 27%, commerce and industry 10%, households 6%, and the Government of Zambia at 4% (Zamstats, 2007). Therefore, fuel as a commercial commodity had an impact on both the micro- and macro-economies of the country.

The pricing of petroleum products in Zambia was largely influenced by international oil prices and the exchange rate of the Kwacha to United States Dollars (MOE, 2022 Annual Report).

The courier services industry in all parts of the world relied heavily on fuel through every step of supply. The history of courier services originated in Persia around 400 BC, when Prince Cyrus used younger enlisted runners, homing pigeons, and men on horseback to deliver important messages throughout the kingdom and beyond. Courier services dominated the postal industry in the middle age, when royal courts paid couriers wages to deliver their parcels (Satosh, 2018). Globally, the United States of America were the first to establish courier companies, namely Wells Fargo (1852) and The Pony Express (1859). Africa itself came on the scene around the 1900s in South Africa.

For Zambia, the provision of formal postal services started in 1904 under the British South Africa Company (NPP, 2021-2031) ZAMPOST being established in 1994 as the first company to offer courier services in the country. In 2009, the Postal Services Act No. 22 was enacted under the objective of the regulation of the postal and courier services, this act enabled ZICTA to regulate the courier service industry. Postal and courier services involved the collection, sorting, transporting, and delivery of goods from the sender to the recipient, parcels were sent throughout the country and other countries as destinations. It was a faster way to get anything anywhere without physically being there (ZICTA 2020).

Courier services operators in the country heavily relied on fuel to operate their vehicles for delivering various packages and parcels throughout the country and region. Perloff (2007) alluded that, any fluctuations in fuel prices had a significant impact on operational costs and ultimately affected sales and profits. Monthly fuel price adjustments, which were common in many countries, posed challenges to courier service operators in managing expenses and pricing strategies.

Cecilia (2017) postulated that courier service operators in Zambia played an important role in the development and growth of the economy. They were an important sector for the government and created 90% of the corporate sector. Courier service operators were the main contributors to economic development as they helped in creating employment opportunities, increased the competition and the wealth in the country, and also enabled younger generation to start own business.

1.2 Statement of the problem

Government under section 4 (j) of ERB Act No. 12 of 2019 mandated ERB to determine, regulate, and review charges and tariffs in the Energy Sector (ERB Report 2020).

In 2020-2021, ERB used the CPM to determine the wholesale pump prices (the principal of the model was that the final price of fuel should cover all costs in the supply chain). Fuel prices were reviewed on a 60-day cycle without any adjustment in prices. Petrol was trading at K17.62, Diesel at K15.59, and Kerosene at K13.03, respectively. In 2022, the government disengaged in the procurement and subsidizing of fuels thus allowing Oil Marketing Companies (OMCs) import fuel at international oil prices. ERB changed the fuel pricing model from the Cost-Plus Model (CPM) to the Import Pricing Mechanism (IPM) in the period 2022, January to December. This led to monthly reviews and adjustment of fuel prices trading between K21 and K26 (Table in appendix) per litre for both petrol and diesel (MOE report 2022).

This caused an economic problem in the country, where many businesses in the transport and logistics industry including courier services were affected. Many complaints focused on transportation costs, operational costs, profits sales and demand for services which may have an impact on the nation's economic growth. Mohammed (2014), found fuel price adjustments to have an impact on the prices of other commodities worldwide, many businesses were affected in operational costs, productivity, sales, and profits. Donker (2011) equally found fuel to have a significant effect on the profitability of a firm, which required a firm to earn adequate sales and make proper investments.

During the period 2022 (January to December) fuel prices kept fluctuating (for the most parts, increasing) and were being reviewed on a 30 day cycle. Since courier service operators relied on fuel for operations, any adjustment in fuel price may have a significant impact on the businesses. The extent to which fuel price adjustments affect the sales, profits, demand and rate of business transactions for courier services in Lusaka District were not known. This problem therefore, created an opportunity for the study to analyse monthly fuel price adjustments on the sales of courier service operators in Lusaka District.

1.3 Purpose of the study

The purpose of the study was aimed at comparing fuel price adjustments on the sales of Courier Service Operators in Lusaka District for the period 2020-2021 when fuel prices were constant to the period 2022 January to December when monthly adjustments were implemented, whether the courier service operators were making profitable sales.

1.4 Study Objectives

The study's main objective was to analyse the monthly fuel price adjustments on the Sales of Courier Service Operators in Selected Parts of Lusaka District for the period 2020-2022.

1.4.1 Specific objectives

The specific objectives of the research were as follows:

1. To examine the demand for courier services with regards to charge prices and fuel adjustments for the period 2020-2022 in Lusaka District
2. To assess whether courier service operators in Lusaka District were making profitable sales to an adjustment of fuel prices
3. To determine the influence of fuel prices on the rate of business transactions of Courier Services in Lusaka.

1.5 Research questions

The study was guided by the follow questions

1. What is the relationship between the demand for courier services with regard to charge prices and fuel adjustments for the Period 2020 -2022 in Lusaka District?
2. To what extent do courier service operators make profitable sales to cover for adjustments in fuel prices?
3. What is the influence of fuel prices on the rate of business transactions of Courier Services in Lusaka?

1.6 Research hypothesis

Null Hypothesis H₀: Monthly fuel price adjustments do not affect sales and profitability of courier service operators in Lusaka District

Alternative Hypothesis H₁: Monthly fuel price adjustments do affect sales and profitability of courier service operators in Lusaka District

The research did a hypothesis testing to find out if the two variables relate to each other using the Chi- square test at 95% confidence level of approximately 0.05 level of confidence.

1.7 Significance of the study

Fuel greatly contributed to the development of the business sector as well as the growth of an economy. Establishing the extent to which monthly fuel price adjustments affected the demand, sales, and profitability of courier services enlightened businesses to mitigate this challenge, discover opportunities to sustain the businesses, and also help them to make key decisions as well as plan and forecast for the future.

The study findings can contribute to the exiting body of knowledge of what other researchers studied in the area of business development, sales, profits and economic growth.

It can also contribute to different work in the research of petroleum products and how they affect the economy, businesses, and consumers in Zambia and other parts of the world. The research could help the government review the fuel pricing model and make policies that would enable both the government and business sectors to develop. This might enable the government to develop a petroleum strategy that is fulfilling for government, businesses, and consumers.

1.8 Theoretical Framework

Theoretical framework propositioned several benefits to research study. This was because it delivered the construction upon which a scholar defined his/her work theoretically, epistemologically, procedure and analytically (Grant & Osanloo, 2014). A theoretical outline for this study was anchored on the Law of Demand Theory.

1.8.1 Law of Demand

In economics the Law of Demand is a widely used theory that expressed the relationship between the price of the product and quantities purchased amongst different customer preferences when all other things were held constant. Demand for a product varied inversely with its price, (Ahuja, 2008 (Microeconomic Book)).

For instance if we related this to the transportation courier of goods and services to transport cargo the transport invest time and energy (oil and gas) which create the costs and traffic of volumes related to the demand of the transportation. Further the Law of demand takes into account the choice of the consumer, goods that bring utility or satisfaction to the consumer, consumer preferences and budget constraint of the consumer given the price of which they had to pay.

Demand has a substitution effect related to the prices of other goods that are cheaper to the consumer. Therefore, demand could be elastic or inelastic, elastic demand referred to a small change in price that caused a large change of the number of units bought while inelastic demand referred to little effect on the number of units bought (Ayujah 2008). The law of demand states that the demand of a product was the willingness of consumers to purchase a good or use a service. The desire for goods and services was coupled with the ability and willingness to pay for that good /service.

The law of demand could cause an effect to courier service operators on the number of customers willing to pay or use the services and also on the volumes of quantities demanded or purchased thus it was significant to use this theory for the study of how the sales of courier services maybe affected with an adjustment in fuel prices.

1.9 Scope of the study

The coverage of the study area were in selected parts of Lusaka District, which included: Town Center, Levy Park Mall, Kabwata, Kabulonga, Woodlands, Chilenje, Manda Hill, East-Park Mall, and Long Acre Area. These areas of the study were chosen because most courier service operators were allocated around the areas. Further it was easy to collect data samples because the population was well established and traceable. The samples were exposed to variety changes in the independent variable. Courier services in these areas covered deliveries of goods from one place to another within the country, and delivered parcels to other destinations and countries; hence they were accustomed to changes in the independent variable.

1.9 Operational definitions

Sales: A sale was defined as a pinnacle activity involved in selling products or services in return for money or other compensation. It was an act of completion of a commercial activity. Sales was everything that one would do to close the sale and get a signed agreement or contract (Siddiq 2023).

Fuel: Fuel was defined as a combustible substance which mostly consisted of carbon. On proper burning in the presence of air, fuel released a considerable amount of energy in the form of heat and light. Fuels produced an immense amount of energy, which was economically used for various domestic and industrial purposes.

A fuel (from Old French feuaile, from feu fire, ultimately from Latin focus fireplace, hearth) is a substance that may be burned in air (or any other oxidant-containing substance), i.e. that so quickly reacts with oxygen that heat and light is emitted in the form of a sustained flame (Martinez 2023). **Liquid fuel:** Thus were fuels that existed in the liquid state known as liquid fuels. Examples include: Diesel, Petrol, Kerosene and Crude oil. (Moe, 2011). The study concentrated on the two variables that were widely used in the day to day business activities these were Diesel and petrol products as these had a significant impact on business activities. **Monthly Adjustments:** This referred to review that caused changes in a commodity either upwards or downwards (ERB Report 2022). In relating to the study it referred to the changes in fuel prices which were reviewed on a 30 day circle basis.

Courier Service: A Courier Service was defined as a premium, all-inclusive service that collected and delivered to a destination at the fastest time both locally and internationally through delivery and shipment of parcels, customs clearance of motor vehicles and other duty products (ZICTA Report 2020).

Operator: According to NPP 2021-2031 a designated operator was a government or non-government entity officially designated to operate postal services and fulfilled obligation arising of the Acts of the Universal Postal Union. In our study an operator is described as one licenced to operate courier services.

1.10 Summary of the Chapter

This chapter provided a focus on the background of the study, the statement of the problem, objectives of the study, research questions, hypothesis, significance of the study, the Theoretical Framework, scope of the study and definition of terms. The next chapter provided a review of literature to the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

The chapter discussed literature review relating to what other researchers did in the area of study and what were the research gaps. According to Kumar, (2005) literature review is important as it brought clarity and focused on the research problem, it helped the researcher to understand the subject area better, thus helping to conceptualize the research problem clearly and precisely. It also helped to understand the relationship between the research problem and the body of knowledge in the study area. Literature review improved the methodology, as it brought about the procedures and methods used by other researchers, what procedures and methods worked well for them, and what problems they faced (Grubic, 2020).

2.1 Related Literature Review

Related literature to the study improved the methodology that was used in the study. The sources of information in the literature review included journal articles both open and closed access, reports from education organisations, books, and recommended readings from the supervisor among others. Therefore, this literature review was guided by research questions as sub-themes which incorporated the Global Perspective, Regional Perspective, and Local Perspective.

2.1.1 The relationship between the demand for courier services with regards to charge prices and fuel adjustments for the Period 2020-2022 in Lusaka District

Fuel is essential to the smooth running of any industry. Without fuel, many processes would stop and be difficult to restart. Fuel can come in many forms; it can be liquid, gaseous, fossil, or renewable. A country's reliance on fuel imports is usually because it lacks sufficient resources to produce fuel domestically.

Fuel is used in all aspects of production and transport: powering vehicles, heating homes, and generating electricity (Energy Regulation Board 2020). It can also be used in producing fertilizers, manufacturing goods, and transporting goods.

In this way, fuel demand is primarily driven by the need for energy and raw materials to produce goods and services.

(i) Global Perspective

Globally studies were done increase of fuel price to the demand of goods and services. Harnida (2022), in a study entitled: The Increase of Fuel Prices and the Problems for the Economy in Indonesia done in 2022, under the main objective to analyse the impact of the increase in fuel prices on the Indonesian Economy. The study used qualitative methods, and data collection was through observation, interviews and documentations. Interviews were conducted with the public and business actors affected by the rising fuel prices. The study found a significant relationship between fuel prices, unemployment, increase in prices of basic needs, increase in the cost of producing goods and services (increase in transportation costs of in and out station to the businesses). The study highlighted increase in inflation which caused a decrease in real salary thereby affecting household consumption, reducing demand for goods and services. The research recommended government to provide cash assistance and wage subsidy assistance as a form of compensation for rising fuel prices.

The research Gap was on the methodology used the researcher used Qualitative methodology of collecting data through observation, interviews and documentation whilst the current research used quantitative data collection instruments by using a questionnaire. The other gap was on the sample size the research looked at selected courier services in the same business line whilst the other researcher concentrated on a survey directly on households.

Tumbunan (2022) from Jakarta Indonesia did a research on the Impact of the Drastic Increase in fuel oil (BBM) prices. The main objective was to determine the impact of drastic increase in fuel prices on the economy of Indonesia. In method the researcher used a descriptive analytical review using mixed methods of both qualitative and quantitative methods on secondary data obtained through various references. The research identified a domestic undersupply of fuel compared to its demand contributed to high prices of the fuel in Indonesia. This increase in fuel directly caused an increase in transportation tariffs, inflation and unemployment. The increase led to a change in operating costs and level of profits, low economic activities and economic growth. The gaps in the review was on the using mixed methods by analysing secondary data through various references, the current study used quantitative methods and developed a questionnaire as a data collection instrument. However both researchers opted to use descriptive analytical methods.

Shaw (2020), in a study to Estimate the Demand for Petrol in India used yearly time series data from 1966 to 2019 to estimate the demand for petrol in India using single equation dynamic models. The explanatory variables used in the model were the real income, the real price level of petrol, and the volume of cars.

Shaw observed that the demand for petrol was inelastic to its price in both the short and long run, with price adversely affecting the demand for petrol in India. There was also evidence of a long-term unidirectional relationship running from real income to the consumption of petrol. The gap was on the methodology used the researcher used secondary data on time series from 1966 to 2019 that is a period of 53 years, and used explanatory variables in the model. This study instead opted to use primary data by using of questionnaires as data collecting instruments. Another gap was on the sample technique used the previous research used a single equation on dynamic models whilst the current researcher used the Chi-square to interpret data.

Another Study on the Effects of Fuel Price Changes on Fleet Demand for New Fuel Economy in the United States of America done by Benjamin Leard and other researchers (Leard 2017), used an estimate equation model between the number of vehicles bought from 2009 to 2016 and the cost of fuel per mile for the vehicles during the same period. The main objective was to examine economic reasons why fleet managers adjusted vehicle purchases in response to fuel price changes. Findings were that demand for fleet purchase of low fuel economy was high when fuel prices increased to the demand for high fuel vehicles when prices of fuel reduced. The findings were similar also on demand from household in the same period. The research compared household demand during the same period and found on average household demand and fleet buyers respond to fuel changes in similar ways. Other findings were that the response to fuel changes varied across the type of fleet buyers, in that rental companies responded strongly to fuel changes unlike commercial and government buyers. Research methods were similar in using of descriptive analyses, though the period of study was different as on research looked at period of seven (7) years whilst this research used a period of (2) years.

The other gap was on the methodology used the first researcher used secondary data on the price of fuel and the number of vehicles bought whilst this research used primary data by the use of questionnaires also the models differ the previous used the estimate equation as a sample technique but the current research used chi-square to analyse its data by using a statistical software using Statistical Package for the Social Sciences (SPSS).

Shi (2014) analysed two important basic characteristics of the International Dry Bulk Market, namely, long-term imbalance of the relationship between the demand and supply of dry bulk capacity and the high risk caused by the volatility of freight rate. It was found in his study that significant peak fat-tail characteristic was manifested in the dry bulk shipping market freight yields sequence. And the sequence had the characteristic of continuity and leverage effect of information asymmetry. At the same time, the dry bulk shipping market had obvious fractal characteristics. Gaps were on the selected sample as the research concentrated on the shipping market where as this research focused on delivery of packages using road transport, however there were similarities in theory of Law of Demand.

Che (2013) discussed the seaborne demand and the supply of capacity of International Dry Bulk cargo market, according to the supply and demand structure of dry bulk cargo market. Meanwhile, the supply and demand situation was discussed to analyse the indeterminacy of dry bulk cargo market. Through the indeterminacy, the author explored the Bullwhip effect of dry bulk cargo market. He also offered some suggestions on reducing cost and control risks. There were similarities in the use of the Law of Demand Theories in the two studies though the studies had differences on the methodology used the first study used the bullwhip effect on dry bulk cargo market and the later researcher used the chi-square test to analyse data collected.

Zhang (2013) does a lot of in-depth analyses and researches on the transport demand of iron ore, coal and grain and market capacity of three types big bulk vessel in the international dry bulk shipping market, including Capesize, Panamax and Handysize respectively. Based on his study, the vessel type with developing advantage found in each of the three big bulk vessel types in the international dry bulk shipping market. The researcher marked a comprehensive analysis and discussion on the demand and supply of international dry bulk shipping market, meanwhile, the thesis introduced the capacity index to scientifically reflect the international dry bulk shipping market balance of supply and demand situation. Gaps identified was on the area of studies, the study concentrated on exploiting types of big bulk vessel shipping marked relation to the demand of iron, coal and grain which the current research focused on demand of courier services in relation to adjustments in fuel prices.

Elizalde (2011) examined the gasoline demand in Mexico using monthly data collected from 1997 to 2007. The study used an Error Correction Model (ECM) with demand for gasoline captured using the consumption of unleaded and premium gasoline. The real prices of unleaded and premium gasoline were used as independent variables alongside income. Estimation results showed that, in both the short and long run, price only adversely affected the demand for unleaded gasoline. In contrast, income positively affected both types of gasoline. Further, demand for both unleaded and premium gasoline was found to be inelastic both in the short and long run. Gaps identified were in model used the study used the Error Correction Model (ECM) to interpret demand for gasoline whilst this study used the Chi-Square Test. Similarities was in the use of the Law of Demand Theory.

Boshoff (2010) used an Autoregressive Distributed Lag Model (ARDL) to ascertain the demand for petrol, diesel, and jet fuel in South Africa using quarterly data collected between 1998 and 2009. Estimation results showed that the price of petrol, diesel, and jet fuel all exhibited a negative effect on their respective consumption. At the same time, income elasticity was significantly high for all three products and had the expected sign (positive). Gaps were in methodology, data instruments used and period of study. The Study used the Autoregressive Distributed Lag Model (ARDL) to estimate results collected from secondary data for a period of eleven (11) years, on the other hand the current study used the Chi-Square Test to analyse data for a period of two (2) years. There were similarities in the independent variable that is petrol and diesel though differences were on the jet fuel as the current research concentrated only on petrol and diesel.

(ii) Regional Perspective

Studies in Africa by various Scholars (Tijjani, 2022) did a study on the Impact of Oil Price threshold on Transportation Fuel Demand in Nigeria. A Threshold Autoregression (TAR) model method was used on data collected at gas stations from the period of 1981 to 2021 and a threshold of N63.73 was held as a measure of the impact. The results indicated that an increase in price of above N63.73 had an impact on business perspectives in terms of move of goods and services. Whilst at a price lower than N63.73 there was no much effect and the study found that the relationship between oil prices and demand for transportation fuel in Nigeria was not a straight line. The study recommended for oil prices to stay below N63.73 and that government policies that tried to stop peoples income should be stopped.

The gaps was on the methodology used and model the previous researcher used the Threshold Autogression (TAR) model whilst the Current study used Chi-square model also differences were on the collection of data the first going for secondary data but the current used primary data by developing a questionnaire, similarities were that both researches used quantitative methodology.

Lucy (2020) in a study on the Effect of fuel prices on food prices in Kenya, did a testing for Granger Causality and co-integration applied to diesel, maize, beans cabbage and potatoes in the period 2010 -2018. The paper's main objective was to evaluate the effects of fuel prices on food prices. The study used secondary data by collecting monthly retail of food prices in Nairobi and diesel prices were collected from the Energy and Petroleum Regulation Authority. The results revealed unidirectional Granger causality running from diesel prices to cabbage and potatoes but there was no causal relationship with maize and beans prices. There was no long-run relationship between perishable goods and fuel prices. However an increase in prices of diesel signified increase in prices of cabbage and potatoes due to demand. The study recommended a policy of cushioning increase in food price by introducing a tax relief once the price of fuel hinted a certain level as a high price attracted lower sales of the products. Gaps were in the methodology used as the first researcher opted to use secondary data whilst this research used primary data through questionnaires, secondly the sample technique were different the first used a linear relationship equation of the variety commodities whilst this research used the chi-square to analyse the hypothesis but both studies were similar in the use of descriptive analytical tools as well as quantitative analysis.

(iii) Local Perspective

In Zambia, Studies were done to analyze the relationship between fuel pricing and Demand by a group of researchers (Windu Matoka, 2022). A Vector Autoregressive Technique (VAR) model was used to analyze how demand for petrol and diesel respond to changes in their respective price. The Research used Hubert Peak Theory (how a product was demanded until it reached its peak and started diminishing), Scarcity Theory (for shortages as resources were never enough) and utility theory (representing satisfaction of a consumer towards a good). Data was collected from ERB on monthly series report and ZAMSTATS data base, the findings were that fuel demand in Zambia is inverse related to price changes in fuel which followed the law of demand. Gaps existed in the models used the previous used the Vector Autoregressive Technique whilst the current used the chi-square technique, there were differences on the theory used the first used the Hubert Peak and Scarcity Theories whilst the second used the Law of Demand Theory. Lastly data collection tools differed as the first used secondary data from ERB on monthly series report and ZAMSTATS whilst this research used primary data through the use of questionnaires which were subject to analytical testing.

2.1.2 The extent Courier Service Operators Make Profitable Sales to cover for Adjustments in Fuel Prices

(i) Global Perspective

Studies were done in Indonesia by M Rachaman, L Rahawati and D Khalida (2023) titled: Strategy for Maximising MSME Profits amid Increases in fuel Prices from the Perspective of Maqashid Syariah Asy-Syatibi. The aim of the study was to determine the profit maximization strategy carried out by MSMEs amid the increase in fuel prices and was reviewed with the perspective of Asy-Syatibi sharia Maqashid.

The research used qualitative methodology and was descriptive design. Data sources were both primary and secondary through conducting of interviews and viewing literature on the subject.

The business used strategy for maximizing profits under the perspective of Maqashid Syariah Asy-Syatibi which involved operating within the law and using online promotion. Value addition and sales strategies were also used to increase sales volumes, maximize its business profits without reducing the quality of the products sold.. The researchers found high fuel prices caused changes in operational costs that brought about changes in the level of profit and losses due to purchasing power of consumers. Gaps was in the methodology the first researchers used qualitative methods whilst this study used quantitative methods, secondly the models to measure data were different the first used the Maqashid Syariah Asy-Syatibi model whilst this study used the chi-square as test model. Lastly there were gaps on the primary data as the previous study used interviews as source of data collection whilst this study used questionnaires.

Studies were done in China (Chen 2022), on the Impact of Rising Oil Prices on New Energy Sales. The main objective was to find out the correlation between oil prices and new energy vehicle sales. The researcher gathered information on prices of fuel during the year and used the analytical framework on how many new energy cars were bought during the period. The study found an increase in new energy car correlated with an increase in prices of fuel. This was due to technology and effectiveness of the energy cars. The sales increase by over 1.2 times compared to the time the prices of fuel were low. The author highlighted the use of technology to add value to products thereby increase sales and making profits. The research had gaps in the methodology and models used, the first researcher used correlation to determine the change in variables whilst this research used the chi-square model to analyse its data.

Data collection tools were also different in that Chen used secondary data from car dealers and oil marketing companies whilst the research used the questionnaire to various courier service operators as its data collecting instrument.

A study done in Ukraine on Profitability of Pharmaceutical Enterprise done by Garmatiuk (2023) assessed businesses basing on indicators of the level of profitability. The study highlighted the following indicators as a measure of profitability: gross profits of products sold, operating profitability of the products sold and net profitability of the products sold. Findings were that to have successful sales, businesses needed to create reserves for increasing profitability that would be increase in the volume of product sold and decrease cost of sales and administration. Gaps were in the methodology used this study used indicators of the level or profits as a measuring model whilst the current study used the chi-square test to analyse data collected. The previous study used secondary data as a source of data collection whilst the current study used the questionnaire as a primary data collection tool.

Asim (2019), in a study on the Effect of fuel prices on Automobile Sales in Pakistan, used the regression methodology and hypothesis testing on data collected to determine the impact of fuel prices on automobile sales. The data analyzed was collected by the use of secondary data on monthly time series from 2014 to 2018 on automobile sales. The study found that an increase in Petrol prices had no affected the sales of the automobile industry in Pakistan. There was potential of growth in the sector. Further the study showed a continuous increase in inflation in Pakistan which lead to less purchasing power no matter the sector of the economy due to the increase of fuel prices. This led to low volume of sales and low profits. Gaps identified were in the data collection instruments the researcher had used secondary data which was subjected to test to come up with the findings on the other hand the research used questionnaires for data collection which was subjected to chi-square testing to come up with the findings.

Other Studies were done in India on the Effectiveness of Increase in fuel Prices which showed an Increase in the Sales of Electric Scooter in India (Venkateshwar 2021). The study only sampled on company which dealt with selling Electric Scooters.

The study found a rise of Petrol to Rs100 per litre, caused the demand for battery operated scooters to escalate as people wanted to save on fuel costs. The sale of e-scooters increased in Okinawa a largest manufacturer of battery operated Scooters in India. The sales increased by 30% in the last quarter compared to the previous quarter because of the raise in gasoline. The electric motorcycle riders were not tied to a pump price as they were insulated from fluctuating gasoline prices. Gaps in review were evident in the sample size used the study only sampled one manufacturing company whilst the current study had a sample of 176 from various courier services. The other gap was on data collection methods used the previous analysed secondary data from sales volumes whilst the current study used primary data sources. Both researches were similar as they were both quantitative.

(ii) Regional Perspective

In Africa Studies were done by Miswa (2019) in a study on the Efficacy of Price Regulation on the Pricing of Fuel in Kenya. The study aimed to examine the efficacy of price regulation on the pricing of fuel in Kenya. The researcher used a descriptive research design and the findings were that an introduction of oil price controls in Kenya greatly affected the pump prices. The pricing regulation was not beneficial to Oil Marketing Companies, changes in oil prices caused by the pricing formula led to increased and uncontrolled economic fluctuations. The price of fuel had negative impact on sales of most businesses causing a significance effect on the level of profits attained. The study recommended that since the demurrage costs tend to be significant due to clearance delays experienced and the operations should be closely monitored to avoid such unnecessary delays and increased costs. Gaps were evident in data collection instruments and sample size.

The study used secondary data from the Energy Regulation Commission (ERC) and 7 Oil Marketing Companies (OMC's) to analyse the price regulation on the fuel prices whilst the current research used primary data source using questionnaires.

(iii) Local Perspective

In Zambia studies were done by Cecilia Mulenga (2017) on Energy and Economic Growth, the researcher used Phillip curve, kinked and demand theory to analyze the situation of four variables; fuel, inflation, unemployment and economic growth from data for 2001 to 2016. The findings were a long run relation among the entire variable and a short run relationship between three variables that is fuel, unemployment and economic growth. The kinked demand curve showed raising fuel price above the floating price causing elastic demand and resulted in lost sales and falling revenue for the firm. The research was similar with the use of the Law of Demand Theory, but differed on the use of the Phillip Curve and Kinked Theory. Gaps evident was in the use of Secondary Data by the first research whilst the current research used primary data by use of questionnaires. Differences were in the time period one had a period scale of five (5) years 2001 to 2016 and the current study was scaled for a two (2) year period.

2.1.3 The Influence of fuel prices on Business Transaction of Courier Service operators

(i) Global Perspective

Globally there was a significant relationship between prices of fuel with number of business transactions in different countries. Hossain (2023), in a study on Perceived Consequences of Unpredictable fuel hike in Bangladesh conducted interviews and group discussion on the subject to find the impact of fuel prices on the people of Bangladesh. The results were that unpredictable fuel price had significant consequences for the People of Bangladesh in terms of increased transportation costs, rise of goods and services and cost of living.

The study found high inflation and reduction in industrial output affecting businesses, a decrease in business activities and foreign investment. The research used qualitative methods and data was collected from various sources. Gaps were evident in methodology the study used interviews and group discussion when collected data whilst this research used a questionnaire as a data collecting instrument. Differences notable were also in the use of qualitative methods by the previous researcher whilst the current researcher used quantitative methods.

Scholars (Fajrin 2022) in Jakarta Indonesia, on the Impact of the drastic increase in fuel oil (BBM) prices identified a domestic undersupply of fuel compared to its demand contributed to high prices of the fuel in Indonesia. This increase in fuel directly caused an increase in transportation tariffs, inflation and unemployment. The increase led to a change in operating costs and level of profits, low economic activities and economic growth. A Mixed methodology of both quantitative and qualitative were used. Gaps were different in the methodology used the previous researcher used a mixed methodology of both qualitative and quantitative data were as the current research used only quantitative methods.

(ii) Regional Perspective

In Africa a study was done by Nyewe (2019) which examined Implications of Fuel Price Increase on Business Transaction in Yenegoa Metropolis, Bayelsa State Nigeria. The methodology used a survey of 3245 business operations in Salli and Tombia Market. The research was exposed to a test and re-test to determine reliability of the instrument from 10 business operators. Reliability coefficient was calculated at 0.85 using Pearson Product Moment Correlation Coefficient. Findings revealed that an increase in the cost of fuel had a significant economic influence on the prices of goods in the state and business transactions reduced. Recommendations were made on price stability of petroleum products and a monitoring system be done on production industries to keep supplied commodities in proper check. Gaps were on the sample techniques, sample size and test model.

The study used a survey to collect data on business operators whilst the current study used a simple random sampling on courier services in selected parts of Lusaka District.

The first research used Pearson Product Moment Correlation Coefficient to analyze data collected whilst the current research used chi-square test as instrument for data analysis.

Abdulraham (2022) in a study on the influence of fuel prices on economic activities in Sudan for the period 2000-2021 used a survey of 300 people as sample size. The researcher used descriptive method and hypothesis on data collected using an applied framework. A simple regression method was used to analyze the data collected. Findings showed that there was impact of fuel prices on oil revenues which affected economic growth escalated transportation costs, costs of production and decrease income for consumers which led to decrease in economic activities. Gaps observed was on the sample size and period of study, the study used a survey of 300 people whilst the current study collected data from a sample of 176 courier service operators using simple random sample technique. However the two researches are similarities in the scale of period though different in years and also similarities was on the use hypothesis tests. Further differences were on model used the first researcher used a simple regression method to analyse data whilst the current research used chi-square tests as tool for data analysis.

(iii) Local Perspective

Fuel price in Zambia is mainly determined by International Oil Prices and Exchange Rate (Pebbles, 2012). An increase in fuel prices is inevitable when the exchange rate depreciates or when there is an international oil price hike. Additionally, the government regulates the price of fuel at the pump influencing how much consumers pay for their petrol or diesel. In an effort to ensure cost-reflective prices, the government through the energy regulator sets a monthly pricing cycle that determines the retail price of fuel.

The table below gives selected summary of literature review

AUTHOR	TOPIC	METHODOLOGY	FINDINGS	GAP
Objective number 1				
1. Harnida (2022)	Problems of the Economy in Indonesia	Qualitative Methods, Observation and interviews of sample	Significant Relationship between Fuel prices, unemployment and demand	Methodology and instruments of data used
2. Leard (2017)	Effects of fuel price change to changes in demand for Fleet Vehicles	Estimate Equation model used on vehicles bought from 2009-2016 in America	Demand for fleet purchases of low fuel vehicles increased as fuel prices increased and vice versa for high fuel vehicles	Methodology used and use of secondary data, no theory attached.
3. Tijjani, (2022)	Impact of Oil Price Threshold on Transportation Fuel Demand in Nigeria	Threshold Autogression (TAR) Model used on secondary data	An increase in fuel Above N63.73 had an impact on movement of goods and sales demand was low whilst it was vice versa when the price was put below N63.73	Methodology and data collection instruments
4. Lucy (2020)	Effects of Fuel Prices on Food Prices in Kenya	Testing for Granger Causality and Co-integration applied to Diesel, maize, beans, cabbage and Potatoes	Unidirectional granger causality running from diesel prices to cabbage and potatoes, increased in price of diesel led to increase in prices and demand for cabbage and potatoes.	Secondary data collection, methodology and instruments of data, testing model

5. Matoka (2022)	Analyzing Relationship between fuel pricing and demand	Vector Autogressive Technique (VAR) model, Hubert Peak, Scarcity and Utility Theories Secondary data	Fuel Demand inverse related to price changes following law of demand	Differences in theory and model but similarity in law of demand
Objective Number 2				
1. Khalida (2023)	Strategy for Maximizing MSME's Profits Amid Increases in Fuel Prices from the Perspective of Maqashid Syariah Asy-Syatibi	Qualitative Design methods, descriptive Approach and interviews	Businesses used sales strategies, online promotion and value addition to maintain high sales volume, maximize profits despite changes in fuel prices	Methodology used and instruments of data. Nation were the research was carried (Indonesia)
2. Chen (2022)	Correlation Between Oil Prices and New Energy Sales	Secondary data on volume of new energy vehicles sold and increase of oil prices in 2022	An increase in fuel prices led to increase of volume sold, increase in profits due to technology and value efficiency of energy vehicles	Used analytical theory framework, difference in data collection and model used.
3. Asim (2019)	Effects of fuel Prices on Automobile Sales in Pakistan	Regression method used and hypothesis testing	Increase in petrol prices affected sales of the automobile industry, less purchasing power, less sales and low profits	Methodology is similar on the use of hypothesis and different model, sample size and sample size and data instruments used.
4. Venkateshwar (2021)	Effect of Increase in Fuel Prices on sales of Electric Scooter in India	One Manufacturer's sales was used	The rise of fuel increased sales volume of electric scooters and increased profits	Sample Size, model and methodology used were different to that of this research.
5. Garmatiuk (2023)	Profitability of Pharmaceutical Enterprise in Ukraine	Indicators of profits and level of profitability	Successful sales by business creating reserves for increasing profitability increase in volume sold	Indicators similar in the measurement of profitability of the business

			and decrease in cost of sales and administration	
6. Miswa (2019)	Efficacy of Price Regulation on the Pricing of Fuel in Kenya	Descriptive Research design	Oil Price controls affected pump prices, lessened sales and had significance on retained profits	Difference of theory no theory was used and data collection instruments are different though the descriptive research design was similar
7. Mulenga (2017)	Energy and Economic Growth in Zambia	Kinked and Law of Demand Theory, use of Phillip Curve, secondary data collected from 2001-2016 on fuel,, economic growth, unemployment and inflation	Kinked demand curve showed raising fuel price above floating price to have an elastic demand and resulted in loss of sales and falling revenue for business	Similar theory on demand Differences in instrument of data and model used.
Objective Number 3				
1. Md. Jahidul Rony & Prof Mohammed Hossain (2023)	Perceived Consequences of Unpredictable Fuel Hike in Bangladesh	Interviews and group discussions Qualitative data collected from various sources	Increased transportation costs, rise of goods and services and cost of living. Industrial output affecting businesses and also decrease in foreign investment and less business activities	Differences in methodology, theory and design
2. Fajrin (2022)	The Impact of the Drastic Increase in Fuel Oil (BBM) Prices	Descriptive methods, mixed method design and secondary data	Fuel price increase caused an increase in cost of production, inflation and negative economic growth, decrease in real wages, household consumption and decrease in economic activities	Differences in Methodology, research design and instruments of data but similar in descriptive methods

3. Nyewe (2019)	Implication of Fuel increase on Business transactions in Yenegoa Metropolis, Beyelsa State Nigeria	Survey method of 3245 business transactions, pre-test of data instrument on 10 operators Pearson Product Movement Correlation Coefficient	Increase of fuel caused decrease in business transactions	Differences in sampling techniques, model and sample size and methodology
4. Abdulraham (2022)	Influence of Fuel Prices on Economic Activities in Sudan period 2020-2021	Survey methods of 300 people, descriptive method hypothesis testing and simple regression method	Impact of fuel prices affected economic growth, transportation costs, increased production costs for businesses, limited disposable income for consumers and reduction in economic activities	Similarity in scoping of periods with one year difference, similar methods of hypothesis Difference in sample size sampling technique and model used.

2.2 Summarized Research Gaps

A number of gaps were identified from studies done by other scholars on the subject matter of the research that necessitated for the research to be done. Most gaps were on the scope and area, most studies were from the 1st Countries that is European countries, middle-east countries and African, studies were done in Nigeria, Kenya Sudan and Ghana but there were a few writers in Zambia.

There was a gap in the type of businesses covered by other studies; this implied that the research was unique addressing businesses on courier services operators. The methodology and instrument data used were also unique in design. Mostly studies were done through surveys, interviews and documentations (reports) analysis, this study used Chi-Square Testing model for analysis and a simple random sampling to select its sample size. The research was descriptive in design and applied quantitative methods for its analysis. Further many studies only concentrated on increases in the independent variable; this study considered both the increase and reduction of the independent variable considering monthly adjustments. Most studies had shown an increase in the variable for longer periods whilst the research analyzed adjustments on the independent variable for the shorter period (30 day cycle) and how it affected the dependent variables.

2.4 Summary of the Chapter

The chapter highlighted the theoretical framework and reviewed both international and local related literature on the analysis of monthly fuel price adjustments on the sales of courier service operators. The next chapter provided information on the methodology that was selected.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter provided the methodology framework of the research. It consisted of the philosophical paradigm, research design, study area, study population, study sample, sampling techniques, data collection instruments, data collection procedure and data analysis instruments and procedures.

3.1 Philosophical Paradigm

Philosophical Paradigm is important when undertaking research as it helps in choosing the appropriate methodology and lays a foundation in the study which increase the quality and improve the performance of data analysis (Rehman & Alharti (2016). The research methods were means through which data was collected and analysed by using chi-square test in accordance with the paradigm and research design used (Leedy & Armrod 2015).

There various approaches to philosophical framework depending on the research design. The research therefore used the positivist methodology where a hypothesis was developed to determine the relationship between sales and adjustments in fuel prices on the sales of courier services. The research was guided by the Law of Demand Theory which was subjected to testing through the collection of data and analysing the data to determine whether to prove the hypothesis or fail to prove the hypothesis of the two variables. Further the data instruments used were valid and reliable to give accurate results through the use of statistical analysis to give accurate results.

3.2 Research Design

A research design is a plan of how and where data was collected and analysed. To analyse the Monthly Fuel Price adjustments on the sales of Courier Service Operators in Lusaka District, a descriptive research design was employed. Hale (2018) defined descriptive research design as describing characteristics of a sample taken from the population and generalizing their conclusions to be those of the entire population. This study used a quantitative method of descriptive research design as participants were meant to provide answers from questionnaires. The quantitative method of descriptive research design was appropriate for the study as it was helpful in collection of data that described occasions thereafter, arranged, tabulated, and portrayed results. The design took a positivism approach by using a structured questionnaire that was used to collect data and the samples were subjected to numerical statistical analysis which had high reliability of getting accurate results. Further the research was deductive in that it relied on two theories that built on each other which were the law of demand and consumer behaviour theory.

3.3 Study area

The study area was selected parts of Lusaka District which included the following areas: Town Centre, Levy Park Mall, kabwata, Kabulonga, Woodlands, Chilenje, Manda Hill, East-park Mall and long acres Area. The areas of the study were chosen because most courier service operators were allocated around these areas.

3.4 Study population

Zambia had about 100 licenced courier service operators registered by ZICTA of which 50 were operating in Lusaka District. The study focused on courier service operators that were operating in Lusaka District giving a number of 50 businesses.

3.5 Study sample

The sample size of the population of 50 licenced courier Service operators was selected using the following statistical formula which determined sample size of a population at 95% confidence level:

$$n = \frac{N}{1 + N(e)^2}$$
$$n = \frac{50}{1 + 50(0.05)^2}$$
$$n = 44$$

The sample size selected of courier service operators companies was 44 and simple random sampling was used to get respondents within the companies; that is 4 key staff from each operator (Management/Supervisor, Sales Division, Accounts and drivers). Therefore multiplying the total operators and key staff = $44 \times 4 = 176$ respondents.

3.6 Sampling techniques

The sampling technique referred to the part of the study that indicated how respondents were selected to be part of the sample and were not selected haphazardly but systematically.

Simple random sampling was used in the study to select respondents from management/supervisors, sales division, accounts division and drivers.

3.7 Data collection instruments

The study used questionnaires to collect data from the respondents. The reasons why the researcher preferred questionnaires over other instruments were highlighted below.

3.7.1 Questionnaires

Questionnaires were reliable data collecting instruments due to the large sample size. They equally saved time; especially since time was a limiting factor to the study.

The administration of the questionnaires to respondents was arrived at after creating an understanding between the researcher and the respondents, by explaining the purpose of the study. Also, the availability of many respondents at a time made it possible for the researcher to collect data within a short period, get a high response rate and also reduce the financial expenses.

3.7.2 Data Sources

The research used primary data sources as its main source by using the questionnaire as mentioned above and secondary data collected from sources like ZICTA, MOE, ERB and ZAMSTATS was mainly used for referencing and building of the study.

3.8 Data collection procedure and time line

The researcher had an official introductory letter from the Directorate of Research and Graduate Studies at the University of Zambia for identification purposes. The research started on the 15th of October, 2023 to 22nd February, 2024.

3.9 Data analysis instruments and procedures

The analysis of data was done at the end of data collection. The responses were categorized based on information provided by respondents. Chi-square Test was used to present and interpret data using frequency distribution tables, percentages, pie charts, and bar charts.

Chi-square Test had the incredible capabilities and flexibility of analysing huge data within seconds and generating an unlimited range of simple and sophisticated statistical results. This ensured the validity and reliability of the tests use and hence accuracy of the results obtained.

3.11 Ethical considerations

The study was guided by principals of ethics that relate to research design, collection of data and research practices. Therefore, participation was voluntary meaning no one was forced to participate in the research or to disclose information that they treated confidential or were not comfortable with. Data was collected upon respondents agreeing and signing the consent form provided for the research.

No personal information was disclosed, nor any name of the respondent published in the research. Both personal and company data were protected according to the data protection code of ethics. Malpractices were not tolerated, no respondent was paid to get result from or influence the findings of the study.

The research was only used for academic purposes and not for any political or selfish purposes. The study was carried within the confines of the law and all legislation procedures and permission was sought before the research was done.

3.12 Summary of the Chapter

This chapter had outlined the methodology of the study. The study took a positivism and deductive approach based on the theory framework in chapter two and was quantitative in nature. The study site was done in selected courier service operators in Lusaka District with a total sample size of 176 participants. The sample size was selected using simple random sampling techniques. The data collection tool included structured questionnaires and the next chapter presented the findings of the study.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4.0 Overview

In the previous chapter, detailed procedure involved in conducting data collection was discussed in detail. Now that research data had been collected, its' imperative that chapter four provides insights of data findings and presentations based on the questionnaires collected from respondents. The chapter also looked at analysis of responses involving their characteristics. All the findings were centered on the main purpose of the study involving the analysis of monthly fuel price adjustments on the sales of courier service operators in Lusaka District, Zambia.

4.1 Data Presentation

After performing a thorough selection, the researcher was able to produce descriptive data. To process normalized values with their individual factors, a distinct examination was utilized. Descriptive statistics were used to present the data: frequencies, implies, rates, pie outlines, and tables.

4.1.1 Analysis of Responses

A total number of 176 questionnaires were administered to managers, sales division, supervisors, accounts division and drivers. The researcher targeted only respondents who might have been involved in the analysis of monthly fuel price adjustment on the sales of courier service Operators. Out of the 176, only 130 questionnaires were filled in and brought back, thus representing 74% response rate. This was a good sign that the majority of the research participants were eager to take part in the study as the researcher was able to go through the questionnaire together with the respondents before leaving it.

Table 1: Questionnaire return

Variables	Sampled	Returned	Percentage
Respondents	176	130	74%

Source: Formulated by Author (2024)

4.1.2 Gender Distribution

To assess the proportion of male and female respondents, the frequency of each gender was calculated, Tables 2 gives a summary of the findings for respondents. The results below showed that women constituted (25%) translating to 33 out of 130 and the rest 97 were men constituting (75%). The results indicate a significant gender imbalance in the study, with a higher proportion of male respondents compared to female respondents. This could be due to various factors such as the nature of the study, the population being studied, or the recruitment methods used. Understanding the reasons for this imbalance is crucial for ensuring the generalizability and validity of the study's findings.

Table 2: Gender of the Respondent

Variables	Frequency	Percent
Female	33	25%
Male	97	75%
Total	130	100%

Source: Formulated by Author (2024)

4.1.3 Position in the Business

The respondents were asked to state their position in the business; Figure 1 gives a summary of the findings and it was revealed that 20 (15%) were managers, 53 (41%) were sales division, 30 (23%) supervisors, 10 (8%) were accounts division and 17 (13%) were drivers. The distribution of positions within the business as outlined in Figure 1 provides valuable insights into the organizational structure and workforce composition. Understanding the roles and responsibilities of each group can help in assessing the efficiency and effectiveness of different departments within the company

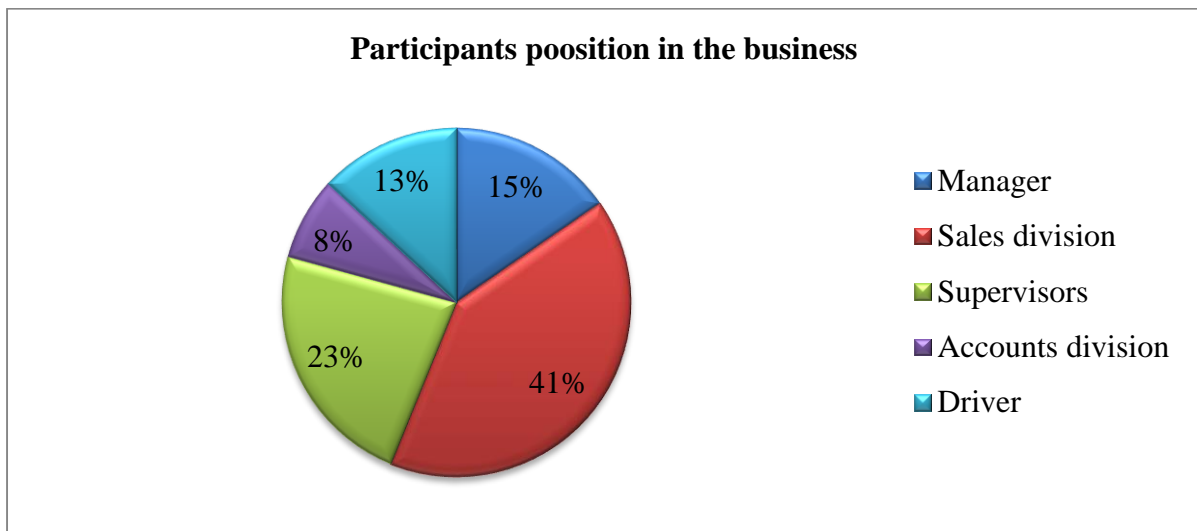


Figure 1: Position in the Business

4.1.4 Business experience

The respondents were asked to state their business experience in years; Table 3 gives a summary of the findings. According to the findings of the study, businesses had different experiences, with the majority 68 (52%) having 6-10 years of business experience. The next big share had 1-5 years of business experience forming 35 (27%) and the least was 11 years and above business experience had 27 (21%). Overall, the findings suggest a diverse range of business experience levels among the respondents, with a majority falling in the moderate experience category.

This diversity can provide valuable insights into the experiences and challenges faced by businesses at different stages of development, and can inform policies and strategies aimed at supporting business growth and success.

Table 3: Business experience

Variables	Frequency	Percent
1-5 years	35	27%
6-10 years	68	52%
11 years and above	27	21%
Total	130	100%

Source: Formulated by Author (2024)

4.2 Independent Variables

4.2.1 Awareness of the monthly adjustments of fuel prices

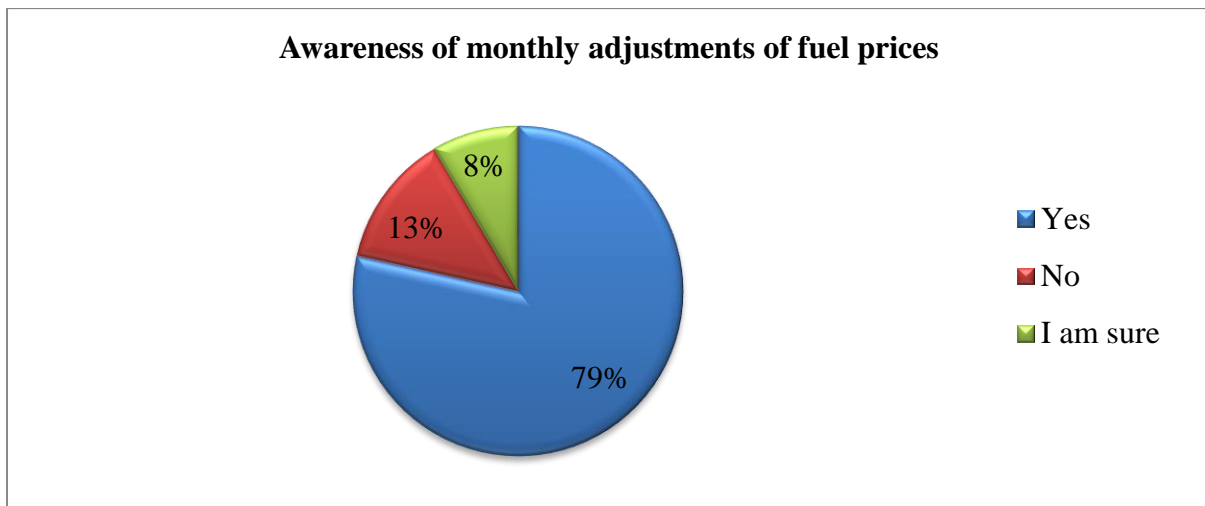


Figure 2: Awareness of the monthly adjustments of fuel prices

In Figure 2 above, respondents were asked if they are aware of the monthly adjustments of fuel prices and the study established that 102 (79%) indicated Yes meaning they are aware of the monthly adjustments of fuel prices, 17 (13%) were not aware of the monthly adjustments of fuel prices and 11 (8%) were not sure of the monthly adjustments of fuel prices.

In summary, while the majority of respondents are aware of the monthly adjustments of fuel prices, there remains a portion of the population that is either unaware or uncertain about these changes. This highlights the importance of continued efforts to ensure clear and accessible communication about fuel price fluctuations.

4.2.2 Adjustments in fuel prices was as a result of Government’s removal of the fuel subsidy

Participants were asked if they agree or disagree that the cause of the adjustments in fuel prices was as a result of Government’s removal of the fuel subsidy and the study discovered that 53 (41%) strongly Agreed, 33 (23%) agreed, 5 (4%) were neutral, 21 (16%) disagreed and 18 (14%) strongly disagreed. The findings suggest that a majority of the participants (64%) were in agreement with the notion that the changes in fuel prices were a direct result of the Government’s decision to remove the fuel subsidy. This indicates a general consensus among a significant portion of the respondents regarding the cause of the fuel price adjustments.

Table 4: Adjustments in fuel prices was as a result of Government’s removal of the fuel subsidy

Variables	Adjustments in fuel prices was as a result of Government’s removal of the fuel subsidy	
	Frequency	Percentage
Strongly Agree,	53	41%
Agree	33	23%
Neutral	5	4%
Disagree	21	16%
Strongly disagree	18	14%
Total	130	100%

Source: Formulated by Author (2024)

4.2.3 Government spending a lot of money to subsidies fuel prices

Table 5: Government spending a lot of money to subsidies fuel prices

Variables	Government spending a lot of money to subsidies fuel prices	
	Frequency	Percentage
Strongly Agree,	20	15%
Agree	23	18%
Neutral	9	7%
Disagree	41	32%
Strongly disagree	37	28%
Total	130	100%

Source: Formulated by Author (2024)

Respondents were asked if they agree or disagree that government used to spend a lot of money to subsidies fuel prices and the study revealed that 20 (15%) strongly agreed, 23 (18%) agreed, 9 (7%) were neutral, 41 (32%) disagreed, 37 (28%) strongly disagreed. This suggests that there is a perception among the respondents that government spending on fuel price subsidies may not have been as significant as implied in the question.

4.3 The demand for courier services with regards to charge prices and fuel adjustments for the period 2020-2022 in Lusaka District

4.3.1 Demand for courier services for 2022 (January to December)

Participants were asked how the demand for courier services for 2022 was from January to December and the study discovered that 68 (52%) indicated that it had increased, 42 (32%) said that it remained the same and 20 (15%) indicated that it had decreased. The findings suggest a positive outlook for the courier service industry in 2022, with more than half of the participants noting an increase in demand.

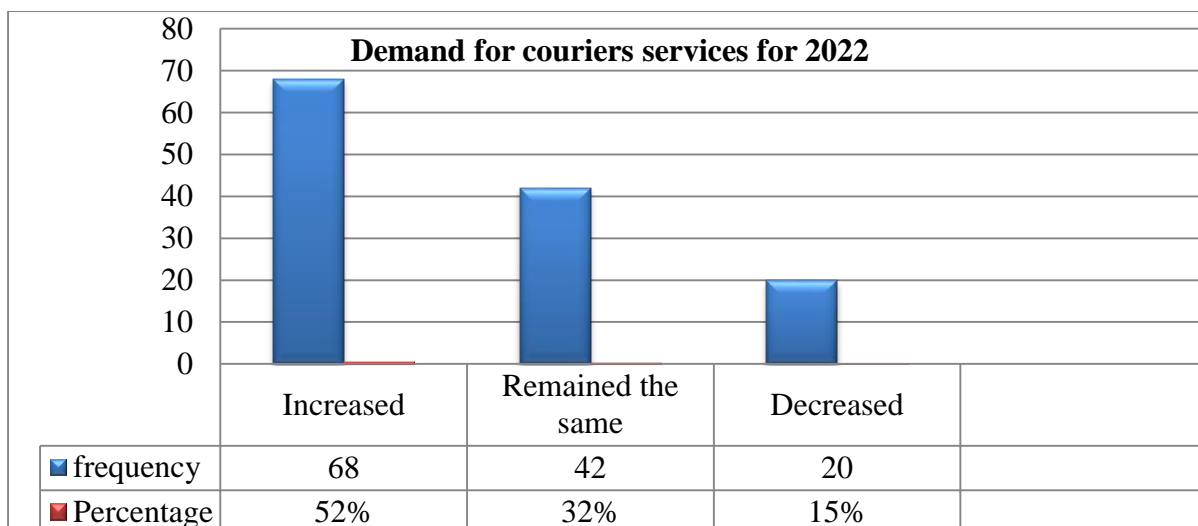


Figure 3: Demand for courier services for 2022 (January to December)

4.3.2 Courier service affected by monthly adjustment of fuel at higher price during 2022

Participants were asked the extent courier service were affected by monthly adjustment of fuel at higher price during 2022 and the study revealed that 32 (24%) said slightly positive, 43 (33%) said very positive, 22 (17%) said slightly negative, 18 (14%) said very negative and 15 (16%) no effect. Overall, results suggest that a significant portion of participants perceived a positive impact on courier services due to the monthly adjustments in fuel prices during 2022. However, there were also respondents who noted negative effects or no noticeable impact. This indicates a varied perception among participants regarding how the changes in fuel prices influenced the courier service sector.

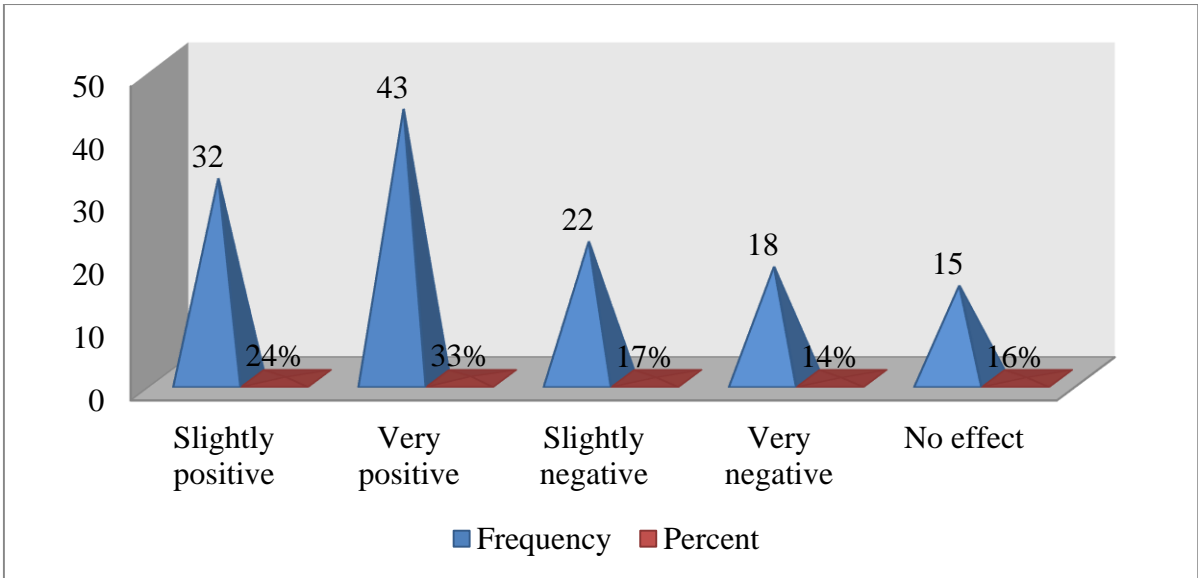


Figure 4: Courier service affected by monthly adjustment of fuel at higher price during 2022

4.3.3 Months were the adjustment was favourable to the business

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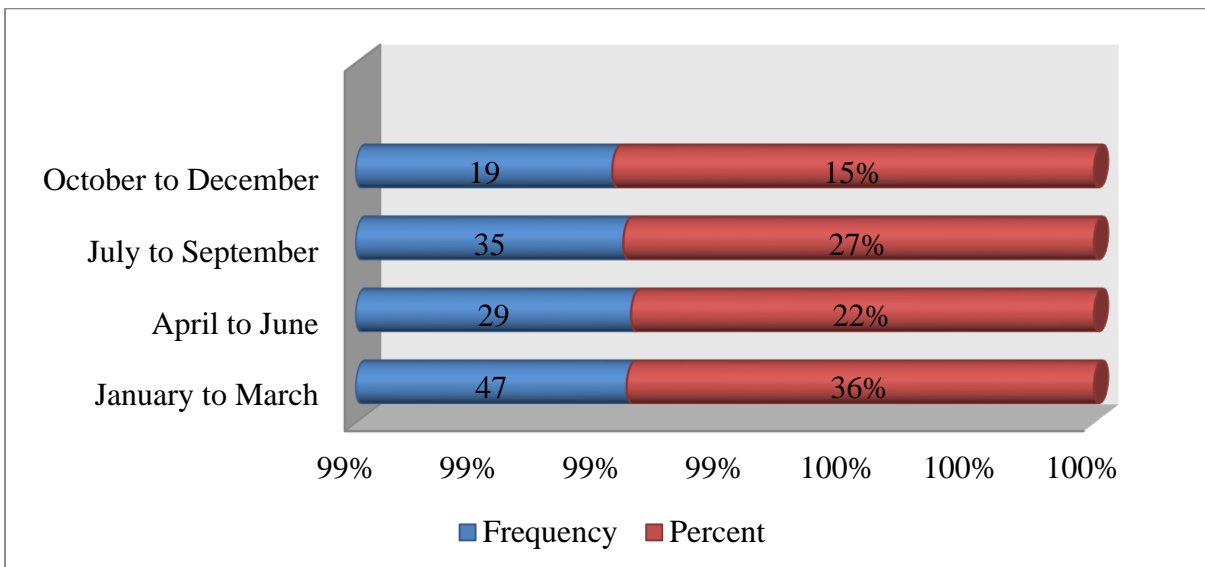


Figure 5: Months were the adjustment was favourable to the business

In Figure 5 above, respondents were asked in which months the adjustment was favourable to the business between January to December 2022 and the study established that 47 (36%) said January to March, 29 (22%) said April to June.

35 (27%) said the business was favourable in July to September and 19 (15%) said October to December. Overall, it can be inferred from the survey results that a considerable number of businesses felt that the adjustment was favourable at different times throughout the year, with a notable preference for the first quarter

4.3.4 Months the adjustment of fuel prices was unfavourable to the business (January to December 2022)

Participants were asked to state the months the adjustment of fuel prices was unfavourable to the business from January to December 2022 and the study discovered that 24 (18%) said January to March, 36 (28%) said April to June, 42 (32%) said July to September and 28 (22%) said October to December. The distribution of responses across different quarters provides valuable insights into how businesses perceive and are affected by changes in fuel prices throughout the year. It suggests that there might be seasonal variations or specific factors influencing how businesses adapt and respond to fluctuations in fuel costs.

**Table 6: Months the adjustment of fuel prices was unfavourable to the business
(January to December 2022)**

Variables	Months the adjustment of fuel prices was unfavourable to the business (January to December 2022)	
	Frequency	Percentage
January to March	24	18%
April to June	36	28%
July to September	42	32%
October to December	28	22%
Total	130	100%

Source: Formulated by Author (2024)

4.3.5 Impact of fuel prices on demand for courier services in the period 2020-2021 when fuel prices were stable and unchanged

Respondents were asked if there was any impact of fuel prices on demand for courier services in the period 2020-2021 when fuel prices were stable and unchanged and the study established that 57 (44%) said moderate low, 43 (33%) said low, 17 (13%) said moderate high and 13 (10%) said high. The study's findings suggest that the majority of respondents (77%) reported either a low or moderate low impact of fuel prices on the demand for courier services.

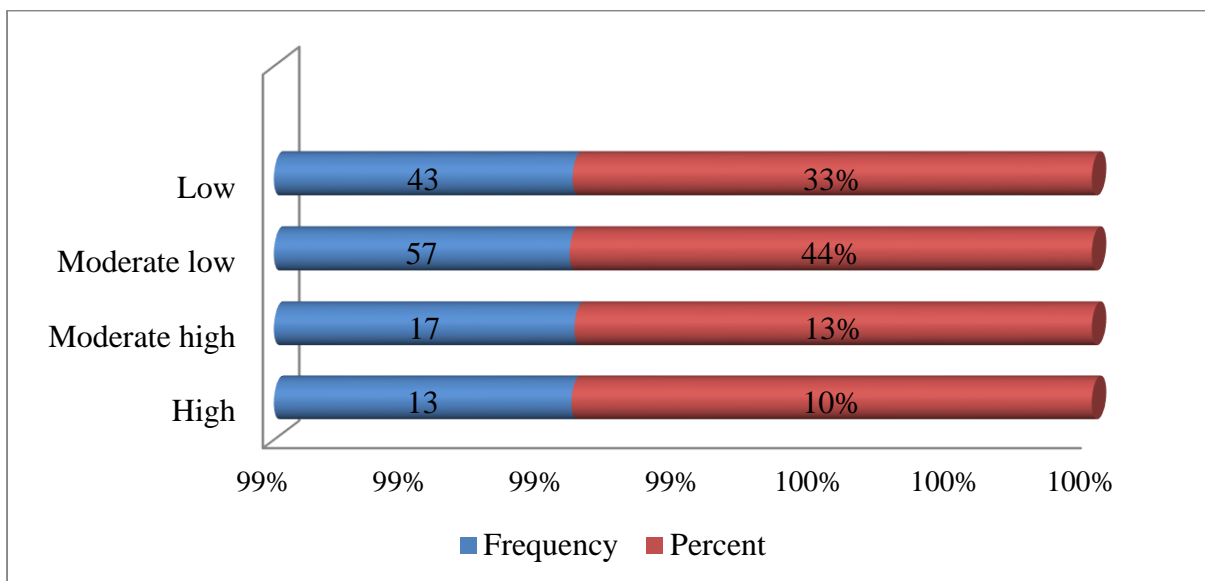


Figure 6: Demand for courier services in the period 2020-2021 when fuel prices were stable and unchanged

4.3.6 The period 2020-2021, demand for courier services in 2022 has (January to December)

Participants were asked to compare the period 2020-2021; demand for courier services in 2022 was from January to December and the study revealed that 79 (61%) said it increased, 13 (10%) said it showed no change and 38 (29%) said it decreased.

These results suggest a mixed scenario for the courier service industry in 2022, with a significant portion noting an increase in demand, while others experienced stability or growth. It highlights the dynamic nature of the sector and the importance of adapting to changing market conditions.

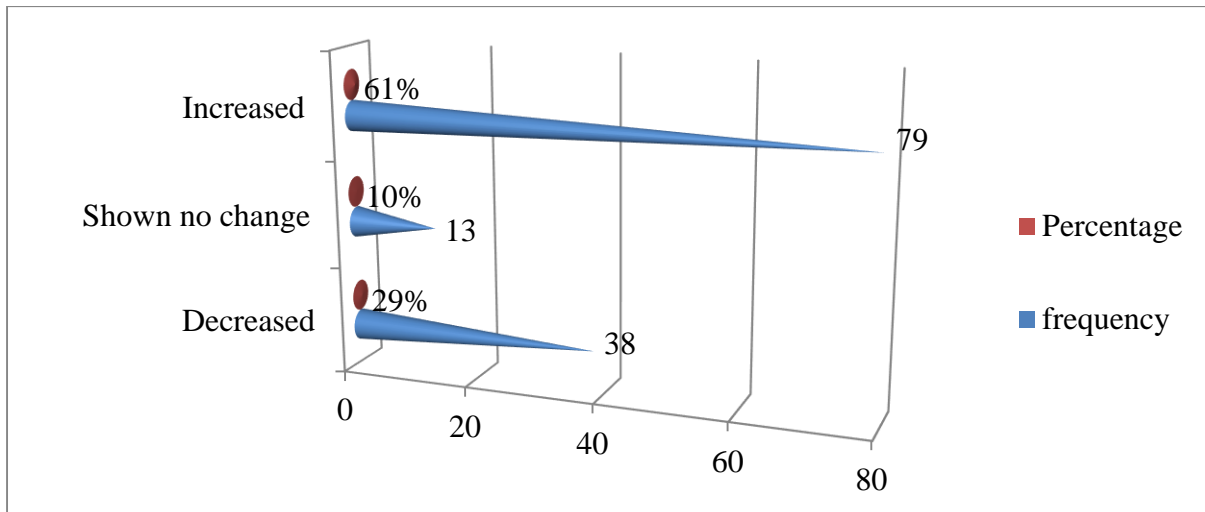


Figure 7: The period 2020-2021, demand for courier services in 2022 has (January to December)

4.4 The Extent Courier Service Operators make profitable sales to cover for adjustments in fuel prices

4.4.1 Performance of sales for 2022 (January to December)

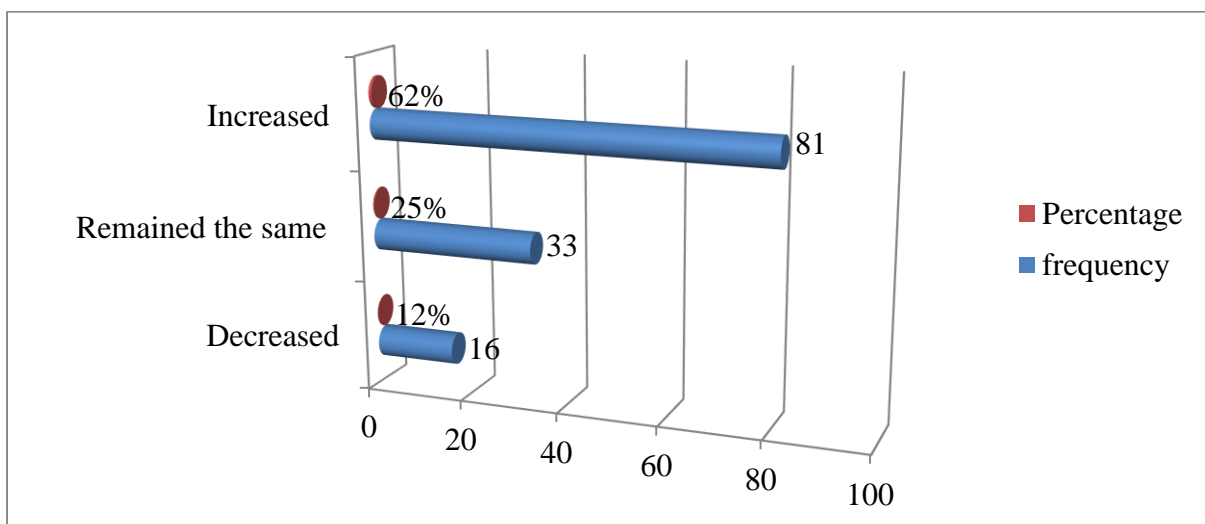


Figure 8: Performance of sales for 2022 (January to December)

In Figure 8 above, participants were asked the performance of sales for 2022 from January to December and the study revealed that 81 (62%) said it had increased, 33 (25%) said it remained the same and 16 (12%) said it had decreased. This suggests that, on average, the group experienced an increase in sales during this time period

4.4.2 The extent were the sales influenced by the monthly adjustment of fuel prices

Participants were asked the extent were the sales influenced by the monthly adjustment of fuel prices and the study established that 38 (29%) said slightly positive, 66 (51%) said very positive, 7 (5%) said no impact, 11 (8%) said slightly negative and 8 (6%) said very negative. This suggests that a substantial portion of participants believed that fluctuations in fuel prices had a positive impact on sales performance.

Table 7: The extent were the sales influenced by the monthly adjustment of fuel prices

Variables	The extent were the sales influenced by the monthly adjustment of fuel prices	
	Frequency	Percentage
Slightly Positive	38	29%
Very Positive	66	51%
No impact	7	5%
Slightly negative	11	8%
Very negative	8	6%
Total	130	100

Source: Formulated by Author (2024)

4.4.3 The months the business had positive sales in 2022 (January to December)

Respondents were asked which months the business had positive sales in 2022 from January to December and the study revealed that 55 (42%) indicated October to December, 37 (28%) indicated July to September, 23 (18%) stated April to June and 15 (12%) said January to March. The survey suggests that while there is some variation in sales performance throughout the year, a majority of businesses reported positive sales in at least one quarter of 2022.

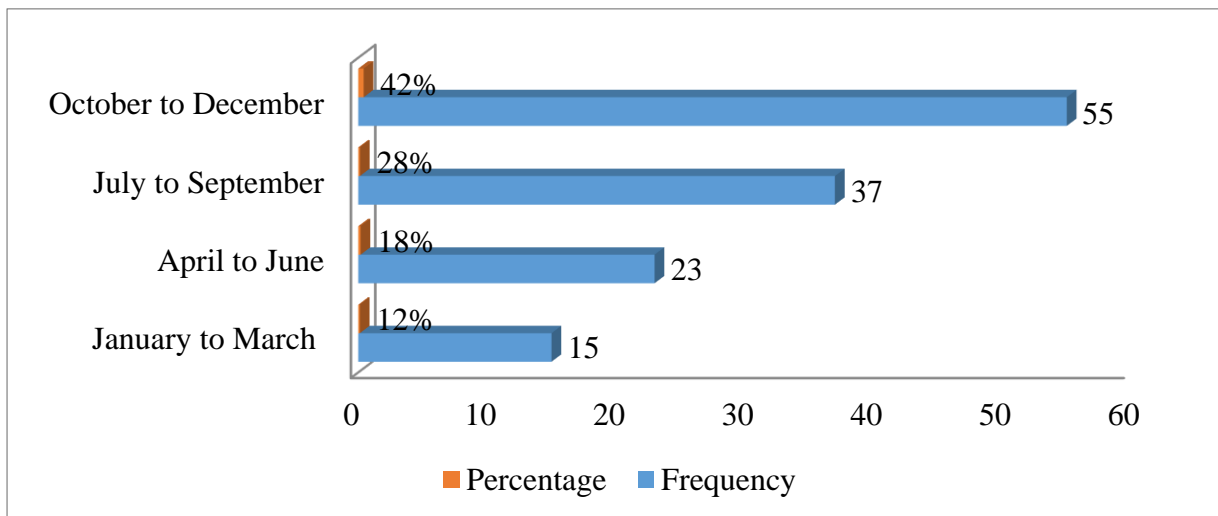


Figure 9: The months the business had positive sales in 2022 (January to December)

4.4.4 The months the business had negative sales in 2022 (January to December)

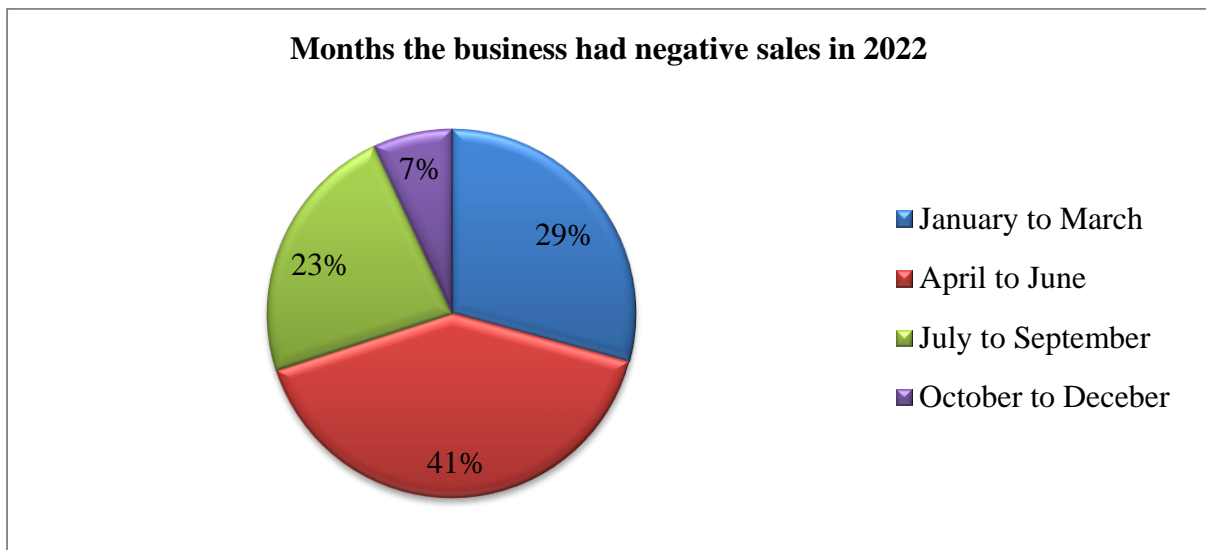


Figure 10: Months the business had negative sales in 2022 (January to December)

In Figure 10 above, respondents were asked which months the business had negative sales in 2022 from January to December and the study discovered that 38 (29%) said January to March, 53 (41%) indicated April to June, 30 (23%) said July to September and 9 (7%) said October to December. The distribution of negative sales across different quarters of 2022 provides a comprehensive overview of the challenges faced by businesses throughout the year. Analysing these patterns can help identify trends, make informed decisions, and implement strategies to improve sales performance in the future.

4.4.5 The impact of fuel prices on sales in the period 2020-2021 when fuel prices were stable and unchanged

Table 8: The impact of fuel prices on sales in the period 2020-2021 when fuel prices were stable and unchanged

Variables	The impact of fuel prices on sales in the period 2020-2021 when fuel prices were stable and unchanged	
	Frequency	Percentage
Slightly negative	22	17%
Very Negative	11	9%
No impact	7	5%
Slightly positive	35	27%
Very positive	55	42%
Total	130	100%

Source: Formulated by Author (2024)

In Table 8 above, participants were asked if there was any impact of fuel prices on sales in the period 2020-2021 when fuel prices were stable and unchanged and the study revealed that 55 (42%) said very positive, 35 (27%) said slightly positive, 7 (5%) said on impact, 22 (17%) said very negative and 11 (9%) said very negative. It appears that stable and unchanged fuel prices had a more positive than negative impact on sales, with more participants reporting some level of positive effect compared to those who reported negative effects.

However, the fact that a slight portion of participants (5%) reported no impact suggests that fuel prices may actually have a positive impact on sales for these individuals or businesses

4.4.6 Operating profit for 2022 (January to December)

Participants were asked the operating profit for 2022 from January to December and the study discovered that 74 (57%) said surplus, 36 (28%) said book balance and 20 (15%) said deficit.

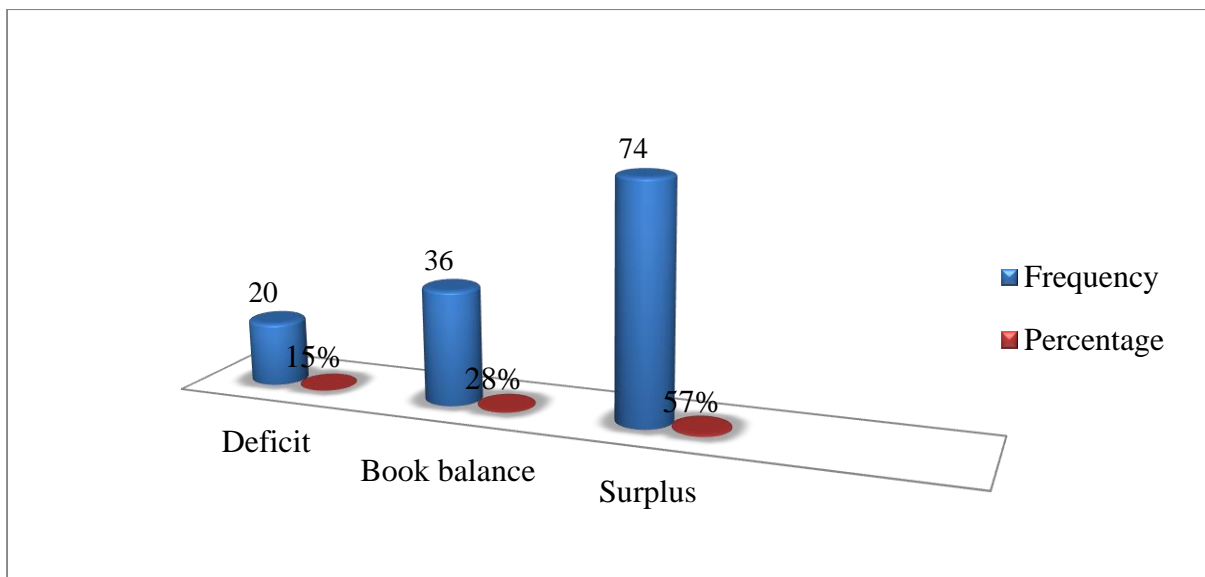


Figure 11: Operating profit for 2022 (January to December)

4.4.7 Profits influenced by the monthly adjustment of fuel prices

In Table 9 below, the interpretation of these results suggests that a significant portion of the participants viewed the monthly adjustment of fuel prices as having a positive impact on profits.

The majority 62 (48%) believed it was very positive, while a notable percentage 25(19%) considered it slightly positive. On the other hand, there were smaller proportions who viewed it negatively, with 22 (17%) stating it was slightly negative and 9% indicating it was very negative. The minority 9 (7%) felt that there was no impact on profits due to these adjustments

Table 9: Profits influenced by the monthly adjustment of fuel prices

Variables	Profits influenced by the monthly adjustment of fuel prices	
	Frequency	Percentage
Slightly positive	25	19%
Very positive	62	48%
No impact	9	7%
Slightly negative	22	17%
Very negative	12	9%
Total	130	100%

Source: Formulated by Author (2024)

4.4.8 Months the business had higher profits in 2022 (January to December)

Participants were asked which months the business had higher profits in 2022 from January to December and the study discovered that 13 (28%) said October to December, 21 (15%) said July to September, 41 (32%) said April to June and 55 (42%) said January to March. Findings suggest that there is variability among businesses regarding when they experience peak profitability throughout the year. The distribution across different quarters indicates that factors such as seasonality, industry trends, and individual business performance may influence when businesses achieve higher profits.

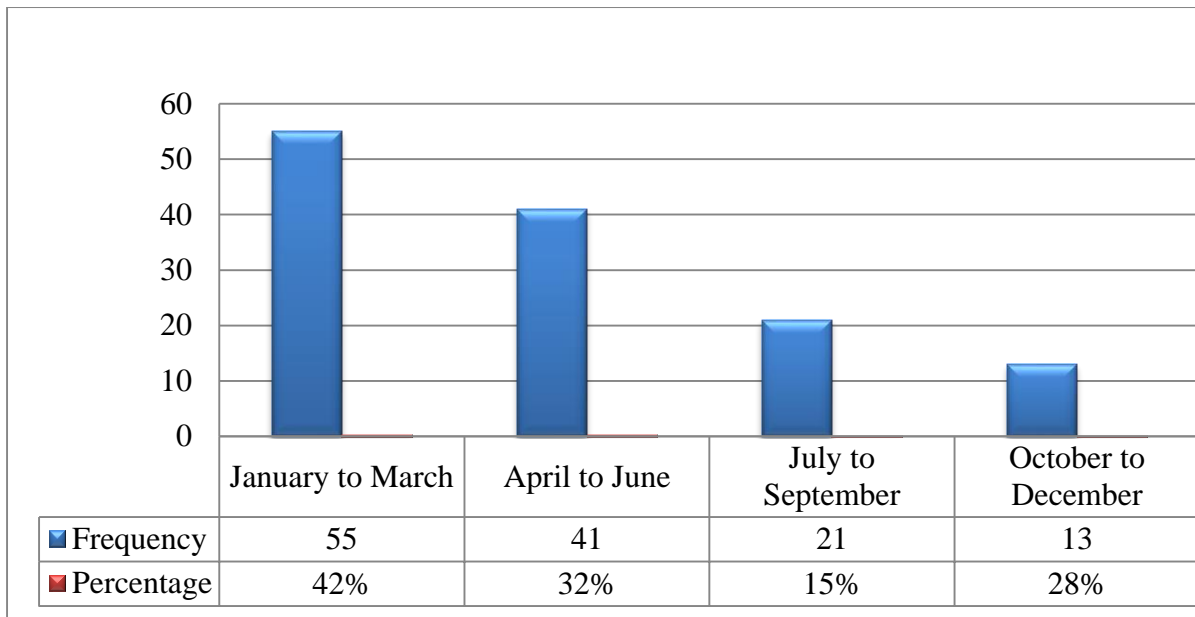


Figure 12: Months the business had higher profits in 2022 (January to December)

4.4.9 Months the business made lower profits in 2022 (January to December)

Table 10: Months the business made lower profits in 2022 (January to December)

Variables	Months the business made lower profits in 2022 (January to December)	
	Frequency	Percentage
January to March	24	13%
April to June	20	15%
July to September	36	28%
October to December	50	38%
Total	130	100%

Source: Formulated by Author (2024)

In Table 10 above, participants were asked the months the business made lower profits in 2022 from January to December and the study revealed 24 (13%) said January to March, 20 (15%) said April to June, 36 (28%) said July to September and 50 (38%) said October to December.

The data suggests that there might be seasonal patterns or specific factors affecting the profitability of businesses at different times of the year. For instance, the higher percentage of businesses reporting lower profits in the last quarter could be attributed to various factors such as end-of-year expenses, seasonal fluctuations in demand, or external economic conditions. Similarly, the lower percentages in the earlier quarters could indicate a gradual improvement or stabilization in profitability as the year progresses.

4.5 The Influence of fuel prices on Business Transactions of courier services

4.5.1 Business transactions in 2022 (January to December) were affected by monthly adjustments of fuel prices

Table 11: Business transactions in 2022 (January to December) were affected by monthly adjustments of fuel prices

Variables	Business transactions in 2022 (January to December) were affected by monthly adjustments of fuel prices	
	Frequency	Percentage
Strongly Agree	51	39%
Agree	42	32%
Neutral	4	3%
Disagree	18	14%
Strongly Disagree	15	12%
Total	130	100%

Source: Formulated by Author (2024)

In Table 11 above, participants were asked if they agree or disagree that business transactions in 2022 from January to December was affected by monthly adjustments of fuel prices 51 (39%) strongly agree, 42 (32%) agreed, 4 (3%) were neutral, 18 (14%) disagreed and 15 (12%) strongly Disagree. It can be observed that a majority of participants either strongly agreed or agreed that the monthly adjustments of fuel prices in 2022 had an influence on business transactions. This indicates a significant perception among the respondents that fuel price fluctuations played a role in shaping business activities throughout the year.

4.5.2 Frequency of customers in 2022 (January to December) reduced when there was an increment of fuel prices

Table 12: Frequency of customers in 2022 (January to December) reduced when there was an increment of fuel prices

Variables	Frequency of customers in 2022 (January to December) reduced when there was an increment of fuel prices	
	Frequency	Percentage
Strongly Agree	49	38%
Agree	38	29%
Neutral	10	8%
Disagree	20	15%
Strongly Disagree	13	10%
Total	130	100%

Source: Formulated by Author (2024)

In table 12 above, respondents were asked if they agree or disagree that the frequency of customers in 2022 (January to December) reduced when there was an increment of fuel prices and the study established that 49 (38%) strongly agreed, 38 (29%) agreed, 10 (8%) were neutral, 20 (15%) disagreed and 13 (10%) strongly disagreed. The study suggests that there is a significant association between fuel prices and the frequency of customers, with higher fuel prices potentially reducing the number of customers. However, it is important to note that this is based on the perceptions and opinions of the respondents, and further research using objective data may be necessary to confirm these findings. Additionally, other factors such as economic conditions, consumer behaviour, and competition may also impact customer frequency and should be taken into consideration in future studies

4.5.3 Frequency of customers in 2022 (January to December) increased when there was a reduction in the fuel prices

Respondents were asked if they agree or disagree that the frequency of customers in 2022 (January to December) increased when there was a reduction in the fuel prices and the study discovered that 55 (42%) strongly agreed, 43 (33%) agreed, 3 (2%) were neutral, 16 (12%) disagreed and 13 (10%) strongly disagreed. The data reveals a divided sentiment among respondents regarding the impact of reduced fuel prices on customer frequency in 2022. While a majority either agreed or strongly agreed with the statement, there was also a notable portion that held contrary views.

Table 13: Frequency of customers in 2022 (January to December) increased when there was a reduction in the fuel prices

Variables	Frequency of customers in 2022 (January to December) increased when there was a reduction in the fuel prices	
	Frequency	Percentage
Strongly Agree	55	42%
Agree	43	33%
Neutral	3	2%
Disagree	16	12%
Strongly Disagree	13	10%
Total	130	100%

Source: Formulated by Author (2024)

4.5.4 Compared to 2020-2021, Business Transaction in 2022 (January to December) increased

Participants were asked to compare the 2020-2021, Business Transaction in 2022 (January to December) increased and the study discovered that 70 (54%) indicated that it increased, 35 (37%) indicated that there was no change and 25 (19%) indicated that it had decreased. The results highlight the diverse experiences of participants regarding their business transactions in 2022. While a significant portion noted growth, others faced declines or stagnation

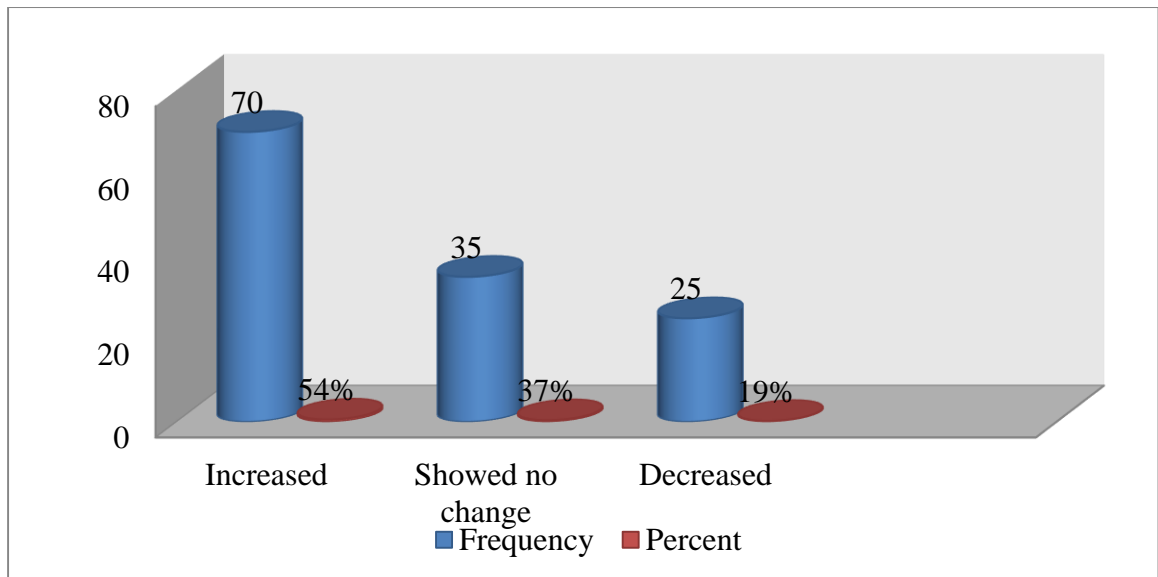


Figure 13: Compared to 2020-2021, Business Transaction in 2022 (January to December) increased

4.6 Chi-Square T-test

Table 14: Cross tabulation on the monthly fuel price adjustments on the sales of courier service operators

Variables	Observed N	Expected N	Residual
Strongly disagree	6	11.4	-10.4
Disagree	10	11.4	-8.4
Undecided	5	5	5
Agree	48	11.5	25.6
Strongly agree	61	11.4	-.4
Total	130		

In this study, the researcher established the relationship between the monthly fuel price adjustments on the sales of courier service operators. The researcher also explored the forms of these relationships. To maximise the accuracy of the findings, the formulated plan of analysis was set at a significance level of 0.05. With this analysis, if the test statistical probability (p -value) was less than the significance level, the null hypothesis would be rejected. Conversely, if the p -value would be greater than 0.05, then the null hypothesis would be accepted. The results of the analysis were thus presented;

Null Hypothesis H₀: Monthly fuel price adjustments do not affect sales and profitability of courier service operators in Lusaka District

Alternative Hypothesis H₁: Monthly fuel price adjustments do affect sales and profitability of courier service operators in Lusaka District

4.6.1 Chi-Square T-test

Since the p-value was less than the agreed significance level, the null hypothesis was rejected. The interpretation of the results was that there was a positive relationship between the monthly fuel price adjustments on the sales of courier service operators.

The results from the Chi-square T-test indicated that there was a correlation between the two variables and this was because the statistical significance level which was set at $p < 0.05$ was less than that of the agreed significance level. This implied that the confidence level was higher than the significance level meaning the correlation between factors for monthly fuel price adjustments on the sales of courier service operators was high. This showed that the majority of the respondents strongly agreed that there was a positively impact on the monthly fuel price adjustments on the sales of courier service operators.

4.7 Summary of the Chapter

The chapter presented findings basing on the data instruments as designed by the researcher and elaborated in the previous chapter. The data was analysed accordingly using the Chi-Square test and hypothesis subjected to testing which interpreted a positive impact of fuel price adjustment on the sales of courier service operators therefore the null hypothesis was rejected.

CHAPTER FIVE

DISCUSSION OF RESEARCH FINDINGS

5.0 Overview

This chapter aimed at providing discussions of the findings streaming from structured questionnaires. In tandem with outlined literature review outlined in chapter two, each and every result shall be addressed in order to ascertain its' connections to preceding research studies and existing knowledge gaps.

5.1 Discussion

The researcher observed that there was a significant gender imbalance in the study, with a higher proportion of male respondents compared to female respondents. This could be due to various factors such as the nature of the study, the population being studied, or the recruitment methods used. Understanding the reasons for this imbalance is crucial for ensuring the generalizability and validity of the study's findings.

The study revealed that the majority respondents were positioned in the sales division followed by the supervisors and the managers, this justifies that sample size investigated was well knowledgeable and were in contact with the two variables. The distribution of positions within the business as outlined provides valuable insights into the organizational structure and workforce composition. Understanding the roles and responsibilities of each group helped in assessing the efficiency and effectiveness of different departments within the company.

According to the findings of the study the respondents had different business experience in years with the majority having 6-10 years of business experience, followed by those with 1-5 years of business experience.

Overall, the findings suggest a diverse range of business experience levels among the respondents, with a majority falling in the moderate experience category. This diversity can provide valuable insights into the experiences and challenges faced by businesses at different stages of development, and can inform policies and strategies aimed at supporting business growth and success.

5.1.1 Awareness of the monthly adjustments of fuel prices

Respondents were aware of the monthly adjustments of fuel prices and the study established that majority indicated Yes meaning they are aware of the monthly adjustments of fuel prices, compared to a minority who were not aware of the monthly adjustments of fuel prices. In summary, while the majority of respondents were aware of the monthly adjustments of fuel prices, there remained a portion of the population that was either unaware or uncertain about these changes. This highlights the importance of continued efforts to ensure clear and accessible communication about fuel price fluctuations.

5.1.2 Adjustments in fuel prices was as a result of Government's removal of the fuel subsidy

The study discovered that more participants agreed that the cause of the adjustments in fuel prices was as a result of Government's removal of the fuel subsidy whereas the minority disagreed to the notion. This indicates a general consensus among a significant portion of the respondents regarding the cause of the fuel price adjustments. The findings were similar to a study done by Miswa (2019) who examined the Efficacy of Price Regulation on the Pricing of Fuel in Kenya. The study used a descriptive research design and the findings were that an introduction of oil price controls in Kenya had greatly affected the pump prices. The pricing regulation was not beneficial to Oil Marketing Companies, changes in oil prices caused by the pricing formula led to increased and uncontrolled economic fluctuations.

The price of fuel had negative impact on sales of most businesses causing a significance effect on the level of profits attained.

5.1.3 Government spending a lot of money to subsidies fuel prices

The study revealed that a majority of respondents disagreed that government spent a lot of money subsidizing on fuel prices whilst a minority agreed to the notion. This suggests that there was a perception among the respondents that government spending on fuel price subsidies may not have been as significant as implied in the question.

5.2 The demand for courier services with regards to charge prices and fuel adjustments for the period 2020-2022 in Lusaka District

5.2.1 Demand for courier services for 2022 (January to December)

The study discovered that during the period 2022 (January to December) the demand for courier services had increased, with the majority saying YES compared to respondents who said NO had decreased. The findings suggest a positive outlook for the courier service industry in 2022, with more than half of the participants noting an increase in demand. The findings relate to a research done in the United State of America by a group of researchers on the Effects of Fuel Price Changes on Fleet Demand for New Fuel (Leard 2017), The researchers used an estimate equation model between the number of vehicles bought from 2009 to 2016 and the cost of fuel per mile for the vehicles during the same period. The main objective was to examine economic reasons why fleet managers adjusted vehicle purchases in response to fuel price changes. Findings were that demand for fleet purchase of low fuel economy was high when fuel prices increased to the demand for high fuel vehicles when prices of fuel reduced. The findings were similar also on demand from household in the same period. The research compared household demand during the same period and found on average household demand and fleet buyers respond to fuel changes in similar ways.

5.2.2 Courier service affected by monthly adjustment of fuel at higher price during 2022

Participants indicated a positive effect of monthly fuel price adjustment on courier services due to increase in online purchases during the period. Overall, results suggest that a significant portion of participants perceived a positive impact on courier services due to the monthly adjustments in fuel prices during 2022. However, there were also respondents who noted negative effects or no noticeable impact. This indicates a varied perception among participants regarding how the changes in fuel prices influenced the courier service sector. Similar findings have also been reported by the studies of other researchers like Asim (2019), in a study on the Effect of fuel prices on Automobile Sales in Pakistan, used the regression methodology and hypothesis testing on data collected to determine the impact of fuel prices on automobile sales. The data analyzed was collected by the use of secondary data on monthly time series from 2014 to 2018 on automobile sales. The study found that an increase in Petrol prices had no effect on the sales of the automobile industry in Pakistan. There was potential of growth in the sector.

5.2.3 Months were the adjustment was favourable to the business

The research found that the first and second quarter business was more favourable whilst other respondents found the third and fourth quarter to be more favourable. Overall, it can be inferred from the findings that a considerable number of businesses felt that the adjustment was favourable at different times throughout the year, with a notable preference for the first quarter.

5.2.4 Months the adjustment of fuel prices was unfavourable to the business (January to December 2022)

The participants had different perceptives on the months fuel adjustment were unfavourable to the business some respondents indicated the first and second quarter whilst other indicated the third and fourth quarter.

The distribution of responses across different quarters provides valuable insights into how businesses perceive and are affected by changes in fuel prices throughout the year. It suggests that there might be seasonal variations or specific factors influencing how businesses adapt and respond to fluctuations in fuel costs.

5.2.5 Impact of fuel prices on demand for courier services in the period 2020-2021 when fuel prices were stable and unchanged

The research discovered that most respondents indicated that there was minimal impact of fuel prices on demand for courier services in the period 2020-2021 when fuel prices were stable and unchanged. Overall, the results suggest that while some courier services may have experienced an increase in demand due to stable fuel prices, others may have seen a decrease or no change at all. The findings of the study have also been demonstrated by other studies of the similar nature, as Mohammed Hossain (2023), on perceived consequences of unpredictable fuel hike in Bangladesh conducted interviews and group discussion on the subject to find its impact on the people of Bangladesh. The results were that unpredictable fuel price had significant consequences for the People of Bangladesh in terms of increased transportation costs, rise of goods and services and cost of living. There was also high inflation and reduction in industrial output affecting businesses and also a decrease in business activities and foreign investment. The research used qualitative methods and data was collected from various source.

5.2.6 The period 2020-2021, demand for courier services in 2022 has (January to December)

The Study revealed that compared to the period 2020-2021; demand for courier services in 2022 (January to December) had increased, as most customers preferred to online purchases compared to physical purchase of goods. This relates to studies done done in Indonesia by M Rachaman, L Rahawati and D Khalida (2023) on Strategy for Maximising MSME Profits amid Increases in fuel Prices from the Perspective of Maqashid Syariah Asy-Syatibi.

The business used strategy for maximizing profits under the perspective of Maqashid Syariah Asy-Syatibi which involved operating within the law and using online promotion. Value addition and sales strategies were also used to increase sales volumes, maximize its business profits without reducing the quality of the products sold. The researchers found high fuel prices caused changes in operational costs that brought about changes in the level of profit and losses due to purchasing power of consumers.

5.3 The Extent Courier Service Operators make profitable sales to cover for adjustments in fuel prices

5.3.1 Performance of sales for 2022 (January to December)

The study revealed an increase in sales of courier service operators with majority of participant stating an increment with sales whilst the minority indicating it had decreased. This suggests that, on average, the group experienced an increase in sales during this time period. Venkateshwar (2021) in his study found a rise of Petrol to Rs100 per litre caused the demand for battery operated scooters to escalate as people wanted to save on fuel costs. The sale of e-scooters increased in Okinawa a largest manufacturer of battery operated Scooters in India. The sales increased by 30% in the last quarter compared to the previous quarter because of the raise in gasoline. The electric motorcycle riders were not tied to a pump price as they were insulated from fluctuating gasoline prices.

5.3.2 The extent the sales influenced by the monthly adjustment of fuel prices

The study found a very positive influence of monthly adjustment of fuel prices on the sales of courier services as witnessed by the majority of participants. This suggests that a substantial portion of participants believed that fluctuations in fuel prices had a positive impact on sales performance.

5.3.3 The months the business had positive sales in 2022 (January to December)

The respondents indicated the courier service operators had more positive sales in the fourth or last quarter in comparison to other quarters, however respondents indicated other quarters to have positive sale. The survey suggests that while there is some variation in sales performance throughout the year, a majority of businesses reported positive sales in at least one quarter of 2022.

5.3.4 The months the business had negative sales in 2022 (January to December)

The study found negative sales to the courier services very minimal with some respondents experiencing a slight negative sale in the first and second quarter others experienced the negative sales in the third and fourth quarter. The distribution of negative sales across different quarters of 2022 provides a comprehensive overview of the challenges faced by businesses throughout the year. Analysing these patterns can help identify trends, make informed decisions, and implement strategies to improve sales performance in the future.

5.3.5 The impact of fuel prices on sales in the period 2020-2021 when fuel prices were stable and unchanged

The respondents indicated a low impact of fuel prices on demand for courier services in the period 2020-2021 when fuel prices were stable and unchanged. However, the fact that a slight portion of participants reported no impact suggests that fuel prices may actually have a relative positive impact on sales for these individuals or businesses. Hence courier service providers can use promotion strategies, and provide reserves on the profits to mitigate future losses as well as ensure to ensure the businesses thrive and have a positive growth in the future. Similar Studies were done in Ukraine on Profitability of Pharmaceutical Enterprise by Garmatiuk (2023) who assessed businesses basing on indicators of the level of profitability. The study highlighted the following indicators as a measure of profitability: gross profits of products sold, operating profitability of the products sold and net profitability of the products sold.

Findings were that to have successful sales, businesses needed to create reserves for increasing profitability that would increase the volume of product sold and decrease cost of sales and administration.

5.3.6 Operating profit for 2022 (January to December)

The study revealed courier services to record a range of book balance to surplus in operating profits for the period 2022 (January to December) with a few respondents recording a deficit in profits. The findings have also been reported by the study of Tumbunan (2022) who identified a domestic undersupply of fuel compared to its demand contributed to high prices of the fuel in Indonesia. This increase in fuel directly caused an increase in transportation tariffs, inflation and unemployment. The increase led to a change in operating costs and level of profits, low economic activities and economic growth. Mixed methods of both quantitative and qualitative methods were used.

5.3.7 Profits influenced by the monthly adjustment of fuel prices

The interpretation of these results suggests that a significant portion of the participants viewed the monthly adjustment of fuel prices as having a positive impact on profits. The majority believed it was very positive, while a notable percentage considered it slightly positive. On the other hand, there were smaller proportions who viewed it negatively, stating it was slightly negative and others indicating it was very negative. The minority felt that there was no impact on profits due to these adjustments. The findings of the study had also been highlighted by other research studies, Asim (2019) the findings revealed that an increase in the cost of fuel had a significant economic influence on the prices of goods in the state and business transactions reduced. Recommendations were made on price stability of petroleum products and a monitoring system be done on production industries to keep supplied commodities in proper check.

5.3.8 Months the business had higher profits in 2022 (January to December)

The participants indicated months the business had higher profits in 2022 from January to December and the study discovered that minority said October to December, while others said July to September, with a majority indicating April to June and January to March respectively. Findings suggest that there is variability among businesses regarding when they experience peak profitability throughout the year. The distribution across different quarters indicates that factors such as seasonality, industry trends, and individual business performance may influence when businesses achieve higher profits.

In a similar study done by Badreldin (2022), he looked at the influence of fuel prices on economic activities for the period 2000-2021. The researcher used descriptive method and hypothesis on data collected using an applied framework. A simple regression method was used to analyse the data collected. Findings showed that there was impact of fuel prices on oil revenues which affected economic growth escalated transportation costs, costs of production and decrease income for consumers which led to decrease in economic activities.

5.3.9 Months the business made lower profits in 2022 (January to December)

Participants equally indicated the months the business made lower profits in 2022 from January to December and the study revealed minority indicating January to March and April to June, whilst the majority indicated July to September and October to December. The data suggests that there might be seasonal patterns or specific factors affecting the profitability of businesses at different times of the year. For instance, the higher percentage of businesses reporting lower profits in the last quarter could be attributed to various factors such as end-of-year expenses, seasonal fluctuations in demand, or external economic conditions. Similarly, the lower percentages in the earlier quarters could indicate a gradual improvement or stabilization in profitability as the year progresses.

5.4 The Influence of fuel prices on the rate of Business Transactions of courier services in Lusaka District

5.4.1 Business transactions in 2022 (January to December) affected by monthly adjustments of fuel prices

The study revealed a positive relationship between monthly fuel price adjustment and business transactions for the period 2022 from January to December with a majority of participants agreeing and minority disagreeing with the notion. It can be observed that a majority of participants either strongly agreed or agreed that the monthly adjustments of fuel prices in 2022 had an influence on business transactions. This indicates a significant perception among the respondents that fuel price fluctuations played a role in shaping business activities throughout the year. Similar studies were done by Abdulraham (2022) in Sudan on the influence of fuel prices on economic activities in Sudan for the period 2000-2021 where the researcher used a survey of 300 people as sample size. Descriptive method and hypothesis on data collected were used on an applied framework. Further the research used a simple regression method to analyze data. Findings showed that there was impact of fuel prices on oil revenues, economic growth, transportation costs, costs of production and income for consumers which led to an influence of economic activities and businesses trends.

5.4.2 Frequency of customers in 2022 (January to December) reduced when there was an increment of fuel prices

The respondents indicated the period 2022 (January to December) had indicated a frequency of customers in 2022 (January to December) increased when there was an increment of fuel prices due to customers avoiding transportation due to high costs of fuel and opting to purchase online goods. The study suggests that there is a significant association between fuel prices and the frequency of customers, with higher fuel prices potentially increasing the number of customers.

The research findings qualifies the theoretical framework of the study on the Law of Demand Theory. According to economics, the Law of Demand is a widely used theory that expressed the relationship between the price of the product and quantities purchased amongst different customer preferences when all other things were held constant. Demand for a product varied inversely with its price, (Ahuja, 2008 (Microeconomic Book). or instance if we related this to the transportation courier of goods and services to transport cargo the transport invest time and energy (oil and gas) which create the costs and traffic of volumes related to the demand of the transportation. Further the Law of demand takes into account the choice of the consumer, goods that bring utility or satisfaction to the consumer, consumer preferences and budget constraint of the consumer given the price of which they had to pay. The law of demand states that the demand of a product was the willingness of consumers to purchase a good or use a service. The desire for goods and services was coupled with the ability and willingness to pay for that good /service.

5.4.3 Frequency of customers in 2022 (January to December) increased when there was a reduction in the fuel prices

Overall the study found an increase in the frequency of customers in the period 2022 (January to December) with an increment in fuel prices this relates to study in Studies were done in China (Chen 2022), on the Impact of Rising Oil Prices on New Energy Sales. The main objective was to find out the correlation between oil prices and new energy vehicle sales. The researcher gathered information on prices of fuel during the year and used the analytical framework on how many new energy cars were bought during the period. The study found an increase in new energy car correlated with an increase in prices of fuel. This was due to technology and effectiveness of the energy cars. The sales increase by over 1.2 times compared to the time the prices of fuel were low. The author highlighted the use of technology to add value to products thereby increase sales and making profits.

5.4.4 Compared to 2020-2021, Business Transaction in 2022 (January to December) increased

Participants were asked to compare the 2020-2021, Business Transaction in 2022 (January to December) increased and the study discovered that majority indicated that it increased, followed by an indication that there was no change and minority indicated that it had decreased. The results highlighted what other researchers experienced, one of the studies done In Africa a by Nyewe (2019) who examined Implications of Fuel Price Increase on Business Transaction in Yenegoa Metropolis, Bayelsa State Nigeria. The methodology used a survey of 3245 business operations in Salli and Tombia Market. The research was exposed to a test and re-test to determine reliability of the instrument from 10 business operators. Reliability coefficient was calculated at 0.85 using Pearson Product Moment Correlation Coefficient. Findings revealed that an increase in the cost of fuel had a significant economic influence on the prices of goods in the state and business transactions.

5.5 Summary of the Chapter

The chapter discussed the findings and analysis from Chapter four which were accordance with the objectives of the study and in line with research questions. Further the research recorded a gender imbalance of having few female respondents in courier services compared to the male respondents.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Overview

This chapter presents the conclusion, recommendations and future areas of research to the study undertaken on the monthly fuel price adjustments on the sales of courier services in Zambia. Conclusions are the final part of a research paper that summaries all the work (Consultores 2021). The reaffirm the thesis, summarise the key ideas that have been discussed throughout the work and offer the final impression on the central idea. Whilst research recommendations suggest future actions supported by research (Dhanya 2023). It helps to improve the field of research and provides a framework based on the outcomes that should be implemented. Future studies create alternatives for researchers to explore by making basic assumptions and suggestions to done in the area of research Inayatullah 2013).

6.1 Conclusions

Fuel prices play a significant role in the operational costs of courier services, as they heavily rely on transportation for their business activities. Fluctuations in fuel prices can directly affect their profitability and overall performance. This analysis aimed to explore how changes in fuel prices had influenced the sales of courier service operators in Lusaka District during the specified period. Therefore, the study aimed at an analysis of monthly fuel price adjustments on the sales of courier service operators in selected parts of Lusaka District. The conclusion was addressed in line with the three search objectives.

The first objective was to examine the demand for courier services with regards to charge prices and fuel adjustments for the period 2020-2022 in Lusaka and the study discovered that 68 (52%) indicated that it had increased, 42 (32%) said that it remained the same and 20 (15%) indicated that it had decreased. The findings suggest a positive outlook for the courier service industry in 2022, with more than half of the participants noting an increase in demand.

The second objective was to assess whether courier service operators in Lusaka District were making profitable sales to an adjustment of fuel prices and the study revealed that the majority 62 (48%) believed it was very positive, while a notable percentage 25(19%) considered it slightly positive. On the other hand, there were smaller proportions who viewed it negatively, with 22 (17%) stating it was slightly negative and 9% indicating it was very negative. The minority 9 (7%) felt that there was no impact on profits due to these adjustments

The last objective was to determine the influence of fuel prices on the rate of business transactions on the Courier Services in Lusaka and the study established that 51 (39%) strongly agree, 42 (32%) agreed, 4 (3%) were neutral, 18 (14%) disagreed and 15 (12%) strongly Disagree. It can be observed that a majority of participants either strongly agreed or agreed that the monthly adjustments of fuel prices in 2022 had an influence on business transactions.

6.2 Recommendations

Based on the analysis conducted, the following recommendations were proposed for courier service operators in selected parts of Lusaka District to navigate the impact of monthly fuel price adjustments:

1. It is recommended that courier service operators should implement dynamic pricing strategies models that will allow for adjustments based on fluctuating fuel prices while remaining competitive in the market.

2. It is also recommended that courier service operators should invest in fuel-efficient vehicles and efficient delivery systems to reduce operational costs and minimize the impact of fuel price fluctuations on overall expenses.
3. The study recommends that courier service operators should enhance technology integration systems to improve efficiency, reduce fuel consumption, and enhance customer satisfaction.
4. The study recommends that to mitigate and caution Oil Marketing Companies (OMC's) buying fuel at high prices, government should adopt a petroleum strategy that facilitates for bulk buying of petroleum products when prices are cheaper on the international market, fuel can be stored at the international reserves until the stocks decrease then be supplied to the Country. The strategy should cover for price shocks that allows locking the fuel price when fuel is cheaper or when the kwacha appreciates.
5. Lastly, the study recommends that Government re-introduce a form of subsidy on fuel so that the impact of high fuel prices is reduced for the Oil Marketing Companies to caution the retail price as most of the times it is high for businesses to make sustainable profits.

6.3 Suggestion for future research studies

From the above findings, research on fuel pricing mechanism can be done in Zambia to consolidate the effects that high prices of fuel pose on the growth of the economy as most of Zambia real income is low compared to other countries which easily cope with high fuel prices. There is need to come up with a petroleum strategy that would be beneficial to both businesses and households to increase on purchasing power in the country which can lead to growth of SME's and boost the economy. Other studies can also be done on how fuel prices may increase inflation in the country that cause escalating high prices of goods and services.

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Appendix I: Questionnaire for Participants

I volunteer to participate in a research project conducted by Theophister Thope from University of Zambia. I understand that the project is designed to gather information on the analysis of monthly fuel price adjustments on the sales of courier service operators in selected parts of Lusaka District for the period 2020-2022. I will be one of the 176 respondents that will take part in this study.

My participation in this research is voluntary. I understand that I will not be paid for my participation. I may discontinue or withdraw at any time without penalty. I also understand that the researcher will not identify me by name in any report using information obtained from this questionnaire and that my confidentiality as a participant in this study will remain secure. Subsequently, uses of records and data will be subjected to standard data by using policies which protect the anonymity of individuals and institutions.

I have read and understood the explanation and conditions provided to me. I agree to participate. I will answer the questions to my satisfactory.

Sign.....

Date.....

For further information, please contact

The Supervisor.....

University of Zambia

Student's Name- Theophister Thope

Cell phone number- + **260 977241893**

Email address: theochim978@gmail.com

Section A: General Information

Please kindly tick where appropriate

1. What is your Gender?

- a) Male
- b) Female

2. Position in the Business

- a) Managers
- b) Sales Division
- c) Supervisor
- d) Accounts division
- e) Driver

4. How long has the business been in existence?

- a) 1-5 years
- b) 6-10 years
- c) 11 years and above

Section B: Independent Variables

5. Is your business aware of the monthly adjustments of fuel prices?

- a) Yes
- b) No
- c) I am not sure

6. Do you agree or disagree that the cause of the adjustments in fuel prices was as a result of Government's removal of the fuel subsidy

- a) Strongly Agree,
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly Disagree

7. Do you agree or disagree that government used to spend a lot of money to subsidies fuel prices

- a) Strongly Agree,
- b) Agree
- c) Neutral
- d) Disagree

- e) Strongly Disagree

Section C: The demand for courier services in relation to charge prices and fuel adjustments for the period 2020-2022 in Lusaka District

8. How was the demand for courier services for 2022 (January to December) has;

- a) Increased
- b) Remained the same
- c) decreased

9. To what extent was the courier service affected by monthly adjustment of fuel at higher price during 2022, please tick only one:

- a) Slightly negative
- b) Very negative
- c) Slightly Positive
- d) Very Positive
- e) No effect

10. In which months was the adjustment favourable to the business (between January to December 2022), please indicate in all applicable in the box:

- a) January to March
- b) April to June
- c) July to September
- d) October to December

11. State in which months the adjustment of fuel prices was unfavourable to the business (January to December 2022), please indicate in all applicable in the box:

- a) January to March
- b) April to June
- c) July to September
- d) October to December

12. Was there any impact of fuel prices on demand for courier services in the period 2020-2021 when fuel prices were stable and unchanged, please tick in the box;

- a) High
- b) Moderate high
- c) Moderate low
- d) Low

13. Compared to the period 2020-2021, demand for courier services in 2022 has (January to December), please tick appropriate answer below;

- a) Increased
- b) Shown no change
- c) Decreased

Section D: Whether Courier Service Operators make profitable sales to adjustments in fuel prices

14. What was the performance of sales for 2022 (January to December);

- a) Increased
- b) Remained the same
- c) decreased

15. To what extent were the sales influenced by the monthly adjustment of fuel prices, please tick only one:

- a) Slightly negative
- b) Very Negative
- c) No impact
- d) Slightly positive
- e) Very positive

16. State in which months the business had positive sales in 2022 (January to December), please tick in the box:

- a) January to March
- b) April to June
- c) July to September
- d) October to December

17. State in which months the business had negative sales in 2022 (January to December), please tick in the box:

- a) January to March
- b) April to June
- c) July to September
- d) October to December

18. Was there any impact of fuel prices on sales in the period 2020-2021 when fuel prices were stable and unchanged, please tick in the box?

- a) Slightly negative

- b) Very Negative
- c) No impact
- d) Slightly positive
- e) Very positive

19. Operating profit for 2022 (January to December) was in;

- a) Surplus
- b) Book Balance
- c) deficit

20. To what extent were the profits influenced by the monthly adjustment of fuel prices, please tick only one:

- a) Slightly negative
- b) Very negative
- c) Slightly Positive
- d) Very Positive
- e) No effect

21. State in which months the business had higher profits in 2022 (January to December), please tick in the box:

- a) January to March
- b) April to June
- c) July to September
- d) October to December

22. State in which months the business made lower profits in 2022 (January to December), please tick in the box:

- a) January to March
- b) April to June
- c) July to September
- d) October to December

Section E: Influence of fuel prices on Business Transactions of courier services

23. Do you agree or disagree that business Transactions in 2022 (January to December) were affected by monthly adjustments of fuel prices

- a) Strongly Agree,
- b) Agree
- c) Neutral

- d) Disagree
- e) Strongly Disagree

24. Do you agree or disagree that the frequency of customers in 2022 (January to December) reduced when there was an increment of fuel prices

- a) Strongly Agree,
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly Disagree

25. Do you agree or disagree that the frequency of customers in 2022 (January to December) increased when there was a reduction in the fuel prices

- a) Strongly Agree,
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly Disagree

26. Compared to 2020-2021, Business Transaction in 2022 (January to December) increased

- a) Increased
- b) Shown no change
- c) Decreased

Appendix II: Gantt chart

THESIS TIME SCALE FROM JULY 1ST 202															
No.	DESCRIPTION	DURATION IN WEEKS													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	LITERATURE REVIEW	█	█	█	█										
2	QUESTIONNAIRE DESIGN				█	█	█								
3	FIELD RESEARCH AND DATA COLLECTION						█	█	█	█	█				
4	DATA ANALYSIS										█	█	█		
5	THESIS DRAFTING												█	█	█
6	THESIS PROOFING/CHECKING														█
7	SUBMISSION OF THESIS														█
8	THESIS PRESENTATION (TBA)														

Appendix III: Budget

BUDGET			
ACTIVITY	UNIT COST	QTTY	TOTAL
LITERATURE REVIEW	15000	1	15000
QUESTIONNAIRE DESIGN	5000	1	5000
FIELD RESEARCH AND DATA COLLECTION	15000	1	15000
DATA ANALYSIS	5000	1	5000
THESIS DRAFTING	2000	1	2000
THESIS PROOFING/CHECKING	1000	1	1000
SUBMISSION OF THESIS	500	1	500
THESIS FINAL PRESENTATION	1500	1	1500
TOTAL			K45000

Appendix IV: Fuel Pricing Table 2022

Pricing Mechanism	Year			
Country Wide Uniform Pump Prices	Month	Unleaded Petrol	Lower Sulphur Diesel	Kerosene
Country Wide Uniform Pump Prices	Jan -22	21.16	22.29	15.39
Country Wide Uniform Pump Prices	Feb-22	19.84	18.93	15.39
Country Wide Uniform Pump Prices	March-22	21.96	21.54	15.39
Country Wide Uniform Pump Prices	April-22	26.50	26.22	19.32
Country Wide Uniform Pump Prices	May-22	24.15	25.64	18.76
Country Wide Uniform Pump Prices	June-22	24.95	25.64	18.76
Country Wide Uniform Pump Prices	July-22	26.75	28.01	21.27
Country Wide Uniform Pump Prices	August-22	23.19	24.87	18.43
Country Wide Uniform Pump Prices	Sept-22	21.54	23.12	16.71
Country Wide Uniform Pump Prices	Oct-22	22.74	26.16	16.06
Country Wide Uniform Pump Prices	Nov- 22	24.31	27.38	19.23
Country Wide Uniform Pump Prices	Dec-22	25.89	27.38	20.45

Appendix V: Ethical Clearance