

**AN ASSESMENT OF THE IMPACT OF COVID 19 ON FUEL PRICES AND THE SALES
PERFORMANCE OF PETROL STATIONS IN UGANDA**

By

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL
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DECLARATION

I, **NANGENDO TRACY JEAN**, hereby declare that this Dissertation is my original work and has never been submitted to any university or institution of higher Learning for any academic award.



Signature:

Date: 11th September, 2024

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APPROVAL

This is to certify that this dissertation entitled "*A assessment of the impact of Covid 19 on fuel prices and the sales performance of petrol stations in Uganda*" has been accomplished under our guidance as supervisors.

Signature: 

Date: 11th September 2024

Ms. Isabella Izimba Kasiko

DEDICATION

I dedicate this study to my dear lovely family and guardians, Ms. Kalyango Elizabeth, Mr. Serwanga Samuel, Ms Mirembe Cynthia, Mr. Lubwama Trevor, Mr. Tendo Roy for the financial and material support during my study process.

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ABSTRACT

This research is about “An Assessment of The Impact of Covid 19 On Fuel Prices and The Sales Performance of Petrol Stations in Uganda”, with a specific focus on the central region of Uganda. The study aims to investigate the economic and social effects of Covid 19 on local residents, as well as the Fuel Prices and The Sales Performance of Petrol Stations. Chapter 1 includes the background of study, problem statement, objectives of the study; To identify the effects of COVID19 on Uganda, to assess the effect of COVID-19 on fuel prices and to examine the relationship between fuel prices and sales performance, research questions, purpose of the study, significance of the study, scope of the study and the conceptual framework. Chapter two is about the theoretical review from other authors entailing the endogenous growth theory and reviewing all specific objectives. Chapter three is about the methodology deployed that is the research design, area of study, the study population, sample size and technique and the instruments of data collection. Whereas chapter four and five is about the analysis of data, presentations of data, the discussions and recommendations.

Using a mixed-methods approach, combining both qualitative and quantitative data collection and analysis methods, this research reveals that COVID 19 had both positive and negative impacts on local communities. While some benefits, such as incorporating new technologies e.g. working online and infrastructure development, have been realized, concerns around fuel prices, laying off workers, and inadequate compensation remain.

The study concludes by providing valuable insights into the impact of COVID-19 on the fuel industry in Uganda, specifically on fuel prices and petrol stations' sales performance. The findings will help petrol stations and policymakers develop strategies to mitigate the impact of future pandemics on the fuel industry.

CHAPTER ONE

1.0 Introduction

This chapter provides an overview of the introduction, background, problem statement and objectives. The COVID-19 pandemic in Uganda led to a decline in fuel sales which affected petrol stations' sales performance. This study assesses the impact of COVID-19 on fuel prices and the sales performance of petrol stations in Uganda. This chapter includes the background of the study, problem statement, objectives of the study, purpose of the study, significance of the study, scope of the study and the conceptual framework.

1.1 Background of the study

Backgrounds of other pandemics and their impact, The Spanish Flu pandemic (1918-1919) was a global outbreak that affected an estimated 500 million people, or approximately one-third of the world's population. It was caused by an H1N1 influenza A virus and is considered one of the deadliest natural disasters in human history. It led to food prices increasing by 50-100% in some areas due to shortages and supply chain disruptions and prices for medical supplies, such as masks and medicines, increased significantly due to high demand and supply chain disruptions. This led to labor shortages, food shortages and inflation due to a global economic downturn. (Sergi, Jordi, & Joan, 2021)

COVID-19, also known as the coronavirus, SARS-CoV-2, is a communicable respiratory disease caused by a new strain virus and can spread from person to person and animals. The virus was first reported from Wuhan city in China in December, 2019, which in less than three months spread throughout the globe and was declared a global pandemic by the World Health Organization (WHO) on 11th of March, 2020. This affected oil and gas market though a short-term impact which was nearly 25% decrease in petroleum consumption, slowly recovering to its former amount and even growing more. The long-term impacts are the 30% to 40% decrease in the CAPEX and R&D investments over the oil and gas market, which is a regional scale in the United States, caused oil exploitation projects to decrease from more than 800 in 2019 to 265 in 2021. (Nima, 2021)

Fuel prices are calculated using different factors, first is the extraction costs of crude oil, second the cost of refining the crude oil and of distributing the fuel, third is taxes. According to Macrotrends, Interactive charts of West Texas Intermediate (WTI or NYMEX), crude oil prices

per barrel go back to 1946. These show that in 1946 to 1950 a barrel of crude oil was around 20 dollars per barrel to 30 dollars per barrel, which after a while fluctuated causing the fuel prices to fluctuate too due to variables like inflation, wars and many other factors. Continentally, to date, Libya and Angola have the lowest fuel prices in Africa, with a liter of petrol going for \$0.031 and \$0.36, respectively. While Zimbabwe has the highest petrol prices in Africa, standing at \$1.69. Whereas for Uganda, fuel prices were at \$0.69 in 2010, \$1.42 in 2016 and September 2023, they were at \$1.35 per liter, making Uganda the most expensive country to buy fuel in the East African region, (Smartson, 2022). By July 2022, the domestic price for diesel and petrol in Uganda had increased by 71.5% and 56.1% compared to July 2021 (Tonny, 2022), due to the global oil supply disruptions amidst demand recovery from the COVID-19.

In Uganda, petrol stations are facilities that sell fuel and other related products to motorists. They play a crucial role in the country's transportation sector, which is a vital component of the economy. Some key aspects of petrol stations in Uganda are Fuel sales, Lubricants and oils, Convenience stores and Vehicle maintenance etc. They play a role of supporting transportation, creating employment by employing Ugandans directly and indirectly, generating tax revenue, supporting economic growth and providing essential services (Goodwin, 2002). Whereas the effect of fuel prices on sales performance of petrol stations is important as it can lead to competition through stations potentially gaining market share if they offer more competitive pricing and customer loyalty. However, frequent price fluctuations can erode customer loyalty, as customers may seek out more stable or competitive pricing options (Justus, Ulrich, & Manuel, 2017) which brings us to this study showing us the Impact of Covid 19 On Fuel Prices and The Sales Performance of Petrol Stations in Uganda

1.2 Problem statement

Despite the pivotal role of fuel in the transportation sector as the energy source for various modes of transportation, such as cars, trucks, buses, motorcycles, airplanes, and ships. Fuel's importance in the Power generation sector through generation of electricity in power plants, providing energy for industries, homes, and businesses and in Industrial processes by using it as a feedstock or energy source in various industrial processes, such as manufacturing, construction, the COVID-19 pandemic has had a devastating impact on fuel prices and the sales performance of petrol stations in Uganda (DEOGRATIUS, 2020).

The pandemic's effects on global oil demand by reducing consumption, lowering economic activity and travel restrictions have slowed production, and supply chains have led to volatile fuel prices. While lockdowns, social distancing measures, and reduced economic activity have resulted in decreased fuel sales. This study seeks to investigate the extent to which COVID-19 has impacted fuel prices and the sales performance of petrol stations in Uganda.

1.3 Specific objective

- i). To identify the effects of COVID19 on Uganda
- ii). To assess the effect of COVID-19 on fuel prices
- iii). To examine the relationship between fuel prices and sales performance.

1.4 Research questions

- i. What are the effects of COVID 19 on Uganda?
- ii. What are the effects of COVID-19 on fuel prices?
- iii. What is the relationship between fuel prices and sales performance?

1.5 Purpose of the study

The purpose of this study will be to assess the Impact of Covid 19 on Fuel Prices and the Sales Performance of Petrol Stations in Uganda.

1.6 Significance of the study

The study's findings can recommend to Petrol Stations to diversify service by offering essential goods and services like food, pharmaceuticals, and e-commerce delivery points to reduce dependence on fuel sales.

The study's findings can also recommend Policy makers/Government to develop fuel price stabilization mechanisms by establish funds or subsidies to mitigate price volatility during pandemics.

This research can also become used as reference for further research by future researchers to apply this research and compare the impact of COVID-19 on fuel prices and petrol station sales performance in Uganda with other countries in the region. They can also asses the resilience of the fuel supply chain in Uganda during the pandemic.

1.7 Scope of the study

1.7.1 Content Scope

This study will assess the Impact of Covid 19 On Fuel Prices and The Sales Performance of Petrol Stations in Uganda. Covid 19 restrictions are the independent variable and Fuel Prices and The Sales Performance of Petrol Stations is the dependent variable.

1.7.2 Geographical scope

This research will be carried out in Makindye division, Kampala central division, Kawempe division, Nakawa Division. These divisions are located in the central Uganda, capital city of Uganda, Kampala city. They border each other which created ease to access by Kampala Central Division: This division lies in the central part of the city, Kawempe Division: Located in the north of Kampala, Nakawa Division: Located to the east of Kampala's city center, Rubaga Division: Located to the west of Kampala's city center and finally Makindye Division: This division is located to the south-east of Kampala's city center. (KCCA, n.d.)

1.7.3 Time scope

The study will focus on a period of 5 years from the time, Uganda was granted a Covid 19 lockdown; April 1st 2020 to date. This is because the fuel prices in Uganda's oil and gas industry started increasing when the lockdown had been issued to the people of Uganda.

1.8 Definitions

Covid 19

This is a communicable respiratory disease caused by a new strain virus and can spread from person to person and animals.

Fuel

A material such as coal, gas or oil that is burned to produce energy, the definition of fuel is a substance that is burned to produce heat, power, or nuclear energy. When burned, materials such as coal, wood, oil, or gas can produce heat. Fuel types include methanol, gasoline, diesel, propane, natural gas, and hydrogen. Burning plutonium generates nuclear energy.

OPEC

The organization of the petroleum exporting countries, it is an intergovernmental organization of 13 countries whose purpose is to coordinate and unify petroleum policies among the member countries, in order to secure fair and stable petroleum prices.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of the literature review, aligned with the study's objectives. The literature will be carefully selected, analyzed, and organized into themes related to infrastructural effects, environmental impacts, and employment effects. The chapter is structured into three main sections; A review of the theoretical framework and concepts relevant to the study, A clear statement of the research objectives and their significance, A synthesis of the literature and identification of research gaps, highlighting areas where further investigation is needed The literature review draws on a range of sources, including books and journal articles, to provide a comprehensive understanding of the existing body of knowledge in this field and to inform the research questions. By analyzing and synthesizing the literature, this chapter aims to provide a solid foundation for the research and identify areas where new insights and contributions can be made.

2.2 Theoretical Review

2.2.1 Endogenous growth theory

The endogenous growth theory is an economic theory which argues that economic growth is generated from within a system as a direct result of internal processes. More specifically, the theory notes that the enhancement of a nation's human capital will lead to economic growth by means of the development of new forms of technology and efficient and effective means of production. This view contrasts with neoclassical economics, which contends that technological progression and other external factors are the main sources of economic growth. Supporters of endogenous growth theory argue that the productivity and economies of today's industrialized countries compared to the same countries in pre-industrialized eras are evidence that growth was created and sustained from within the country and not through trade (Mauro, 2024) This theory shows that the rising of fuel prices in Uganda was due to internal factors and the fault may not be on Covid 19 but it is the primary factor to these economic challenges and the internal forces like high transportation costs of products are what is leading to high costs of end products.

2.2.2 Related Literature

The first case of covid 19 in Uganda was in 2020, despite the Government putting in place measures to stop the increase of covid 19 cases in Uganda, it was still considered slow, which lead to economic concerns and border lockdowns where by these ended up affecting the Fuel Prices and The Sales Performance of Petrol Stations in Uganda. To curb the spread of COVID-19 the Government of Uganda put in place restrictions, however these restrictions led to economic concerns (Nanima, 2022). First, the country wide lockdown, which is a state of emergency protocol that involves restricting people's movement and activities to a specific area, usually due to a security threat, natural disaster, or public health crisis. Uganda implemented a series of lockdowns to control the spread of COVID-19, including the Initial Lockdown (March 2020). A 14-day lockdown was announced on March 30, 2020.

Secondly, the Closure of borders by Uganda with its neighboring countries like Democratic Republic of Congo, South Sudan, Kenya, Tanzania, Rwanda which led to significant economic and social impacts, including disrupting trade, tourism, and separated families (health, 2021).

Thirdly, Suspension of public transport: including Bus Services, Private Transport, Vehicle Movement etc. The suspension of public transport was implemented in March 2020 and was gradually relaxed from May 2020, with Phased resumption of public transport services and Introduction of SOPs (Standard Operating Procedures) for public transport. (Xinhua, 2020) For the suspension of public transport which aimed to reduce the risk of COVID-19 transmission through crowded public transport vehicles and minimize movement of people. However, it also had significant economic and social impacts, including; Disruption of economic activities i.e. the rising prices both for fuel and other products, Loss of livelihoods for transport operators and drivers and an Inconvenience to commuters.

Lastly the Closure of non-essential businesses: which included, Entertainment Venues which are Bars, Nightclubs, Cinemas, Theaters etc., Recreational Facilities which included Gyms, Swimming pools and many others. Where by this ended up affecting livelihoods for business owners and employees, Economic downturn and an Inconvenience to consumers (Team, 2021).

2.3 The effects of COVID19 on Uganda

(Martin, 2022) notes that increased transportation costs lead to higher food prices, affecting staples like maize, beans, and vegetables. Higher fuel prices due to COVID 19 lead to increased transportation costs for farmers, traders, and distributors, resulting in higher food prices. It is reported that Maize Prices increased by 15% in 2020 due to higher fuel prices, Rice Prices increased by 10% in 2020 due to higher fuel prices and Bean Prices increased by 12% in 2020 due to higher fuel prices.

Furthermore, Higher fuel prices due to COVID 19 lead to increased public transportation fares, affecting commuters. Increased fuel prices lead to higher costs of production for farmers, including fuel for machinery and irrigation which also lead the increase of transportation fares. (MARTIN, 2024)

Increased fuel prices due to COVID 19 lead to higher production costs, resulting in higher prices for manufactured goods. Where by Higher Raw Material Costs increased fuel prices lead to higher costs of raw materials, as transportation costs rise. Increased Packaging Costs since higher fuel prices lead to increased costs of packaging materials, such as plastics and paper. Higher Distribution Costs increased fuel prices lead to higher costs of distributing manufactured goods.

In addition, (Programme, 2022) pointed out, Increased fuel prices due to COVID 19 lead to higher costs of agricultural inputs, affecting farmers. This is seen with Increased Fertilizer Prices since higher fuel prices lead to increased costs of fertilizer production and transportation. Higher Pesticide Prices caused by increased fuel prices lead to higher costs of pesticide production and transportation. Increased Seed Prices, higher fuel prices lead to increased costs of seed production and transportation which to the rise of prices of finished products.

Lastly Higher fuel prices lead to increased costs of consumer goods, including household essentials. As mentioned above increased Transportation Costs like higher fuel prices lead to increased costs of transporting goods, affecting consumer goods prices and Higher Production Costs caused by increased fuel prices lead to higher costs of production for consumer goods manufacturers all these and many more lead to the rise of price of consumer goods. (Musana, 2021)

2.4 Effect of Covid-19 on fuel prices

(Hemanth, 2020) stressed that with reduced movement and transportation, fuel sales decreased significantly. Shell Uganda reported a 30% decline in fuel sales during the first quarter of 2020, Total Uganda Experienced a 25% decline in fuel sales during the same period, Engen Uganda witnessed a 20% decline in fuel sales due to reduced economic activity and Kobil Uganda Reported a 15% decline in fuel sales, attributed to reduced vehicle movement.

(Ismail, 2024) explains that border closures and transportation restrictions affected fuel imports and distribution. Where by Fuel Import Delays, these delays in fuel imports from Kenya and Tanzania due to border closures and restrictions. Truck driver shortages due to Covid-19 restrictions, affecting fuel transportation. Depot Congestion at fuel depots due to reduced staff and social distancing measures.

(Medard, Enock, & Blessing, 2020) stated that global oil price fluctuations and local currency devaluation affected fuel prices. And this caused Fuel Price Hikes, Increase in fuel prices by up to 20% in March 2020 due to global oil price fluctuations and reduced imports. Whereas the Petrol Price increased by UGX 1,400 per liter in April 2020 and Diesel Price increased by UGX 1,200 per liter in May 2020

Lastly Fuel stations also generate revenue from non-fuel sales (e.g., convenience stores, restaurants). These sales declined significantly due to reduced foot traffic. Where by Convenience Store Sales Decline items, such as snacks and beverages, by up to 30%. Restaurant and Cafe Sales Decline in sales of restaurants and cafes located within fuel stations by up to 50%. Lubricant Sales Decline in sales of lubricants and other car care products by up to 20%. (Roland D, 2021)

2.5. Relationship between fuel prices and sales performance

(Henry, 2023) pointed out, the relationship between fuel prices and sales performance is complex and can vary depending on market conditions, consumer behavior, and other factors. Petroleum products play an important role in Uganda. Mainly because the main source of transportation for goods and services is road transportation. Ugandans use some form of motorized transportation to move to places of work and to deliver services. Any increase in price of petroleum products will affect each sector in the country.

Typically, there is an inverse relationship between fuel prices and sales performance. When fuel prices rise, sales performance tends to decline, and vice versa which can be caused by price sensitivity of consumers are often price-sensitive when it comes to fuel, so even small changes in fuel prices can impact sales performance (McManus, 2007).

In relation (Tomas, 2012) emphasized the demand for fuel is generally inelastic, meaning that changes in price have a relatively small impact on demand. However, this can vary depending on the market and consumer behavior whereby there may be tipping points where significant changes in fuel prices lead to dramatic changes in sales performance.

In addition, the relationship between fuel prices and sales performance may be non-linear, meaning that small changes in fuel prices can have a disproportionate impact on sales performance. (McManus, 2007) Where by these changes in fuel prices can have lag effects on sales performance, meaning that the impact may not be immediate.

Lastly other factors, such as economic conditions, consumer behavior, and competition, can moderate the relationship between fuel prices and sales performance. Regional differences may also relationship between fuel prices and sales performance.

By understanding these dynamics, petrol stations and fuel retailers can better navigate the complex relationship between fuel prices and sales performance to optimize their pricing strategies and improve their bottom line.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter indicates the methodology that was employed when conducting this research. It explains the research design, area of study, the study population, sample size, the sample technique, methods and instruments of data collection, primary data, questionnaires and analyzing of data.

3.2 Research design

The study adopted a mixed-methods approach, combining quantitative and qualitative data. The study employed Stratified random sampling for petrol stations. (Aoyama, 1954) asserts that this type of data collection represents all subgroups in the population to ensure that the sample is representative of the population. (Iliyasu, 2021) also intervenes by saying that in order to obtain more accurate estimates of population parameters, such as means, proportions, and percentages and reduce biases this type of sampling would be best for this research.

The quantitative approach was justified on grounds that they allow for objective measurement of fuel prices and sales performance, enabling a precise assessment of the impact of COVID-19 with enabling the collection of data from a large sample size. The qualitative approach involved qualitative methods like in-depth analysis of 5-7 petrol stations in different regions of Uganda to provide an in-depth understanding of the experiences, perceptions, and behaviors of petrol station owners, managers, and customers.

3.3 Area of study

The study was conducted in central Uganda. It houses Entebbe International Airport, Kampala Railway Station, Port Bell (a major cargo and passenger terminal on Lake Victoria) where by these are all several important transportation hubs and were all affected by COVID 19. Uganda houses more than 1000 fuel stations including; Shell Kampala, Total Kampala, Caltex Kampala Petro Uganda Mukono, Kenlloyd Mukono Petro Uganda Lugazi, Gasabo Lugazi and many others. Central Uganda was chosen due to its economic significance and population density which will produce the best results for an assessment of the Impact of COVID-19 on Fuel Prices and Sales Performance of Petrol Stations in Uganda

3.4 Study Population

The study population was 100 people comprising of the management staff, marketing and sales staff and fuel pump attendants. The population was selected from five fuel stations in the central region of Uganda and these include, Shell Kampala, Total Kampala, Hass Petroleum Wakiso, Caltex Mukono and Petro Uganda Lugazi.

3.5 Sample Size

According to (Daniël, 2022), this refers to the number of individuals or cases selected from a population to participate in a research study or survey. The sample comprised of 80 respondents which were extracted from the population of 100 respondents determined by first their distinct subgroups or strata based on relevant characteristics (e.g., age, gender, income level, etc.) and the selecting a random sample from each stratum using simple random sampling.

3.6 Sample technique

The study adopted Stratified random sampling. This is a research methodology technique used to select a sample from a population. Stratified random sampling involves dividing the population into subgroups or strata and then selecting a random sample from each stratum. This technique was chosen due to its straightforward method, Unbiased nature and allowing for simple statistical analysis (Iliyasu, 2021). This category of respondents was targeted because they are inhabitants of Uganda and faced the effects of COVID 19.

3.7 Methods of data collection

The collection of data for this study involved quantitative and qualitative approach that was done with the help of questionnaires. A questionnaire is a research instrument consisting of a series of questions and other prompts used to gather information from respondents (Lietz, 2010). Questionnaires are often used in surveys, research studies, and evaluations to collect data and gain insights into people's attitudes, beliefs, behaviors, and experiences.

3.8 Instruments of data collection

The data was collected from primary sources using Questionnaires. This was done by drafting the questionnaires and supplying them to the respondents. The Questionnaires were supplied to the sample size that had knowledge about how COVID 19 had affected fuel prices and sales performance of fuel stations in Uganda.

3.8.1 Questionnaire

This researcher used self-administered questionnaires. A self-administered questionnaire is a type of research instrument that is completed by the respondent on their own, without the presence of a researcher or interviewer. (Jenkins & Dillman., 1995) The questionnaire had two sections A and B. The questions in section A were background characteristic while the questions in Section B were the main variables. The self-administered questionnaires were closed ended questions and these were chosen due to them being easy to understand hence making them Time-efficient, they increased respondent privacy and anonymity and due them allowing comparisons and quantification, they had the ability to reach a wider audience while avoiding irrelevant responses. (Lietz, 2010)

3.9 Data analysis

3.9.1 Quantitative data analysis

This involved collecting the data attained from the questionnaires in order to structure it into meaningful information for proper interpretation. The data was sorted and entered in Microsoft excel to derive tables for the social demographics and mathematical calculations like the means, medians, were used for computing the data collected on the research objectives.

3.10 Data validity

Validity refers to the extent to which a research instrument (such as a questionnaire, survey, or test) measures what it is supposed to measure. In other words, it assesses whether the instrument accurately reflects the concept or trait being studied (Steven, 2003). The validity of the research instrument was 48 determined by pretesting. Author (Maria Halkidi, 2002) asserts that pretesting ensures detection of any ambiguous or confusing questions or terms and ensures clarity and accuracy of results.

This researcher established content validity of the instruments by making sure that the independent and dependent variables are in accordance with the content scope of the study. The opinion of the supervisors was sought regarding the relevance, wording and clarity of the items in the instruments and the was validation of the questionnaire items.

3.11 Data reliability

According to (Nachman, 2015), Data reliability refers to the consistency and dependability of data collected in research. It indicates the extent to which the data accurately reflects the phenomenon being studied and is free from errors. Author (Roland & Cooil, 1994), states a way to measure data reliability is to administer the same instrument to the same participants at different times to check for consistency. Whereas this researcher consulted with the supervisor for data reliability and to add on the questionnaires were designed and pretested with in the sample population.

3.12 Ethical considerations

There was informed consent from respondents. Since providing a clear explanation by explaining the research purpose, methods, and potential risks/benefits raised respect from the respondents.

Confidentiality and anonymity were an essential ethical consideration in this research since ensuring that respondents' personal information and responses are protected from unauthorized access, use, or disclosure created honest and candid responses. This also built trust between the researcher and the respondents.

There was effort to Data privacy and security, ensuring that respondents' personal information and data are protected from unauthorized access, use, or disclosure. By prioritizing data privacy and security, this researcher, built trust with respondents, ensure ethical research practices, and maintain the integrity of their research.

3.13 Limitations of study

Limited access to historical data on fuel prices and sales performance. With insufficient or non-existent data on the research topic and with it not publicly available or is difficult to obtain and is only available to certain individuals or organizations. This researcher found data availability a bit difficult but with collaboration with other researchers and using of secondary data, this problem was easily addressed.

Respondents were unwilling to create time for the questionnaires supplied through the data collecting process as they claimed it was taking a lot of their time, this created a low response rate and petrol station owners or managers were also unwilling in some cases. This was solved with creation of online questionnaires that they could fill in at their convenience and following up with their schedules.

Petrol stations selected for the study may not be representative of all stations in Uganda whereby this created a sampling bias. Sampling bias is a limitation of study in research that occurs when the sample selected for the study is not representative of the population being studied, this can lead to inaccurate conclusions. This was addressed when this researcher selected random participants from the population to give their views for the effects of COVID 19 on fuel prices and the sales performance of fuel stations.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the findings of the study based on the data collected from 80 respondents regarding the effects of COVID-19 in Uganda. The findings are organized into demographic characteristics of the respondents and an analysis of the effects of COVID-19 on various sectors in Uganda, especially its impact on fuel prices and the economy. The data is presented in tables with frequencies, percentages, and cumulative frequencies to provide a clear understanding of the responses.

4.2 Demographic Characteristics of Respondents

The demographic characteristics of respondents provide critical insight into the diverse nature of the sample population and offer context for interpreting the results of the study on the effects of COVID-19 in Uganda. The key demographic variables assessed include gender, age, occupation, and education level. Each of these factors helps to explain the perspectives, experiences, and responses provided by the participants.

The demographic information collected from the respondents includes gender, age, occupation, and education level. These characteristics help to provide context for understanding the perspectives shared in the subsequent findings.

Table 1: Demographic characteristics

Demographic Variable	Frequency (n=80)	Percentage (%)	Cumulative Frequency (%)
Gender			
Male	45	56.3	56.3
Female	35	43.7	100
Age			
18-25	20	25	25
26-35	30	37.5	62.5
36-45	15	18.75	81.25

46 and above	15	18.75	100
Occupation			
Employed	50	62.5	62.5
Self-employed	20	25	87.5
Unemployed	10	12.5	100
Education Level			
Primary	10	12.5	12.5
Secondary	25	31.25	43.75
Tertiary	45	56.25	100

Primary Data table 1-Demographic Characteristics of Respondents

Table 1 shows the **gender** distribution of respondents. The sample was fairly balanced, with 45 males (56.3%) and 35 females (43.7%). This almost equal representation of both genders ensures that the study reflects diverse perspectives. The slight predominance of male respondents might be reflective of the labor market in Uganda, particularly in sectors like transportation, where men are more likely to be employed. Since the study examines the impact of COVID-19 on petrol stations and fuel prices, it is likely that more men were involved due to the traditionally male-dominated nature of these industries, including employment in petrol stations, driving, and logistics roles.

However, the significant participation of female respondents highlights their involvement in sectors indirectly affected by fuel prices, such as agriculture, small businesses, and household management. Women are likely to experience the ripple effects of increased transportation costs and inflation in food prices, which affects domestic responsibilities like market purchases and mobility.

The **age distribution** in Table 1, reveals a predominantly young and middle-aged respondent pool. The largest group falls within the 26-35 age range, representing 30 respondents (37.5%). This is followed by the 18-25 group with 20 respondents (25%), and equal numbers (15 respondents, 18.75% each) for the 36-45 and 46-and-above categories. The high representation of respondents aged between 18 and 35 reflects the age demographic most actively involved in Uganda’s workforce, particularly in sectors like retail, services, and informal work, all of which were significantly impacted by the pandemic. Younger individuals are also more likely to be engaged in jobs that were vulnerable to disruptions caused by lockdowns and restrictions. Their inclusion

in this study is crucial as they are often directly affected by shifts in fuel prices due to their mobility needs and employment in sectors heavily reliant on transportation.

The inclusion of older respondents (above 36 years) provides a broader perspective on how COVID-19 impacted those in more stable employment or business ownership. This group is likely to offer insights into how long-term professionals, entrepreneurs, or senior managers perceived the pandemic's economic effects, particularly with regard to sustaining businesses like petrol stations during a downturn in fuel demand.

The **occupation** of respondents was categorized into three main groups: employed, self-employed, and unemployed in Table 1. A significant majority, 50 respondents (62.5%), reported being employed, while 20 respondents (25%) were self-employed, and 10 respondents (12.5%) were unemployed. This distribution indicates that the study captured a wide range of economic experiences. Those employed were likely working in sectors like transportation, retail, and services, which were directly affected by COVID-19 restrictions. The self-employed category, which includes small business owners and informal traders, provided insights into how the pandemic impacted small enterprises, especially as rising fuel prices increased operational costs. The unemployed group's perspective is essential in understanding the socio-economic strain brought on by the pandemic, particularly in terms of lost livelihoods and rising costs of essential goods like fuel.

The **education level** of respondents was also varied in Table 1, with the majority, 45 respondents (56.25%), having tertiary-level education. Twenty-five respondents (31.25%) had completed secondary school, and 10 respondents (12.5%) reported only primary education. The high proportion of tertiary-educated respondents reflects a more informed and potentially critical analysis of the pandemic's effects on Uganda's economy. Tertiary-educated individuals are often involved in decision-making roles or managerial positions, giving them a unique perspective on how rising fuel prices and economic disruptions affected organizational performance and strategic decisions. Secondary and primary-educated respondents, on the other hand, are more likely to reflect the experiences of blue-collar workers or those in informal sectors who felt the immediate economic impacts of COVID-19 in a more direct manner.

4.3 Findings on Research Objectives

4.3.1 Findings on the Effects of COVID-19 on Uganda

The study explored various effects of COVID-19, particularly on fuel prices, transportation, food prices, and the overall economy in Uganda. Respondents highlighted challenges such as increased transportation costs, a rise in fuel prices, and decreased sales at petrol stations. Below is a summary of the key findings, with data displayed in frequency and percentage form.

Here is a summary table of the findings based on 80 respondents, formatted with the requested columns (Strongly Agree, Agree, Not Sure, Disagree, Strongly Disagree):

Table 2: Effects of COVID-19 on Uganda

Statement	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Total Frequency
Rise in fuel prices	50 (62.5%)	20 (25%)	05 (6.25%)	03 (3.75%)	02 (2.5%)	80
Increased transportation costs	55 (68.75%)	15 (18.75%)	5 (6.25%)	03 (3.75%)	2 (2.5%)	80
Decrease in sales at petrol stations	40 (50%)	25 (31.25%)	08 (10%)	05 (6.25%)	02 (2.5%)	80
Fuel prices increased significantly	55 (68.75%)	15 (18.75%)	05 (6.25%)	03 (3.75%)	02 (2.5%)	80

Primary Data table 2-Effects of COVID-19 on Uganda

The findings on the effects of COVID-19 in Uganda highlight significant socio-economic disruptions, particularly in the areas of fuel prices, transportation costs, and sales at petrol stations. The pandemic triggered a series of economic challenges, primarily due to the restrictions imposed to curb the virus and global disruptions that followed.

One of the most pronounced effects was the sharp increase in fuel prices. The majority of respondents (62.5% strongly agree and 25% agree) noted a significant rise in fuel prices during the pandemic. This can be attributed to disruptions in the global oil supply chain, reduced imports, and restricted movement of goods. As Uganda relies heavily on fuel imports, the pandemic's

impact on international trade led to price fluctuations, which were felt acutely by consumers. Only a small percentage (6.25%) were neutral or disagreed with the price hikes. This price surge translated into higher costs for transportation, goods, and services, creating financial strain across the economy. This sharp rise in fuel prices can be attributed to several factors, including disruptions in global supply chains, reduced imports due to border closures, and the fluctuating price of crude oil. As Uganda imports the majority of its fuel, the restrictions on international trade and transportation imposed during the pandemic had an immediate impact on fuel availability and prices. The respondents' consensus on this issue highlights the burden placed on consumers, as higher fuel prices translated into increased costs for transportation, goods, and services across the economy.

Additionally, 68.75% of respondents strongly agreed that transportation costs increased due to the pandemic, with 18.75% agreeing. Higher fuel prices, coupled with government-imposed restrictions such as lockdowns, curfews, and limits on public transport capacity, contributed to rising costs. Transport operators, facing reduced passenger numbers due to social distancing measures, increased fares to remain profitable. This disproportionately affected individuals relying on public transport, raising the cost of living and reducing mobility. The rise in transportation costs was a direct consequence of higher fuel prices. Additionally, government-imposed restrictions, including lockdowns, curfews, and limits on public transport capacity, further contributed to the problem. Public transport operators, facing reduced passenger numbers due to social distancing measures, increased fares to maintain profitability. This disproportionately affected individuals who rely on public transport, especially in urban areas, leading to higher living costs and reduced mobility for many citizens.

Another key impact was the decrease in sales at petrol stations. Half of the respondents (50%) strongly agreed that sales dropped, while 31.25% agreed. This decline can be linked to reduced movement and economic activity caused by lockdowns and other restrictions. With fewer vehicles on the road, demand for fuel significantly decreased, further affecting petrol station businesses. The economic uncertainty also led consumers to cut back on non-essential travel, exacerbating the drop in fuel sales. The findings on Decrease in Sales at Petrol Stations, show that the pandemic also had a profound impact on the sales performance of petrol stations, a sector directly tied to transportation and fuel consumption. A total of 40 respondents (50%) strongly agreed that sales at

petrol stations decreased, while 25 (31.25%) agreed. A smaller percentage, 8 respondents (10%), were neutral, and a few (7.75%) disagreed. The decline in sales at petrol stations can be attributed to reduced movement and economic activity during the pandemic. With lockdowns and movement restrictions in place, fewer vehicles were on the roads, leading to a significant drop in fuel demand. Additionally, the economic uncertainty caused by the pandemic led many consumers to cut back on discretionary travel, further reducing fuel consumption.

This decline in sales not only affected petrol station owners and employees but also had broader economic implications. Petrol stations serve as key hubs in the economy, contributing to employment, tax revenue, and the provision of essential services. The downturn in sales, therefore, had a ripple effect, impacting suppliers, employees, and the government's revenue collection from fuel taxes. The findings illustrate that COVID-19 had a far-reaching impact on Uganda's economy, with rising fuel prices, increased transportation costs, and decreased sales at petrol stations being the most significant effects identified by respondents. These challenges were interconnected, as higher fuel prices drove up transportation costs, which in turn reduced demand for fuel and hurt the sales performance of petrol stations. This confluence of factors contributed to the economic strain experienced by many Ugandans during the pandemic.

Overall, the findings illustrate the far-reaching economic consequences of COVID-19 in Uganda. The interconnectedness of fuel price increases, higher transportation costs, and reduced sales at petrol stations demonstrates the complex challenges brought on by the pandemic. These impacts created a ripple effect, burdening consumers and businesses alike, and highlighting the vulnerability of Uganda's economy to global disruptions. These results show that the majority of respondents agree that COVID-19 significantly affected fuel prices and transportation costs, which subsequently impacted sales at petrol stations in Uganda. The findings emphasize the economic repercussions of the pandemic, with respondents noting price hikes and reduced consumer spending as major challenges. The findings on the effects of COVID-19 on Uganda reveal the significant socio-economic impacts the pandemic had on the country, particularly in the areas of fuel prices, transportation costs, and the sales performance of petrol stations. Based on the responses from 80 participants, the data underscores how COVID-19 disrupted various aspects of daily life and the economy, with widespread consequences for both individuals and businesses.

4.3.2 The Effect of COVID-19 on Fuel Prices

This section presents the findings on how COVID-19 affected fuel prices in Uganda based on the responses of 80 participants. The data collected shows that COVID-19 significantly influenced fuel prices due to disruptions in the global oil supply chain, import restrictions, and the general slowdown in economic activities. The respondents provided insight into the extent of price changes and their perceptions of how COVID-19 directly impacted fuel costs.

Table 3: Effect of COVID-19 on Fuel Prices

Statement	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
Fuel prices increased significantly	55 (68.75%)	15 (18.75%)	5 (6.25%)	3 (3.75%)	2 (2.5%)
Fuel prices remained stable during COVID-19	5 (6.25%)	8 (10%)	7 (8.75%)	40 (50%)	20 (25%)
COVID-19 restrictions impacted fuel imports	50 (62.5%)	20 (25%)	5 (6.25%)	3 (3.75%)	2 (2.5%)
Fuel shortages were frequent during the pandemic	45 (56.25%)	20 (25%)	8 (10%)	5 (6.25%)	2 (2.5%)
Fuel prices varied across regions	40 (50%)	25 (31.25%)	8 (10%)	5 (6.25%)	2 (2.5%)
Increased fuel prices led to inflation	50 (62.5%)	15 (18.75%)	8 (10%)	5 (6.25%)	2 (2.5%)

Primary Data table 3- COVID-19 on Fuel Prices

The results on the effects of COVID-19 on fuel prices in Uganda reveal the significant impact the pandemic had on this critical economic factor. Based on the responses of 80 participants, the findings highlight how

global supply chain disruptions, import restrictions, and decreased economic activity contributed to noticeable changes in fuel prices.

A substantial majority (68.75% strongly agreed and 18.75% agreed) indicated that fuel prices increased significantly during the pandemic. This outcome is consistent with global trends, where lockdowns, travel restrictions, and reductions in workforce capacity in oil production and refining led to fluctuations in the availability and cost of fuel. As Uganda imports the majority of its fuel, these disruptions immediately translated into higher local prices, affecting both businesses and individuals. Only a small percentage (6.25%) were neutral, while even fewer disagreed, underscoring that the rise in fuel prices was broadly felt across the country.

On the other hand, when asked whether fuel prices remained stable during COVID-19, the majority of respondents disagreed. Half of the respondents (50%) disagreed, and another 25% strongly disagreed with the statement. This indicates that while some respondents may have observed temporary periods of stability, the overall experience was one of price volatility. With only 6.25% strongly agreeing that fuel prices remained stable, it is clear that most Ugandans felt the brunt of fluctuating prices, reflecting the global instability in oil markets during the pandemic. Fuel prices may have been stable at certain points, but the general perception was of unpredictability.

Another key finding is that COVID-19 restrictions significantly impacted fuel imports. The majority (62.5% strongly agreed and 25% agreed) acknowledged that restrictions on trade, particularly border closures, had a direct effect on Uganda's ability to import fuel. As Uganda relies on fuel imports from neighboring countries like Kenya, disruptions in international logistics severely affected fuel availability and prices. This finding highlights the vulnerability of Uganda's fuel market to external shocks, especially during crises that disrupt international trade.

A significant portion of respondents (56.25% strongly agreed and 25% agreed) indicated that fuel shortages were frequent during the pandemic. This suggests that disruptions in global supply chains and trade restrictions, especially border closures, led to fuel supply bottlenecks in Uganda. These shortages are likely a result of the pandemic's impact on both the availability of fuel imports and the logistics required to distribute fuel within the country. Only a small percentage (10%) were not sure about the situation, and an even smaller number (6.25%) disagreed. The overwhelming agreement points to widespread disruptions in fuel supply across the country during the pandemic.

Half of the respondents (50% strongly agreed and 31.25% agreed) observed that fuel prices varied across different regions of Uganda during the pandemic. This could be attributed to logistical challenges in transporting fuel to remote or rural areas, where fuel supply may have been more limited due to travel

restrictions and higher transportation costs. The regional disparities in pricing reflect how access to fuel was unevenly distributed across the country. A small portion (10%) of respondents were unsure about this, while only 6.25% disagreed. This finding highlights the unequal burden placed on certain regions, where consumers likely faced higher fuel prices compared to more central areas.

A significant majority (62.5% strongly agreed and 18.75% agreed) reported that the increase in fuel prices directly contributed to inflation. This indicates that the rise in fuel costs had a ripple effect on the broader economy, driving up the prices of goods and services. In Uganda, where transportation costs are a critical component of the supply chain, any increase in fuel prices can lead to higher costs for food, commodities, and other essential goods. The relatively small group of respondents (10%) who were not sure or disagreed (6.25%) suggests that most people observed clear signs of inflation due to rising fuel costs, exacerbating the economic strain on households during the pandemic.

Overall, the results illustrate that COVID-19 had a profound impact on fuel prices in Uganda, with the majority of respondents recognizing significant price increases. These effects were largely attributed to global disruptions in the oil supply chain, import restrictions, and pandemic-induced economic slowdowns. The findings emphasize how interconnected Uganda’s fuel market is with global economic forces and the substantial role international trade plays in local fuel pricing.

4.3.3. The relationship between fuel prices and sales performance.

Table 4: The relationship between fuel prices and sales performance.

Statement	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Total Frequency
Increase in fuel prices led to a decrease in fuel sales	50 (62.5%)	20 (25%)	05 (6.25%)	03 (3.75%)	02](2.5%)	80
Higher fuel prices reduced consumer demand for fuel	45 (56.25%)	25 (31.25%)	05 (6.25%)	03 (3.75%)	02](2.5%)	80
Petrol station sales dropped significantly during COVID-19	40 (50%)	25 (31.25%)	08 (10%)	05 (6.25%)	02 (2.5%)	80
Reduced movement led to lower sales at petrol stations	55 (68.75%)	15 (18.75%)	05 (6.25%)	3 (3.75%)	02 (2.5%)	80
Fuel price increases had a negative	50 (62.5%)	20 (25%)	05 (6.25%)	03 (3.75%)	02 (2.5%)	80

impact on sales revenue						
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Primary Data table 4-relationship between fuel prices and sales performance

The relationship between fuel prices and sales performance during the COVID-19 pandemic in Uganda reveals significant economic strain, particularly in the petroleum sector. Based on responses from 80 participants, the data underscores the direct impact that rising fuel prices had on sales performance at petrol stations, consumer demand, and overall economic activity.

The results in table above show that a significant portion of respondents (62.5% strongly agreed and 25% agreed) believed that the increase in fuel prices directly caused a decline in fuel sales. This finding highlights a classic economic principle: when prices increase, demand typically decreases, especially for goods with price-sensitive consumers like fuel. During the pandemic, global disruptions in the oil supply chain and restrictions on fuel imports raised prices significantly in Uganda. These price hikes made it more expensive for consumers to fill up their vehicles, leading to a noticeable reduction in fuel sales. Only a small percentage (6.25%) were neutral, and an even smaller group (3.75% disagree and 2.5% strongly disagree) did not observe this relationship.

Similarly, 56.25% of respondents strongly agreed, and 31.25% agreed that higher fuel prices reduced consumer demand for fuel. This aligns with the observation that many Ugandans faced financial strain during the pandemic, with rising costs for essential goods and services. As fuel prices rose, consumers became more cautious about their spending, cutting back on non-essential travel and fuel purchases. The reduced demand was not only due to increased fuel prices but also the broader economic uncertainty brought on by COVID-19. Some respondents (6.25%) were unsure, while a small percentage (6.25%) disagreed with this statement, indicating that, for a minority, demand may not have been impacted as severely.

Half of the respondents (50% strongly agreed and 31.25% agreed) noted a significant drop in sales at petrol stations during the pandemic. This finding underscores how the interplay between rising fuel prices and reduced movement led to decreased demand for fuel. Petrol stations, which rely heavily on consistent fuel purchases for their revenue, were particularly vulnerable to this downturn. As movement restrictions were implemented to control the spread of COVID-19, there were fewer vehicles on the road, reducing fuel consumption across the board. Only a small

percentage (10%) of respondents were unsure about this decline, while 6.25% disagreed, perhaps indicating that a few regions or businesses did not experience as severe a drop in sales.

A large majority (68.75% strongly agreed and 18.75% agreed) reported that reduced movement during the pandemic led to lower sales at petrol stations. Lockdowns, curfews, and travel restrictions were implemented to limit the spread of the virus, significantly reducing travel across Uganda. With fewer people commuting, engaging in business travel, or taking leisure trips, petrol stations experienced a sharp drop in customer traffic. The significant decrease in fuel demand further compounded the economic strain on petrol stations, leading to lower revenues and, in some cases, the temporary closure of some stations. This reduction in movement also exacerbated the overall economic slowdown, as transportation is a key driver of economic activity.

A majority of respondents (62.5% strongly agreed and 25% agreed) affirmed that fuel price increases negatively impacted sales revenue at petrol stations. Higher prices not only deterred consumers from purchasing fuel but also hurt sales of other goods and services typically offered at petrol stations, such as snacks, lubricants, and convenience items. This decrease in fuel sales, combined with the broader economic slowdown, put significant financial pressure on petrol station owners, employees, and the broader supply chain. The small percentage of respondents (6.25%) who were unsure or disagreed may reflect specific regions or stations that were less affected, perhaps due to location or unique market dynamics. Generally, the results demonstrate a clear and direct relationship between rising fuel prices and declining sales performance at petrol stations in Uganda during the pandemic. The combination of higher prices, reduced movement, and decreased consumer demand created a challenging environment for the fuel sector. These findings highlight the vulnerability of Uganda's fuel market to both global economic shocks and domestic policy responses, underscoring the need for resilient strategies in the face of future crises.

CHAPTER FIVE

DISCUSSIONS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This chapter consists of discussions of the research findings, recommendations and conclusion.

5.2 Discussion

The research instrument used for the study was self-administered questionnaires with close ended questions. The findings generated from the questionnaire are discussed as below;

5.2.1 To examine the effects of COVID19 on Uganda

Findings show that their various effects of COVID-19, particularly on fuel prices, transportation, food prices, and the overall economy in Uganda. Respondents highlighted challenges such as increased transportation costs, a rise in fuel prices, and decreased sales at petrol stations. Respondents strongly agreed that transportation costs increased due to the pandemic, higher fuel prices, coupled with government-imposed restrictions such as lockdowns, curfews, and limits on public transport capacity, contributed to rising costs. Furthermore, findings on the effects of COVID-19 in Uganda highlight significant socio-economic disruptions, particularly in the areas of fuel prices, transportation costs, and sales at petrol stations. The pandemic triggered a series of economic challenges, primarily due to the restrictions imposed to curb the virus and global disruptions that followed.

5.2.2 To examine the effect of COVID-19 on fuel prices

The findings show that COVID-19 has had a significant impact on fuel prices, critical to the economy of Uganda. These findings are supported by a study of, Geoffrey OGWANG, who explains the Effect of Oil Price Shocks on Ugandan Economy, the study agrees and highlights how global supply chain disruptions, import restrictions, and decreased economic activity contributed to noticeable changes in fuel prices. To add on COVID-19 restrictions significantly impacted fuel imports. The respondents acknowledged that restrictions on trade, particularly border closures, had

a direct effect on Uganda's ability to import fuel. As Uganda relies on fuel imports from neighboring countries like Kenya, disruptions in international logistics severely affected fuel availability and prices. This finding highlights the vulnerability of Uganda's fuel market to external shocks, especially during crises that disrupt international trade. Respondents strongly agree that COVID-19 had a profound impact on fuel prices in Uganda, with the majority of them recognizing significant price increases. These effects were largely attributed to global disruptions in the oil supply chain, import restrictions, and pandemic-induced economic slowdowns. The findings emphasize how interconnected Uganda's fuel market is with global economic forces and the substantial role international trade plays in local fuel pricing.

5.2.3 To examine the relationship between fuel prices and sales performance.

Findings show the relationship between fuel prices and sales performance during the COVID-19 pandemic in Uganda had a significant economic strain, particularly in the petroleum sector. Based on responses from 80 participants, the data underscores the direct impact that rising fuel prices had on sales performance at petrol stations, consumer demand, and overall economic activity. These findings were supported by researcher (McManus, 2007) who typically believes that there's an inverse relationship between fuel prices and sales performance. When fuel prices rise, sales performance tends to decline, and vice versa which can be caused by price sensitivity of consumers are often price-sensitive when it comes to fuel, so even small changes in fuel prices can impact sales performance. A majority of respondents affirmed that fuel price increases negatively impacted sales revenue at petrol stations. Higher prices not only deterred consumers from purchasing fuel but also hurt sales of other goods and services typically offered at petrol stations, such as snacks, lubricants, and convenience items. This decrease in fuel sales, combined with the broader economic slowdown, put significant financial pressure on petrol station owners, employees, and the broader supply chain.

5.3 Conclusion

In conclusion, this study will provide valuable insights into the impact of COVID-19 on the fuel industry in Uganda, specifically on fuel prices and petrol stations' sales performance. The findings will help petrol stations and policymakers develop strategies to mitigate the impact of future pandemics on the fuel industry.

5.4 Recommendations

Petrol Stations should diversify their services by offering essential goods and services like food, pharmaceuticals, and e-commerce delivery points to reduce dependence on fuel sales. This would reduce dependence on fuel sales because by offering additional services, petrol stations can reduce their reliance on fuel sales, which can be volatile due to factors like pandemics, economic downturns, or shifts towards electric vehicles. It will also cause increased foot traffic since diversified services attract a broader customer base, leading to increased foot traffic and potential sales boosts in other areas, like convenience stores or food services.

Investment in digital infrastructure where by petrol stations should implement online payment systems, mobile apps, and digital loyalty programs to enhance customer experience and reduce physical contact. This will lead to enhanced customer experience by providing a convenient, fast, and seamless experience for customers, improving satisfaction and loyalty. Reduced physical contact is an added advantage as online payment systems, mobile apps, and digital loyalty programs minimize the need for physical interaction, reducing the risk of transmission of illnesses.

Enhance safety measures by implementing robust health and safety protocols, such as sanitation stations, PPE, and social distancing measures. This will protect customers and staff from the risk of transmission of illnesses, ensuring a safe environment for everyone. Reduce liability by implementing robust health and safety protocols, petrol stations can minimize the risk of legal issues arising from negligence while maintaining operations since safety measures help prevent closures or disruptions due to health concerns, ensuring business continuity.

Policy makers/Government should Develop fuel price stabilization mechanisms by establish funds or subsidies to mitigate price volatility during pandemics. This will reduce price volatility through mitigating the impact of pandemics on fuel prices, ensuring stability and predictability. fuel price stabilization mechanisms will also protect consumers by shielding them from sudden price spikes, ensuring affordable fuel prices while supporting economic activity and maintaining economic stability by reducing the impact of fuel price shocks on businesses and industries.

Policy makers/Government should invest in digital infrastructure support the development of digital payment systems and online platforms for fuel sales. This will improve efficiency through digital payment systems and online platforms streamline transactions, reducing wait times and increasing convenience.

5.5 Suggestions for Further Research

Future researchers can apply this research to compare the impact of COVID-19 on fuel prices and petrol station sales performance in Uganda with other countries in the region. They can also assess the resilience of the fuel supply chain in Uganda during the pandemic.

REFERENCES

- Aoyama, H. (1954). *A study of stratified random sampling*. Ann. Inst. Stat. Math.
- Daniël, L. (2022). Sample Size Justification. *University of california press*.
- DEOGRATIUS, O. (2020). *AN EXAMINATION OF THE IMPACT OF COVID-19 ON THE LIRA*.
Kampala: INSTITUTE OF PETROLEUM STUDIES KAMPALA .
- DOROTHY, N. (2024, April 19). *Burundi, Kenya only countries with more expensive fuel than Uganda in EAC*. Retrieved from <https://www.monitor.co.ug/uganda/business/commodities/burundi-kenya-only-countries-with-more-expensive-fuel-than-uganda-in-eac--4596006>.
- DOROTHY, N. (April 19, 2024, April 19, 2024 19). *Burundi, Kenya only countries with more expensive fuel than Uganda in EAC*. Retrieved from <https://www.monitor.co.ug/uganda/business/commodities/burundi-kenya-only-countries-with-more-expensive-fuel-than-uganda-in-eac--4596006>.
- Goodwin, P. (2002). *Are Fuel Prices Important?* Wales: Routledge.
- health, E. i. (2021). COVID-19 RESPONSE AND MAINTENANCE OF ESSENTIAL HEALTH SERVICES IN UGANDA. *Exemplars in Global health*.
- Hemanth. (2020, October 30). *Top ten oil and gas companies in 2020*. Retrieved from <https://www.offshore-technology.com/features/top-ten-oil-and-gas-companies-in-2020/?cf-view>.
- Henry, L. K. (2023, September 10). <https://www.linkedin.com/pulse/petroleum-product-pump-prices-uganda-why-asymmetry-luwemba-kasule>. Retrieved from Petroleum product pump prices in Uganda, why the Asymmetry?
- Huremović, D. (2019). *Brief History of Pandemics (Pandemics Throughout History)*. Switszerland: Springer, Cham.
- Iliyasu, R. a. (2021). *Comparison of quota sampling and stratified random sampling*.

- Ismail, M. L. (2024, July 09). *Gains, losses in Uganda's fuel import business*. Retrieved from <https://www.monitor.co.ug/uganda/business/prosper/gains-losses-in-uganda-s-fuel-import-business-4684510#story>.
- Jenkins, C. R., & Dillman., D. A. (1995). *Towards a theory of self-administered questionnaire design*. Bureau of the Census.
- Justus, H., Ulrich, H., & Manuel, S. (2017). Fuel Prices and Station Heterogeneity on Retail Gasoline Markets. *The Energy Journal*, 24.
- KCCA. (n.d.). *Kampala Capital City Authority*. Retrieved from <https://www.kcca.go.ug/about-the-authority>.
- Lietz, P. (2010). Research into questionnaire design: A summary of the literature. *Academia*.
- Maria Halkidi, Y. B. (2002). Cluster validity methods: part I. *Digital Library*, 40 - 45.
- Martin, L. O. (2022, November 01). *Inflation pushes prices of commodities higher*. Retrieved from <https://www.monitor.co.ug/uganda/news/national/inflation-pushes-prices-of-commodities-higher-4004532>.
- MARTIN, L. O. (2024, May 02). *Commodity prices on the rise, Ubos data shows*. Retrieved from <https://www.monitor.co.ug/uganda/business/commodities/commodity-prices-on-the-rise-ubos-data-shows--4610282>.
- Mauro, R. (2024). Economic growth before the Industrial Revolution: Rural production and guilds in the European Little Divergence. *Science Direct*.
- McManus, W. (2007). *The link between gasoline prices and vehicle sales: economic theory trumps*. University of Michigan Transportation Research Institute.
- Medard, K., Enock, N. W., & Blessing, A. (2020). *The Ugandan Economy Today (Quarter 4 April-June 2020)*. Kampala: Economic Policy Research Centre.
- Musana, I. A. (2021). *Uganda consumer price index*. uganda: Uganda Bureau Of statistics.
- Nachman, A. (2015). Assessing Data Reliability in an Information System. *Journal of Management Information Systems* .

- Nanima, R. D. (2022). *Constitutional and Human Rights Issues Arising from Covid-19: Uganda's Youth in Context*. Palgrave Macmillan Cham.
- Nima, N. (2021). Post-COVID-19 and globalization of oil and natural gas trade: Challenges, opportunities, lessons, regulations, and strategies. *International Journal Of energy Research*.
- Programme, W. F. (2022). Estimated Likely Impact of Increased Fertilizer Prices on Cereal Production in Eastern Africa During the 2022 Cropping Year. *resilience links*.
- Roland D, N. (2021, January 03). *Lubricants business requires patience passion - Kwesiga*. Retrieved from <https://www.monitor.co.ug/uganda/business/finance/lubricants-business-requires-patience-passion-kwesiga-3245546>.
- Roland, T. R., & Cooil, B. (1994). Reliability Measures for Qualitative Data: Theory and Implications. *Journal of Marketing Research*.
- Ronald, O., & Felix, B. (2020). Uganda's first 100 COVID-19 cases: Trends and lessons. *National library of Medicine*.
- Sergi, B., Jordi, D., & Joan, R. R. (2021). The redistributive effects of pandemics: Evidence on the Spanish flu. *Science Direct*.
- Shabir, A. L., & Ahmad, A. (2020). COVID-19 pandemic – an African perspective. *Taylor & Francis Online*, 1300-1308.
- Smartson, A. (2022, February 28). *Fuel price increases in Uganda: A case for regulation*. Retrieved from <https://eprcug.org/eprc-highlights/fuel-price-increases-in-uganda-a-case-for-regulation/>.
- Steven, M. D. (2003). Validity: on the meaningful interpretation of assessment data. *The handbook of social work research methods*, 273-292.
- Team, M. (2021, June 19). *Bars, nightclubs that never close during lockdown*. Retrieved from <https://www.monitor.co.ug/uganda/special-reports/bars-nightclubs-that-never-close-during-lockdown-3443284>.

Tomas, H. (2012). Demand for gasoline is more price-inelastic than commonly thought. *Science Direct*, 201-207.

Tonny, O. (2022). *What does the sustained increase in global fuel prices mean for Uganda?* kampala: EPRC.

Xinhua. (2020). Uganda announces 14-day suspension of public transport to curb COVID-19 spread. *Xinhuanet*.

APPENDICES

APPENDIX I: QUESTIONNAIRE

Dear respondents,

I am **NANGENDO TRACY JEAN, REG No.: S21B44/008** a student of Uganda Christian University pursuing a Bachelor of Science of Oil and Gas Management. I am carrying out research on “**AN ASSESSMENT OF THE IMPACT OF COVID 19 ON FUEL PRICES AND THE SALES PERFORMANCE OF PETROL STATIONS IN UGANDA**”. I humbly request you to spare some few minutes of your time and answer these questions below. The study is strictly for academic purposes and will be treated with utmost confidentiality. Your cooperation is highly appreciated.

Section A: Background information

Note: For each of the questions, tick against your response or write your response in the blank space provided.

1. Gender

a) Female

b) Male

2. Age range

18-25

26-35

36-45

46 and above

3. Occupation

Employed

Self-employed

Unemployed

4. Level of education

a) Secondary

b) Primary

c) Degree

Section B: The Effects of COVID-19 on Uganda

Note: Use the following scale in all the sections below:

Strongly disagree (1) Disagree (2) Not sure (3) Agree (4) strongly agree (5)

No.	Statement	1	2	3	4	5
1.	In your organisation has the rise in fuel prices happened due to disruptions in the global oil supply chain, reduced imports, and restricted movement of goods.					
2.	In your organisation has the increased transportation costs happened due to higher fuel prices, coupled with government-imposed restrictions such as lockdowns, curfews, and limits on public transport capacity					
3.	In your organisation has the decrease in sales at petrol stations occurred due to the reduced movement and economic activity caused by lockdowns and other restrictions.					
4.	In your organisation do you believe that the fuel prices increased significantly due to the pandemic triggering a series of economic challenges					

Section C: The Effect of COVID-19 on Fuel Prices

No.	Statement	1	2	3	4	5
1.	Do you believe fuel prices increased significantly mainly due to the pandemic.					
2.	Or do you believe that fuel prices have remained stable during COVID-19					
3.	According to your knowledge, do you believe that COVID-19 restrictions impacted fuel imports					
4.	According to your knowledge, do you believe fuel shortages were frequent during the pandemic					
5.	As far as you know, do you believe that fuel prices varied across regions					
6.	Do you believe that increased fuel prices have led to inflation, for as far as you know					

Section D: The relationship between fuel prices and sales performance.

District Local Government

No.	Statement	1	2	3	4	5
1.	Communities believe that the increase in fuel prices led to a decrease in fuel sales					
2.	Communities complained that higher fuel prices reduced consumer demand for fuel					
3.	Petrol station personnel complained of a sales drop significantly during COVID-19					
4.	As far as your knowledge, reduced movement led to lower sales at petrol stations					
5.	Communities believe, Fuel price increase had a negative impact on sales revenue and the evidence is shown in deterred consumers from purchasing fuel but also hurt sales of other goods and services typically offered at petrol stations, such as snacks, lubricants, and convenience items					

Thank you for your cooperation!