SOCIO-ECONOMIC IMPACT OF COVID-19 IN NIGERIA

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Abstract
This study investigated socio-economic impact of the COVID-19 pandemic in Nigeria. The study was conducted within the 36 states of the country and the federal capital territory. Sampling technique adopted was the stratified random approach where the states were grouped into the existing 6 geopolitical zones in Nigeria. Primary data collection involved the use of questionnaire randomly administered across the country. 240 likert-questionnaires were administered in each geopolitical zone thus, involving 1,440 respondents (729 male and 711 female). Data collected were statistically analysed using the descriptive, ANOVA and Pearson's bivariate correlation techniques. Results of the statistical analyses revealed that every part of Nigeria experienced the negative impact of covid-19 lockdown. From the economic aspect of the study, COVID-19 affected economic activities in Nigerians. Measures adopted by government to control the spread of the virus increased the rates of unemployment, poverty, and crime in Nigeria. Businesses suffered loss of patronage thereby lowering their productivity and profit. Most sectors of the Nigerian economy were affected but agricultural sector's productivity remained unchanged. From the social aspect, levels of socialisation amongst Nigerians reduced. Participations in tourism and recreation activities dropped. Burials, marriages, birthday celebrations and wedding anniversaries were postponed. Patronages to hotels and hospitality centres reduced. Even worshippers' faith was affected. The study therefore concludes that covid-19 affected the socio-economic activities and lives of Nigerians.

Keywords: ANOVA, Correlation, COVID-19, lockdown measures, Socio-economic activities.

1: Introduction

The outbreak and emergence of COVID-19 has affected most countries' economy and the social lives of the inhabitants. At a global perspective, the global number of confirmed cases has risen to 15,012731, with 619150 deaths as at 24th July, 2020 (WHO, 2020). Given the persistent rise in the confirmed cases and the adopted measures to control the spread of the COVID-19, it suffices to say that sustainability of human lives and livelihood in Nigeria is being threatened. UNDP (2020) asserted that "though COVID-19 impact on countries may vary, it is likely to raise poverty level and inequality globally, exerting a devastating impact on lives and livelihoods".

Some analysts such as DW.COM (2020) predicted that "the economic effects of the coronavirus pandemic on the growth of global economy would surpass that of the SARS outbreak". Rob, Laura, & Anneken (2020) reported that "global stock markets fell on the 24th of February, 2020 owing to a significant increase in the observed number of COVID-19 cases recorded outside China's mainland". As at February 28, 2020 world stock markets experienced their highest decline within a single-week, since the 2008 financial crisis (Imbert & Huang, 2020; Smith, 2020). The Organization of Petroleum Exporting Countries reportedly "scrambled following a steep decline in oil prices due to reduced demand from China" (Reed, 2020).

Nigeria, with human population of about 202 million (World Bank, 2019) largely dominated by young people, resumed the year 2020 with a positive socio-economic outlook, but owing to the ravaging global COVID-19 pandemic which entered into the country on February 27, 2020 when the first case was confirmed, the socio-economic of the country's economy has been affected. Nigerian government adopted certain measures to control and contain the spread of the virus which include closure of state borders, lockdown of some

states, restriction of movements, shut down of aviation and other transport sector, schools, hotels, tourist centres, shopping malls and other nonessential household businesses, ban on social gathering and religious activities; leaving only essential services like hospital, pharmacy, security operatives, telecommunication industries and food traders. Due to these measures, there were several reports about shortages in the supply of important items like the pharmaceuticals (Boseley, 2020), with many areas experiencing conditions of panic purchases and consequent limited supply of food items and essential groceries (CAN, 2020). The COVID-19 pandemic has had far-reaching socio-economic consequences more than its spread and propagation together with the efforts to curtail it. As the pandemic spreads globally, concerns on issues regarding supply-side manufacturing have shifted to reduced business within the services sector (Rob, Laura & Anneken, 2020).

Before the covid-19 outbreak, Nigeria had earlier recorded 184,191 cases of other diseases in across the country between 2006 and 2019 (NCDC, 2019). These diseases include Cholera, Measles, Lassa fever, Ebola, Yellow Fever, Monkey Pox, among others. The approaches adopted in the containment and treatment of these diseases have had little or no socio-economic consequences when compared with measures adopted in the containment of COVID-19. As at 24th July, 2020, a total of 251893 COVID-19 samples have been tested and 38,948 cases confirmed, with 833 deaths (NCDC, 2020).

Studies had been done on socio-economic impact of viruses (SARS, HIV, Ebola). Since the outbreak of the coronavirus, studies are being done on the socio-economic effect of COVID-19 around the globe, with respect to continents and individual countries. Some of such studies are reviewed below. Ozili (2020) adopted the discourse analysis in the study conducted on socio-economic impact of the COVID-19 in Africa. The findings revealed COVID-19 impact on social interaction due to social distancing measure of virus containment. Also, economic activities were affected negatively, all culminating to poor socio-economic wellbeing of citizens. Wood, Nartea and Bishop (2020) examined both direct and indirect impact of COVID-19 on vulnerable persons (children and youths) in Eastern Caribbean. Data were gathered from ECA countries, ILO, IMF, among others, and analysed using descriptive statistics. The findings revealed high rate of unemployment and poverty, resulting to an increase in social protection expenditure by government. Obi and Ehiedu (2020) had earlier asserted that industrialised and developing economies spend more on the social protection and health of citizens. Given the outbreak of COVID-19, money spent on social protection was forecasted to rise as indicated in study by Wood, et.al.

United Nations Economic Commission for Africa (2015) descriptively analysed Ebola outbreak and its socio-economic impact in Africa. They disaggregated the concepts into social impact and economic impact. From the economic impact, their findings affirmed rise in government's expenditure on health, thereby creating financial gap between revenue and expenditure; suspension of public investments as funds are being channelled into containing Ebola virus, low savings, and currency depreciation resulting from slump in foreign trade. From the social impact, stigmatization, household insecurity arising from fear of contracting the virus, rise in unemployment rate, rise in deaths of medical professionals, were seen as the major impact. On HIV studies, Wabiri and Taffa (2013) surveyed socio-economic inequality within South Africa and HIV prevalence. The study utilised Multiple Correspondence Analysis to generate socio-economic index score groups (low, middle and upper) and determine the covariate level of the virus across socio-economic groups using both univariate and multivariate Logistic regression. It was revealed from their findings that a disproportionate impact of the disease and fear exist among the vulnerable group in South Africa. Jong-Wha and Warwick (2012) in their study of SARS, asserted that socio-political crises was triggered the emergence of SARS. They also affirmed that the economic impact of SARS on foreign direct investment (FDI), alongside human capital, is minor.

Having reviewed studies done on COVID-19, it is pertinent to state that perhaps no study has focused on socio-economic effect of COVID-19 in Nigeria. This study therefore aimed at examining the socio-economic effect of COVID-19 pandemic in Nigeria. In other that the set aim was achieved, the following objectives were examined: (i) Investigate the Nigerian states that are affected by covid-19 pandemic; (ii) examine the effectiveness of measures and approaches adopted by the governments to contain and curtail the spread of covid-19 in Nigeria; (iii) Examine the socio-economic activities affected by the covid-19 pandemic; (iv) ascertain the impact of covid-19 on socio-economic lives of the Nigerian inhabitants and economy; (v) determine the levels of impact of the covid-19 pandemic across the geopolitical zones in Nigeria; (vi) investigate the relationships between the income levels of individuals and the socio-economic impact of the covid-19 pandemic; and (vii) recommend adaptive measures to improve on the deteriorating economic lives of individuals, and strengthen the Nigerian economy for effective growth and development.

2: Study area

Nigeria, being the study area, is located within the West African region in the continent of Africa. This region covers land area approximately 75,000 km^2 (NDES, 2000), with a total population of 206,139,589, being the largest populated country in the continent of Africa. This study area comprises 36 states and a federal capital territory that make up the following 6 geopolitical zones: south-east, south-west, south-south, north-east, north-west, and north-central. Nigeria is endowed with numerous natural resources like oil and gas, forest resources, water resources, solid minerals and agricultural land areas. The economic activities in Nigeria can be summarised under agriculture, energy, infrastructure, mining/drilling, manufacturing, stock exchange, investment, tourism and banking. However, the economy depends to a very large extent on oil and gas together with agricultural products. Due to the covid-19 pandemic, the country experiences dwindling socio-economic balance owing to the measures and approaches adopted by Nigerian government to contain and curtail the covid-19 pandemic that has been observed in all the states of the country and the federal capital territory.

3. Materials and methods

The study was conducted in the 36 states and federal capital territory of the country, and adopted the stratified random sampling technique where the states were grouped into the existing 6 geopolitical zones as south-east, south-west, south-south, north-east, north-west, and north-central. Data collection involved both primary and the secondary sources. Primary source involved administration of questionnaire while secondary source involved information from the WHO and NCDC archives, reputable online Journals. Primary data collection involved a random administration of questionnaire across the states and federal capital territory. Both e-questionnaire and hard copies were administered with the aid of field assistants (3 field assistants in each state to cover the 3 senatorial districts) across all the states in Nigeria. 1,600 questionnaires were administered. The Likert-questionnaire which was made into 2 sections (biodata and socio-economic scaled items) contained 27 items requesting responses at a scale of 1-4 levels. The biodata comprises 7 items, while the socio-economic scaled items were 20 and well structured in line with the stated objectives of study. Out of 1,600 questionnaires administered, 1,540 were retrieved. In other that randomness was ensured, 1,440 of the retrieved questionnaires were used (that is, 240 of the retrieved questionnaires from each geopolitical zone which satisfied the condition of randomness).

Data collected were statistically tested with the descriptive, ANOVA and Pearson's bivariate correlation techniques using the Statistical Package for the Social Sciences (SPSS) 15.0 version. The technique of mean, standard deviation, coefficient of variation, percentages

and graphs were used to present the responses on the biodata and socio-economic scale; Differences in the socio-economic effects of covid-19 across the geopolitical zones was tested using the ANOVA at 5% confidence level; while Pearson's bivariate correlation was used to analyse the relationship and levels of correlations between the economic activities of respondents and socio-economic impact of the covid-19, at 5% confidence level

4. Results and Discussion

4.1: Demographics

This study investigated 1440 respondents, comprising 729 male and 711 female across the 6 geopolitical zones of Nigeria. While the numbers of male respondents were higher in the South-east, South-west and North-Central zones, the numbers of female respondents were higher in the south-south, North-east and North-central (fig. 1).

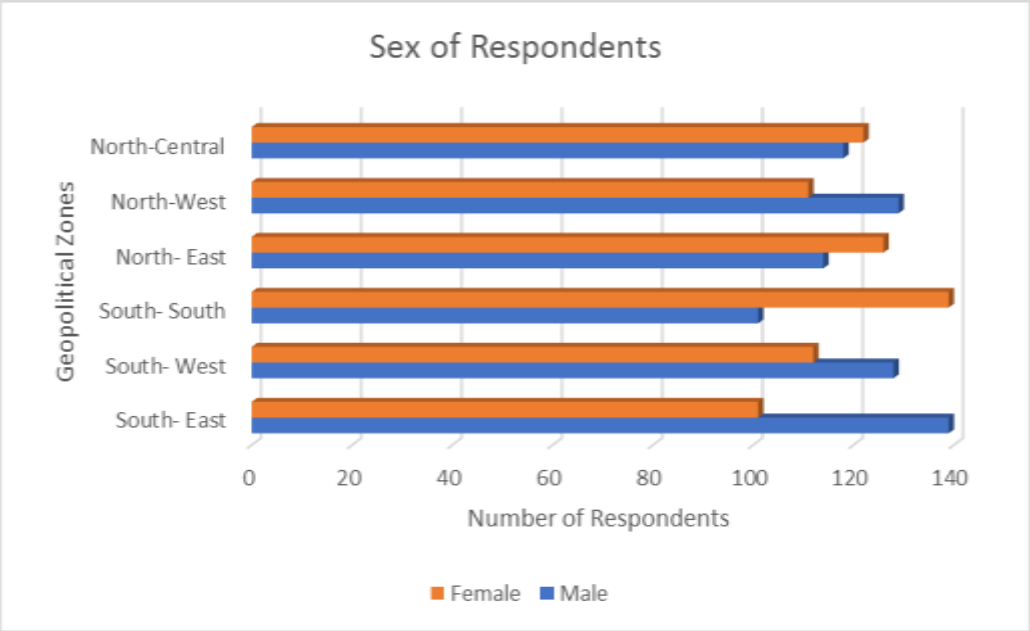

Fig. 1: Sex of the Respondents

The respondents fall within different age groups above 18 years. 44.2% falls between 18 and 35 years, 52.4% falls between 36 and 59 years, while 3.4 % are above 60 years. This shows that a very high proportion of those who responded to the questionnaire are within the active productive age cohort in terms of involvement in socio-economic activities. While 39.9% of respondents are single, 55.4% are married and 4.7% are widows or widowers. The occupational data showed that the respondents are involved in several and different occupations and varied amongst the 6 geopolitical zones. Generally, 26.6% of the respondents are self employed, 36.9% work in private owned establishments, while 36.5% are government employed (fig 2). Irrespective of where they work, their income levels range between ₦18,000 and above (fig 3).

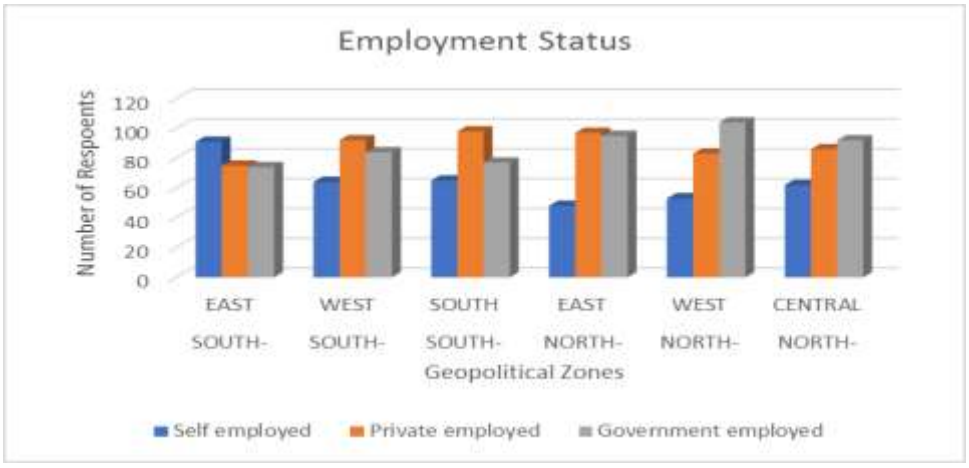

Fig. 2: Employers of respondents

While 15.6% respondents earn between ₦18,000 and ₦40,000, 23.4% earn between ₦41,000 and ₦60,000, 30% earn between ₦61,000 and ₦80,000, while 31% earn above ₦80,000 monthly.

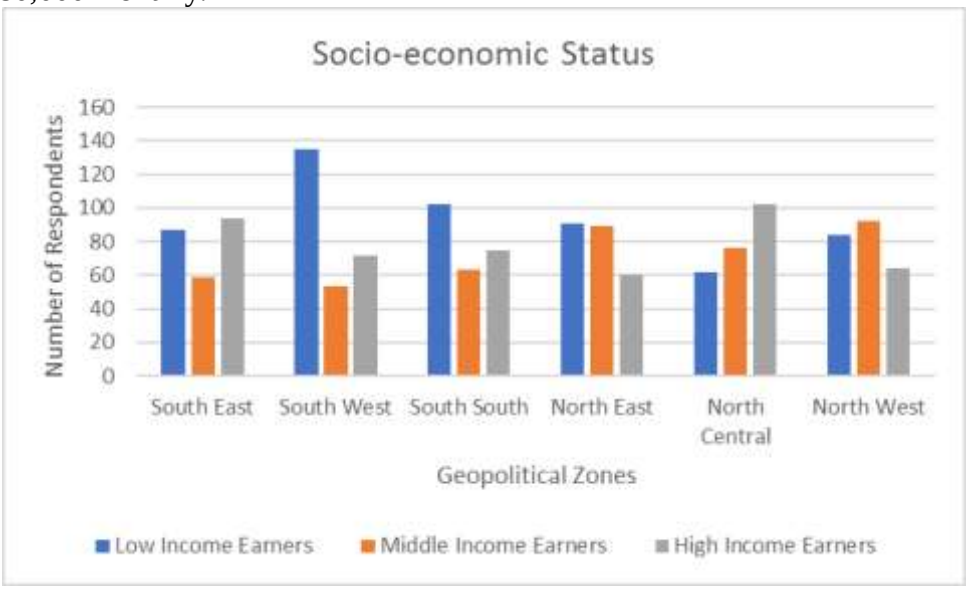

Fig. 3: Socio-economic Status of Respondents

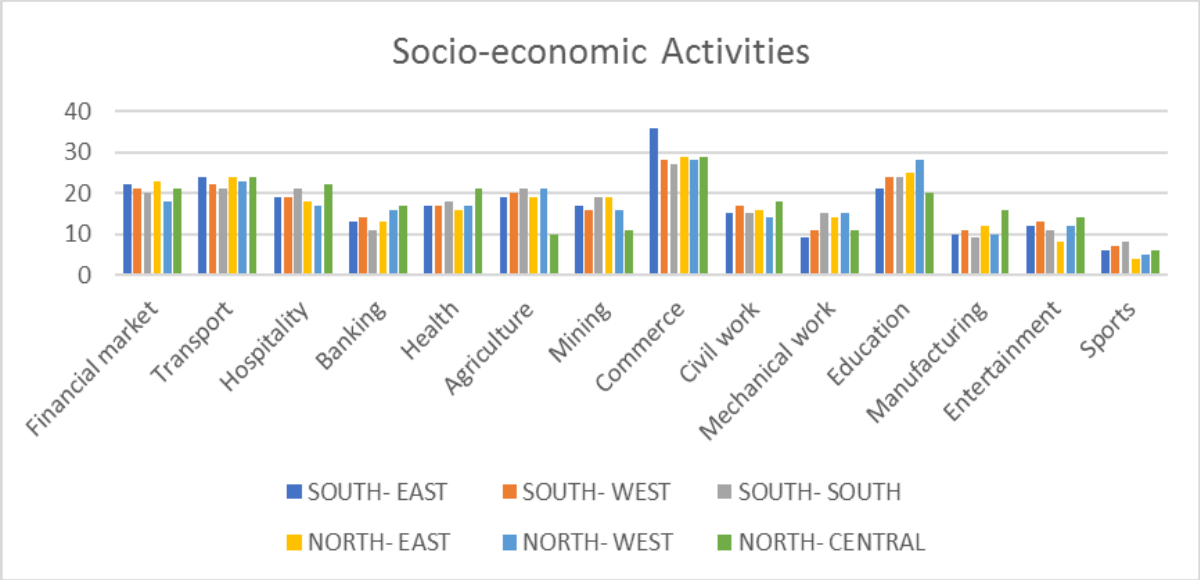

Fig. 4: Respondents Socio-economic Activities across Nigeria

3.2: Measures of Variations on the Socio-economic Impact of Covid-19 Across Nigeria.

The socio-economic impact of covid-19 was generally felt across all geopolitical zones of Nigeria. While the highest impact was observed in the south-southern part of Nigeria as represented by 69.54% of the respondents, the lowest impact was recorded in the north-eastern geopolitical zone as represented by 66.90% of the respondents.

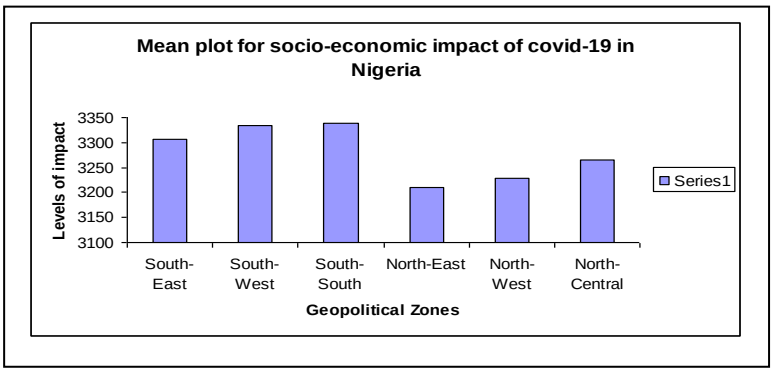

Fig. 5: Mean Plot for the Socio-economic Impact of Covid-19 Across Geopolitical Zones in Nigeria

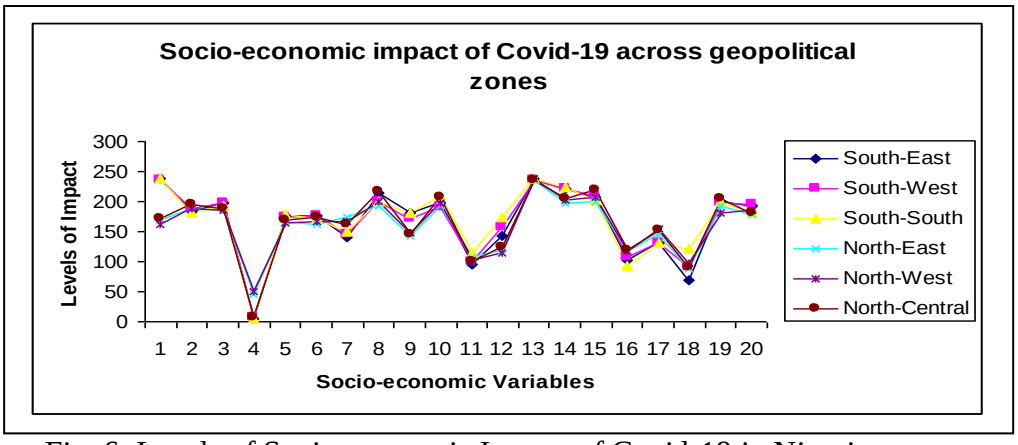

Fig. 6: Levels of Socio-economic Impact of Covid-19 in Nigeria

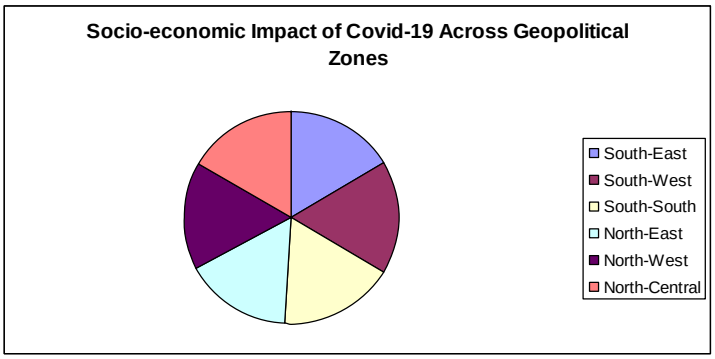

Fig. 7: Proportional Presentation of Socio-economic Impact of Covid-19 in Nigeria

Table 1: Descriptive Statistical Analysis for the socio-economic impact of covid-19 in the geopolitical zones of Nigeria

S/N	SOUTH-EAST	SOUTH-WEST	SOUTH-SOUTH	NORTH-EAST	NORTH-WEST	NORTH-CENTRAL
Mean	65.35	66.75	69.40	60.55	61.45	63.20
S.D	60.00	56.57	55.23	45.65	45.42	54.33
C.V (%)	91.81	84.75	79.58	75.39	73.91	85.97

Table 1 presents the mean, standard deviation and coefficient of variation values of the socio-economic impact of covid-19 across the geopolitical zones Nigeria. The pattern of mean variations conformed to the percentage values of responses. However, the socio-economic impact of covid-19 varied more within the south-eastern geopolitical zone.

3.3: Differences in the Socio-economic Impact of Covid-19 Across Nigeria

Table 2: ANOVA results for the differences in socio-economic impact of Covid-19 within the six geopolitical zones of Nigeria

Variable	Groups	Sum of squares	d/f	Mean square	F	Sig.
Socio-economic	Between	1127.50	5	225.500	.080	.995
	Within	322034.2	114	2824.861		
	Total	323161.7	119			

Table 2 presents the results of ANOVA statistics for the differences in the socio-economic impact of covid-19 within the 6 geopolitical zones in Nigeria. The results showed that the mean differences are not statistically significant at the 5% level of confidence. Therefore, the socio-economic impact of covid-19 did not differ much in every part of Nigeria.

3.4: Relationships between economic activities of respondents and socio-economic effect of COVID-19

Table 3 below presents the results of correlation analysis for the relationship between economic activities of respondents and the socio-economic impact of covid-19 in Nigeria. The results showed that there is no significant relationship between the economic activities engaged in by the respondents and the impact of the covid-19 pandemic. This shows that every individual felt the socio-economic impact of the pandemic. This is as to be expected because of trickle-down effect of high price of commodities due to panic buying and non-productivity by industries.

Table 3: Results of correlation analysis for the relationship between the economic activities of respondents and the socio-economic impact of covid-19 across geopolitical zones in Nigeria.

	Correlations	South-East		South-West		South-South		North-East		North-West		North-Central	
		SEI	EA	SEI	EA	SEI	EA	SEI	EA	SEI	EA	SEI	EA
SEI	Corr.	1	-.048	1	.059	1	.061	1	-.075	1	-.031	1	-.141
	Sig.		.870		.842		.835		.798		.916		.630
EA	Corr. Sig.	-.048	1	.059	1	.061	1	-.075	1	-.031	1	-.141	1
		.870		.842		.835		.798		.916		.630	

*SEI (Socio-economic Impact); *EA (Economic Activities).

Discussion of Findings

Generally, findings from this study revealed that COVID-19 pandemic was a problem, but its effect on socio-economic was due mainly to the lockdown measure taken by the Nigerian government to contain and curtail the spread of the virus which resulted to panic buying at the beginning of the lockdown thus leading to rise in price of commodities. The lockdown measure ushered in hunger since individuals could not go out to earn their daily income especially those within the low socio-economic status. Though government distributed palliatives across the states, the study confirmed that it could not solve the problem of hunger and starvation caused by the lockdown as affirmed by 91.6% of the respondents. Many companies and factories dropped their workers because they could not sustain the payment of salaries. Sectors like the aviation, hotels and private schools dropped many of their workers thus, increasing the unemployment rate according to 74.3% of the respondents. All these led to increased poverty and crime rates in Nigeria owing to quest for survival as affirmed by 65.2% of the respondents. The study also found a sharp fall in business expenditure owing to non-production. While many sectors suffered the lockdown effect, agricultural was not affected as its productivities continued to rise.

The social lives of Nigerians were not left out. It was also affected by the lockdown measure. The extent of socialisation amongst Nigerians reduced. Participations in activities regarding tourism and recreation dropped. Many people postponed their marriages. Patronage to hotels and hospitality centres dropped drastically as affirmed by 81.8% of respondents. 99% of all the respondents affirmed that schools and educational activities were completely affected, while 57.9 % of the respondents believed that the lockdown and closure of worship centres affected the faith of worshippers.

Conclusion

From the survey study done on COVID-19 effect on socio-economic in Nigeria, it is clear that socio-economic impact of the covid-19 lockdown did not differ much in every part of the country. It has impacted much on the citizen's socio-economic lives and activities. The adopted measures by government to curtail the spread of the virus increased the rate of unemployment, raised poverty level and increased crime rate. Businesses suffered loss of patronage thereby lowering productivity and profit. Only agricultural sector's productivity remained unchanged. In other words, all economic activities were worse hit during this period.

From the social aspect, level of socialisation amongst Nigerians reduced drastically. Participations in activities regarding tourism and recreation dropped. Many people postponed their burials ceremonies, marriages, birthday celebrations, and wedding anniversaries due to the lockdown order given by the Nigerian government. As earlier noted, patronages to hotels

and hospitality centres reduced, while the spiritual faith of different religious worshippers were affected.

Policy Recommendations

From this study, it is affirmed that COVID-19 pandemic and government efforts to curtail it resulted to lots of socio-economic problems. Government has a major role to play in finding solution to these problems. Although, palliatives were earlier distributed across the states of the federation, it never solved the problem of hunger and starvation; it did not alleviate the citizens' levels of hunger and poverty; and did not cushion the resultant effects of COVID-19 on unemployment. Government must not only focus on how to stop the spread and propagation of the virus, but should also focus on closing the economic and social gaps created by the measures taken in to contain the spread. In the light of the above, the study makes the following recommendations:

1. Government should give non-interest loan to private investors who suffered loss during this pandemic period. This will aid in reviving their businesses, thereby creating opportunities for employment. This will help to reduce the unemployment rate.
2. A special youths and women empowerment programme should be embarked on by governments across the country. This will reduce the level of poverty among the citizens. 3.
3. Community security operatives should be encouraged as this will help to curb the increasing crime rate within the period of COVID-19.
4. Government should also deploy joint task force officials to all the states and federal capital territory of the country to help in curtailing the security challenges.
5. Government should make social protection and security policies that should include the vulnerable members of the society especially those that fall within the category of low socio-economic status.

References

Boseley, S (2020). "WHO warns of global shortage of face masks and protective suits". The Guardian. ISSN 0261-3077. Archived from the original on 12 February 2020. Retrieved 12 February 2020.

CAN (2020)"Viral hysteria: Hong Kong panic buying sparks run on toilet paper". CNA. Archived from the original on 26 February 2020. Retrieved 26 February 2020.

DW.COM. (2020) "China's coronavirus epidemic threatens global economy". DW.COM. 30 January 2020. Archived from the original on 31 January 2020. Retrieved 31 January 2020.

Imbert, F; Huang, E (2020). "Dow falls 350 points Friday to cap the worst week for Wall Street since the financial crisis". CNBC. Archived from the original on 28 February 2020. Retrieved 28 February 2020.

Jong-Wha, L. & Warwick, J.M. (2012) The impact of SARS on China: New Engine of World Growth. China, ANU Press.

NCDC (2019) National disease outbreak dashboard 2006-2019 (All Diseases). www.ncdc.gov.ng

NCDC (2020) COVID-19 Nigeria. www.covid19.ncdc.gov.ng

Niger Delta Environmental Survey (NDES) (2000), *Niger Delta Development Priorities and Action Plan*, phase II report, vol. 2.

Obi, C.K & Ehiedu, V.C (2020) Testing the efficacy of Wagner's law on public expenditure in Nigeria. Scientific Papers of the University of Pardubice. Series. D 28(1): 103-114

Ozili, P. (2020) COVID-19 in Africa: Socio-economic impact, policy response and opportunities. *International Journal of Sociology and Social Policy*. Vol. ahead-of-print. No. ahead-of-print

Reed, S (2020). "OPEC Scrambles to React to Falling Oil Demand From China". The New York Times. ISSN 0362-4331. Archived from the original on 5 February 2020. Retrieved 14 February 2020.

Rob M., Laura H and Anneken T. (2020). "Dow plunges 1,000 points as coronavirus cases surge in South Korea and Italy". CNN. Archived from the original on 27 February 2020. Retrieved 27 February 2020.

Smith, E. (2020). "Global stocks head for worst week since the financial crisis amid fears of a possible pandemic". CNBC. Archived from the original on 28 February 2020. Retrieved 28 February 2020.

UNDP (2020) COVID-19 Socio-economic impact. www.undp.org

United Nations Economic Commission for Africa (2015) Socio-economic impacts of Ebola on Africa. *Economic Commission for Africa*. www.uncea.org.

Wabiri, N. & Taffa (2013) Socio-economic inequality and HIV in Africa. BMC Public Health www.biomedicentral.com

Wood, J.; Nartea, A.; & Bishop, S. (2020) The Socio-economic impact of COVID-19 on children and young people in the Eastern Caribbean Area. *USAID/UNICEF*. www.unicef.org

World Bank (2019) The world bank in Nigeria. www.worldbank.com

World Health Organisation (2020) Coronavirus disease (COVID-19) pandemic. Retrieved on 9th April, 2020 from www.who.int.