# EFFECT OF COVID-19 PANDEMIC LOCKDOWN ON AGRICULTURAL MIGRANT WORKERS IN SOUTHEASTERN NIGERIA: IMPLICATION FOR FOOD AND NUTRITION SECURITY

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## ABSTRACT

Corona Virus disease (COVID-19) has led to a remarkable loss of human lives across the world that presents an extraordinary challenge with unfathomable social and economic consequences. The deadly disease caused distortions in agricultural systems, as well as a reduction in food production by compromising the agricultural value chain. The fast spreading nature of the disease necessitated a lockdown action that hurt farmers and the agricultural sectors. However, the overall goal of this study was to investigate the effects of the Covid-19 pandemic lockdown on the agricultural migrant workers, as well as its perceived implication on food and nutrition security. Data was collected from a cross-section of randomly selected 200 migrant workers (100 from each State) and analyzed with a bivariate regression model. The study revealed that migrant workers' income was reduced by 21.84% in Anambra State and 10.88% in Imo State. Their household food expenditure regrettably increased by 19.12% (Anambra State) and 8.46% (Imo State), increase in food expenditure caused an increase in wage charges by 10.88% (Anambra State) and 23.99% (Imo State). Quality of health care accessibility and food affordability was also affected by the lockdown. To the general economy, it brought about the scarcity of labour and disruption in industrial supply of raw materials with a resultant effect on food shortage. The lockdown adversely influenced food and nutrition security by 30.0% (Anambra State) and 63.3% (Imo State). The study, therefore, concludes the economic lockdown as a measure to tackle the spread of Covid-19 is gradually leading to total economic loss to the nation's gross domestic product. The study, therefore, recommends that a less rigid approach should be adopted maybe through a massive sensitization campaign on the disease spread mechanism and preventive measures.

**Keywords:** Covid-19, migrant workers, food and nutrition security, Southeast Nigeria

## I.  INTRODUCTION

The World Health Organization (WHO, 2020) submitted that COVID-19 was discovered in December 2019 in Wuhan, the capital of China's Hubei Province, and has since spread globally, resulting in the ongoing 2019-20 coronavirus pandemic (Hui, 2020). Due to the fast-spreading nature of the virus; on the 30th day of January 2020, the WHO declared Covid-19 a public health emergency because of its extraordinary nature, and the risk it poses to public health which cut across different countries. This led several countries into locking down their economies to

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safeguard their citizens and economy, but the lockdown hurt the labour force, food, nutrition, and the economy in general, among the labour force that was hurt by the lockdown decision are the migrant workers. This pandemic triggered the most serious economic crisis since World War II (OECD, 2020).

The International Organization for Migration (IOM) cited in Sookrajowa and Claudius defined a migrant as any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of the person's legal status; whether the movement is voluntary or involuntary; what the causes for the movement are? or what the length of the stay is (Sookrajowa and Claudius, 2018; and Vasco, 2011)? The people that constitute the migrant labour force are mostly those with low skills and are regarded as informal employees that are mostly found in areas such as construction, agriculture, and even within a domestic work environment, these groups of people are often subjected to many forms of discrimination (Douglas and Band, 2016). The Food and Agricultural Organization (FAO, 2020) contends that migrants workers play a substantial role in Agri-food systems, thus, measures affecting the movement of people (internally and internationally) and resulting in labour shortage will have a long-term impact on agricultural value chains, affecting food availability and market prices globally. However, the nature of the migrant labour force in Nigeria usually follows irregular arrangements, this explains why most migrant workers are subjected to poor housing and unfriendly working conditions, unimproved access to healthcare, and inadequate social protection. Many agricultural migrant workers have no access to adequate hygiene, protective equipment, and good sanitation (Molinero-Gerbeau and Avallone, 2018). Many migrant workers live in overcrowded settlements, therefore exposing them to the risk of becoming centers of infection which have led to increased death and has attracted stigmatization from the locals. They are more likely to be exposed to occupational safety and health hazards and run a greater risk of contracting and further spreading COVID-19 (FAO, 2020). According to the international labour organization (ILO); it is expected that international migrants, regardless of their migratory status, will be more exposed to the immediate and long-term harms of the COVID-19 pandemic (ILO, 2020). Since January 2020, thousands of people have been stranded on their journeys as over 170 countries have put in place some sort of mobility restrictions. To ensure compliance and reduction in Covid-19 disease spread; the Federal and States governments of Nigeria inaugurated Covid-19 monitoring teams. Tollgates were erected at different States' borders to ensure that only food items and palliatives were allowed to transit within the lockdown period. The international flight zones were grounded and people were stuck in a location.

The study of Bonnet *et al.* (2019) suggested that any restrictions on or removal of the ability to work and earn a living, especially for informal workers in Sub-Saharan Africa will put a strain on their families. Most unskilled workers who transit from different States to locations where their services are needed could not import their unskilled expertise into the agricultural sectorial labour supply due to the strictness of the border closure. The pandemic is fast becoming a mobility crisis, also causing a significant burden on vulnerable groups such as refugees, migrants, internally displaced people (IDP), and host communities due to the loss of income, restricted movement, and reduced access to markets, inflation, and a spike in prices.

Covid-19 outbreak and restriction of movement have also hurt Nigeria's economy badly, judging from the country's dependence on oil. There is a need for the Federal Government to refrain from oil dependence and give urgent attention to restructuring its agricultural sector, sensitizing households on community farming (gardens), as well as making adequate policies to mitigate the effect. This is to say that the Covid-19 outbreak requires a rapid response since it affected the

food security of the nation (Reuters, 2020). This food security has been defined by some scholars to mean a situation that subsists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for active and healthy life (FAO, 1996 as cited in Meludu, 2010; & Meludu and Abolade, 2021). This definition was repeated in the study by Clover (2003). It is important to reiterate that achieving food security in any country is typically insurance against hunger and malnutrition (Osuafor *et al*., 2020), whereas the absence of food security hinders economic development (Davies, 2009). To address this, Orefi (2012) noted that efforts must be made to increase food production in both quantity and quality.

In many countries, especially in developed economies, migrant workers play a critical role in agriculture and food production; COVID-19 is already having an impact on migrant farmworkers and, consequently, affecting food production and supply (IOM-UN, 2020), as well as the economic growth of nations. These necessitate the need to carry out this research with overall intention to investigate the effects of the Covid-19 pandemic lockdown on the agricultural migrant workers, as well as its perceived implication on food and nutrition security in Nigeria.

## II. MATERIAL AND METHODS

### 2.1 Study Area

The study was carried out in southeastern Nigeria. It consists of five States (Anambra, Imo, Enugu, Abia, and Ebonyi) which had 101 local government areas that are split into 346 communities. It is bounded in the east by Akwa Ibom and the Cross River States, in the north by Benue and Kogi States, in the west by Edo and Delta States, and in the south by Rivers and Bayelsa States. The Nigerian Population Commission (NPC) in 2006 reported that the area had a population of 28,415,006. The Southeast zone is located within latitude $5°28'34''$ and $5°10'65''$ N and longitude $7°01''33''$ and $7°30'36''$E. The area is sitting on a landmass of 41440 km$^2$.

### 2.2 Sample Size and Sampling Procedure

A multi-stage sampling technique was adopted to collect adequate data for the study using a well-structured questionnaire and a descriptive survey schedule. Shaughnessy *et al*. (2011) noted that a descriptive survey design or schedule samples an individual unit of a population or study representative. Thus, in the first stage, two States (Anambra, and Imo) were purposively selected for convenience, afterwards; two Local Government Areas (LGAs) were randomly selected from each State to make it a total of four LGAs from where two communities were equally selected randomly from each LGA to make it a total of eight communities. In the second stage, five villages were randomly selected from each community to make it a total of forty (40) villages for the study. Furthermore, five migrant workers were randomly sampled from each village to make it a total of two hundred (200) sample size (n) for the study. It is important to bring to the reader's notice that six research assistants (two per state) were recruited and trained to assist with the data collection which lasted for fourteen (14) days window.

The questionnaire used for the data collection was designed into five sections, section A was designed to collect dependable data about the respondent's socioeconomic characteristics which helped to gain an insight into the migrant workers' economic profile to understand the weighted effect of the Covid-19 pandemic outbreak. These data collected in this session is measured as: dummy variable; 1 = male, 0 = female (sex), year (age), 0 = single, 1 = separated/divorced, 2 = widow/widower, and 3 = married (marital status), years (years of schooling), year (farming

experience), no of people living and feeding from the same pot (household size). Monthly income, food expenditure, and daily wage charges were measured in USD. Section B was designed to capture data on the effect of lockdown on the economy of migrant workers, the data collected was captured on 5 points Likert scale where 1 = strongly disagree, 2 = disagree, 3 = somewhat agree, 4 = agree, and 5 = strongly agree. Section C was designed to capture data about the perceived effect of COVID-19 lockdown in the agricultural sector in Nigeria. The data was equally designed to capture 5 points Likert scale data as the best approach for qualitative data; where 1 = strongly disagree, 2 = disagree, 3 = somewhat agree, 4 = agree, and 5 = strongly agree. Section D captured 5 points Likert scale data on the perceived effect of Covid-19 lockdown on food and nutrition security in Nigeria, where 1 = strongly disagree, 2 = disagree, 3 = somewhat agree, 4 = agree, and 5 = strongly agree. Furthermore, section E captured 4 points Likert scale data on the measure of the seriousness of lockdown implementation or length of days; the data was measured as; 1 = not serious, 2 = moderate, 3 = serious, and 4 = very serious.
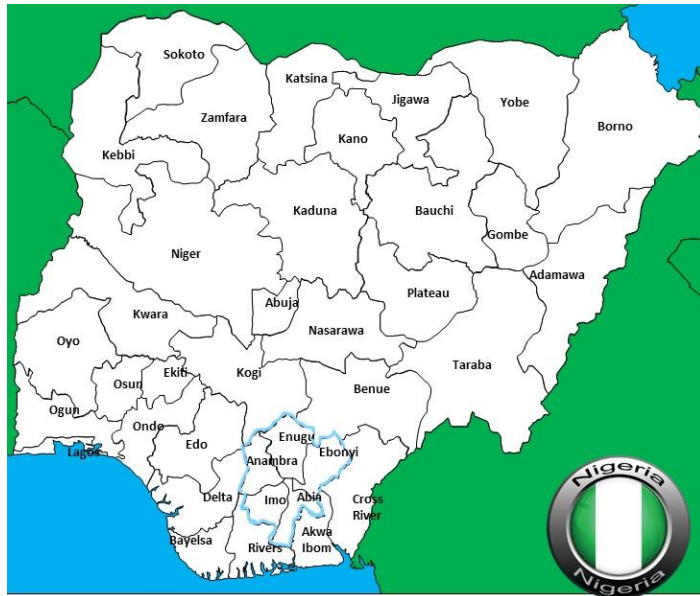


**Fig.1: Map of Nigeria (part marked in blue pen is Southeast zone).**

## 2.3 Data Analysis

The study utilized both descriptive statistics and a bivariate regression model to achieve the study objectives. Objectives one, two, and three were achieved with descriptive statistics which include; mean, standard deviation, and a mean threshold of four and five points Likert scale. The points Likert scale were identified as the best alternative to quantify qualitative data for this study. Objective four was achieved with bivariate regression analysis, this analytical technique was used because of the need to predict the further effect of the lockdown if alternative measures were not taken to address the situation. Therefore, the models are stated as follows:

The mean threshold of five Points Likerts Scale is defined as:

$$\overline{X} = \frac{1+2+3+4+5}{5} = 3.0 \tag{1}$$

Where, $\overline{X}$ = Mean threshold ($\geq 3.0$ = agree, $< 3$ = disagree), 1 = strongly disagree, 2 = disagree, 3 = somewhat agree, 4 = agree and 5 = strongly agree.

The bivariate model is mathematically defined by;

$$EFNS^* = f(M^*_i; \beta) + \varepsilon_i \tag{2}$$

$EFNS^*$ is the mean threshold of individual perceived effect on food and nutrition security, $\beta$ is the estimated parameter or coefficient, $M^*_i$ is the mean threshold of individual measure of seriousness on lockdown implementation, and $\varepsilon_i$ is the stochastic error term or residuals.

## III. RESULTS AND DISCUSSION

### 3.1 Description of migrant worker's socioeconomic profile

Table 1 reflects the description of the migrant worker's socioeconomic profile. The results from Anambra State revealed the average age (42.17), years of schooling (6.85), agricultural experience (12.76), and household size (7.56). Those coming from Imo State revealed the average age (40.68), years of schooling (7.17), agricultural experience (8.98), and household size (4.58). The data were pooled to represent the Southeast data, we found the average age (41.43 ), years of schooling (7.01 ), experience (10.87 ), and household size (6.07) very interesting which indicates that the migrant workers are relatively in their active employment age with enough experience required to execute their job. These findings empirically confirmed that migrant workers in Imo State are more educated than their counterparts in Anambra State. These results are in agreement with the study of Mulubrhan *et al.* (2021) who reported active age of 49 years, household size of 6 people, and 8 years of schooling in their study of COVID-19 and food security: Panel data evidence from Nigeria.

**Table 1: Summary statistics of participant's socio-economic profile**

|   | Variables | Anambra | | Imo | | Pooled | |
|---|-----------|---------|----------|------|----------|--------|----------|
|   |           | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. |
| 1 | Age (Years) | 42.17 | 10.92 | 40.68 | 16.02 | 41.43 | 13.47 |
| 2 | Years of schooling (Years) | 6.85 | 3.87 | 7.17 | 3.95 | 7.01 | 3.91 |
| 3 | Farming experience (Years) | 12.76 | 7.20 | 8.98 | 5.54 | 10.87 | 6.37 |
| 4 | Household size (No) | 7.56 | 2.47 | 4.58 | 2.91 | 6.07 | 2.69 |

Source: Field Survey 2020.

### 3.2 Effect of Covid-19 lockdown on the economies of migrant workers

This section is presented in two parts, the first (Table 2) reflects the information on the effect of Covid-19 economic lockdown on the income, food expenditure, and daily wage charges of the migrant workers. It is important to note that the study revealed a monthly income drop of 21.84% in Anambra State, and 10.88% drop in Imo State, while their food expenditure increased by 19.12% in Anambra State and 8.46% in Imo State respectively. Equally, their daily wage charges increased by 10.88 % in Anambra State and 23.99% in Imo State, this suggests that the lockdown has a more visible effect on migrant workers in Anambra State when compared to Imo State. Averagely, food expenditure increased from 62.86 USD to 74.88 USD in Anambra State and

73.97 USD to 80.23 USD in Imo State. From the above information, the indication is that migrant workers in Imo state increased their daily wage charge more than those in Anambra State, despite this, the people in Anambra State resorted to family labour instead of hiring the services of the migrant workers. This explained the significant drop in migrant workers' income more than those in Imo State. The fact that Imo State has a lower household size (Table 1) explained why they retained the services of the few available migrant workers in the State during the lockdown; no wonder the percentage income drop is lower in Imo State. During the lockdown, every State government mobilized different support for their indigenes, and awareness creation on the need to improve household food nutrition was massive. This ideal nutrition campaign was bought more in Anambra State; this justified while migrant workers in Anambra spent more on healthy food consumption than their Imo State counterparts.

**Table 2: Percentage change in income and food expenditure status**

| SN | Variables | Mean (Anambra) | Percentage (%) | Mean (Imo) | Percentage (%) |
|----|-----------|----------------|----------------|------------|----------------|
| 1 | Monthly income before the lockdown (USD) | 113.27 | | 132.32 | |
| 2 | Monthly income after the lockdown (USD) | 88.53 | -21.84 | 117.92 | -10.88 |
| 3 | Food expenditure before the lockdown (USD) | 62.86 | | 73.97 | |
| 4 | Food expenditure after the lockdown (USD) | 74.88 | 19.12 | 80.23 | 8.46 |
| 5 | Daily wage charge before the lockdown (USD) | 7.63 | | 14.96 | |
| 6 | Daily wage charge after the lockdown (USD) | 8.46 | 10.88 | 18.55 | 23.99 |

Source: Field Survey 2020. NGN380 = 1USD.

In the second part of this section, the decision on the effect of the Covid-19 lockdown on the economies of migrant workers was achieved from the mean score of five points Likert scale as presented in Table 3. A benchmark of 3.0 was set for decision making, while the standard deviation (SD) was used to check for the variability of migrant workers' responses. Variables with a mean score greater than and equal to 3.0 are said to agree with the lockdown effect, while those with a mean score less than 3.0 disagrees in responses. Also, an SD of 0.5 and above shows a very high variability adequate for sound judgment. Based on the 10 items of the effect of Covid-19 lockdown on the economies of migrant workers captured in the study, 10 of them had a mean score of 3.0 for Anambra State, and 9 for Imo State respectively.

Empirically, Covid-19 lockdown effects on the economies of migrant workers in Anambra State include; exposure to hunger and starvation (4.03), children could not participate in online learning platforms due to inability to afford data (4.05), reduction in household food affordability (4.02) among others. Also, in Imo State, the study found that; children could not participate in online learning platforms due to the inability to afford data (4.24), social distancing reduced networking to where available labour exists (4.16), and affected the social security of migrant labour/affordability of decent housing (4.14) among others. The grand mean of 3.86 (Anambra) and 3.82 (Imo) is an indication that the economies of migrant workers were affected in the study areas. These findings have validated the assertion of Bonnet *et al.* (2019) who noted that any restrictions on or removal of the ability to work and earn a living, especially for informal workers in Sub-Saharan Africa will put a strain on their families.

**Table 3: Effect of lockdown on the economy of migrant workers**

| SN | Lockdown Variables | Anambra State | | Imo State | |
|---|---|---|---|---|---|
| | | Mean | Std. Dev. | Mean | Std. Dev. |
| 1 | Lower earning capacity of migrant labour | 3.77* | 1.30 | 2.06 | 1.36 |
| 2 | Reduction in economic access to good health care | 3.55 * | 1.24 | 3.89* | 1.08 |
| 3 | Reduction in household food affordability | 4.02* | 1.03 | 3.68* | 1.32 |
| 4 | Exposure to hunger and starvation | 4.03* | 1.14 | 3.78* | 1.26 |
| 5 | Increase in self-medication due to the fear of been pronounced positive case | 3.99* | 1.02 | 4.01* | 1.28 |
| 6 | Vulnerability of food access and utilization | 3.71* | 0.93 | 4.11* | 1.28 |
| 7 | Affected social security of migrant workers/affordability of decent housing | 3.95* | 0.93 | 4.14* | 1.26 |
| 8 | Social distancing reduced networking to where available labour exist | 3.89* | 1.09 | 4.16* | 1.18 |
| 9 | Children could not participate in online learning platforms due to the inability to afford data | 4.05* | 1.30 | 4.24* | 1.13 |
| 10 | Reduction in working hours | 3.63* | 1.11 | 4.15* | 0.99 |
| | **Grand Total** | **3.86*** | **1.11** | **3.82*** | **1.21** |

Source: Field Survey 2020. (*) Signifies agreement variables

### 3.3 The migrant workers perceived the effect of COVID-19 lockdown in the crop sub-sector in Southeast, Nigeria

We analyzed the respondents' answers on the perceived effect of the Covid-19 lockdown in the agricultural sector and presented the results in Table 4. A benchmark of 3.0 was set for decision-making on five points Likert scale. Variables with a mean score of 3.0 and above agree with the captured effect, while those under 3.0 disagree.

**Table 4: Migrant workers perceived effect of COVID-19 lockdown in the crop sub-sector in Southeast Nigeria**

| SN | Perceived effect on the agricultural sector | Anambra State | | Imo State | |
|---|---|---|---|---|---|
| | | Mean | Std. Dev. | Mean | Std. Dev. |
| 1 | Scarcity of labour during peak period of planting | 3.99* | 1.38 | 3.16* | 1.17 |
| 2 | Increase in the cost of farm labour | 4.43* | 0.94 | 4.00* | 1.20 |
| 3 | Shortage of labour for weeding, irrigation, fertilizer application, etc. | 3.80* | 1.22 | 3.80* | 1.23 |
| 4 | Delay in planting season | 4.17* | 1.22 | 3.85* | 1.31 |
| 5 | Delay in harvesting | 3.85* | 1.24 | 3.80* | 1.31 |
| 6 | Increase in crop loss due to unavailability of labour | 3.72* | 1.26 | 4.18* | 1.04 |
| 7 | Difficulty in transporting produce | 4.05* | 1.20 | 3.93* | 1.11 |
| 8 | Difficulty in marketing produce | 3.59* | 1.18 | 3.98* | 1.07 |
| 9 | Increase in food quantity demanded by the labourer(s) | 4.16* | 1.07 | 3.95* | 1.12 |
| 10 | Increase in food quality demanded by the labourer(s) | 3.48* | 1.15 | 3.60* | 1.20 |
| 11 | Reduction in the demand of farm inputs like fertilizer due to slowed farm activities | 3.57* | 1.13 | 4.31* | 1.09 |
| 12 | Low patronage of financial institution for farm credit | 3.84* | 1.29 | 4.21* | 1.01 |
| 13 | Reduction in the supply of raw materials to the agro-allied industries | 3.91* | 1.30 | 4.25* | 1.12 |
| | **Grand Total** | **3.89*** | **1.20** | **3.92*** | **1.15** |

Source: Field Survey 2020. (*) Signifies agreement variables

Among the two states; the thirteen (13) items of perceived effect in the agricultural sector of Nigeria's economy had a mean threshold of 3.0 and above, however, the perceived effects were; an increase in the cost of farm labour (4.43), delay in planting season (4.17), shortage of labour for weeding, irrigation, fertilizer application, etc. (3.80) among others (Anambra); and reduction in the demand of farm inputs like fertilizer due to slowed farm activities (4.31), reduction in the supply of raw materials to the agro-allied industries (4.25), low patronage of the financial institution for farm credit (4.21) among others (Imo). This finding has revealed that the continued lockdown of the country to control the spread of the virus is not healthy for the agricultural sector, instead, strict measures should be rolled out to force the citizenry to comply with the World Health Organization (WHO, 2020) Covid-19 protocols.

### 3.4 Migrant workers perceived effect of Covid-19 lockdown on food and nutrition security in Southeast, Nigeria

Table 5 reflects the migrant workers' responses on the perceived effect of COVID-19 lockdown on food and nutrition security. Maintaining the benchmark of 3.0 for the decision on five points Likert scale, based on the 12 items of effect on food and nutrition security, 12 of them agree for Anambra State and the pooled sample, thence, the variables affecting food and nutrition security are; increase in the price of food (4.52), reduction in household food quality and quantity (4.26), reduction in food availability (4.23) among others (Anambra), and the quality food supply will be low (4.50), reduction in food production (4.34), reduced access to diversified diet (4.28) among others (Imo). Furthermore, the grand mean score of 4.10 (Anambra), and 4.01 (Imo) is an indication that the majority of the migrant workers agree with the perceived effect of the Covid-19 lockdown on food and nutrition security. Also, an SD above 0.5 showed very high variability in their responses, therefore, the study can be adopted by the policymakers. These findings were not in agreement with FAO (1996) as cited in Meludu(2010); & Meludu and Abolade (2021) who assumed that people must have physical, social, and economic access to safe and sufficient nutritious food before food security exists.

**Table 5: Migrant workers perceived effect of Covid-19 lockdown on food and nutrition security in Southeast, Nigeria**

| SN | Possible effect on the food and nutrition security | Anambra State | | Imo State | |
|----|----|----|----|----|----|
| | | Mean | Std. Dev. | Mean | Std. Dev. |
| 1 | Quality food demand will be high | 4.22* | 1.26 | 3.37* | 1.34 |
| 2 | Quality food supply will be low | 3.80* | 1.17 | 4.50* | 0.92 |
| 3 | Increase in the price of food | 4.52* | 0.83 | 4.21* | 0.96 |
| 4 | Reduction in household food quality and quantity | 4.26* | 1.01 | 4.45* | 1.16 |
| 5 | Adjustment in household food consumption pattern | 4.12* | 1.00 | 4.15* | 1.08 |
| 6 | Reduced access to diversified diet | 3.90* | 1.14 | 4.28* | 1.11 |
| 7 | Reduction in food production | 4.14* | 1.04 | 4.34* | 0.92 |
| 8 | Reduction in food availability | 4.23* | 0.77 | 4.11* | 1.18 |
| 9 | Reduction in household disposable income | 3.97* | 1.15 | 4.15* | 1.27 |
| 10 | Reduction in household purchasing power | 4.31* | 0.88 | 3.98* | 1.26 |
| 11 | Increase in the number of stunted children | 4.01* | 1.00 | 3.66* | 1.37 |
| 12 | Increase in child/maternal mortality | 3.75* | 1.19 | 2.91 | 1.69 |
| | **Grand Total** | **4.10 *** | **1.04** | **4.01*** | **1.19** |

Source: Field Survey 2020. (*) Signifies agreement variables

## 3.5 Influence of Covid-19 lockdown on the food and nutrition security of migrant workers

The influence of the Covid-19 lockdown on the food and nutrition security of migrant workers is presented in Table 6. This influence was estimated with a bivariate regression analysis. The coefficient of multiple determinants ($R^2$) was 0.792 (Anambra State), and 0.955 (Imo State) which implies that the explanatory variable (migrant worker's perceived Covid-19 lockdown effect) explained 79.2% (Anambra State), and 95.5% (Imo State) of the dependent variable (food and nutrition security), while the remaining 20.8% (Anambra State), and 4.5% (Imo State) unexplained was as a result of the stochastic or residual error term beyond the control of the migrant workers, these residuals are issues like government decision on economic lockdown, restrictions of vehicular movement among others. The F-stat. was highly significant at a 1% level of probability for Anambra State and Imo State, the significant F-statistics values imply that the entire model was fit to explain the effect of Covid-19 on the food and nutrition security of migrant workers in the study areas.

Coefficient of the seriousness of lockdown implementation was positive and significant at a 1% significance level for both states (Table 6), this implies that a marginal increase in the seriousness of lockdown implementation or length of days of economic lockdown will increase the perceived influence of the pandemic on food and nutrition security of the migrant workers by 30.0% (Anambra State), and 63.3% (Imo State) respectively. If this economic lockdown continues and labour engagement remains scarce due to the inability of migrant workers to move freely from State to State, their desires to survive will push them to subsistence farming as the only alternative to family survival, thence, they could produce what to eat and the remaining will be sold to meet other family needs. Since the outbreak of the COVID-19, many migrant workers have lost their jobs, while other households have gone back to land for agricultural cultivation which is expected to see an increase in food production and supply in a few farming seasons to come. No wonder FAO (2020) suggested that measures affecting the movement of people (internally and internationally) resulting from labour shortage will have a long-term impact on agricultural value chains, affecting food availability and market prices globally.

**Table 6: Influence of the lockdown on the food and nutrition security of migrant workers**

| Food and Nutrition Security | Anambra State Coefficient | t-ratio | Imo State Coefficient | t-ratio |
|---|---|---|---|---|
| Lockdown | 0.300 | 19.33*** | 0.633 | 45.56*** |
| Constant | 2.879 | 49.23*** | 1.580 | 29.21*** |
| $R^2$ | 0.792 | | 0.955 | |
| F-Stat. | | 373.57*** | | 207.5*** |
| Observation | 100 | | 100 | |

Source: Field Survey 2020. (***) Sig. @ 1%.

## IV. CONCLUSIONS AND RECOMMENDATIONS

The migrant workers as identified in the study are unskilled members of the agricultural labour force with a low level of education, they often live in precarious situations and sometimes suffer discrimination from society. Through the descriptive measures used to analyze this study, the study revealed that the migrant workers transiting to Anambra State are older than those moving to Imo State, and the migrant workers transiting to Imo State are equally more educated than those moving to Anambra State. This disparity in education explained why migrant workers in Imo State recorded a lower decline in income during the pandemic lockdown. At this period,

labour was scarce and the few available ones needed to be skilled to commiserate the daily wage charged, which the farmers in Imo State were more willing to pay when compared to those in Anambra State. Though, environmental factors peculiar to States may have influenced this outcome. Inversely, the migrant workers in Anambra State were willing to spare more of their income to increase their food budget because the need to improve the quality of food diet became sacrosanct. This may also depend on the level of awareness creation in some States which paid particular attention to the consumption of nutritious food during such time of Covid-19 outbreak.

The lockdown caused reduction in quality or access to good healthcare, a reduction in household food affordability, and exposure to hunger and starvation. Again, before the lockdown, the migrant workers networks among themselves, especially with regards to detail where labour is needed which has been distorted. It is important to note that most migrant workers' survival depends greatly on daily hustle that is barely enough to save up for future expansion or their economic development. Conclusively, the researcher(s) submits that continued enforcement of the economic lockdown will affect the crop sub-sector of the agricultural economy in that it will lead to scarcity of labour during the peak period of planting season, and increase the cost of available labour among others. This will adversely increase the price of food which will make life more difficult to survive against the virus. Thus, further lockdown of the economy to curtail the spread of the virus will be more harmful than good. The study, therefore recommend that those responsible for the enforcement of the lockdown should adopt a more strategic sensitization approach to Covid-19 protocols that will make the migrant workers aware of preventive measures instead of mobility restrictions.

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