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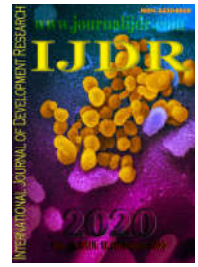
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RESEARCH ARTICLE

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INFLUENCE OF COVID-19 PANDEMIC ON PRICES OF OIL AND RAW MATERIALS IN ABAKALIKI, EBONYI STATE, NIGERIA

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ABSTRACT

The study investigated the influence of covid-19 on price of oil and raw materials in Abakaliki, Ebonyi State, Nigeria. This study employed ex-post facto research design with aim of finding how the influence of COVID-19 on the price of oil and raw materials. Thus, the target population was 36 which consisted of The target population of this study was Filling stations (12), business centers (15), bakery (4), pure water company (2) and palm oil producers operating (3) in Abakaliki Metropolis even though they are very little in number. Thus, the target population was 36. Managers of the mentioned businesses were the ones that supplied the necessary information for this study. The sample size was 36. Purposive sampling technique was used for the study because the researchers chose corporations that could supply the necessary information needed for the study. The instrument for data collection was a questionnaire. The data collected for this study was analyzed using mean, frequency and Pearson Product Moment Correlation Coefficient. The findings revealed that the mean prices at which fuel was bought between March/April, May/June and July/August, 2020, were ₦143.37, ₦148.75 and ₦ 157.50 respectively; diesel was bought at ₦ 199.33, ₦ 212.33 and ₦ 206.66 respectively. Filling stations sold fuel and diesel at an average price of ₦ 132.83, and ₦ 182.00 respectively. Prices of raw materials between March/April, May/June and July/August, 2020 were ₦ 7, 608.33, ₦ 7, 900. 00, and ₦ 10, 105.00 respectively for the different raw materials for pure water production. For bakery, it was ₦ 26,550.00, ₦28,333.33 and ₦33,416.66 respectively for the different raw materials. The prices at which palm fruit kernel was bought between March/April, May/June and July/August, 2020 were ₦ 183.33, ₦ 250.00 and ₦ 293.00 respectively. The results also revealed that COVID-19 influenced the price of palm oil and crude oil by-products such as petrol (fuel) and diesel; COVID-19 made the prices of raw materials to go up unlike before the emergence of the virus and there is a high positive low correlation between price of oil and raw materials. Based on this, recommendation was made that Nigeria as a country should stop too much dependence on importation of raw materials from foreign countries. The Nigerian government should make efforts to build refineries in the country in order for the crude oil to be refined here in Nigeria.

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INTRODUCTION

Nigeria as a country has been experiencing a tough time since March, 2020 due to the deadly virus that emanated from China and spread to other parts of the world. The emergence of coronavirus made Nigeria to place a ban on movements of people and also goods. Other countries also did the same because of the fast spread of the virus within a country and across continents. This situation made the corporate organizations to close down and productions of goods and services became affected.

The Organization of Petroleum Exporting Countries (OPEC) as a body has been faced with unfavorable conditions due to the coronavirus. The virus has made the daily produce of oil to decline. This situation has affected Africa's economy as a continent. Ghana, Nigeria, Zambia and Democratic Republic of Congo are significantly exposed to unfavorable industrial product exports like oil, iron ore and copper to China (McKenzie, 2020). The demand for oil has declined and this has affected the price of oil. Buyers of oil from Africa have cancelled their orders due to the emergence of coronavirus that

led to closure of borders, ban on travel and shut of production entities like in China and other countries (McKenzie, 2020). Akinkugbe-Filani (2020) noted that the demand for oil in China went down to 20% more. In order to compensate for the continuous fall in the price of oil, OPEC is trying to pump more barrels of oil. Though, there is uncertainty amongst OPEC members whether the oil market will recover from the shock quickly. Globally, the price of oil has declined due to the deadly virus in the world (Chris, 2020). This shock in price of oil is a very unfavorable hit experienced by OPEC because such has not been seen for the past two decades where a barrel is now around 20 US dollars for West Texas Intermediate [WTI] and 24 US dollars for Brent crude (Chris, 2020). Actually, this situation was also caused by the reduction in movements of humans and goods including closure companies, schools, among others which made the demand for oil to fall greatly.

The production of goods in large quantities has been shut down by the deadly virus (COVID-19). In China, production has been affected and supply chains have been disrupted because the ports have been closed down to control the spread of the virus (McKenzie, 2020). Most economic sectors have been hit unfavorably. Africa as a continent is not left out because the virus is also in Africa. The entrance of the virus into African has affected South Africa and Nigeria and these countries are trying their best to control and manage the challenges (McKenzie, 2020). With this, the economy of the African countries is going down because the demand for raw materials has declined across Africa for production of goods. The demand for industrial components has been hampered in China since most of her raw materials are purchased by Africa (McKenzie, 2020). Obi et al (2020) noted that the continuous increase with respect to dependence on Chinese imports by Nigeria makes her vulnerability to be worse because her raw materials used for production is made of 70% of the total imports from China to Nigeria as reported by the National Bureau of Statistics (NBS). The deadly virus has made nations of the world to place a ban on traveling and this act has significantly affected supply negatively because the manufacturing companies in Nigeria have seen the effect on the Nigeria economy. Maguire and Pullin (2020) noted that in China, the virus has killed a lot of people and other countries are even worse. This situation has taken the global market for raw materials backward and as a result there is a weak demand for raw materials supply chain. Companies that are into production have been affected by COVID-19 as a result of the closures of factories in China who happened to be the supply chain globally (McKenzie, 2020). This has made the supply of raw materials to be delayed, and to be low in availability to meet up demand from potential customers. The price of the raw materials is now higher than before and this has made orders to curtail as manufacturing companies cannot meet up with the high cost of raw materials for production.

The increase in the price of oil has made construction companies drive the cost of raw materials forward. The price of raw materials unavoidably was increased by suppliers to enable contractors cover their high costs of transportation. As the prices go up, the shipping cost follows in the same direction. The increment in the price of oil makes the contractors pay more cost to buy raw materials for production (Shaver, 2011). As a result of this, the production quantities needed to be curtailed which will make the price of the product to be increased, which at the same time leads to low

consumer demand. The increase in the price of oil affected the price of raw materials for production entities due to the fact that as oil price affects the cost of shipping, the raw materials bought for manufacturing declines (Bolaji & Bolaji, 2010). Thus, there could be a relationship between the price of oil and raw materials.

Statement of the Problem

The advent of COVID-19 in Nigeria has hit the economy very hard and businesses have been affected, and some factories have been affected in that some of them could not operate as before. The Nigerian border has been shut down and this has affected the exportation and importation of goods and services outside and inside of the country. In Nigeria, internal movements of people and goods were on ban from March till early June 2020. However, only very essential commodities were allowed to move about from one place to another in the country. In AbakalikiMetropolis, Ebonyi State, the movement of goods and services were on ban from March till June and the effect was low supply of goods at the market across the state which resulted in unhappiness of consumers. The situation in the state is that the price of oil and raw materials has been fluctuating and as a result, the researchers decided to carry out this study to find out from those into production and those trading oil, how the deadly virus has influenced the oil and raw materials.

Purpose of the Study

The main purpose of this study focused on the influence of covid-19 on price of oil and raw materials in Abakaliki Metropolis, Ebonyi State, Nigeria. Specifically, the study seeks to find out:

1. The prices at which fuel was bought by the different businesses operators in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020.
2. The prices at which diesel was bought by the different business operators in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020.
3. The prices at which fuel and diesel were sold by Filling Stations in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?
4. The prices at which raw materials were bought for Pure Water Production in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020.
5. The prices at which some raw materials were bought by Bakery Operators for Production in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020.
6. The prices at which palm fruit was bought by Palm Oil Producers in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020.
7. The influence of COVID-19 on price of oil in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020.

8. The influence of COVID-19 on price of raw materials in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020.
9. The relationship between price of oil and raw materials in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020.

Scope of the Study: The geographical scope of this study was Abakaliki Metropolis, Ebonyi State, Nigeria. The content scope of this study focused on the influence of covid-19 on price of oil and raw materials and their relationship. The study looked at the different prices business operators bought raw materials, fuel, and diesel, palm kernel respectively for running their business and for production.

Research Questions: The following research questions were formulated to guide this study:

1. What are the prices at which fuel was bought by the different businesses operators in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?
2. What are the prices at which diesel was bought by the different business operators in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?
3. What are the prices at which fuel and diesel were sold by Filling Stations in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?
4. What are the prices at which raw materials were bought for Pure Water Production in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?
5. What are the prices at which some raw materials were bought by Bakery Operators for Production in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?
6. What are the prices at which palm fruit was bought by Palm Oil Producers in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?
7. What is the influence of COVID-19 on the price of oil in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?
8. What is the influence of COVID-19 on the price of raw materials in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020?
9. What is the relationship between price of oil and raw materials in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020?

Review of Related Literatures: In a survey, Chris (2020) reported that oversupply of oil was accompanied with low price of oil and this was a decision by Saudi Arabia after a price war with Russia. The fall in price demotivated investment in new production. This situation has affected Nigeria as reported by Nevil (2020) that due to the fact that Nigeria is dependent much on oil, it has affected the economy negatively where the price of oil has fallen. Continuing, the

author added that the lockdown in the country made her citizens to discontinue spending and as a result, one person's spending becomes income of another. The revenue inflow of the country has fallen from 5.5 trillion naira in 2020 to 1.1 trillion naira. This condition has caused economic challenges (Nevil, 2020). The lockdown in countries made factories to discontinue operation and thus, the demand for oil has declined by 29 millions of barrels per day (Kubursi, 2020). In addition, the price at present is now lower than the cost of production, transportation and storage. The impact of the deadly virus has resulted in shutdowns of supermarkets, malls, factories and offices in China and this situation affected the price of palm oil which slumped (Maguire & Pullin, 2020). Palm oil as a product is mainly used in food catering industries in China and also in Nigeria. Though, China is regarded as the second largest importer of palm oil behind India. Braun and Jaffe (2020), and Barbosa, Bresciani, Graham, Nyquist and Yanosek (2020) noted that the global outbreak of coronavirus has caused oil prices to fall sharply because the demand for its by-product such as diesel, fuel and gasoline. Nian (2020) found in a survey that due to the deadly virus presence, the supply side has been affected negatively in the sense that raw materials and their components are low in supply. The supply of raw materials is not moving like before because of the ban on transportation. With this, domestic raw materials are being affected and there is a significant slowdown in the course of clearing imported raw materials from abroad. This condition caused the price of raw materials to increase. In a similar manner, Wright (2020) reported in a study that the price of the raw material specifically due to reduced sawmill residue availability, will rise during the period of COVID-19.

Continuing, the author found that most (68 percent of producers) expect those increased prices to be less than 10 percent. As a result, several producers are planning to reduce their use of sawmill residues in 2020, using more round wood and in-wood chips and other fiber instead for production. Most of the respondents in his study reported that the peak in the price of raw material will continue to be on the rise. Wright (2020) also reported that thirty-three (33) percent of European companies are negatively affected by COVID-19 in that the price of raw materials are no longer favorable to them. Though, the companies said they did not feel affected by reduced sawmill residue availability, whereas all those in North America and SouthEast Asia felt affected to varying degrees. The authors also reported that not all South East Asian or North American companies felt negatively affected by COVID-19. Hellenic Shipping News Worldwide [HSNW], (2020) reported in her survey that uncontrollable spread of the deadly virus has hit the world economies badly in that the prices of raw materials are now weak including demand for steel output. The deadly virus might not have a small effect on mill companies in Eastern Europe while those entities that depend on spot raw materials could purchase lower raw materials for production as a result of increase in price. This is also the same in Western Europe where iron ore prices are high.

Statistics Canada (2020) reported in a survey that raw material bought by production companies in Canada reduced in price by 15.6% as evaluated by Raw Materials Price Index (RMPI). Though, it was found that the decline in prices of crude oil caused the price of raw materials to fall. Statistics Canada (2020) also reported that the 15.6% fall in price of crude oil was the third consecutive monthly decline in March, 2020

compared to December, 2008 when they experienced their biggest decline of 15.7%. It was also found that the primary reason for the reduction in price of raw materials was because crude oil prices fell. Burgering (2020) in a survey reported that there is a relationship between the price of oil and sugar. The survey revealed that sugar price has been on the increase from the start of the fourth quarter of 2019 in Brazil where the price got to a level just above USD 15 cents per pound. The author added that the reduction in the price of oil has been pressurizing sugar prices. The author went further saying that the rationale for the drop in price of oil is the expected significant increase in export of sugar from India and the declined price of oil. In support of it, Burgering (2020) added that the fall in the price of oil strongly affected the price of sugar. This occurred due to the price of Brazilian ethanol produced from sugar cane that depends on the price of oil trend (Burgering, 2020). The time oil prices became lower a little bit, the Brazilian sugar cane factories became more financially encouraged to manufacture sugar rather than ethanol (Burgering, 2020). The sugar market was in deficit before the decline in oil price which brought about excess supply and caused a continuous rise in the price of sugar. All these show how the oil price could have a relationship with the use of raw materials for production of sugar.

RESEARCH METHODOLOGY

Design for the study: This study employed ex-post facto research design with aim of finding out the influence of COVID-19 on the price of oil and raw materials. According to Sharma (2019), ex-post facto research design concerns non manipulation of the independent variables of interest in a study and as a result, the researcher cannot control the independent variables because they have already occurred or they have already influenced the dependent variable. Ex-post facto research design is suitable for this study because COVID-19 had already influenced oil and raw materials either positively or negatively. Be that as it may, the independent variable (COVID-19) was studied in retrospect to seek possible and plausible relations and the likely influence that the changes in the independent variable produce on a single or set of dependent variables.

Table 1. Prices at which fuel was bought by the different businesses operators in Abakaliki Metropolis, Ebonyi state on the average

S/N	Months	Pure Water Company (₦)	Business Center (₦)	Bakery (₦)	Palm Oil Producers (₦)	Mean Price (\bar{X})
1	Between March/April	200	123.50	125.00	125.00	143.37
2	May/June	220	125.00	125.00	125.00	148.75
3	July/August	190	145.00	150.00	145.00	157.50
	Grand Mean (\bar{X}) Price	203.33	131.16	133.33	131.66	149.87

Table 2: Prices at which diesel was bought by the different business operators in the in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020

S/N	Months	Pure Water Company (₦)	Bakery (₦)	Palm Oil Producers (₦)	Mean Price (\bar{X})
1	Between March/April	190.00	215.00	193.00	199.33
2	May/June	230.00	210.00	197.00	212.33
3	July/August	200.00	200.00	220.00	206.66
	Grand Mean(\bar{X}) Price	206.66	208.33	203.33	206.10

Population for the study: The target population of this study was Filling stations (12), business centers (15), bakery (4), pure water company (2) and palm oil producers operating (3) in Abakaliki Metropolis even though they are very little in number. Thus, the target population was 36. Managers of the mentioned businesses were the ones that supplied the necessary information for this study.

Sample Size and Sampling Technique: The total population of 36 formed the sample size due to the little number. Purposive sampling technique was used for the study because the researchers chose corporations that could supply the necessary information needed for the study.

Instrument for data collection: The instrument for data collection was a questionnaire made for the target population to be responded to. The target population were required to fill in the amount they buy fuel/diesel during March to August, 2020; the price at which they bought raw materials for production and how COVID-19 has affected the prices of oil, and raw materials in the Abakaliki Metropolis of Ebonyi State. The options meant for the respondents were Strongly Agree, Agree, Disagree and Strongly Disagree.

Method of data collection: The data collection process was done through the aid of two research assistants who moved to the business centers, bakeries, filling stations, bakery and palm oil producers in the village areas since they are not found near the capital city in Abakaliki Metropolis to administer the questionnaire to the subjects.

Method of data analysis: The data collected for this study was analyzed using mean, frequency and Pearson Product Moment Correlation Coefficient. The decision for research question 7 and 8 was that any mean values within the range of 2.5 and above will be accepted while any mean value less than 2.5 will not be accepted.

Data Presentation and Analysis

Research Question 1: What are the prices at which fuel was bought by the different businesses operators in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?

Table 1 above shows that on the average, the prices at which fuel was sold varies this period of COVID-19. The mean prices show that between March/April, May/June and July/August, 2020, fuel was sold at the prices of ₦143.37, ₦148.75 and ₦157.50 respectively.

In the same vein, the prices at which fuel was bought varied among the different business operators: pure water company, business center, bakery and palm oil producers with ₦203.33, ₦131.16, ₦133.33 and ₦131.66 respectively.

Research Question 2: What are the prices at which diesel was bought by the different businesses operators in Abakaliki

Table 3. Prices at which fuel and diesel were sold by Filling Stations in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020

S/N	Months	Price of Fuel (₦)	Price of Diesel (₦)	Mean Price (\bar{X})
1	Between March/April	125.00	173.00	149.00
2	May/June	123.50	183.00	153.25
3	July/August	150.00	190.00	170.00
	Grand Mean(\bar{X}) Price	132.83	182.00	157.41

Table 4. Prices at which raw materials were bought for Pure Water Production in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?

S/N	Raw Materials	Between March/April (₦)	Between May/June (₦)	Between July/August (₦)	Mean Price (\bar{X})
1	Printed rolls for satchel production (per roll)	1,225.00	1,300.00	890.00	1,138.33
2	Polyethylene packaging (per bag)	21,000.00	27,000.00	28,500.00	25,500.00
3	Treated water filter (per filter)	600.00	800.00	925.00	775.00
	Grand Mean(\bar{X}) Price	7,608.33	7,900.00	10,105.00	9,137.77

Table 5. Prices at which some raw materials were bought by Bakery Operators for Production in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020

S/N	Raw Materials	Between March/April (₦)	Between May/June (₦)	Between July/August (₦)	Mean Price (\bar{X})
1	Wheat flour (per bag)	11,800.00	12,000.00	12,500.00	12,100.00
2	Water (per tank)	4,000.00	4,500.00	5,000.00	4,500.00
3	Yeast (per bag)	13,500.00	15,000.00	16,500.00	15,000.00
4	Sugar (per bag)	20,000.00	22,500.00	24,000.00	22,166.66
5	EDC (a small gallons)	45,000.00	45,000.00	47,500.00	45,833.33
6	Valinna oil (liquid milk)	65,000.00	71,000.00	95,000.00	77,000.00
	Grand Mean(\bar{X}) Price	26,550.00	28,333.33	33,416.66	29,433.33

Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?

Table 2 above shows that on the average, the prices at which diesel was sold varies this period of COVID-19. From the mean column, the mean prices show that between March/April, May/June and July/August, 2020, diesel was bought at the prices of ₦ 199.33, ₦ 212.33 and ₦ 206.66 respectively. In the same vein, the prices at which diesel was bought varied among the different business operators: pure water company, bakery and palm oil producers with ₦ 206.66, ₦208.33, and ₦203.33 respectively.

Research Question 3: What are the prices at which fuel and diesel were sold by Filling Stations in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?

Table 3 above shows that on the average, the prices at which fuel and diesel were sold varies this period of COVID-19. From the mean column, the mean prices show that between March/April, May/June and July/August, 2020, fuel and diesel was sold by filling stations at the prices of ₦ 149.00, ₦153.25 and ₦170.00 respectively. In the same vein, the prices at which fuel and diesel was sold on the average varied among the different filling stations visited which are: ₦132.83, and ₦182.00 respectively.

Research Question 4: What are the prices at which raw materials were bought for Pure Water Production in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?

Table 4 above shows that on the average, the prices at which raw materials were bought varies this period of COVID-19. The grand mean show that the prices at which they were bought between March/April, May/June and July/August,

2020 were ₦7, 608.33, ₦7, 900. 00, and ₦10, 105.00 respectively for the different raw materials.

Research Question 5: What are the prices at which some raw materials were bought by Bakery Operators for Production in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?

Table 5 above shows that on the average, the prices at which raw materials were bought varies this period of COVID-19 for the production by bakery operators. The grand mean shows that the prices at which they were bought between March/April, May/June and July/August, 2020 were ₦ 26,550.00, ₦-28,333.33 and ₦-33,416.66 respectively for the different raw materials.

Research Question 6: What are the prices at which palm kernel was bought by Palm Oil Producers in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?

Table 6. Prices at which palm kernel was bought by Palm Oil Producers in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020

S/N	Raw Materials	Between March/April (₦)	Between May/June (₦)	Between July/August (₦)	Mean Price (\bar{X})
1	Smallest custard rubber	100.00	150.00	180.00	143.33
2	Medium custard rubber	150.00	200.00	250.00	200.00
3	Bigger custard rubber	300.00	400.00	450.00	383.33
	Grand Mean(\bar{X}) Price	183.33	250.00	293.00	242.22

Table 6 above shows that on the average, the prices at which palm kernel for the production of palm oil was bought varies

this period of COVID-19. The grand mean shows that the prices at which palm fruit was bought between March/April, May/June and July/August, 2020 were ₦ 183.33, ₦ 250.00 and ₦ 293.00 respectively for the different types of rubbers used in the measurement when selling.

Research Question 7: What is the influence of COVID-19 on price of oil in Abakaliki Metropolis, Ebonyi state on the average in this period of COVID-19 from March to August, 2020?

Table 7. Influence of COVID-19 on price of oil in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020

S/N	Item Statements	SA	A	D	SD	Mean	Decision	STD	Decision
1	COVID-19 has made the price of petrol (fuel) not to be stable	16	18	-	-	3.47	Accepted	0.50	Homogeneous
2	The price of petrol (fuel) has been on the increase since the emergence of COVID-19	17	16	-	-	3.47	Accepted	0.56	Homogeneous
3	COVID-19 has made the price of diesel not to be stable	15	18	-	-	3.41	Accepted	0.55	Homogeneous
4	The price of diesel has increased during this period of COVID-19	17	17	-	-	3.50	Accepted	0.50	Homogeneous
	Grand					3.46	Accepted	0.52	Homogeneous

Table 8. Influence of COVID-19 on price of raw materials in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020

S/N	Item Statements	SA	A	D	SD	Mean	Decision	STD	Decision
5	COVID-19 has made the price of raw materials not to be stable	17	15	2	-	3.44	Accepted	0.61	Homogeneous
6	The price of raw materials for production is now higher than before because of COVID-19	20	14	-	-	3.58	Accepted	0.49	Homogeneous
7	The price of raw materials for production is now lower than before because of COVID-19	12	14	3	5	2.97	Accepted	1.02	Heterogeneous
	Grand					3.33	Accepted	0.70	Homogeneous

Table 9. Relationship between price of oil and raw materials in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020

S/N	Item Statements	SA	A	D	SD	Correlation Coefficient	Decision
8	The decline in prices of crude oil at the international market caused the price of raw materials to fall.	1	8	2	23	1.00	Perfectly High Relationship
9	When the price of crude oil declined, price of raw materials increased.	-	2	-	32	-0.03	Negative Relationship
	Grand					0.49	Positively Low Relationship

Table 7 above shows a grand mean value of 3.46 is within the acceptance range of 2.5 and above. This result implies that most of the respondents accepted the item's statements. On the other hand, the standard deviation (0.52) shows that the respondents were homogeneous in their response.

Research Question 8: What is the influence of COVID-19 on price of raw materials in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020?

Table 8 above shows a grand mean value of 3.33 which is within the acceptance range of 2.5 and above. This result implies that most of the respondents accepted the item's statements. On the other hand, the standard deviation (0.70) shows that the respondents were homogeneous in their response.

Research Question 9: What is the relationship between price of oil and raw materials in Abakaliki Metropolis, Ebonyi state in this period of COVID-19 from March to August, 2020?

Table 9 above shows the relationship between price of oil and raw materials. The grand correlation coefficient (0.49) shows that there is a positively low relationship between price of oil and raw materials.

DISCUSSION OF FINDINGS

The findings for research question 1 has shown that pure water companies bought fuel at the prices of ₦ 200, ₦ 220 and ₦ 190 between March/April, May/June, and July/August, 2020 respectively. Business center bought fuel at the prices of ₦ 123.50, ₦ 125.00, and ₦ 145.00 between March/April, May/June, and July/August, 2020 respectively. Bakery bought fuel at the prices of ₦ 125.00, ₦ 125.00, and ₦ 150.00

between March/April, May/June, and July/August, 2020 respectively. While palm oil producers bought fuel at the prices of ₦ 125.00, ₦ 125.00, ₦ 145.00 between March/April, May/June, and July/August, 2020 respectively. However, the mean prices show that between March/April, May/June and July/August, 2020, fuel was sold at the prices of ₦143.37, ₦148.75 and ₦ 157.50 respectively. These findings show that the prices of fuel as a product used by businesses due to lack of steady power supply every now and then fluctuated between March and August, 2020. The findings further show that the prices of fuel increased and thus, was not steady. In the same vein, the prices at which fuel was bought varied among the different business operators: pure water company, business center, bakery and palm oil producers with ₦ 203.33, ₦ 131.16, ₦ 133.33 and ₦ 131.66 respectively. This finding is in support of Akinkugbe-Filani (2020) who noted that the prices of oil fluctuated in the market both at domestic and international markets due to coronavirus. The findings for research question 2 has shown that pure water companies bought diesel at the prices of ₦ 190.00, ₦ 230.00 and ₦ 200.00 between March/April, May/June, and July/August, 2020 respectively. Bakery operators diesel at the prices of ₦ 215.00, ₦ 210.00, and ₦ 200.00 between March/April, May/June, and July/August, 2020 respectively. Palm oil producers bought diesel at the prices of ₦ 193.00, ₦ 197.00,

and ₦ 200.00 between March/April, May/June, and July/August, 2020 respectively. However, the mean prices show that between March/April, May/June and July/August, 2020, diesel was bought at the prices of ₦ 199.33, ₦ 212.33 and ₦ 206.66 respectively. This means that the price of diesel was not steady during this period COVID-19. In the same vein, the prices at which diesel was bought varied among the different business operators: pure water company, bakery and palm oil producers with ₦ 206.66, ₦ 208.33, and ₦ 203.33 respectively. This result is an unfavorable hit in Nigeria because of coronavirus. The findings concur with that of (Chris, 2020) who asserted that by-products of crude oil are increasing due to the outbreak of coronavirus in some countries.

The findings for research question 3 has shown that Filling Stations in Abakaliki Metropolis sold fuel at the prices of ₦ 125.00, ₦ 123.50 and ₦ 150.00 between March/April, May/June, and July/August, 2020 respectively. Diesel was sold at the prices of ₦ 173.00, ₦ 183.00, and ₦ 190.00 between March/April, May/June, and July/August, 2020 respectively. However, the mean prices show that between March/April, May/June and July/August, 2020, fuel and diesel was sold by filling stations at the prices of ₦ 149.00, ₦ 153.25 and ₦ 170.00 respectively. In the same vein, the prices at which fuel and diesel was sold on the average varied among the different filling stations visited which are: ₦ 132.83, and ₦ 182.00 respectively. This result has shown the increase in the price of fuel and diesel sold by Filling stations and it is not in agreement with Chris (2020) who reported that the prices of oil has fallen as due to oversupply of oil was accompanied with low price of oil. The findings for research question 4 has shown that raw materials in Abakaliki Metropolis were bought at the prices of ₦ 1,225.00, ₦ 1,300.00, and ₦ 890.00 between March/April, May/June, and July/August, 2020 respectively for Printed rolls for satchel production (per roll) for the production of pure water. Polyethylene packaging (per bag) as raw material was bought at the prices of ₦ 21,000.00, ₦ 27,000.00, and ₦ 800.00 between March/April, May/June, and July/August, 2020 respectively. Treated water filter (per filter) as raw material was bought at the prices of ₦ 890.00, ₦ 28, 500.00, and ₦ 925.00 between March/April, May/June, and July/August, 2020 respectively. However, on the average, the prices at which raw materials were bought varies this period of COVID-19. The grand mean shows that the prices at which they were bought between March/April, May/June and July/August, 2020 were ₦ 7, 608.33, ₦ 7, 900. 00, and ₦ 10, 105.00 respectively for the different raw materials. The result revealed that the prices of raw materials has increased due to the deadly virus and it is in support of Shaver (2011) who noted that the increment in the price of oil makes the contractors to pay more cost to buy raw materials for production.

The findings for research question 5 has shown that raw materials in Abakaliki Metropolis were bought at the prices of ₦ 11,800.00, ₦ 12,000.00, and ₦ 12,500.00 between March/April, May/June, and July/August, 2020 respectively for wheat flour (per bag); water (per tank) at the prices of ₦ 4,800.00, ₦ 4,500.00, and ₦ 5,000.00 between March/April, May/June, and July/August, 2020 respectively. Yeast (per bag) as raw material was bought at the prices of ₦ 13,500.00, ₦ 15, 000.00, and ₦ 16,500.00 between March/April, May/June, and July/August, 2020 respectively. Sugar (per bag) as raw

material was bought at the prices of ₦ 20,000.00, ₦ 22, 500.00, and ₦ 24, 500.00 between March/April, May/June, and July/August, 2020 respectively. EDC (a small gallon) as raw material was bought at the prices of ₦ 45,000.00, ₦ 45,000.00, and ₦ 47,500.00 between March/April, May/June, and July/August, 2020 respectively. Valinna oil (liquid milk) as raw material was bought at the prices of ₦ 65,000.00, ₦ 71,000.00, and ₦ 95,000.00 between March/April, May/June, and July/August, 2020 respectively.. The grand mean shows that the prices at which they were bought between March/April, May/June and July/August, 2020 were ₦ 26,550.00, ₦ 28,333.33 and ₦ 33,416.66 respectively for the different raw materials. These findings show that there was an increase in prices of raw materials used in the production. The result shows that the price of raw materials being purchased by bakery operators went up due to the deadly virus presence. This is in line with Bolaji and Bolaji (2010) that the price of raw materials for production entities rose due to the fact that as oil price affects the cost of shipping. The findings for research question 6 has shown that palm oil producers bought palm kernel at the prices of ₦ 100.00, ₦ 150.00 and ₦ 180.00 between March/April, May/June, and July/August, 2020 respectively for the smallest custard rubber. The medium custard rubber was bought at the prices of ₦ 150.00, ₦ 200.00, and ₦ 250.00 between March/April, May/June, and July/August, 2020 respectively. While the bigger custard rubber was bought at the prices of ₦ 300.00, ₦ 400.00, and ₦ 450.00 between March/April, May/June, and July/August, 2020 respectively. However, the grand mean prices show that the prices at which palm fruit was bought between March/April, May/June and July/August, 2020 were ₦ 183.33, ₦ 250.00 and ₦ 293.00 respectively for the different types of rubbers used in the measurement when selling. This result shows that the palm kernel used in production of palm oil went up and such affected the price of palm oil at the market. This is not in line with Braun and Jaffe (2020), and Barbosa, Bresciani, Graham, Nyquist and Yanosek (2020) that the global outbreak of coronavirus has caused palm oil to fall since the demand for such raw materials to produce palm oil fell.

The findings in research question 7 revealed that item statements 1, 2, 3 and 4 were all accepted by the respondents. This is because the grand mean value of 3.46 is within the acceptance range of 2.5 and above. On the other hand, the standard deviation (0.52) shows that the respondents were homogeneous in their response. To this end, the respondents believe that COVID-19 influenced the price of oil. The findings show that the majority of the respondents agreed with the item statements in research question 1, 2, and 3 implying that COVID-19 in this study influenced the price of palm oil and crude oil by-products such as petrol (fuel) and diesel. The results show that COVID-19 in the study area caused the price of oil to increase. This findings is not in support of Braun and Jaffe (2020), and Barbosa, Bresciana, Graham, Nyquist and Yanosek (2020) that the COVID-19 has made oil prices to fall sharply because the demand for its by-product such as diesel, fuel and gasoline. In a similar vein, the results of this study for research question one disagrees with that of Nevil (2020) that due to the fact that Nigeria is dependent much on oil, the emergence of COVID-19 has affected the economy negatively where the price of oil has fallen. The findings in research question 8 shows a grand mean value of 3.33 which is within the acceptance range of 2.5 and above. This result implies that most of the respondents accepted the item's statements. On the

other hand, the standard deviation (0.70) shows that the respondents were homogeneous in their response. The findings show that majority of the respondents accepted the item statements that COVID-19 influenced the price of raw materials. The result implies that in the study area, COVID-19 made the prices of raw materials go up unlike before the emergence of the virus. Production sectors now complain more than before about the amount they do spend to procure raw materials for their productions. This finding is in line with Nian (2020) that the prices of raw materials used for production increased due to the low supply of them. Continuing, the author said the low supply was caused by the deadly virus that made most suppliers and companies into supply to close down to protect their lives. This made supply of raw materials not to be successful because of the ban on transportation. This results concur with that of Wright (2020) that the price of the raw material will rise due to reduction in availability during the period of COVID-19. This rise that was predicted is what the study is experiencing. The findings of a research question revealed that there is a relationship between price of oil and raw materials. The grand correlation coefficient (0.49) shows that there is a positively low relationship between price of oil and raw materials. This implies that in the study area, as the price of oil is going up, that of raw materials are also going up. This is due to the high amount transport operators spend on fuel and diesel procurement to convey people and goods from one place to another. Thus, this findings is in concordance with Shaver (2011) who reported in a survey that the increment in price of oil made the contractors pay more cost to buy raw materials for production. This situation made the production quantities required to decline and in the process, the price of raw materials increased. The result is also in agreement with Bolaji and Bolaji (2010) who asserted that oil price affected raw material price.

Conclusion

Ebonyi state is a state that is growing little by little but the state cannot boast of industries and as a result the prices of goods and services are high. The economic condition of the state is not a favourable one as most of the indigenes are poor and they do survive through their farming works and trading. As the state government is trying to make things better, coronavirus came in. The virus hit Ebonyi state and Nigeria very hard; it has disrupted economic activities very badly and overcoming this shock would not be that easy due to bad government that would not allow good economic policies to prevail. Nigeria as a country has experienced an increase in the prices of goods and services due to lack of availability of the necessary raw materials to produce goods which the deadly virus has caused. The coronavirus has made the citizens of Ebonyi state to experience suffering especially for those who are not financially buoyant. The emergence of the virus has made her not able to import raw materials for production which is due to excess dependence on other countries. The country is witnessing high costs placed on goods and services during this period of COVID-19. Abakaliki of Ebonyi state is experiencing high cost of transportation of goods and services due to the coronavirus presence. The cost of consumer goods are increasing; many sellers at the market could not sustain their business due to continuous increase in the prices of the goods they buy and sell; the pure water companies are buying raw materials at high prices and selling at high prices; the bakery, palm oil

producers are not left behind. The filling stations are selling at high prices to the point that most businesses that depend on the use of fuel to run their generator cannot meet up the high cost of crude oil products. To this end, the virus has negatively influenced economic activities negatively.

Recommendation

The following recommendations were made with respect to the findings of this study:

1. Nigerian government should reduce the price of oil for its citizens to pay less for movement of goods. This will help make goods to be sold at a cheaper rate.
2. Nigeria as a country should stop her too much dependence on importation of raw materials from foreign countries. This is because it is making our production entities spend more and this will affect the sale of their goods after production. Thus, Nigeria should start looking for ways to produce needed raw materials locally as such will improve our economy and raw materials will be bought at a cheaper rate.
3. The Nigerian government should make efforts to put some of her refineries in order for crude oil to be refined here in Nigeria. Doing this, will help to reduce the cost of production and then it will make its procurement to be less expensive and raw materials will become low in price to procure.

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