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Health Status and Household Consumption during COVID-19 Pandemic: A Case of Rural Communities in Delta State, Nigeria.

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Abstract

With the global tremors orchestrated by the emerging and ravaging COVID-19 pandemic, consumption level at the macroeconomic level has been greatly altered as seen by huge government expenditure and financial indulgences following the easing of lockdowns, although much is yet to be done at the microeconomic level especially as regards households. This study seeks to examine the impact of health status on household consumption during the pandemic. Using data of rural communities in Delta State Nigeria, the specified probit model showed that ill-health has drastically reduced the consumption level of households, thus re-emphasizing the need to design and implement households-oriented economic policies to cushion the effects of the pandemic.

Keywords: Covid, Household, Health, Pandemic, Consumption.

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1. Introduction

The emerging COVID-19 has exerted tremendous impact on performance of economies around the globe. With lockdowns of economic activities and clampdowns on human and vehicular movement as well as resulting health issues, COVID-19 has affected the world's economic and social sphere unprecedentedly. Advanced and emerging economies are yet to recover from the ravaging effects of the pandemic.

In developing and under-developing economies, the effects of the COVID-19 pandemic are even more severe (Efayena & Olele, 2020). Owing to volatile economic environment, the pandemic has revealed the vulnerabilities caused by years of economic policy misplacements in these economies. Even with the easing of COVID-19-related restrictions on human and economic activities, there has been a decline in the economic trajectory of countries due to uncertainties which has discouraged forward-looking decisions. There are disruptions in the supply chains for exports. For resource-endowed countries such as Nigeria, the pandemic has resulted in limited markets for exports due to decline in global demand. This has culminated in increased sourcing of financial resources, resulting

in huge debt burden. For a certainty, there are economic uncertainties and disruptions worldwide orchestrated by the pandemic just like previous disease outbreaks (see Efayena, 2016), although much is still left to appraise when it comes to the impact of the pandemic at the household level.

Several empirical studies have been carried out on the impact of COVID-19 on household consumption. For instance, Liu et. al. (2020) examined the impact of the pandemic on household consumption pattern in China using the data of the China Household Finance Survey. The study found that the significant decline in household consumption was more prevalent in urban centres during the outbreak of the pandemic. Chen et. al. (2020) employed data of daily transactions among Chinese households and also found a severe decline in consumption, with travelling and entertainment subsectors affected the most. Chang and Meyerhoefer (2020) investigated how the demand for food online was affected under COVID-19 in Taiwan and found that increase in COVID-19 cases is accompanied by corresponding increase in food demand. This was possibly caused by inability of family members to provide food and other essentials for the sick. Other studies such as Holland (2020), Coibion et. al. (2020), Roe et. al. (2020), Baker et. al. (2020), Chhetri (2020), Martin et. al. (2020), among others, affirmed the negative effects of the pandemic on household consumption with immediate and long-term implications for the households.

In addition to losses incurred in terms of human resources, there have been substantial macroeconomic disequilibrium brought about by the pandemic. To curb the transmission/spread of the virus, Nigeria, along with other nations, found it necessary to shut down its borders, impose vehicular and flight restrictions to and from the country, and enforce complete lockdowns in the various states. These actions have not only disrupted supply chains across various industries and constrained human mobility but have also led to considerable hardships for a majority of households. For instance, primarily driven by the pandemic, both unemployment and underemployment rates in Nigeria surged to 27.1 percent and 28.6 percent, respectively, and the overall economy contracted by 6.1% in the second quarter of 2020 (National Bureau of Statistics, NBS, 2020).

The pandemic further stretched the nation which was still grappling with revenue challenges. The country was predominantly relying on oil as its primary income source and foreign exchange generator. However, the price and quantity of this commodity are subject to fluctuations in the global market due to the pandemic. The sharp drop in oil prices, amounting to a 55 percent decrease from December 2019 to March 2020, represents one of the most severe economic shocks that Nigeria has experienced in its history. This impact is particularly significant given that the oil sector contributes 65 percent to government revenue and 90 percent to total export earnings. By March 18, 2020, the price of crude oil had fallen to just US$29.62 per barrel. It's worth noting that the Federal budget projections for 2020 had estimated oil prices at US$57 per barrel and production at 2.18 million barrels per day. With these plummeting oil prices persisting at this lower level, a staggering 48 percent decline was expected in monthly revenue from oil sales. This could in turn lead to a reduction in fiscal revenue of nearly $10 billion and a decrease in export earnings of $19 billion (UNDP, 2020). These trajectories and other economic factors resulted in about 44.6 million Nigerians, particularly young individuals, lacking access to economic opportunities that could enhance their quality of life. Coupled with sluggish economic growth, exemplified by a significant negative growth of -6.1 percent in the second quarter of 2020, this high unemployment rate can inevitably leads to elevated poverty levels. In 2019, Nigeria's poverty rate stood at 40.1 percent, encompassing 82.9 million individuals categorized as living in extreme poverty (NBS, 2020).

The pandemic also has its toll on rural households in Nigeria. Rural communities have suffered negative consequences due to the pandemic. As an example, the COVID-19 outbreak has revealed significant shortcomings in healthcare systems and the social welfare support available to different rural communities (Okojie, 2022). Rural households were exposed to other communicable and non-communicable diseases as a result of health facilities being overwhelmed with COVID-19 virus cases. In addition, Awa-Samuel et al. (2022) found that residents of rural areas in Nigeria experienced

dire social consequences, including low life expectancy and an uptick in crime rates. The resulting effects were increase in rural households' poverty level and reduced consumption level. The decline in rural households' consumption level stems from basically the partial or in some cases full restrictions on human and vehicular movement. This resulted in households spending primarily on essential goods and services during the pandemic. Another possibly reason for the decline in consumption level is the low expectations of future income, especially for households domiciled in the gig economy (individuals engaged in precarious employment or in the informal sector).

In Nigeria, there is relative paucity in literature on the impact of COVID-19 on households' consumption pattern. Other than some few studies such as those of Onyekwena and Ekeruche (2020) and Kazeem (2020) which focus on households' indicators, the majority of COVID-19- related studies cover economic, social and other macroeconomic variables of the Nigerian economy (Akanni and Gabriel, 2020; Andam et. al, 2020; Ayoade, 2020; Gabriel et al., 2020; Kazeem, 2020; Nnabuife et al., 2020; Onyekwena & Ekeruche, 2020; Otache, 2020; and Ozili, 2020). This is appalling given the toll the pandemic has taken on the Nigerian economy. As at 11th November, 2020, health records have placed confirmed COVID-19 cases at, 64516, with 60737 cases discharged alongside 1162 deaths nationally (Nigeria Centre for Disease Control, NCDC, 2020).

While Nigerians have been adjusting their lifestyle and working culture in response to uncertainties created by the pandemic, households' consumption is expected to be severely affected. This study provides a comprehensive dimension of changes in households' consumption pattern due to the outbreak of the pandemic. After all, there is little knowledge of households' response to the pandemic in terms of consumption pattern. The study seeks to evaluate households' consumption pattern during the COVID-19 pandemic in rural communities of Delta State, Nigeria. This is highly essential since with welfare inequality and wide income gap, residents of rural communities would probably be negatively affected by the pandemic, since a lot are poor and socially-excluded. This paper thus closes the wide gap by utilizing household-level data to capture the effect of the pandemic on consumption patterns in rural communities.

Our study contributes to the plethora of studies bordering household consumption (see Fuster et. al., 2018; Pagel & Vardardottir, 2018; Di Maggio et. al., 2017; Baker & Yannelis, 2017; Johnson et. al., 2006; Agarwal et. al., 2007; among others) as well as create a viable platform for economic policies which will positively affect grassroots' residents since most rural communities possess specific demographic and economic characteristics.

Following the introduction section, the next section evaluated the methods employed in the study. While section 3 discussed the results of the study and section 4 concluded the study by proffering policy options to minimize the ravaging effects of the pandemic on households' consumption pattern.

2. Materials and Methods

2.1 Population and sample of the study

The study is a cross-sectional household survey and the population of the study comprises of the 6863 rural households registered under the 2015 Delta State Rural Health Scheme (RHS). The study utilized 2500 of these rural households across 25 local government areas of Delta State (Aniocha North, Aniocha South, Bomadi, Burutu, Ethiope East, Ethiope West, Ika North East, Ika South, Isoko North, Isoko South, Ndokwa East, Ndokwa West, Okpe, Oshimili North, Oshimili South, Patani, Sapele, Udu, Ughelli North, Ughelli South, Ukwuani, Uvwie, Warri North, Warri South, and Warri South West).

2.2 Study Design and Sampling Procedure

The study employed the multistage sampling technique in selecting the sample. In stage 1, all registered rural communities in the 2015 Delta State RHS across the 25 local government areas were compiled. For equal representation, 10 communities were randomly selected in stage 2. Due to

ethical reasons especially since visitations during the period of collation were still high restricted, we only selected 10 household heads in stage 3. In other words, with low COVID-19 vaccination awareness and acceptance rate, the study only targeted a benchmark of 10 households whose heads have received the first round of vaccination as at the time of the field survey. Thus, the criterion for selection was on the ground of COVID-19 vaccination in order to avoid health crisis for both the field officers and respondents. This was highly essential since the period of administration and collection of data (September and October, 2020) brought the total number of confirmed COVID-19 cases and deaths to 58,848 and 1,112, respectively (Nigeria Centre for Disease Control, 2020) and many individuals were skeptical in granting visitations to their homes due to health reasons. That was exactly the situation in Delta State which was one of the states in with the highest records of COVID-19 cases and death, following Lagos and Kano States. The field survey was carried out when the human and vehicular restrictions were gradually being eased in Delta State. Some of the households were located in waterfront and riverine communities. In addition, ethical considerations, such as minimizing participants' burden and ensuring informed consent, were also considered. The degree of variability was considered moderate given that the population was highly homogenous and a relatively small sample can adequately capture the characteristics.

2.3 Research Instrument

The study utilized a pretested questionnaire to elicit information from the households. The questionnaire was detailed and structured to capture the objective of the study. The instrument was organized into two sections to ensure ease in filling out. The questionnaire contained only the succinct or key items to ensure that they are quickly filled within a short period of time. The first section comprises of sociodemographic characteristics of the households, such as age, marital status, educational status, the gender of the household head, and gender of the respondent. Section 2 contains questions on the key elements of the study such as health status, household income, and underlying health issues. Questions in the instrument were basically closed-ended in nature. The questionnaire was pretested by administering it to 3 households in each of the local government area. The scale reliability coefficient of 0.71 is indicative of internal consistency in the instrument. This highly shows the reliability of the collected data. It should be noted that the instrument contained enclosed ethical issues such as confidentiality of data collected, informed consent, as well as approval to discontinue participation at any time during the field survey.

2.4 Administration of Instrument

In order to administer the questionnaires, trained field research assistants were deployed in data collection. Field research assistants were carefully selected graduate students of the University of Benin, Nigeria. Prior to proceeding to field survey, research assistants were given a 4-day training on the objective of the survey, data collection technique, field survey ethics as well as study location. A field supervisor was assigned to four local government areas to oversee the field research assistants assigned to those locations. The period of data collection spanned from September to October, 2020.

2.5 Model Specification

In this study, we aimed to estimate the health status-household consumption during COVID-19 pandemic among rural communities in Delta State, Nigeria. Given the dichotomous nature of the consumption level, the study adopted a probit model which is a qualitative response model and is based on the cumulative normal probability distribution. Probit model represents a specialized variant of regression analysis that is employed for binomial response variables, where there are only two potential outcomes (positive or negative) or performs regression involving binary outcome variables (Liao, 2014; Aldrich & Nelson, 1984). This method was adopted due to inherent advantages it holds over other estimation techniques. For instance, the probit regression assumes normally distributed

errors. This implies that such models comparatively produce a better fit for normally distributed data, as well as account for possible outliers (Chen & Tsurumi, 2010; Long, 1997). Following Greene (2011) and Cameron and Trivedi (2005), we specified the model below:

$$p_i = \text{prob}\,[Y_i = 1 \mid X] = \int_{-\infty}^{x_i'\beta} (2\pi)^{-\frac{1}{2}} \exp\left(-\frac{t^2}{2}\right) dt = \Phi\,(x_i'\beta) \quad (1)$$

Where p_i is the probability of choosing a particular consumption level by the household and Φ represents the cumulative distribution of a standard normal random variable (Greene, 2011). Y presents the underlying index depicting the difference between the households' consumption levels; X_i is a vector of explanatory variables. The explanatory variables include UHI (underlying health issues), SRH (self-reported health), GEN (gender), MS (marital status), HI (household income), EDU (educational status), and HT (household type).

The interpretation of the association between a particular variable and the probability outcome involves analyzing the marginal effect. This effect quantifies the partial change in the probability associated with the explanatory variables expressed as $P(Yi = 1 \mid X)$, while holding other variables constant. The marginal effect of the X_k variable can be expressed as shown below:

$$\frac{\partial p_i}{\partial x_{ik}} = \phi\,(x_i'\beta)\,\beta_k$$

where ϕ denotes the standard normal variable probability density function.

The maximum likelihood estimation (MLE) technique was adopted to estimate the parameters of the probit model. The objective of MLE is to find the parameter values that maximize the likelihood of the observed data given the model. MLE is highly relevant to the Probit model because it is used to estimate the model parameters, specifically the coefficients associated with predictor variables, by maximizing the likelihood function or its logarithm. It has been established that the MLE performs well even under very weak conditions or when minimal assumptions are met, as well as compute the variance of maximum likelihood estimators using a random sample, even in cases of substantial model misspecification (White, 1982).

2.6 Operationalization of Variables

2.6.1 Dependent variable

The dependent variable household consumption (HC) for the study was the responses to the question, "How would you define your household consumption status over the pandemic period to date? Very good, good, fair, bad or very bad". We combined "very good" and "good" responses into the *"good HC"* category, while "fair", "bad" and "very bad" were categorized as *"poor HC".* This categorization was made to disaggregate the consumption level of households in rural communities during the COVID-19 pandemic. This variable was coded 1 if it is categorized *"poor HC"* and 0 if it is categorized *"good HC".*

This categorization signifies the household's relative economic well-being and standard of living. These categorizations are often used in socioeconomic assessments to understand and quantify the economic condition of households. For instance, a "good HC" status signifies that the household has an income that comfortably covers its basic needs, such as food, housing, healthcare, and education; often have access to safe drinking water, nutritious food, and quality healthcare; typically lives in stable housing conditions, which may include owning or renting a suitable home; and its members generally enjoys a better quality of life with access to a range of goods and services. While a "poor HC" status signifies that the household often has income levels that struggle to meet basic needs, resulting in financial insecurity; faces difficulties in affording necessities like adequate nutrition, safe housing, and healthcare, leading to a lower quality of life; and resides in substandard housing conditions, overcrowding, or housing instability

It's important to note that the categorization of households' consumption as "good HC" or "poor HC" is a simplification of complex socioeconomic realities, with potential limitations or biases. For instance, collapsing multiple consumption categories into just two ("poor" and "good") reduces the granularity of the data. This compression may result in the loss of valuable information about variations in consumption levels, making it harder to detect nuanced patterns. Even within the "poor" and "good" categories, there can be substantial variation in consumption levels. This heterogeneity is masked when using broad categories, potentially leading to incorrect conclusions about the average consumption within each group.

2.6.2 Independent variable

- Self-reported health (SRH)

The main health variable is self-reported health (SRH). This variable is a dummy variable. We constructed a dichotomous variable and categorized into good SRH (0) for "very good" and "good" options; and poor SRH (1) for "fair, "bad" or "very bad" options. In other words, healthy respondents (that is, SRH = 0) are those who self-reported their health to be very good or good, while those adjudged unhealthy (SRH = 1) are those who self-reported their health to be fair, bad or very bad. It should be noted that even though the complexity of categorizing into "healthy" or "unhealthy" strata is beyond the scope of the study, these terms are employed for clarity purpose. It should also be noted that the health status of households can significantly influence their consumption pattern (Onyekwena & Ekeruche, 2020).

Table 1. Definitions of Variables

Variable	Operationalization	Mean value (MV)
HC (Household consumption)	"poor HC" =1; "good HC" = 0	.682
AGE (age)	Age of household head (years)	.431
GEN (gender)	Male = 1; female = 0	.416
EDU (educational status)	University education: education = 1; otherwise = 0.	259
MS (marital status)	Married = 1; otherwise = 0	.795
SRH (self-reported health)	"poor SRH = 1; "good SRH" = 0	.607
UHI (underlying health issues)	Presence = 1; otherwise = 0	.583
HT (household type)	coded 1 for male-headed households; 0 otherwise	.633
HI (household income)	if income is classified as "high" and 0 if income is classified as "low"	.547

Source: Authors' compilation

2.6.3 Control variables

It should be noted that several household characteristics that may affect household consumption were included in our model to avoid omitted variables problems (Li and Chen, 2014). One of the control variables employed in the study is UHI (underlying health issues). This variable is a dummy variable employed to ascertain if the respondent has any underlying health issues. Specifically, the question *Do you have any health conditions such as high blood pressure, diabetes, heart, kidney problems or any other as such?* is designed to elicit such health issues. We are fully aware that such information is a concise and indicative measure of an individual's state of health, and this is well-supported in existing literature (Benítez-Silva et al., 2004; Ferraro, 1980). These also have potential effects on consumption level

(Onyekwena & Ekeruche, 2020) as well as account for heterogeneity in the model. The variable was coded 1 if any household member has underlying health conditions; and 0 otherwise.

We also employed other time-varying individual characteristics such MS (marital status), HI (household income), EDU (educational status), and HT (household type). The gender variable, GEN, was coded 1 for males and 0 for females; marital status (MS) was code 1 for married and 0 otherwise; household income (HI) was coded 1 if income is classified as "high" and 0 if income is classified as "low" (It is also worth stating that this categorization was due to households' bias towards stating their incomes in monetary terms); educational status (HS) was coded 1 has a form of for education and 0 otherwise; and household type (HT) was coded 1 for male-headed households; 0 otherwise.

Table 1 shows a summary of the definitions of the variables alongside their mean values.

3. Results and Discussion

Data from the survey was analyzed using the probit model. Each specified variable in the model was computed for marginal effect, while keeping other variables constant at their sample mean values. The results obtained were presented in Table 2.

Table 2. Results of probit model

Variable	Coefficient	Std. error	Z-statistic	Marginal effects
_Con	-.6307	.8846	-.713	
EDU	-.0926	.0842	-1.099	-.0608
GEN	.3771	.2867	1.315	.2195
HI	.0672**	.3550	1.893	.1077
SRH	-.7107**	.3534	2.011	-.0612
HT	-2.4183*	.6001	-4.030	-.3107
MS	-.8802	.7748	-1.136	-.0249
UHI	-1.3173*	.3711	-3.549	-.4066
Log – likelihood		-71.269	Akaike I.C	.5072
Restricted Log.L		-182.074	Schwarz I.C	.6136
McFadden Pseudo-R^2		.7203	HQIC	.5101
Hosmer – Lemeshow X2		33.521		
Predicted percentage Correction		94.03		

Source: Authors' compilation
Note: (***), (**), (*) denote significance at the 10%, 5%, and 1% level, respectively.

According to the likelihood ratio test, four of the specified variables are statistically significant. A comparison of the McFadden Pseudo R^2 (.7203) and the predicted percentage correction (94.03%) values showed that model has a satisfactory explanatory power. The overall model is statistically significant at the 1% probability level. Following Borooah (2002), that implies that a decrease or increase in significant variable in the model will correspondingly increase or decrease the likelihood of household consumption. The predicted percentage correction statistic of 94.03 percent shows that the model has a high prediction power.

The results showed that marital status, education status and gender type did not significantly influence the consumption pattern of the sampled households during the COVID-19 period. Ceteris paribus, the educational level will impact households' consumption, although it was not surprising that the result did not present a statistically significant relationship between education level and household consumption. This may imply that while education is an important determinant of long-term economic outcomes, it may not have played a significant role in shaping household consumption patterns during the acute phase of the COVID-19 pandemic due to the overriding influence of immediate economic shocks and shifts in consumption behaviour.

The negative and statistically significant coefficients of household income (HI) and health status (SRH) and underlying health issues (UHI) imply that poor health and underlying health issues can potentially result in a decline in household consumption. Specifically, health status (SRH) and underlying health issues will likely reduce household consumption by 6.1 percent and 40.7 percent, respectively. This corroborates previous empirical studies. For instance, based on difference-in-differences estimation, Chen et al. (2020) found that due to the health pandemic, daily consumption plummeted by 42 percent in 214 Chinese cities in late January 2020. The study of Liu et al. (2020) which also investigated the impact of COVID-19 on Chinese household consumption also found that there was significant decline in household consumption orchestrated by the pandemic. Similar conclusion was reached in Kim et al. (2022) which examined the short-term impact of COVID-19 on consumption spending in Singapore. Thus, households with members who have health conditions were likely to decrease their consumption level due to out-of-pocket health bills or other financial obligations.

A close look at the marginal effects of the significant variables showed an interesting scenario. Households' income level is expected to be an essential determinant of household consumption level. The positive and statistically significant coefficient implies that as household income improves, the household tended to increase consumption level. The marginal effect of household income shows that a percent increase in household income will increase the probability of household consumption by 10.77 percent. This is highly plausible because it is hypothesized that high-income households may likely increase their consumption level. It is also expected that when households have desirable health status, their level of consumption increases since they possess more deposable income to expend. This is a substantial increase. A 10.77 percent increase in household consumption means that, on average, households are spending 10.77 percent more money on goods and services compared to a previous period or baseline. For example, a rural household with a monthly household budget of N1,000 per month before COVID-19 now had to expend an additional N107.70 per month on various items. This has the potential effect of depleting households' savings. A likely reason for this empirical finding is that some households may aim to maintain their pre-pandemic lifestyle despite economic disruptions caused by the pandemic. Increased income allows them to continue spending as they did before, which can support overall consumption levels. This was the conclusion reached by Xiong et al. (2021). The study found that compared to the pre-COVID-19 consumption, income spent on housing, food, and beverage did not change too much.

Male-headed households are 31.07 percent more likely to reduce household consumption during the pandemic. This implied that female-headed households have more spending tendencies than male-headed households. In the sampled rural communities, male-headed households were usually smaller in size and as such consumption is relatively reduced. Another likely reason was the effect on the pandemic on employment between the genders. For instance, Sodokin (2023) found that 77.7 percent of male-headed households lost between 75 and 100 percent of their income due to COVID-19, compared to 22.3 percent of female-headed households. This adversely the household consumption level of such male-headed households.

The findings of this study hold several policy implications. The findings clearly showed that households' consumption pattern is a function of health status and other demographic characteristics. Thus, whatever government policies to cushion the ravaging effects of COVID-19 should be household-oriented. These policy implications underscore the importance of an integrated approach that addresses the health and economic dimensions of rural households' well-being. Effective policies should aim to strengthen healthcare systems, protect vulnerable populations, and promote economic resilience in rural communities during and beyond the COVID-19 pandemic.

4. Conclusion

The COVID-19 pandemic has changed all facets of the global economy. Current and future job and income losses has affected household consumption level. Short-term shocks to household consumption might linger on for a while given unfavourable economic parameters especially in developing and underdeveloped economies such as Nigeria. Household consumption will continue to suffer as long as the pandemic persists. Such shocks to household consumption will gradually dissipate as normalcy is restored. The most vulnerable groups are households residing in rural communities who are poor and socially-excluded. This study examined the impact of health status on the consumption of households during COVID-19 pandemic in rural communities using Delta State as a reference point. The study established that ill health has drastically reduced household consumption during the pandemic. The health situation of households has aggravated the already poor and vulnerable populace and has reduced the potential of increasing their consumption level.

In order for Nigeria to curtail the impact of the pandemic, efforts should be channeled into rural households. There is need to invest in better health facilities especially in rural communities as such health facilities can significantly contribute to improved health status in rural areas, which, in turn, can enhance rural households' ability to maintain or enhance their consumption levels. Improved health facilities provide rural residents with access to timely diagnosis and treatment of illnesses and medical conditions. Early intervention can prevent health issues from becoming more severe and costly to treat, reducing medical expenses for rural households.

Access to better healthcare can lead to reduced out-of-pocket health expenditures for rural households. When healthcare is readily available, households are less likely to delay seeking treatment, which can result in lower healthcare costs in the long run. When rural residents have access to quality healthcare, they are more likely to maintain good health and productivity. Healthy individuals can continue working and contributing to household income, leading to economic stability and increased consumption capacity. Thus, better health facilities in rural areas play a crucial role in not only improving health outcomes but also in bolstering rural households' economic resilience and capacity to maintain or enhance their consumption levels. Investment in healthcare infrastructure is an investment in the overall well-being and economic vitality of rural communities.

There is also need to provide palliatives to alleviate the effects of the pandemic on households. Palliatives should be closely monitored to ensure that rural communities especially those in waterfronts and riverine geographical locations are not marginalized. This will help limit income loss, eradicate disruptions to supply chains, stimulate businesses in such locations as well as boost consumption level. Specifically, monitoring and ensuring the effective distribution of palliatives to rural communities, especially those in waterfronts and riverine areas, can be challenging but is essential to guarantee that the assistance reaches those in need. Government can collaborate with local community leaders, NGOs, and grassroots organizations in rural communities. These local partners can help identify beneficiaries and ensure the fair distribution of palliatives. There is need to establish feedback mechanisms that allow beneficiaries to report issues or concerns about the distribution process. Ensure that there are channels for complaints and suggestions.

Monitoring and distributing palliatives to rural communities ultimately have the potential of alleviating economic challenges faced by households in these areas. Such rapid assistance can help households address immediate economic hardships, such as food shortages or loss of income. In addition, palliatives provide financial relief to households struggling with reduced income or job loss, without resorting to debt or asset depletion; enable rural households to maintain or enhance their consumption levels, preventing a decline in living standards and the need to cut back on essential expenses; as well as support long-term economic recovery and resilience, ultimately improving the overall well-being of rural communities.

Despite the robustness of the findings of this study, the study has its limitations. The study was carried out between lockdowns in 2020. Carrying out a field survey just after the initial lockdown

constrained the response rate of the respondents. As a result, the findings primarily reflect the immediate economic consequences of the COVID-19 pandemic on the rural communities. In addition, obtaining the income value of the respondents in monetary terms would have enhanced the findings. Nevertheless, the study can still serve as a reference point for understanding the short-term economic consequences and identifying the vulnerabilities of rural households affected during this period. This study will thus provide a benchmark for future research which can be targeted at examining the macroeconomic effects of the health pandemic on households in Nigeria.

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