

Perceived Effect and Constraints to the use of Coping Strategies During COVID-19 Pandemic Lockdown on Smallholder Crop Farmers in Imo State, Nigeria

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Abstract: Agriculture is as important as the air we breathe, as a result no matter your field of specialty you cannot live without food for so long. Agricultural plays an essential role in the economy of Nigeria as it provides food for the entire population of a country and also provides raw materials for the non-agriculture sectors of the economy. Nigeria's agriculture is made up of a higher percentage of smallholder farmers who are often exposed to shocks and have less capacity to combat the impact and increase the rate of recovery due to shocks. Therefore, the perceived effect and constraint to the used of coping strategies during COVID-19 pandemic lockdown on smallholder crop farmers are important in building a resilient agricultural sector to improve farmers' food security, and livelihoods and build resilient capacity toward pandemics. The COVID-19 pandemic was a big threat to Nigeria's food security since the bulk of the food produced in Nigeria is by the smallholder farmers who are often vulnerable to shocks. The paper examined the perceived effect and constraint to the use of coping strategies during COVID-19 pandemic lockdown on smallholder crop farmers in Imo state. Multi-stage sampling were employed to have a sample size of 360. A questionnaire were designed to suit the objective of the study to collect the primary data. The data was analysed using descriptive statistics and ANOVA. Results showed that COVID-19 lock down Period lead to Reduced income by($x=3.22$) with homogenous response of ($SD=0.88$). Obstruction of value chain ($x=3.16$) with perceived effect of covid-19 pandemic lockdown in Imo state. The result revealed reduced income heterogeneous response ($SD=1.66$), Spoilage of harvested produce ($x=3.17$) with homogenous response of ($SD= 0.95$), unavailability of labour ($x=2.55$) with heterogeneous response (1.20), loss of business capital ($x=3.02$) with heterogeneous response ($SD=1.07$), reduced sales ($x= 3.17$) with heterogeneous response ($SD=1.16$), decline in production ($x=2.68$) with homogenous response ($SD=0.95$). the result to the constraints to the use of coping strategies during COVID-19 pandemic further revealed that inadequacy of storage facility($x=3.41$), unavailability of labour/prohibitive labour cost ($x=3.03$), poor service/ Network ($x=3.00$), Poor capital base ($x=3.700$), low technical knowhow ($x 3.00$), inadequate/poor knowledge of coping strategies options ($x=3.49$), weak government policies ($x=3.49$) corrupt leadership ($x=3.32$), unavailability/epiteptic power supply ($x=3.52$), and fear of contacting the disease ($x=3.61$), were all constraints to the used of coping strategies in Imo state. The major constrains to the use of coping strategies during COVID-19 Pandemic Lockdown by the smallholder crop farmers was ($x=3.70$) poor capital base. This result also revealed that there is no significant difference in the perceived effect of COVID-19 lockdown in the three agricultural zone. Simply put the smallholder crop farmers were affected the same way in Imo State. The government should look into the untold hardship experienced by smallholder farmers during the pandemic and make policies that will protect their interest and give out grant to the smallholder crop farmers through the third tier of government to cushion the losses.

Keywords: perceived, covid-19 pandemic, lockdown, constraints, coping strategies.

INTRODUCTION

The outbreak of the word pandemic coronavirus COVID-19 took the world unawares and unprepared thus leaving the Nigerians to suffer devastating death crises, disruption of social activity, including agricultural activities which has a proportional effect on smallholder crop farmers. Lockdown is a policy or an order adopted by governments in different nations to limit the spread of the virus. It is an order that outlawed people from moving out of their homes. It specifically states that every household remains in-door or at home for safety to prevent contact with persons with the virus. Lockdown is interchangeably used for quarantine but the two concepts are not the same, although they serve the same purpose of limiting the spread of the virus. While quarantine is aimed at persons who have come in contact with people who have tested positive for COVID-19 or persons who have travelled to or returned from places with a high incidence of COVID-19. Hitav et al. (2020) similarly shared the view that quarantine is aimed at separation and isolation of individuals who have been in close contact with a positively tested patient. Lockdown is a measure that closes the entire country except essential services such as healthcare service, pharmaceutical service and security services, amongst others.

The smallholder crop farmers experienced great hardship during the peak period of the global pandemic. The pandemic did not only affect farmers' health or farming activities but also their livelihood (Isere *et al.*, 2021). Covid-19 was a stochastic event in the sense that its emergence was sudden and unexpected. In the words of Platje *et al.* (2021), many households or businesses affected by the pandemic, did not benefit from the credit facility or stimulus package announced by the national government through the Central Bank of Nigeria (CBN, 2020). Usually too, rural farmers and their households are the worse off as neither government nor local authorities extend help or fiscal assistance to them in time of need.

The intrusion of Covid-19 into the Nigerian social space, and the subsequent implications and impact adversely impacted businesses, households and the economy. The slowdown in farm work and trade activities, as most finished goods flow through the sector to final consumers, also affected the manufacturing sector, especially for non-essential goods (PWC, 2020). The shocks occasioned by the pandemic led to many households losing their income base. With regards to smallholder crop farmers, the constraints to the use of coping strategies by smallholder crop farmers' higher debt, reduced food intake/the quality of food consumed. Writing on Nigeria's experience with Covid-19, Amuda (2020) argues that the pandemic impacted negatively on both the economic and business activities in category, and this is for the simple reason that grown almost entirely on smallholdings. Most crop farmers are privately owned by individuals or families. Sabo *et al.* (2017) corroborates this claim by stating that more than 80% of farmers in Nigeria are smallholder farmers, who produce the food.

Since the COVID-19 pandemic, smallholder crop farmers have been experiencing shock to their daily income. Many revenue streams have been significantly disrupted by lockdown and quarantines. An estimated 500 million smallholder farmers around the world already live on less than two dollars per/day (FAO 2020b). Income losses and lack of predictability are likely to influence what and how farmers will plant next season, which also has implications to broader national and global food supply, impacting nutrition in both rural and urban households. (Technoserve Business, 2020). Farming households in Nigeria are apparently in states of overwhelming fear concerning their mainstay with the recent lockdown as a result of the pandemic. The global crisis is envisaged to have more effect on crop production in different States and Nigeria at large. The country is at the risk of looming food crisis unless measures are taken to protect the smallholder crop farmers, keep food supply chain alive and mitigate the pandemic's effect across food system. Thus, the ability of smallholder farmers to increase food production is pertinent during this pandemic and beyond. (Bidemi, 2020).

To cope with the haze, smallholder crop farmers are bound to resort to certain survival measures, to live and subsist in business. Coping strategies are defined as the behaviors, thoughts, and emotions that are used to adjust to the changes that occur in life (FAO, 2020b). There are many coping strategies that people use, and some may prove more effective than others, depending on the nature of the stressful situation and the person who is employing them (FAO, 2020b). These coping strategies used could include climate-smart agricultural integrated production system, and channels that explore domestic and regional markets, value added product, stronger productive and commercial value chain alliance, and integration of adaptive technologies and digitalization to increase sales and efficiency (International Trade Centre Alliance (ITC, 2020). The use of coping strategies is of important in agricultural sector and are underscored by their ability to combat hunger, stimulate economic diversification and foster shared prosperity. But the sector's performance remains hampered by varied challenges. To combat these challenges will require significant effort from all stakeholders across the agricultural value chain. The challenges faced by smallholder crop farmers include constraints to the use of the coping strategies.

However, the various constraints to the use of coping strategies put in place by the smallholder crop farmers for survival in the business and ensuring food security have not been ascertained. Again, in the study area, much is not known about the smallholder crop farmer's perceived effect of lockdown. It is against the foregoing that the present study sets out to Analyse the perceived effects and constraints to the use of the coping strategies by the smallholder crop farmers during the COVID-19 pandemic lockdown in Imo state.

The general objective was to analyze the, perceived effects and constraints to the use of the coping strategies, during COVID-19 pandemic lockdown by smallholder crop farmers in Imo state.

The specific objectives are to

- I. determine the perceived effects of COVID -19 pandemic lockdown on smallholder crop farmer in the study area,
- II. ascertain constraints to the use of the coping strategies by the smallholder crop farmers during the COVID-19 pandemic lockdown in the study area, and

HYPOTHESIS

The smallholder crop farmers do not differ significantly in their perception of the effects of COVID- 19 pandemic in the three Agricultural zones of Imo State.

Material and Methods

Study Area

This study will be conducted in Imo state of Nigeria. Imo state Nigeria is located in the South – East zone of Nigeria and lies between latitude $4^{\circ}45'N$ and $7^{\circ} 15'N$ and longitude $6^{\circ} 50' E$ and $7^{\circ} 25' E$ with land area of 5. 530km². Estimated population of about 6.34 million people in the year 2020 projected from 2011 population estimate figure and an annual growth rate of 3.35% (National Population Commission 2017).

It is bordered by Abia State on the East, by River Niger and Delta State on the West, by Anambra State to the North and Rivers State to the South. Imo State has a total number of 27 local government areas, with a high population density which exceeds that of the annual average of 166 person per kilometer square (www.imostate.gov.ng).

The population for the study consisted of smallholder crop farmers in imo state. A multi- stage sampling technique was employed. In stage one, the three agricultural zones (Owerri, Orlu, Okigwe) were purposively selected for the study so as to ensure adequate representation of the smallholder crop farmers in the zones. In the second stage, 30% of each agricultural zone was proportionately selected (Owerri zone, Orlu zone, Okigwe zone) giving a total of nine blocks. In the third stage, two extension circles were randomly selected from each of the block making a sum of 18 circles. In the fourth stage, 10% of the farmer was be selected from the registered smallholder crop farmers lists provided by the agriculture department / units in the Local Government Headquarters. From there connaissance survey done in the affected area and lists of 3,600 farmers obtained from the Local Government Areas agricultural units,10% was selected amounting to 360 smallholder crop farmers for the study.

Data Collection and Analysis

This survey was a cross-sectional study conducted using a structured questionnaire. The questions focused on the period before the COVID-19 outbreak and during the pandemic. The questionnaires were administered by trained field officers who visited each of the participants in their respective households. All the field officers were familiar with the farmers, local languages, communities, and practices of the farming households. Each field officer was assigned to a village. Data were subjected to inferential and descriptive statistics tool.

Results and Discussion

Perceived Effect

Table1 Distribution of smallholder crop farmers by perceived effect of covid-19 pandemic lockdown in Imo state.

S/N	Item	VHE				Mean	SD	Remark
a	Obstruction of value chain	155	123	50	24	3.16	1.66	effect
b	Spoilage of harvested produce	165	103	69	17	3.17	0.95	effect
c	Reduced income	156	146	22	28	3.22	0.88	effect
d	Unavailability of labour	68	129	76	79	2.55	1.20	effect
e	Loss of business capital	163	76	70	43	3.02	1.07	effect
f	Sickness	38	32	173	109	2.00	0.91	
g	Reduced sales	187	75	53	37	3.17	1.16	effect
h	Decline in production	89	94	136	33	2.68	0.95	effect
i	Death	37	115	30	170	2.05	1.11	
j	Fear of the unknown	98	139	58	51	2.79	1.01	effect
k	Encouraged survival by any means	126	176	27	23	3.15	0.82	effect
l	Polarized social relationship and cohesion	71	134	101	46	2.65	0.94	effect
m	Undesired pregnancy	89	94	136	33	2.68	0.95	effect
n	Loss of man hours	164	172	11	5	3.14	0.62	effect
o	Unavailability of market for output	112	98	130	12	2.88	0.97	effect
p	Increased frustration	224	104	12	12	3.53	0.72	effect
q	Hike in food price	220	106	8	16	3.53	0.72	effect
r	Overweight/obesity	87	64	52	149	2.26	1.24	effect

Source: Field Survey, 2023 effect = $x \geq 2.50$

Table 1 shows that all the indicators listed (18) except three were the perceived effect of covid-19 pandemic lockdown. The result revealed reduced income ($x=3.22$) with homogenous response of (SD=0.88). Obstruction of value chain ($x=3.16$) with heterogeneous response (SD=1.66), Spoilage of harvested produce ($x=3.17$) with homogenous response of (SD= 0.95), unavailability of labour ($x=2.55$) with heterogeneous response (1.20), loss of business capital ($x=3.02$) with heterogeneous response (SD=1.07), reduced sales ($x= 3.17$) with heterogeneous response (SD=1.16), decline in production ($x=2.68$) with homogenous response (SD=0.95) , fear of the unknown($x=2.79$) with heterogeneous response (SD= 1.01), encouraged survival by any means ($x=3.15$) with homogenous response (SD= 0.82), polarized social relationship and cohesion ($x=2.65$) with homogenous response (SD= 0.94), undesired pregnancy ($x=2.68$) with homogenous response (0.95), loss of man hours ($x= 3.14$) with homogenous response (SD=0.62), unavailability of market for output ($x=2.88$) with homogenous response (SD=0.92) and increased frustration ($x=3.53$) with homogenous response (SD= 0.72). The results with heterogeneous responses are still perceived effect of COVID-19 as the discriminating index remains the mean score of 2.50 and above.

However death ($x=2.05$) with heterogeneous response (SD=1.11), sickness ($x=2.00$) with homogenous response (0.91) and overweight/obesity ($x=2.26$) with heterogeneous response (SD=1.24) were not the perceived effect of covid-19 pandemic lockdown in Imo State using the discriminating index of 2.5.

The coronavirus disease 2019 lockdown is a threat to all the core segments of food security and production (availability, accessibility, affordability, stability and utility). Empirical this research showed that lockdown and restriction of movement obstruct internal supply of food and domestic production (food availability). Thus, a break in the chain of internal food supply and low domestic crop production affect food availability. Similarly, the study found that COVID-19 lockdowns affect accessibility of food and decline to food production. (Adebowale *et al.*, 2021, Uchechukwu *et al.*, 2022)

The result is in support to Oguji, et al., (2021) that opined that there is inadequate food chain thus creating a huge deficit supply gap during lockdown. kabir (2020) crisis of the lockdowns in Nigeria is the cut in the internal supply of food to the market from the farm. This could be attributed to labour shortage during lockdowns, manifested through restriction

of farmers to work on the farms and prevention of truck drivers to convey food from the farm to the market. This was aggravated by the Nigerian Police Force officers' brutality and corruption against Nigerians. Smallholder crop farmers, businesses, and communities have been particularly affected.

Preliminary media reports show that the unavailability of farm inputs due to logistical bans, absence of manpower for food processing, prices instability, fear of the pandemic, and inaccessibility of farm labor have adversely affected farm incomes and supply chains (Anadolu Agency, 2020; Hasan, 2020).

Table 2 Distribution of farmers by constraints to the use of coping strategies in the study area.

S/N	Item	SA	A	D	SD	Mean	SD	Remark
a	Inadequacy of storage facility	164	172	11	5	3.41	1.97	factor
b	Unavailability of labour / prohibitive labour cost	169	78	53	52	3.03	1.11	factor
c	Poor capital base	262	79	8	3	3.70	0.61	factor
d	Poor service / Network	255	69	23	5	3.60	0.79	factor
e	Low technical knowhow	112	136	98	6	3.00	0.81	factor
f	Inadequate/ poor knowledge of coping strategies options	117	140	82	13	3.03	0.84	factor
g	Weak government policies	213	108	23	8	3.49	0.72	factor
h	Corrupt leadership	173	127	44	8	3.32	0.78	factor
i	Unavailability /epileptic power supply	222	102	14	12	3.52	0.74	factor
j	Weak extension and advising services	52	64	149	87	1.66	1.61	Not factor
k	Fear of contacting the disease	256	62	28	6	3.61	0.71	factor

Source: Field Survey 2023

The result in table 2 shows the distribution of smallholder crop farmers by constraints to the use of coping strategies in Imo State. Specifically the result indicated that all the indicators under studied are factors that constituted constraints to the use of coping strategies expect one of the item. Which is weak extension and advisory services ($\bar{X}=1.66$). This indicated that extension workers were up and doing even in the time of COVID-19 Pandemic Lockdown.

The result further revealed that ($\bar{x}=3.41$) inadequacy of storage facility unavailability of labour/prohibitive labour cost ($x=3.03$), poor service/ Network ($x=3.00$), Poor capital base ($x=3.700$), low technical knowhow ($x=3.00$), inadequate/poor knowledge of coping strategies options ($x=3.49$), weak government policies ($x=3.49$) corrupt leadership ($x=3.32$), unavailability/epiteptic power supply ($x=3.52$), and fear of contacting the disease ($x=3.61$) were all constraints to the used of coping strategies in Imo state. The major constrains to the use of coping strategies during COVID-19 Pandemic Lockdown by the smallholder crop farmers was ($x=3.70$) poor capital base.

The slowdown in farm work and trade activities, as most finished goods flow through the sector to final consumers, also affected the manufacturing sector, especially for non-essential goods (PWC, 2020). The shocks occasioned by the pandemic led to many households losing their income base. This work is in line with Amuda (2020) who opined that in regards to smallholder crop farmers, the constraints to the use of coping strategies by smallholder crop farmers include weak government policies, corrupt leadership, fear for contacting the disease and epileptic power supply. , COVID-19 has created

Significant food production challenges including low access to seed, farm inputs, hired labor, and agricultural finance (Nchanji and Lutomia, 2021)

HYPOTHESIS: The smallholder crop farmer do not differ significantly in their perceived effect of COVID-19 pandemic lockdown in the three agricultural zones of Imo state.

Table 3 Result of analysis of variance on the perceived effect of COVID-19 pandemic lockdown in the three agricultural zones of Imo State.

Sources	Sum of Squares	DF	Mean Square	Fcalp<0.01	Ftabp<0.01	Pcal>F	Decision
Between group	148.32	2	74.16	1.00	4.605	0.3687	Null is accepted
Within groups	25864.61	349	74.1106				
total	26012.929	351	74.1109				

Source: SPSS result analysis 2023

The result in Table 3 showed that no significant differences existed in the perceived effect on smallholder crop farmers during COVID-19 pandemic lockdown in the three agricultural zones of Imo state.

Decision $F_{tab} 4.605 > F_{cal} 0.3687$ therefore the null hypothesis which states that smallholder crop farmer do not differ significantly in their perceived effect of COVID-19 pandemic lockdown in the three zone is therefore accepted. The result revealed that the smallholder crop farmer across the three zones were effected the same way during COVID-19 pandemic lockdown.

This implies that the lockdown policy made by the government effected the smallholder crop farmer equally across the state. This result has serious implication to food security and farmers wellbeing.

Conclusion and Recommendations

The smallholder crop farmers suffered untold hardship during COVID-19 pandemic lockdown that affected their business leading to food insecurity. The study on perceived effects on COVID-19 pandemic lockdown on smallholder farmers was also ascertained. The results indicated that effects include reduced income, obstruction of value chain, spoilage of harvested produce, unavailability of labour, loss of business capital, reduced sales, decline in production, fear of the unknown, Encourage survival by all means, polarize social relationship and cohesion, undesired pregnancy, loss of manpower, unavailability of market for output and increased frustration.

The study on the constraints to the use of coping strategies indicated that the major constraints to the use of coping strategy during COVID-19 pandemic lockdown, was capital based. It also showed that even at the hit of the pandemic the extension workers were up and doing to sustain the stay of the farmer in business.

The hypothesis revealed that no significant differences existed in the perceived effect of COVID-19 pandemic lockdown by the smallholder crop farmers in the three agricultural zones of Imo state. This implies that the lockdown policy made by the government effected the smallholder crop farmer equally across the state. This result have serious implication to food security and farmers wellbeing. One of the constraints to the use of coping strategies is no-technical-how- how, the study recommends that farmers should form groups that will help them learn new innovation, 2) This study recommends that farmers in their group should secure farm implements such as tractors, either on hire or purchase. This method is better than the use of family labour that may likely not be able help in cultivating large areas of farm land. 3) The Federal and State Governments needs to make sure that there is provision of soft loans to every sectors of economy for quick recovery from Covid-19 pandemic challenges 4) Media houses should continue to create awareness to masses and educate people on how to create wealth so as to alleviate the problems facing masses after Covid-19 pandemic.

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