



COVID 19, INSECURITY AND SOCIO-ECONOMIC DEVELOPMENT OF NIGERIA

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Abstract

This study has a twin objective of examining the impact of COVID-19 and insecurity on socioeconomic development of Nigeria. The study employed a survey design using a structured 5-point Likert scale questionnaire to collect data electronically on Google forms from 397 respondents across the country. The data were analyzed using partial least squares structural equation modelling (PLS-SEM) and it was found that the proxies for COVID-19 (Lock down, personal protective equipment, remote work, and social distancing) have negative and significant impacts on socioeconomic indicators (education, employment, income, poverty, and social amenities) in Nigeria. The study also found that insecurity in terms of physical security, territorial security, food security and health security have negative and significant impact on socioeconomic development of Nigeria. Based on this, it is recommended that the government of Nigeria should not contemplate another lockdown but intensify sensitization COVID-19 protocols and should be sincere in their fight against insecurity.

Keywords: COVID-19, Coronavirus, Insecurity, and Socioeconomic Development.

Introduction

On December 31, 2019, the World Health Organization (WHO) was informed of an outbreak of “pneumonia of unknown cause” detected in Wuhan City, Hubei Province, China – the seventh-largest city in China with 11 million residents. As of January 23, there are over 800 cases of 2019-nCoV confirmed globally, including cases in at least 20 regions in China and nine countries/territories. The first reported infected individuals, some of whom showed symptoms as early as December 8, were discovered to be among stallholders from the Wuhan South China Seafood Market. The virus causing the outbreak was quickly determined to be a novel coronavirus. On January 10, gene sequencing further determined it to be the new Wuhan coronavirus, namely 2019-nCoV, a beta coronavirus, related to the Middle Eastern Respiratory Syndrome virus (MERS-CoV) and the severe acute respiratory syndrome virus (SARSCoV). As of September 6, 2021, over 221 million cases have been reported around the world with over 4.5 million death (Worldometer, 2021).

The first confirmed case in [Nigeria](#) was announced on 27 February 2020, when an Italian citizen in [Lagos](#) tested positive for the virus. By the end of June 2020, 561 cases and 17 deaths were reported, bringing the total number of confirmed cases and deaths to 25,694 and 590, respectively (NCDC, 2020). Although the cases were not as brutal as expected in Nigeria, but data from Worldometer (2021) showed that confirmed cases stood at 195,511 with 2,552 deaths as of September 6, 2021. The

infection and growth rate of covid 19 led to several responses from the Federal Government of Nigeria, which includes lockdown. The lockdown affected security (especially food security) and socioeconomic indicators in Nigeria.

Nicola et al. (2020) observed that the COVID-19 pandemic has sparked fears of an impending economic crisis and recession. Social distancing, self-isolation and travel restrictions have led to a reduced workforce across all economic sectors and caused many jobs to be lost. Schools have closed, and the need for commodities and manufactured products has decreased. In contrast, the need for medical supplies has significantly increased. The food sector is also facing increased demand due to panic-buying and stockpiling of food products. In response to this global outbreak, the socioeconomic effects of COVID-19 on individual aspects of the world economy must be taken seriously. These phenomena of COVID-19 along with insecurity which have bedeviled this country have been subject of debates to all.

Insecurity is the state of being subject to danger or injury. The anxiety that is experienced when one feels vulnerable and insecure. Ezemonye (2011) affirmed the above definition of insecurity as “a state of being not secure, lack of confidence”. For over a decade, Nigeria has been fraught with insecurity challenges, from Boko Haram and their Islamic State West Africa Province (ISWAP) counterparts to Bandits and unknown gunmen. Amid all this, the statistics of unemployed youths and graduates in the

nation has been rising to an alarming rate, the basic development infrastructures like electricity to enhance the industrialization of the nation to create employment opportunities has been lacking, thereby crippling other efforts to drive the economic resurgence of the country. The issue of insecurity in Nigeria are caused by failure in the socioeconomic indicators like poverty and unemployment; these contributes to frustration and anger that can result to one taking to armed robbery, kidnapping, or pitching tent with agitators calling for dissolution of the nation under the guise of revolutionaries thereby creating more panic in the society (Pepple, 2021).

The issue of insecurity and violence persisted during the coronavirus pandemic. A USIP-commissioned surveys conducted in May and July 2020 of more than 10,000 Nigerians revealed that the prevalence of violence across the country can be correlated with people's opinions about the response to the coronavirus. While COVID-19 brings its own evident epidemiological challenges, past insecurity makes things worse. Controlling for other variables, respondents who reported personally experiencing insecurity or violence in the past 12 months are also more likely to negatively rate the response of the Nigerian federal government to COVID-19. Respondents without a recent experience of insecurity are more likely to rate the federal government's response positively.

Criminality and internal conflicts might seem to be entirely unrelated to tackling the coronavirus. There are data that suggests otherwise and implies that reducing insecurity would improve the confidence people feel in the government's response in other areas, such as regarding COVID-19. But with insecurity, nobody is taking the issue of COVID-19 serious, and this is undermining all the efforts at curtailing these challenges that are affecting the socioeconomic development of Nigeria. Thus, this study examines the impact of COVID-19 and insecurity on the socioeconomic development of Nigeria, and suggestion on the ways to curtail these challenges. The two major hypotheses postulated in this study are:

H₀₁: COVID-19 has no significant impact on socioeconomic development of Nigeria.

H₀₁: Insecurity has no significant impact on socioeconomic development of Nigeria.

The paper is divided into five sections: this introduction is the first section, and it is followed by brief review of literature on the concepts and their relationship with socioeconomic indicators. Then, the methodology of the study is followed by the results from the analysis as well the discussion of findings from these results. Finally in the last section, conclusions and recommendations were made to suggest way forward for these challenges.

LITERATURE REVIEW

Conceptual clarifications

According to World Health Organization (2020), Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. Coronaviruses are a large family of viruses that are known to cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS). A novel coronavirus (COVID-19) was identified in 2019 in Wuhan, China. This is a new coronavirus that has not been previously identified in humans.

Regarding insecurity, Cameron and McCormick (1954) opined that the notions of security and insecurity probably began with the works of Thomas and Adler, although neither employed them exactly as we do today. Security need was the basis of the social contract between the people and the state, in which people willingly surrendered their rights to an organ (government) who oversees the survival of all (Ewetan & Urhie, 2014). In this light security embodies the mechanism put in place to avoid, prevent, reduce, or resolve violent conflicts, and threats that originate from other states, non-state actors, or structural socio-political and economic conditions (Stan, 2004).

Insecurity in a general term refers to a state of being subjected to fear, threat, danger, molestation, intimidation, harassment etc. in all aspects (Eneji & Agri, 2020). For example, insecurity can be conceived as threats to the state which often accounted for the race for arms and nuclear weapons to defend the state as opined by Ajodo et al. (2014). According to Saliu et al. (2007) human threats of life emanate not only from situation of violent conflicts but also other non-conflict sources. Thus, insecurity is a situation of fear or anything that causes fear, harm, or has the capability to cause fear, harm, and injury, destructions to an individual, group or nation.

The concept of insecurity connotes different meanings such as: absence of safety; danger; hazard; uncertainty; lack of protection, and lack of safety. According to Beland (2005) insecurity is a state of fear or anxiety due to absence or lack of protection. Achumba et al (2013) defined insecurity from two perspectives. Firstly, insecurity is the state of being open or subject to danger or threat of danger, where danger is the condition of being susceptible to harm or injury. Secondly, insecurity is the state of being exposed to risk or anxiety, where anxiety is a vague unpleasant emotion that is experienced in anticipation of some misfortune. These definitions of insecurity underscore a major point that those affected by insecurity are not only uncertain or

unaware of what would happen, but they are also vulnerable to the threats and dangers when they occur. In the context of this paper insecurity is defined as a breach of peace and security, whether historical, religious, ethno-regional, civil, social, economic, and political that contributes to recurring conflicts, and leads to wanton destruction of lives and property.

Socio-economic development is a product of development and can be defined as the process of social and economic transformation in a society (Ewetan & Urhie, 2014). Socio-economic development embraces changes taking place in the social sphere mostly of an economic nature. Thus, socio-economic development is made up of processes caused by exogenous and endogenous factors which determine the course and direction of the development. Socio-economic development is measured with indicators, such as GDP, life expectancy, literacy, and levels of employment. Changes in less-tangible factors are also considered, such as personal dignity, freedom of association, personal safety, and freedom from fear of physical harm, and the extent of participation in civil society. Causes of socio-economic impacts are, for example, new technologies, changes in laws, changes in the physical environment and ecological changes.

COVID-19 and socioeconomic development

The impact of COVID-19 on all the indicators of developments around the world are glaring. Several studies have been conducted to support or give credence to these impact, especially the socio-economic indicators. Ali et al. (2020) explored the community perception of the socioeconomic impact of COVID-19 pandemic in a rural mountain area of Pakistan. The conducted online survey through snowball sampling technique of 367 respondents, their results showed that the spread of novel coronavirus pandemic has significant socioeconomic impact on the lives of mountain communities in Gilgit-Baltistan. Financial uncertainty, decrease in income, fear of job loss, and food insecurity are some major challenges that mountain communities face due to outbreak of coronavirus in the region. This study has shown how the virus affected the socio-economic characteristics of the Pakistani.

Similarly, Lin et al. (2020) investigated the role of socioeconomic factors in the spread of COVID-19. Socioeconomic indicators like population, population density, gross domestic product, rural-to-urban migrants, urbanization rate, per-person disposable income, and level of health care) in these cities were also aggregated from the Bureau of Statistics. The data referring to travelers from Wuhan were collected from the Baidu Migration database. A multiple stepwise linear regression model was performed to identify the independent risk factors of

the number of cases. Nine socioeconomic variables including the number of travelers from Wuhan, population, native population, gross domestic product, Per-person GDP, the number of hospitals, the number of rural-to-urban migrants, traffic capacity, and person-disposable income were recognized as potential contributors of the number of cases. Results of multiple linear regression showed a statistically significant association between the number of cases and the number of travelers from Wuhan ($t = 6.746$, $P = 0.000$) and the number of rural-to-urban migrants ($t = 3.776$, $P = 0.001$) in these cities. However, other seven potential contributors were not associated with the number of cases. This study does not state specifically how COVID-19 affected socio-economic indicators

The study of Biswas et al. (2021) compared the socioeconomic development (SED) of the countries listed in G7 (representing developed nations) and BRICS (Brazil, Russia, India, China and South Africa—developing countries) and delve into the nexus between the SED of a country and its resilience to the current pandemic, COVID-19. The initial apprehension is that a country with better SED can show better resilience. To test this assumption, they consider seven socioeconomic indicators representing income, employment status, educational level, health condition, government expenditures in essential areas, like health, research and development, and gender equality and apply a compromise solution-based multi-criteria decision analysis (MCDA) framework. Next, they consider three parameters, namely infected cases (IC), recovery rate (RR), and death rate (DR), as explanatory proxy variables to indicate the resilience of the countries to COVID-19 spread. Finally, they examine the association between the SED and resilience of the countries. The results show that the SED of a country does not lead to better resilience to COVID-19.

In Nigeria, Fagbemi (2021) appraised the emanating effect of COVID-19 on sustainable development goals (SDGs) in Nigeria through the systematic illustration of the prevailing incidents. It was affirmed that the preoccupation with the COVID-19 cases caused many other critical socioeconomic issues (like education, infrastructure development, and employment) to suffer a state of negligence or be overlooked. Like other developing countries, Nigeria could become poorer, given the increased unemployment rate and the anticipated difficulty in servicing debt resulting from the COVID-19 outbreak. Hence, festering challenges including poverty, limited access to health care, low education quality, poor road networks among others, could be further entrenched. These incidents could be detrimental to sustainable development goals (SDGs) 2030 agenda. The study concluded that COVID-19 poses as threat to Nigeria's development prospects, as it may take more time to recover, especially in the post-COVID-19 era. Thus, it is critical to recognize

the significance of securing strong institutional regulatory setup and resources (including financial and material resources) needed to facilitate sustainable change in the economy.

Khalatbari-Soltani et al. (2020) briefly reviewed the extent to which socioeconomic position (SEP) has been considered as one of the potential risk factors of COVID-19 and opined that SEP is widely associated with disease and mortality. Individuals with a more disadvantaged SEP are more likely to be affected by most of the known risk factors of COVID-19. The study hypothesized that SEP plays an important role in the COVID-19 pandemic either directly or indirectly via occupation, living conditions, health-related behaviours, presence of comorbidities and immune functioning. This brief overview of the literature highlights the important socioeconomic characteristics are being overlooked when data are collected. As COVID-19 spreads worldwide, it is crucial to collect and report data on socioeconomic determinants as well as race/ethnicity to identify high-risk populations. A systematic recording of socioeconomic characteristics of patients with COVID-19 will be beneficial to identify most vulnerable groups, to identify how SEP relates to COVID-19 and to develop equitable public health prevention measures, guidelines, and interventions.

Idris (2020) evaluates the social and economic impact of covid-19 in Nigeria taking into cognizance the effect on certain critical macroeconomic indicators. The study adopted an analytical approach to supplement the much ongoing documentations on the subject matter. Result shows that virtually all essential macroeconomic indicators are grossly affected with tax, remittances and employment exhibiting severe consequences. Also, uncertainty, panics and lockdown measures are key to motivating higher decrease in world demand. The supply disruptions and the death toll generate a heightened uncertainty and panic for household and business. This uncertainty and panic leads to drop in consumption and investment thereby causing a decrease in corporate cash flows and triggered firm's bankruptcy. Also, lay-off and exiting firms produce higher unemployment while labour income decreased significantly.

Martin et al., (2020) evaluated the socio-economic impact of COVID-19 on individuals, using micro-economic model they developed to estimate the direct impact of distancing on household income, savings, consumption, and poverty. The model assumes two periods: a crisis period during which some individuals experience a drop in income and can use their savings to maintain consumption; and a recovery period, when households save to replenish their depleted savings to pre-crisis level. The San Francisco Bay Area is used as a case study, and the impacts of a lockdown are quantified, accounting for the effects of unemployment insurance (UI) and the CARES Act federal stimulus. Assuming a shelter-in-

place period of three months, the poverty rate would temporarily increase from 17.1% to 25.9% in the Bay Area in the absence of social protection, and the lowest income earners would suffer the most in relative terms. If fully implemented, the combination of UI and CARES could keep the increase in poverty close to zero, and reduce the average recovery time, for individuals who suffer an income loss, from 11.8 to 6.7 months. However, the severity of the economic impact is spatially heterogeneous, and certain communities are more affected than the average and could take more than a year to recover.

Varkey et al. (2020) examined the socioeconomic determinants of the occurrence of COVID in Asian countries considering the data as of June 18, 2020, for 42 Asian countries. A multiple regression analysis in a cross-sectional framework is specified and ordinary least square (OLS) technique with heteroscedasticity corrected robust standard error is employed to obtain regression coefficients. Explanatory variables that are highly collinear have been dropped from the analysis. The findings of the study show a positive significant association of per capita gross national income and net migration with the incidence of total COVID-19 cases and daily new cases. The size of net migration emerged to be a potential factor and positive in determining the total and new cases of COVID. Social capital as measured by voters' turnout ratio (VTR) to indicate the people's participation is found to be significant and negative for daily new cases per million population. People's participation has played an important role in checking the incidence of COVID cases and its spread. In alternate models, countries having high incidence of poverty are also having higher cases of COVID.

Josephson et al. (2021) documented the socioeconomic impacts of the pandemic among households, adults, and children in low-income countries. they rely on longitudinal household survey data from Ethiopia, Malawi, Nigeria, and Uganda, originating from pre-COVID-19 face-to-face household surveys plus phone surveys implemented during the pandemic. The study estimated that 256 million individuals—77% of the population—live in households that have lost income during the pandemic. Attempts to cope with this loss are exacerbated by food insecurity and an inability to access medicine and staple foods. Finally, the study finds that student-teacher contact has dropped from a pre-COVID-19 rate of 96% to just 17% among households with school-aged children.

Torkian et al. (2020) investigated the relation between COVID-19 incidence and mortality with development indexes in different regions of the world. This ecological study was conducted on data from January 11 to August 23, 2020. The development indexes included were Human development index (HDI), Inequality-adjusted HDI (IHDI), the Gini Coefficient, Gender Development

Index (GDI), Gender Inequality Index (GII) and their components. The development indexes were obtained from the United Nations Development Program (UNDP). COVID-19 cases and mortality data of the countries involved in the pandemic were obtained from the European Centre for Disease Prevention and Control (ECDC). Data was analyzed by Spearman correlation coefficients and negative binomial regression. The study found that the highest and lowest incidence and mortality rates were in the AMRO and WPRO regions, respectively. The development indexes had no significant linear correlation with COVID-19 incidence and mortality except in WPRO, where there was direct significant correlation between life expectancy at birth and inequality adjusted life expectancy with COVID-19 incidence and mortality.

Buheji et al. (2020) analyzed the socio-economic impact of COVID-19 to determine how the pandemic is causing various problems to the impoverished. The study stated that the outbreak of COVID-19 made many poor communities in different places of the world face incredibly challenging socio-economic and livelihood consequences. An integrative literature review was carried out to sample the consequences of the global pandemic economic crisis on the poor communities in four different continents. The research pointed out how it is hard on the poor to adhere to the restrictive measures of social isolation or the lockdown. Immediate strategies that minimize the pandemic impact on the livelihood and the socio-economic activities of the poor are suggested.

Obi et al. (2020) examined the socio-economic effect of the lockdown policy on business, transport, and service/hospitality industries in three selected metropolises from three states within the period of relaxation. Using the multistage sampling method, they selected 300 respondents across the three sectors examined. Data obtained via structured questionnaires was analyzed using Multiple Regression Analysis, Coefficient for correlations of independent sample and analysis of variance (ANOVA) for significant impact samples. The findings revealed that the increasing number of lockdown days, interstate travel ban, social distancing, and restriction to essentials services severely affected the level of economic activities within the period under review. In contrast, CPL PSL RSM had negative relationship but significant impact in the model, while BSK and ITR negative non-significant impact in the models due to imposed restriction on internal movement, while the rest variables had positive significant effect on the level of economic activities.

Food security is an important area where the effect of COVID-19 is visible. There are number of research that looked at the relationship between food security and COVID-19. Among them are Smith and Wesselbaum (2020); Statistics Canada et al., (2020); Ahn and Norwood, (2021); Pereira and Oliveira

(2020); Owens et al. (2020); Kent et al. (2020); Mishra (2020); and Niles et al. (2020). Smith and Wesselbaum (2020) investigated the coronavirus disease 2019 (COVID-19)–food-insecurity migration channel and develop a policy agenda. The interaction between COVID-19 and the decline in economic activity will lead to increased food insecurity within and across countries. Higher food insecurity may act as a multiplier for the epidemic due to its negative health effects and increased migration. Research has shown that food insecurity affects within-country and cross-border migration. Besides the mean prevalence rate, the distribution of food insecurity affects the migration decision. The impacts of COVID-19 are particularly strong for people in the lower tail of the food-insecurity distribution. In the current context, the effect of food insecurity therefore could be increased migration, including both rural–urban migration and international migration.

Mishra (2020) discussed the damages to lives caused by COVID-19 and hunger with implications for food insecurity, nutritional status, productivity, education, and wage earnings (based on literature). More importantly, they discuss various complimentary steps to preventing COVID-19 related deaths with steps to preventing deaths related to food insecurity and hunger for the immediate, medium, and long terms. Finally, they provide a concluding paragraph highlighting the need for the Indian government to carefully combine governmental and non-governmental interventions, in reducing India's food insecurity and hunger rates despite the COVID-19 related slowdown. However, in countries with economic problems and low economic capacity, the high prevalence of diseases is related to the high level of poverty. Socioeconomic difficulties are fuel to the fire caused by diseases, especially when the disease is preventable (Rosario et al., 2021).

Other studies on COVID-19 that are worthy of mention are Leddy et al.,(2020)who presented a conceptual model to understand the multiple mechanisms through which the economic and public health crises sparked by COVID-19 might increase food insecurity and contribute to poor health outcomes in the short-and long-term; Bodrud-Doza et al. (2020)who studied the public perception of socioeconomic crisis and human stress in resource-limited settings of Bangladesh during the COVID-19 outbreak; Cohen (2020)who argued that the coronavirus and COVID-19 undermine security and the efforts of movers to make informed decisions concerning their sojourns; Wolfson and Leung (2020)that examined the early effects of the COVID-19 pandemic among low-income adults in the US as social distancing measures began to be implemented; Kent et al. (2020) described the prevalence and socio-demographic associations of food insecurity in Tasmania, Australia, during the COVID-19 pandemic; Bodrud-Doza et al. (2020)that conducted a perception-based analysis to get the idea of the

peoples' psychosocial, socio-economic crisis, and possible environmental crisis amidst the COVID-19 pandemic in Bangladesh; and Binh Dao et al. (2020) provided an overview and analysis of the unprecedented impacts of the COVID-19 pandemic outbreak on Vietnam's economy.

Insecurity and Socioeconomic Development

While the links between insecurity and development are complex, there is little doubt that insecurity acts as a development disabler. In the 21st century, insecurity take many forms, from large and small wars to inter-communal political violence, banditry, kidnapping, criminal, gang and economically-motivated violence, and inter-personal or gender-based violence (Eneji & Agri, 2020). Each has its particular impact on socioeconomic development; together they add up to a major obstacle to achieving the sustainable development goals (SDG) agenda, which highlights the negative impact of insecurity on development, insecurity represents development in reverse," generating costs that adversely affect countries and communities for decades (Eneji & Agri, 2020; Ewetan & Urhie, 2014).

On the impact of insecurity on the economy, Arisukwu (2017) pointed out that the productive aspect of most manufacturing business depends largely on the availability and regular supply of raw materials for production. Insecurity has cut off the supply of such raw materials hence, jeopardizing production activities. Besides this, insecurity affects marketing of finished product as there is a continuous exodus from areas of insecurity. There is also an increase in security spending as most business organizations operating in Nigeria spend a lot in maintaining private security outfits.

In the case of Nigeria, there is also evidence of some businesspeople and manufacturing companies having to relocate particularly from the North in recent times to other peaceful parts of the country (Nwagboso,2012). Many of the Igbo and Yoruba from Southern Nigeria who are engaged in various businesses in Northern Nigeria have had to return to their home states to avoid the violence orchestrated by the terrorist group Boko Haram (Suleiman, 2012). Thus the Boko Haram insurgency which begun in Maiduguri, Borno State, in 2009, has badly affected the economy of the North as major consumer goods and the companies which produce these consumer goods have withdrawn from the region (Eneji & Agri, 2020; Arisukwu, 2017).

Security is crucial for sustainable development and in the absence of it, economic growth and development cannot be sustained as it destroys economic, human and social capital (Purity & Anigbuogu, 2019). Under conditions of peace and security, people and government can direct their efforts and resources towards improving human life. Insecurity is a threat to sustainable development globally and it is a bane to economic growth and development and has simultaneously frustrated and undermined the dreams

and aspirations of great dynamites owing to its obvious negative consequences (Purity & Anigbuogu, 2019). There are three components of sustainable development: economic development, social development and environmental protection. Sustainable development ensures a developed world with secured and healthy environment for all, human beings, animals and plants.

Sustainable development is only achievable when social, economic, political, and environmental sustainability elements in Nigeria are stable, secured, viable and equitable (Ndubuisi-Okolo & Anekwe, 2018). In Nigeria, government at all levels from the federal, states, and local governments have not fared well in the provision of public goods such as infrastructure, health, education, employment, and security despite the enormous oil revenues accruing into their coffers. Many people provide all the services that otherwise would have been provided by the government including security. Monies are allocated to the various tiers of government for the development of their areas, but it is diverted by those in position of authority into their private purse. Gwom (2011) opines that kidnapping and terrorism are signs and consequences that formal authority is ineffectual and checks and balances in governance are not working. Despite stupendous wealth in the country, majority of the youths are not gainfully employed while some lack the requisite skills to acquire a befitting job

According to Huizar et al. (2021), Food insecurity, malnutrition and obesity, independently, represent three of the most complex conditions threatening the livelihoods of populations in nearly every country, making them leading causes of poor health, globally. Food insecurity is defined as a limitation in the accessibility and/or the lack of resources (e.g., income, transportation, skills, etc.) for safe and nutritious food to support normal growth, affects more than a quarter (26.4%) of the world's population. The outbreak of the COVID-19 pandemic has been a proximate cause of a transcontinental food emergency, with impending threats to the food environment and nutrition, which is expected to be severe in the most vulnerable populations (Huizar et al., 2021).

MATERIALS AND METHODS

This study adopted a survey research design which was designed to illustrate a cross-sectional study that apply a minimal degree of interference in the study. The population of the study comprises of all adults 18 years and above in all the 36 states of the federation and the FCT, Abuja. The sample size for the study was determined using the Cochran's formula, which is considered especially appropriate in situations with large populations. The formula is

given as: $n_0 = \frac{Z^2 pq}{e^2}$. There is the desired level of

precision (i.e. the margin of error, which is 5%), p is the (estimated) proportion of the population which

has the attribute in question, which is assumed to be 50%, and $q = 1 - p$ gives 50%. Thus, the minimum sample size to be selected as representative of the population for this study was 385, but an attrition rate of 20% was added to this sample to cater for low response rate, which made the sample size 462 respondents.

The data for the study were collected using 5-Likert structured questionnaire and this implies that the measurement scale is ordinal scale. The questionnaire was designed and administered electronically on Google Forms using emails, WhatsApp, and other social media platforms. The questionnaire has sections for demographic information of the respondents and sections for COVID-19, insecurity, and socioeconomic development. For the validity of the questionnaire, the convergent and discriminant validity methods were employed. The reliability of the questionnaire was conducted to determine its consistency in testing what it was intended to measure using the Cronbach's Alpha, rho-A and Composite reliability estimates. Any instrument with a coefficient of 0.70 and above is valid and dependable. Thus, the instrument is deemed to be capable of producing same result under same condition and circumstance.

The data were analyzed using the Partial Least Square Structural equation model (PLS-SEM) to model the regression analysis and test the hypothesis to determine if there is an effect relationship between each of the independent variables and the dependent variable. Wold (1982) developed the PLS path modeling method, and its algorithm is a sequence of regressions in terms of weight vectors. PLS-SEM is a non-parametric method that does not require that the data meet certain distributional assumptions. However, the parametric significance tests (e.g., as used in regression analyses) cannot be applied to test whether coefficients such as outer weights, outer loadings and path coefficients are significant. Instead, PLS-SEM relies on a nonparametric bootstrap procedure (Efron & Tibshirani, 1986; Davison & Hinkley, 1997) to test the significance of various results such as path coefficients, Cronbach's alpha, HTMT, and R^2 values.

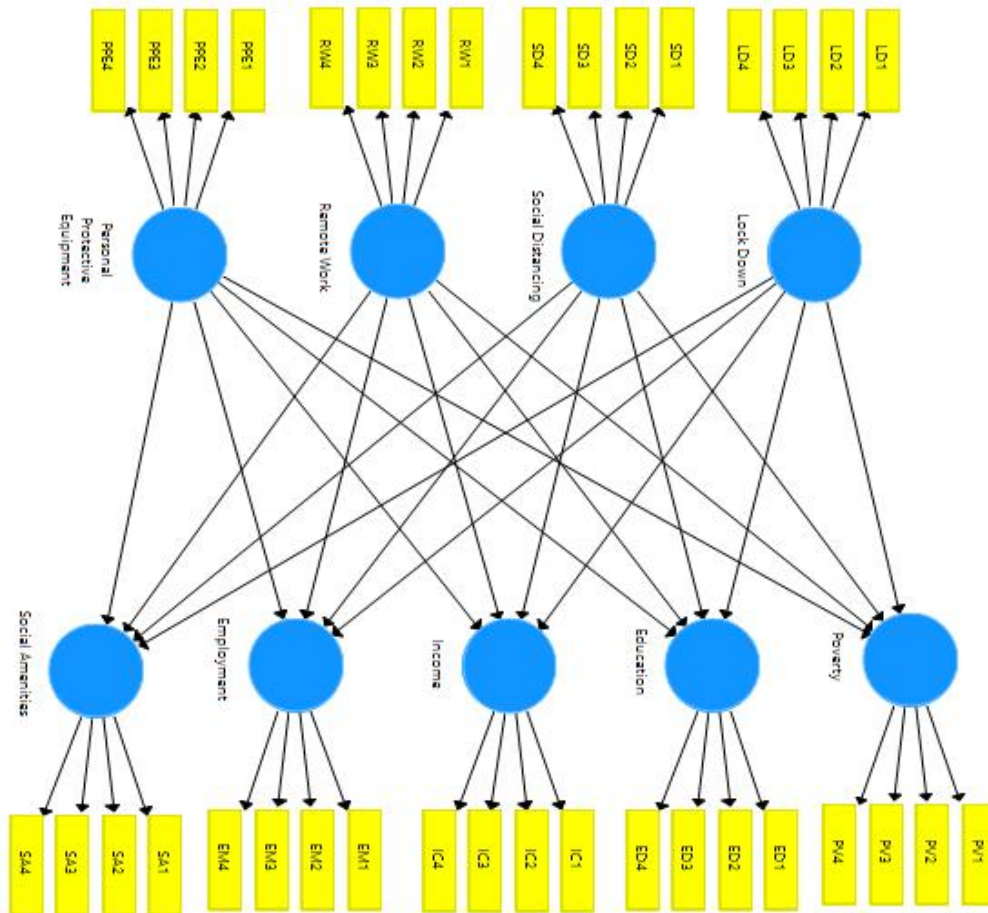
Evaluating PLS-SEM results involves examining the measurement models, which differs for reflective and formative constructs. If the measurement models

meet required criteria, researchers then need to assess the structural model (Hair et al., 2016). The first step in reflective measurement model assessment involves examining the indicator loadings. Loadings above 0.708 are recommended, since they indicate that the construct explains more than 50 percent of the indicator's variance, thus providing acceptable item reliability. The second step is assessing internal consistency reliability, most often using Jöreskog's (1971) composite reliability. Higher values indicate higher levels of reliability. The third step is to assess the convergent validity of each construct measure, using the average variance extracted (AVE). Convergent validity is the extent to which the construct converges to explain the variance of its items. The minimum acceptable AVE is 0.50 or higher, which indicates that the construct explains 50 percent or more of the variance of the items that make up the construct. The fourth step is to assess discriminant validity, which is the extent to which a construct is empirically distinct from other constructs in the structural model. Discriminant validity problems are present when HTMT values are high.

When measurement model assessment is satisfactory, the next step in evaluating PLS-SEM results is assessing the structural model. This was done using the coefficient of determination (R^2), the blindfolding-based cross-validated redundancy measure Q^2 , as well as the statistical significance and relevance of the path coefficients. The model was assessed for out-of-sample predictive power by using the PLS predict procedure (Shmueli et al. 2016). Structural model coefficients for the relationships between the constructs are derived from estimating a series of regression equations. The next step was examining the R^2 value of the endogenous construct(s). The R^2 measure the variance, which is explained in each of the endogenous constructs, and is therefore a measure of the model's explanatory power (Shmueli & Koppius, 2011). The R^2 ranges from 0 to 1, with higher values indicating a greater explanatory power. As a guideline, the R^2 values of 0.75, 0.50, and 0.25 can be considered substantial, moderate, and weak (Henseler et al., 2009; Hair et al., 2011).

The models in SEM are specified using diagrams rather than mathematical models. The Structural Equation Models adopted for this study is as follows.

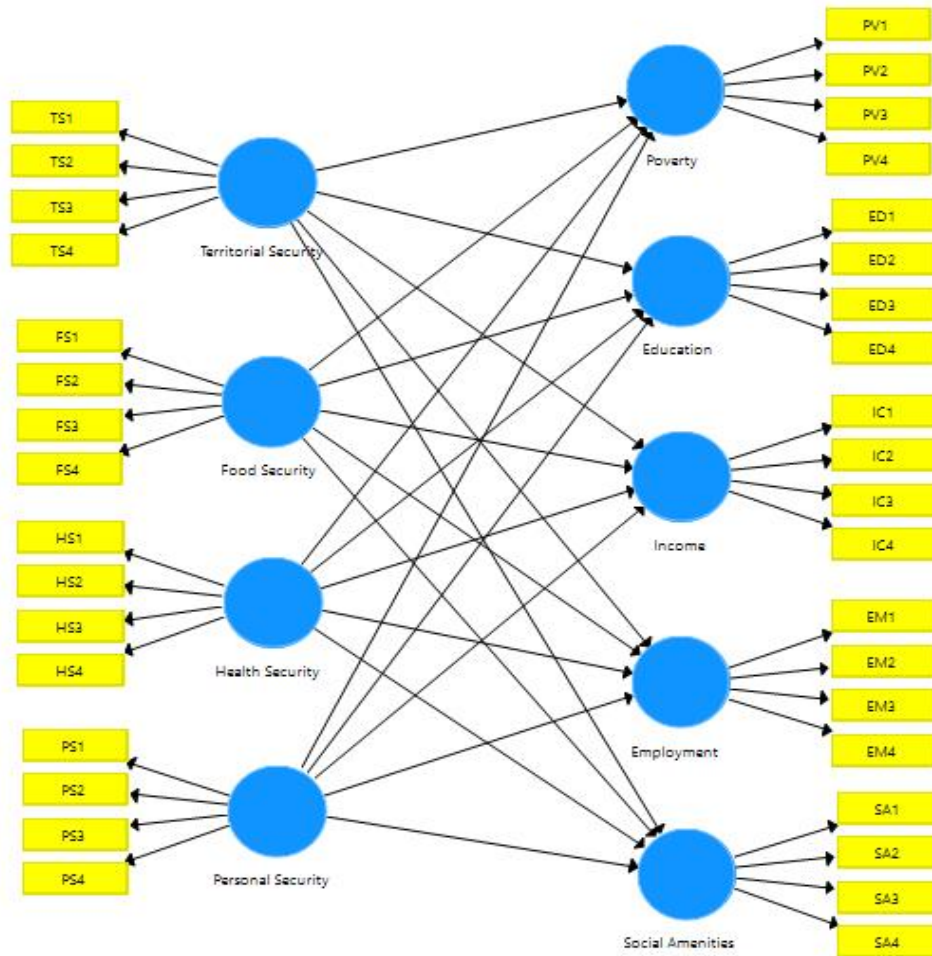
Figure 1: Structural Model for COVID-19 and Socioeconomic Development



Source: Source: Extracted from SmartPLS results, 2021

COVID-19 is measured using lockdown (LD), social distancing (SD), remote work (RW), and personal protective equipment (PPE). The indicators of Socioeconomic development used are poverty, education, income, employment rates, and social amenities. The proxies for insecurity are territorial security (TS), food security (FS), health security (HS), and personal security (PS).

Figure 2: Structural Model for Insecurity and Socioeconomic Development



Source: Source: Extracted from SmartPLS results, 2021

RESULTS AND DISCUSSIONS

Descriptive Statistics

Table 1 shows the descriptive statistics of the measurement variables of the data collected. A total of fifty-two (52) questions were set in the questionnaire. The questionnaire responses were based on 5-point Likert scales of Strongly Disagreed, Disagreed, Undecided, Agreed and Strongly Agreed. These scales were coded as 1, 2, 3, 4, and 5, respectively. The responses were collected electronically through Google forms and as such did not leave room for missing values or outliers since the settings made all questions compulsory to prevent missing values and options were restricted to the range of 1-5 to prevent outliers.

The table shows the mean responses to each of the question for all the respondents, the median, the minimum, the maximum, and the standard deviation of the responses. The median is the proper measure of the average in this instance because of outliers. Although, from the minimum and maximum values, there is no sign of outliers, but it is still necessary to state that the best measure of average for an ordinal response is median.

Table 1: Summary Statistics of the Measurement Variables

Code	Measurement Items	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
LD1	All Nigerians to stay at their homes and isolate	3.013	3	1	5	1.574	-1.565	-0.005
LD2	COVID-19 Pandemic palliatives were distributed to all Nigerians	1.834	1	1	5	1.359	0.686	1.477
LD3	The lock down in different states were frequently relaxed	3.423	4	1	5	1.193	-0.893	-0.291
LD4	Curfews were enforced to ensure people stayed at home in all parts of the country	3.134	3	1	5	1.414	-1.327	-0.018
SD1	Spiritual gatherings were totally banned in all parts of the country	3.28	3	1	5	1.455	-1.369	-0.224
SD2	Social gatherings were totally banned in all parts of the country	3.239	3	1	5	1.436	-1.339	-0.195
SD3	People were mandated to avoid physical contact	3.864	4	1	5	1.258	-0.449	-0.876
SD4	Essential gatherings had strict population control measures	3.597	4	1	5	1.356	-0.925	-0.587
RW1	Many work opportunities were created for majority of Nigerians	2.378	2	1	5	1.457	-0.932	0.687
RW2	Many Nigerians had to leave their jobs voluntarily	2.526	2	1	5	1.315	-0.795	0.549
RW3	Most people with jobs had to work from home	3.65	4	1	5	1.34	-0.997	-0.578
RW4	Essential service workers also had to work from home	2.383	2	1	5	1.258	-0.798	0.545
PPE1	All Nigerians were mandated to use personal protective equipment	3.718	4	1	5	1.423	-0.98	-0.703
PPE2	The COVID-19 Pandemic protective equipment were available to all Nigerians	2.081	2	1	5	1.361	-0.046	1.135
PPE3	The COVID-19 Pandemic protective equipment were affordable for all Nigerians	2.083	2	1	5	1.284	-0.38	0.948
PPE4	The COVID-19 personal protective equipment had no factory flaws	2.534	3	1	5	1.128	-0.593	0.312
TS1	There are issues of armed militants controlling territories within Nigeria	3.937	4	1	5	1.251	-0.352	-0.919
TS2	The security agencies have been grossly unable to curtail insecurity	3.945	4	1	5	1.254	-0.242	-0.986
TS3	Informal groups have sprung up in most communities for self-security	3.98	4	1	5	1.181	0.175	-1.084
TS4	Most perpetrators of crime in the country do not face the punishment by law	4.191	5	1	5	1.191	1.015	-1.451
PS1	There have been cases of kidnapping and banditry in most parts of Nigeria	4.433	5	1	5	1.174	3.226	-2.129
PS2	There have been more occurrences of inter-ethnic and religious conflicts	3.856	4	1	5	1.323	-0.315	-0.946
PS3	Armed robberies are still a major issue in most parts of the country	3.798	4	1	5	1.248	-0.345	-0.84
PS4	Farmers-Herders' crises have been incessant in most parts of the country	4.048	5	1	5	1.276	0.053	-1.142
FS1	Food production in the country is consistent	2.257	2	1	5	1.269	-0.6	0.717
FS2	The country produces required quantity of food for National consumption	2.204	2	1	5	1.25	-0.563	0.758

FS3	There have been no issues of food shortage anywhere in the country	1.98	1	1	5	1.328	-0.065	1.145
FS4	All food produced in the country meet globally acceptable standard of quality	2.179	2	1	5	1.205	-0.287	0.789
HS1	There are adequate health care centers	2.028	2	1	5	1.226	0.02	1.034
HS2	There are adequate health care equipment and facilities	1.887	1	1	5	1.274	0.465	1.323
HS3	There are adequate health care personnel	2.154	2	1	5	1.235	-0.155	0.945
HS4	Available health care personnel are well trained and experienced	2.489	2	1	5	1.121	-0.539	0.437
PV1	Majority of Nigerians cannot afford proper housing	3.997	5	1	5	1.424	-0.09	-1.193
PV2	Majority of Nigerians cannot afford good food consistently	3.947	4	1	5	1.36	0.08	-1.19
PV3	Many people in Nigeria cannot afford good clothes to properly cover their bodies	3.501	4	1	5	1.285	-1.045	-0.389
PV4	The average poverty rate has been on an exponential increase	4.071	5	1	5	1.242	0.308	-1.236
ED1	Education in Nigeria is available to all and affordable by all	1.912	1	1	5	1.233	0.474	1.244
ED2	There are inadequate public schools in the country for the children of Nigeria	3.416	4	1	5	1.438	-1.276	-0.371
ED3	There are inadequate well-trained teachers to meet the needs of the children	3.534	4	1	5	1.323	-0.996	-0.48
ED4	The curriculum for primary and secondary schools is sufficient	2.599	2	1	5	1.257	-0.87	0.392
IC1	The average income of households has reduced greatly	4.025	5	1	5	1.335	0.061	-1.193
IC2	Many businesses have become bankrupt	3.884	4	1	5	1.332	-0.4	-0.954
IC3	Personal income for many individuals has reduced	4.078	5	1	5	1.278	0.442	-1.295
IC4	Sales income for many businesses has reduced greatly	3.869	4	1	5	1.298	-0.345	-0.927
EM1	There are inadequate jobs available to eligible people in the country	4.06	5	1	5	1.391	0.243	-1.308
EM2	Unemployment rate in the country has significantly increased	4.224	5	1	5	1.321	1.353	-1.668
EM3	Majority of workers in Nigeria are not satisfied with their jobs	4.093	5	1	5	1.273	0.702	-1.366
EM4	There are no plans in motion for more job creation in the country	3.622	4	1	5	1.361	-0.836	-0.611
SA1	Social amenities in Nigeria have been in deterioration	4.101	5	1	5	1.276	0.519	-1.323
SA2	Public assistance from government has been grossly inadequate	3.952	4	1	5	1.209	-0.129	-0.982
SA3	Public facilities are available for free use to all Nigerians	2.234	2	1	5	1.392	-0.504	0.897
SA4	There are still many social amenity projects uncompleted	4.02	5	1	5	1.266	0.226	-1.183

Source: Extracted SmartPLS results, 2021

Indicator Reliability

The indicator loadings should be larger than 0.7 to ensure indicator reliability. From table 2, all the indicators are larger than 0.7 indicating that the construct explains more than 50 percent of the indicator's variance, thus providing acceptable item reliability.

Table 2: Reliability of the Indicators

Items	Loadings	P Values
ED1 <- Education	-0.816	0.046
ED2 <- Education	0.594	0.036
ED3 <- Education	0.729	0.040
ED4 <- Education	-0.479	0.074
EM1 <- Employment	0.898	0.000
EM2 <- Employment	0.912	0.000
EM3 <- Employment	0.869	0.000
EM4 <- Employment	0.725	0.000
IC1 <- Income	0.853	0.000
IC2 <- Income	0.898	0.000
IC3 <- Income	0.944	0.000
IC4 <- Income	0.915	0.000
PV1 <- Poverty	0.940	0.000
PV2 <- Poverty	0.937	0.000
PV3 <- Poverty	0.777	0.000
PV4 <- Poverty	0.833	0.000
SA1 <- Social Amenities	0.863	0.000
SA2 <- Social Amenities	0.793	0.000
SA3 <- Social Amenities	-0.707	0.000
SA4 <- Social Amenities	0.588	0.000
RW1 <- Remote Work	0.834	0.000
RW2 <- Remote Work	0.551	0.000
RW3 <- Remote Work	-0.401	0.003
RW4 <- Remote Work	0.387	0.001
LD1 <- Lock Down	-0.118	0.341
LD2 <- Lock Down	0.925	0.000
LD3 <- Lock Down	-0.341	0.002
LD4 <- Lock Down	-0.399	0.000
PPE1 <- Personal Protective Equipment	-0.394	0.000
PPE2 <- Personal Protective Equipment	0.880	0.000
PPE3 <- Personal Protective Equipment	0.847	0.000
PPE4 <- Personal Protective Equipment	0.437	0.000
SD1 <- Social Distancing	0.690	0.000
SD2 <- Social Distancing	0.789	0.000
SD3 <- Social Distancing	0.845	0.000
SD4 <- Social Distancing	0.745	0.000
FS1 <- Food Security	0.776	0.000
FS2 <- Food Security	0.788	0.000
FS3 <- Food Security	0.852	0.000
FS4 <- Food Security	0.780	0.000

HS1 <- Health Security	0.925	0.000
HS2 <- Health Security	0.944	0.000
HS3 <- Health Security	0.903	0.000
HS4 <- Health Security	0.623	0.000
PS1 <- Personal Security	0.901	0.000
PS2 <- Personal Security	0.730	0.000
PS3 <- Personal Security	0.835	0.000
PS4 <- Personal Security	0.911	0.000
TS1 <- Territorial Security	0.761	0.000
TS2 <- Territorial Security	0.799	0.000
TS3 <- Territorial Security	0.851	0.000
TS4 <- Territorial Security	0.830	0.000

Source: Extracted from SmartPLS results, 2021

Construct Reliability

To establish internal consistency reliability of the construct, Cronbach's alpha and composite reliability (CR) should be higher than the threshold of 0.7. It is clear from table 3 that most of the latent indicators are dependable since their values are higher than the threshold value of 0.7. As an alternative to Cronbach's alpha and composite reliability, Dijkstra and Henseler (2015) proposed rho_A as an exact measure of construct reliability, which usually lies between Cronbach's alpha and the composite reliability. Hence, rho_A may represent a good compromise if one assumes that the factor model is correct.

Convergent Validity

Convergent validity is the extent to which the construct converges to explain the variance of its items. To assess convergent validity, the average variance extracted (AVE) should be larger than 0.5. In table 3, most of the construct's value of the average variance extracted AVE are larger than 0.5 which shows that our constructs satisfied the condition of convergent validity. It also indicates that all the construct explains 50 percent or more of the variance of the items that make up the construct.

Table 3: Construct Reliability and Validity of the indicators

Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Education	0.114	0.677	0.004	0.448
Employment	0.876	0.903	0.915	0.731
Income	0.924	0.931	0.946	0.815
Poverty	0.898	0.924	0.928	0.765
Social Amenities	0.265	0.770	0.585	0.558
Lock Down	0.011	0.392	0.002	0.286
Personal Protective Equipment	0.436	0.689	0.592	0.459
Remote Work	0.376	0.354	0.412	0.328
Social Distancing	0.776	0.816	0.852	0.592
Food Security	0.814	0.842	0.876	0.639
Health Security	0.877	0.936	0.917	0.738
Personal Security	0.868	0.898	0.910	0.718
Territorial Security	0.831	0.858	0.885	0.658

Source: Extracted from SmartPLS results, 2021

Discriminant Validity

Discriminant validity is the extent to which a construct is empirically distinct from other constructs in the structural model. There are many traditional methods for discriminant validity assessment, such as cross loadings and the Fornell-Larcker criterion (Fornell & Larcker, 1981), but researchers are advised to apply the Heterotrait-Monotrait (HTMT) criterion (Henseler et al., 2014). This is because traditional methods fail to indicate a lack of discriminant validity, even when two constructs are perfectly correlated, rendering this criterion's use ineffective for empirical research. For this thesis, table 4 shows the HTMT criterion for all the latent constructs. The discriminant validity of the construct is valid if the upper bound of the 95% confidence interval of HTMT is lower than 0.9. From table 4, this condition is satisfied.

Table 4: HTMT Criterion for COVID-19 and Socioeconomic Development

	Education	Employment	Income	Lock Down	Personal Protective Equipment	Poverty	Remote Work	Social Amenities
Education	0.833							
Employment	0.799	0.841						
Income	0.568	0.810	0.821					
Lock Down	1.045	0.830	0.718	0.811				
Personal Protective Equipment	0.789	0.596	0.604	1.247	0.813			
Poverty	0.751	0.713	0.703	0.716	0.584	0.821		
Remote Work	0.771	0.447	0.545	1.457	0.805	0.512	0.772	
Social Amenities	0.829	0.990	0.812	0.881	0.638	0.711	0.552	0.611
Social Distancing	0.480	0.281	0.263	1.229	0.548	0.216	0.574	0.408

Source: Extracted from SmartPLS results, 2021

Table 5: HTMT Criterion for Insecurity and Socioeconomic Development

	Education	Employment	Food Security	Health Security	Income	Personal Security	Poverty	Social Amenities
Education	0.833							
Employment	0.799	0.841						
Food Security	0.718	0.529	0.821					
Health Security	0.721	0.545	0.809	0.811				

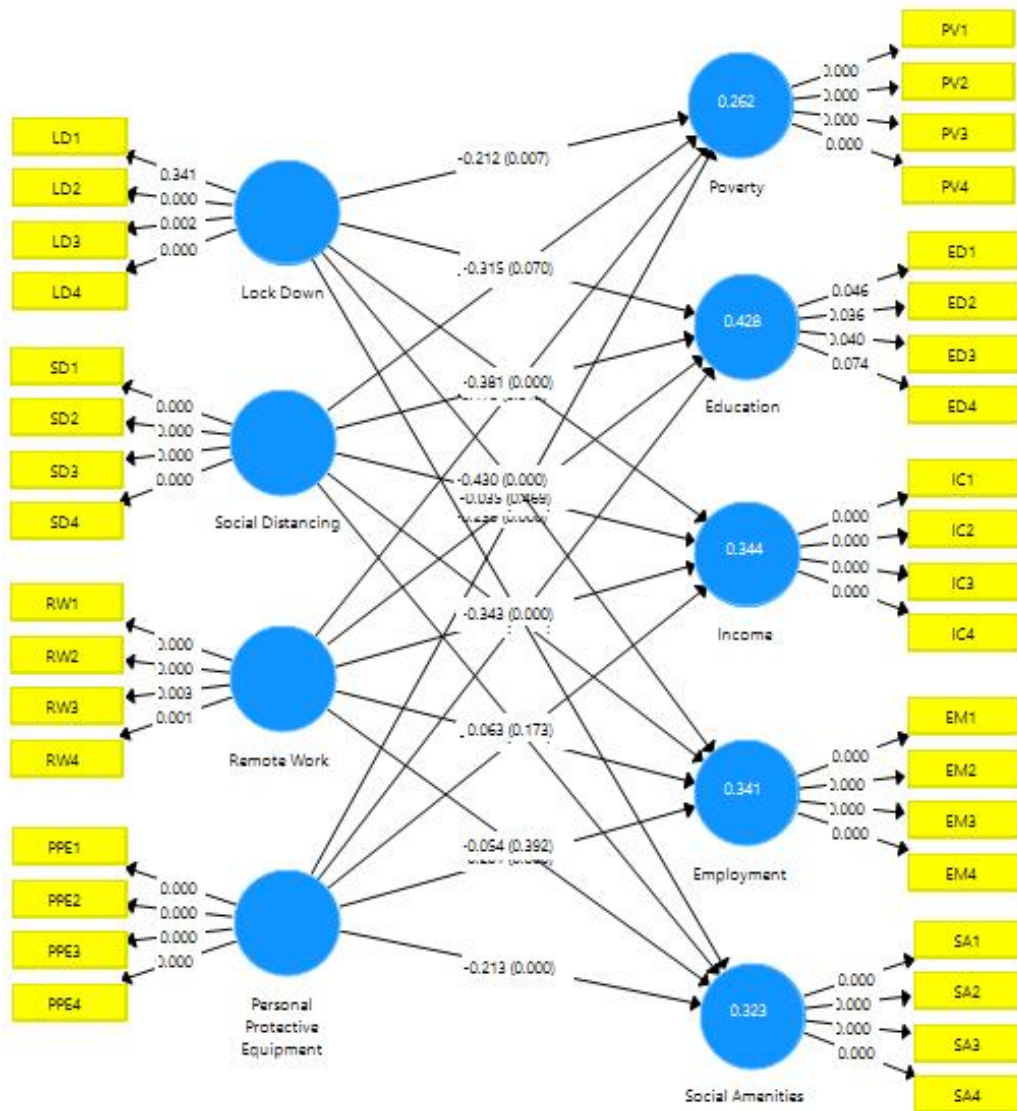
Income	0.568	0.810	0.515	0.451	0.813			
Personal Security	0.675	0.727	0.655	0.623	0.661	0.821		
Poverty	0.751	0.713	0.583	0.515	0.703	0.581	0.772	
Social Amenities	0.829	0.990	0.683	0.638	0.812	0.790	0.711	0.611
Territorial Security	0.573	0.545	0.755	0.549	0.476	0.803	0.533	0.692

Source: Extracted from SmartPLS results, 2021

Assessment of the Structural Model

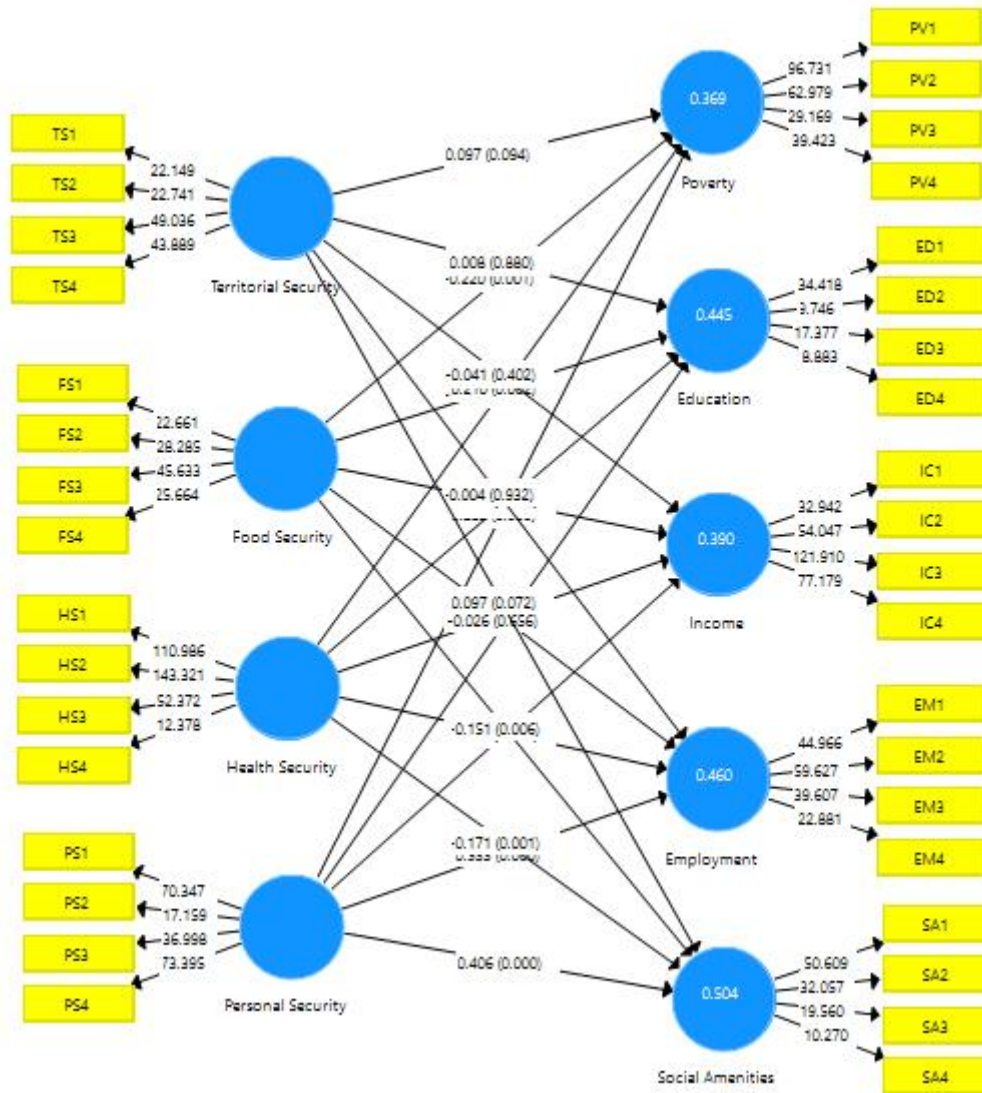
To assess the structural model, Hair et al. (2013) suggested looking at the R², beta, and corresponding t-values via bootstrapping procedure with a resample of 5000. They also suggested that, in addition to these basic measures, researchers should also report the predictive relevance (Q²) and the effect sizes (f²). Figure 3 showed the structural model results, the loadings and the R² values for COVID-19 and socioeconomic development in Nigeria, while Figure 4 showed the values for insecurity and socioeconomic development in Nigeria. The resample of bootstrapping procedure was done using 5000.

Fig 3: COVID-19 and Socioeconomic Development in Nigeria



Source: Extracted from SmartPLS results, 2021

Fig 4: Insecurity and Socioeconomic Development in Nigeria



Source: Extracted from SmartPLS results, 2021

Test of Hypotheses

Table 6 and 7 show the path coefficients of the regression results of the study. The results are displayed in two separate tables for impact of COVID-19 on socioeconomic development and impact of insecurity on socioeconomic development in Nigeria.

Table 6: Path Coefficients for COVID-19 and Socioeconomic Development

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Lock Down -> Education	-0.315	-0.271	0.174	1.814	0.070
Lock Down -> Employment	-0.430	-0.429	0.075	5.711	0.000
Lock Down -> Income	-0.381	-0.378	0.078	4.872	0.000
Lock Down -> Poverty	-0.212	-0.215	0.079	2.687	0.007
Lock Down -> Social Amenities	-0.343	-0.344	0.073	4.703	0.000
PPE -> Education	-0.239	-0.206	0.132	1.811	0.070
PPE -> Employment	-0.201	-0.200	0.055	3.677	0.000
PPE -> Income	-0.187	-0.186	0.062	3.005	0.003
PPE -> Poverty	-0.239	-0.236	0.063	3.765	0.000
PPE -> Social Amenities	-0.213	-0.211	0.056	3.775	0.000
Remote Work -> Education	-0.153	-0.137	0.090	1.704	0.088
Remote Work -> Employment	-0.031	-0.037	0.069	0.453	0.651
Remote Work -> Income	-0.127	-0.130	0.068	1.870	0.062
Remote Work -> Poverty	-0.175	-0.177	0.070	2.490	0.013
Remote Work -> Social Amenities	-0.054	-0.058	0.063	0.855	0.392
Social Distancing -> Education	0.102	0.094	0.064	1.586	0.113
Social Distancing -> Employment	-0.024	-0.023	0.047	0.516	0.606
Social Distancing -> Income	-0.035	-0.031	0.048	0.725	0.469
Social Distancing -> Poverty	-0.037	-0.034	0.049	0.752	0.452
Social Distancing -> Social Amenities	0.063	0.065	0.046	1.364	0.173

Source: *Extracted from SmartPLS results, 2021*

The results above show that all components of the COVID-19 measured by the study had negative effects on components of socio-economic development measured by the study except of social distancing that had a positive effect on education and social amenities although the positive effects were significant. This is consistent with the findings of Ali et al. (2020); Lin et al. (2020); Idris (2020); Martin et al. (2020); and Fagbemi (2021). But Biswa et al. (2021) has a contradictory finding to that of this study.

As for the negative effects, the ones that were statistically significant with p-values less than 0.05 were the effects between Lock Down and Employment, Lock Down and Income, Lock Down and Poverty, Lock Down and Social Amenities, PPE and Employment, PPE and Income, PPE and Poverty, PPE and Social Amenities, and Remote Work and Poverty. The results imply that majority of the COVID-19 variables (protocols) tested by the study had negative effects on socioeconomic development in Nigeria. The findings indicate that the negative impact that exist between the variables implies that if the independent variable is continued, there will be a significant corresponding decrease in dependent variables studied (socioeconomic development components).

Table 7: Path Coefficients for Insecurity and Socioeconomic Development

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Food Security -> Education	0.210	0.209	0.066	3.167	0.002
Food Security -> Employment	-0.026	-0.023	0.059	0.446	0.656
Food Security -> Income	-0.145	-0.144	0.059	2.457	0.014
Food Security -> Poverty	-0.220	-0.221	0.069	3.182	0.001
Food Security -> Social Amenities	-0.151	-0.148	0.055	2.742	0.006
Health Security -> Education	0.271	0.274	0.070	3.888	0.000
Health Security -> Employment	-0.195	-0.198	0.050	3.883	0.000
Health Security -> Income	-0.071	-0.073	0.054	1.310	0.190

Health Security -> Poverty	-0.110	-0.112	0.070	1.569	0.117
Health Security -> Social Amenities	-0.171	-0.175	0.051	3.373	0.001
Personal Security -> Education	-0.299	-0.296	0.061	4.912	0.000
Personal Security -> Employment	0.533	0.533	0.052	10.280	0.000
Personal Security -> Income	0.511	0.508	0.053	9.602	0.000
Personal Security -> Poverty	0.282	0.281	0.069	4.086	0.000
Personal Security -> Social Amenities	0.406	0.406	0.055	7.382	0.000
Territorial Security -> Education	0.008	0.005	0.053	0.151	0.880
Territorial Security -> Employment	-0.004	-0.001	0.044	0.086	0.932
Territorial Security -> Income	-0.041	-0.038	0.049	0.839	0.402
Territorial Security -> Poverty	0.097	0.097	0.058	1.673	0.094
Territorial Security -> Social Amenities	0.097	0.099	0.054	1.800	0.072

Source: Extracted from SmartPLS results, 2021

Table 7 show that there were positive and significant effects of Food Security on Education, and Personal Security on Social Amenities, Personal Security on Employment, Personal Security on Income, Personal Security on Poverty, and Personal Security on Social Amenities with p-values less than 0.05. However, there were positive but insignificant effects of Territorial Security on Education, Territorial Security on Poverty and Territorial Security on Social Amenities.

On the other hand, the study found negative and significant effects of Food Security on Income, Food Security on Poverty, Food Security on Social Amenities, Health Security on Employment, Health Security on Social Amenities, and Personal Security on Education with p-values less than 0.05. This implies that majority of the negative effects on socioeconomic development are from food and health security. However, there were negative and insignificant effects of Food Security on Employment, Health Security on Income, Health Security on Poverty, Territorial Security on Employment, Territorial Security on Income. The findings give credence to that of Arisukwu (2017); Purity and Anigbuogu (2019); and Huizar et al. (2020).

Table 8: R² and Predictive Relevance of the Model

	R ²	Q ² _Predict	P-Value
Education	0.445	0.408	0.000
Employment	0.460	0.314	0.000
Income	0.390	0.318	0.000
Poverty	0.369	0.233	0.000
Social Amenities	0.504	0.294	0.000

Source: Extracted from SmartPLS results, 2021

The predictive sample reuse technique (Q²) can also effectively show predictive relevance (Chin et al., 2008). Based on the blindfolding procedure, Q² shows how well data can be reconstructed empirically using the model and the PLS parameters. In this study, Q² was obtained using cross-validated redundancy procedures. As a guideline, Q² values should be larger than zero for a specific endogenous construct to indicate predictive accuracy of the structural model for that construct. As a rule of thumb, Q² values higher than 0, 0.25, and 0.5 depict small, medium, and large predictive relevance of the PLS-path model, whereas a Q² less than zero means the model lacks predictive relevance. As shown in table 8, Q² for the dependent variables indicate acceptable predictive relevance.

CONCLUSION AND WAY FORWARD

This study sought to assess the effect of COVID-19 and insecurity on socioeconomic development in Nigeria. The study made use of partial least squares structural equation modelling (PLS-SEM) in SmartPLS. From the findings, the study concludes that COVID-19 and insecurity had negative and significant impact on socioeconomic development in Nigeria. However, the study further concludes that food and health security are the major elements of insecurity that significantly affect most of the socioeconomic development indices like Poverty, Social Amenities, Employment and Education. Furthermore, the study concludes that the COVID-19 situation mostly had a negative and significant impact on socioeconomic development in Nigeria.

The study therefore recommends that following way forward:

- i. That the government should not contemplate another lockdown but intensify sensitization efforts regarding usage PPE and promoting social distancing, as well as remote work where possible. This should contribute immensely to reducing poverty, improving personal income as people would be gainfully engaged, reduce layoff by employers, and improve access to education.
- ii. Government should be sincere in their fight against insecurity. This is because it has driven people from farms, affected health facilities, make our borders porous, and people feeling insecure all the time.

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