

Covid-19 Pandemic Awareness and Coping Strategies of Cocoa Farmers in Ondo State of Nigeria

Foluso Temitope Agulanna^{1*}



¹Cocoa Research Institute of Nigeria (CRIN), Idi Ayunre, Ibadan, Nigeria

*Corresponding author: foluagu@yahoo.com

Received: 25 April 2022 / Accepted: 1 July 2022

Abstract

Cocoa ranks first in Nigeria's agricultural export trade. The study was carried out because of the understanding that as a major contributor to the nation's economy, disruptions to the cocoa sector, such as the one occasioned by Covid-19 will impact not only farmers' well being but the national economy as well. The objectives of this study were to determine the socio-economic characteristics of cocoa farmers in the study area, and to identify their level of awareness and coping strategies during Covid-19. As location of this study, Ondo is the largest cocoa producer state, hence, whatever affects the cocoa sector in the state will have effect on the nation's cocoa sector as a whole. Random sampling technique was used to select cocoa farmers in the study area. A total of fifty cocoa farmers (respondents) were purposively selected from Ile-Oluji/Oke-Igbo local government area of the state. Information was collected from the selected farmers with the aid of well-structured questionnaires and the data retrieved from forty-six cocoa farmers collected were analysed with descriptive statistics and chi-square analysis. The result of the analysis showed that three-quarter of the farmers are above the age of 41 years, males and married. Similarly, high proportion of the cocoa farmers have 4-6 children in the household, a quarter had secondary education, nearly half have 16 to 20 years farming experience while three-quarter lived in condominiums or housing units where residents are herded together thereby predisposing them to the risk of the contagion. Most of the respondents had low income or sales during Covid-19 pandemic, more than three-quarter ate food three times before Covid-19 while about 15 percent ate three times during the pandemic. Ninety percent did not have enough food at home during the lockdown and most of them did not have enough money to buy food during the pandemic. Majority of the respondents were aware of the occurrence of Covid-19, while 70% of the respondents coped by relying on less expensive food during the lockdown. Nearly sixty percent of the respondents reduced their food consumption due to income loss, and more than sixty percent reduced the number of meals eaten daily and reduced the portion or size of meal daily during Covid-19. The chi-square test also showed that a significant relationship exists between farmers awareness and coping strategies to Covid-19 as well as the quality and type of food they consumed.

Keywords: Covid-19 pandemic, cocoa farmers, awareness, coping strategies

INTRODUCTION

Cocoa is one of the most important perennial tree crops grown in tropical climates around the equator. It is also a highly valuable and important economic crop because it provides employment and income to farmers, raw materials for industries and foreign exchange for producing countries such as Nigeria (Afolayan, 2020). Studies show that 90% of the world's cocoa beans are produced in small, family-run farms of less than 6 ha of acreage, with only 5% yield coming from big farmsteads of 50 ha or more. In spite of the neglect of agriculture by many African nations, cocoa still remains a major export crop in many of these economies (Akinagbe & Ajayi, 2010). Nigeria, alongside Ghana and Côte d'Ivoire, supplies more than two-thirds of the world's yield of cocoa. Social disruptions such as the Covid-19 pandemic hampered the cocoa industry in Nigeria.

Historically, cocoa is said to have been first cultivated in the Delta region of Nigeria before spreading to the Western region around 1890 where ecological conditions and the soil type encourages cocoa growing and cultivation. Cocoa is commonly grown in the southern belt of Nigeria because of the soil and weather conditions that are favourable to its cultivation. It is generally agreed that all the states in southwestern Nigeria are cocoa producing states, with the only exception being Lagos, which according to Afolayan (2020), does not produce cocoa in "commercial quantity." Ondo, Osun and Cross River top the list of producer states with an annual production of 77,000, 70,000, and 65,000 metric tons apiece. But of all the cocoa

In the context of Nigeria, the pandemic led to the lockdown of villages, cities and states in the country, including Ondo State, which is the study area in this paper. Although Jacobs

& Okeke (2022) claimed that the anti-Covid-19 mitigation strategies adopted by Nigeria were responsible for the low virus transmission experienced by the country, the truth still remains that the pandemic exposed many rural farmers to debilitating health problems, and by restricting human and vehicular movement, led to low agricultural productivity, which in turn led to low income for farmers and their households. The pandemic also disrupted transportation of agricultural products and supply chains in different parts of the country due to the travel restrictions imposed by the government.

It is undeniable that Covid-19 had a significant impact on the global economy as well as business operations. Every country in the world experienced one form of economic downturn or another as a result of the Covid-19 pandemic. From early 2020, when the coronavirus disease emerged, to the year 2021, the pandemic wreaked havoc on almost every country in the world, causing a global economic recession. Yeyati & Filippini (2021) averred that the recession occasioned by Covid-19, is the most far-reaching humanity has experienced since the end of the World War-II. The pandemic also led to a significant contraction, or decline in growth of the GDP of many nations. The gross domestic product (GDP), according to Jena *et al.* (2021), is the most widely recognised indicator, it also accounts for the overall goods and services produced within a country. A decline or shrinkage in a nation's GDP is often a sign

the pandemic. But as with many government policies, in Nigeria, 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. As with other cocoa producing states in Nigeria, cocoa farmers in Ondo state 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), the world was not prepared for such a calamitous event as the Covid-19 pandemic. Perhaps this uncertainty in its occurrence explains why it created such huge social and economic costs for the nations of the world. All through history, epidemics have been known to decimate human populations. This is more so when such epidemics were unexpected.

Hence, the present study examined the strategies that cocoa farmers in the study area adopted to cope with the global pandemic. The objectives of the study were

MATERIALS AND METHODS

The study was carried out in Ondo State, which is also the chief cocoa producing state in Nigeria. Ondo is one of the six states that make up Southwestern Nigeria. The state lies between longitude 4° 50' 7.01" East and latitude

in the north by Ekiti and Kogi States, in the east by Edo State, in the west by Oyo and Ogun States, and in the south by the Atlantic Ocean. There are 18 Local Government Areas (LGA) in Ondo state, out of which Ile Oluji/ Oke-Igbo LGA was purposively selected. Well-structured questionnaires were administered to fifty cocoa farmers in six villages/towns out of which forty-six were used for the analysis, for the purpose of collecting primary data on farmers' socio-economic characteristics, awareness as well as coping strategies during the pandemic. The reason is that not all the questionnaires were retrieved since some were not properly filled. Data were collected through in-depth interviews of cocoa farmers in the study area using both qualitative and quantitative approach. From the in-depth interview, information related to occurrence and nature of sickness, measure(s) adopted to stay safe

Data Analysis Method

Data retrieved from the information collected was analysed with descriptive statistics and chi-square analysis. A chi-square test was used to establish the statistical link between cocoa farmers' awareness and coping strategies to Covid-19. The chi-square test used was based on the formulation of a null hypothesis and an alternative hypothesis (Bartlett *et al.*, 2018) whether there is relationship between the awareness of cocoa farmers and their coping

RESULTS AND DISCUSSION

In carrying out this study, some limitations were found. Data used in this study was based on in-depth interview of some cocoa farmers in the study area as Covid-19-induced social distancing and lockdown

still in place at the time of data collection. The data was limited by its convenience sample, moderate sample size across the LGA in Ondo state and the amount of information.

The Covid-19 global pandemic disrupted many national economies, particularly in Africa. In Nigeria, its effect on the agricultural sector was grim and dire. The pandemic also created a public health crisis in the country, leading to many farmers becoming sick and unable to perform to their optimum capacity. The sudden occurrence of Covid-19 caught many countries off-guard. The infection and fatality of the virus was very alarming when it first emerged. In response, many governments implemented various forms of lockdown to contain the spread of the disease. It is common knowledge that most countries in the world experienced substantial negative economic and health impacts from Covid-19 pandemic. As a result, many national economies were disrupted, resulting in the shutting down of many industries and rising unemployment rates (Jena *et al.*, 2021). However, this initial response of governments to the pandemic was reactive, not proactive. Now, this way of reacting to an unexpected event is perfectly in line with the precautionary principle (PP). The principle states that when there is uncertainty or lack of information on the impact of an event, which can lead to serious damage, measures should be taken to prevent such a situation to appear. In other words, the principle is to be applied when events associated with calamities can damage the functioning of a system seriously, or even destroy it (Platje *et al.*, 2020). In the context of Covid-19 pandemic, some of the crisis management measures

management ideal is a *sine qua non*. However, a major drawback with the PP approach to problem-solving is that it often requires that we act randomly in dealing with uncertain events or situations. In the context of Covid-19, this sense of uncertainty was exacerbated by the paucity of data or information about the virus.

Several scholarly discussions have largely focused on the impact of Covid-19 on human health and business operations. Consequently, most people get the impression that the pandemic affected only fiscal or healthcare issues in society. This perspective is both narrow and restrictive; because the truth is that Covid-19 had multi-layered effect on society. For example, there are several reports that show that the pandemic severely affected social infrastructure as well. In Nigeria, for example, quarantine restrictions hampered many construction projects thereby leading to the downsizing of the labor force. The trimming of the workforce triggered unemployment and loss of income for construction workers. With particular reference to social infrastructure, the pandemic affected such public facilities as water supplies, public transportation, telecommunications, roads and even schools. For example, restrictions in vehicular movement impacted cocoa farmers' mobility or ability to convey their

Socioeconomic Characteristics

Disruption to the cocoa sector, and impacts on farmers' wellbeing and livelihoods were issues brought into sharp focus by the Covid-19 pandemic. The pandemic disrupted cocoa farming and production, sales, prices and income of cocoa farmers in the study area. This conforms to findings in Oriola (2009) that.

and in regard to farmers, when productive, they can easily pay the wages of engaged laborers and prices will become affordable for consumers. The findings of this study further revealed that cocoa farmers were highly vulnerable in terms of livelihoods, diet and food intake. To weather the multi-layered shocks occasioned by the pandemic, farmers and their households adopted diverse coping strategies, which are discussed below. Table 1 is an elaboration of the socioeconomic characteristics of cocoa farmers in the study area during the pandemic. These include age, gender, marital status, educational status, farming experience, type of accommodation, and number of

above the age of 41, 78.3% are males while 76.1% are married. It reveals also, that 26.1% of the respondents had secondary education, 43.5% had 16 to 20 years farming experience, 78.3% had 4-6 children in the household while 73.9% lived in condominiums or living conditions that brought people in close proximity to each other. Such living conditions are risk factors for the spread or transmission of Covid-19 since the possibility of contracting the contagion increases with contact or people sharing common facilities such as conveniences and rooms. What is shown from the foregoing is that because of their lifestyle and economic deprivation,

Table 1. Socioeconomic characteristics of cocoa farmers in Ondo State

Variables	Frequency	Percentage (%)
Age (years)		
18-25	1	2.2
26-33	4	8.7
34-41	6	13
>41	35	76.1
Total	46	100
Gender		
Male	36	78.3
Female	10	21.7
Total	46	100
Marital status		
Single	11	23.9
Married	35	76.1
Total	46	100
Educational status		
No formal education	15	33
Primary education	11	23.9
Secondary education	12	26.1
Tertiary education	8	17.4
Total	46	100
Farming experience (years)		
1-5	2	4.4
6-10	11	23.9
11-15	13	28.3
16-20	20	43.5
Total	46	100
Type of accommodation		
Hut	1	2.2
Bungalow	3	6.5
Face-to-face	34	73.9
Self-contained room	8	17.4
Total	46	100
Children in the household		
1-3	8	17.4
4-6	36	78.3
7-9	2	4.4
Total	46	100

populations to Covid-19 pandemic. Corroborating the findings above, Obayelu *et al.* (2021), aver that by threatening the food security of people (especially the rural poor), the pandemic exposed many households to varying forms of vulnerabilities. Again, the food demand and supply shocks caused by Covid-19 outbreak had effect on agriculture, food and dietary intake negatively through Covid-19 policies.

In another study that investigated the strategies used by farm households to mitigate the impacts of Covid-19 on agricultural households in India, Harris *et al.* (2020) arrived at several findings. The most common strategies included finding new markets (including selling door-to-door), reduce prices, and eat the farm's own production. To deal with reduction in sales, most farmers resorted to leaving harvest in the field, feeding vegetables to livestock, and sharing vegetables with others. Some farmers decided to find new markets and reducing prices, with female farmers reducing prices more than men, and small farms more than large farms.

In April 2020, at the peak of the pandemic, Nigeria's National Bureau of Statistics (NBS), in collaboration with the World Bank, carried out a Covid-19 NLPS (the abbreviations standing for National Longitudinal Phone Survey). The survey was a monthly assessment of a nationally representative sample of 1,950 households, meant to monitor the socio-economic impact of the pandemic and other shocks. The first round (baseline) of the survey was conducted in April/May 2020, during which a federally mandated lockdown was in full effect. The survey revealed that: (i) the pandemic had devastating consequences on all sectors of Nigeria's

loans since the onset of the pandemic (NBS,

Covid-19 Effect on Small Scale Enterprises

At the risk of overstating a known datum, it is common knowledge that Covid-19 had a destructive impact on the economic or health care systems of various societies. The shocks that resulted from the pandemic led to the closure of many business enterprises. To safeguard the lives and wellbeing of citizens, many governments adopted the policy of lockdown and restrictions on people's movement; a policy which itself led to people losing their jobs and means of livelihood. The consequence was a disruption in the global supply chains. But it is not only that the pandemic devastated large businesses; its impact on small- and medium-sized enterprises (SMEs) was also severe. Nigeria had its fair share of disruption to small scale businesses occasioned by Covid-19.

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 the cocoa sector, the coping strategies adopted by farm households led to 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 cocoa is grown almost entirely on smallholdings. Most cocoa orchards 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 about

98% of the food consumed in the country, with the exception of wheat. By providing a variety of foods in sufficient quantities, smallholding helps ensure food security

Cocoa Farmers Income and Food Consumption

Table 2 shows the frequency of eating of food by cocoa farmers before and during the pandemic. Majority of the respondents (95.7%) indicated that their income or sale was low during Covid-19. Covid-19 mitigation measures also disrupted cocoa production and farm activities as farmers did not have access to good quality seeds, tools or agricultural inputs (e.g. pesticides and fertilizers). About 89.1% of the

that due to Covid-19 policy responses, they

did not have enough food to eat while 95.6% indicated that they did not have enough money to buy food. Only about 15.2% could afford to eat three times a day during the pandemic; this is in contrast to 78.3% that ate thrice daily before the pandemic. Many farmers had to skip meals because of low income/sale, reduced farm activities, and inability to purchase food items. This is in agreement with the report of the NBS (2020) which showed that there was a reduction in food consumption during the pandemic. What this revealed is

Cocoa Farmers' Awareness and Coping Strategies

Table 3 reveals the level of awareness and coping strategies of cocoa farmers to Covid-19 in the study area. The table shows that 96% of the respondents were aware of the existence of the corona virus, 69.6% relied on less expensive food for their daily meal during the lockdown. 56.5% reduced

Table 2. Cocoa farmers income and consumption during Covid-19 pandemic

Variables	Frequency	Percentage (%)
Income or sale during Covid-19		
High	0	0
Low	44	95.7
Same	2	4.3
Total	46	100
Eating frequency before Covid-19		
1 time	1	2.2
2 times	2	4.4
3 times	36	78.3
More than 3 times	7	15.2
Total	46	100
Eating frequency during Covid-19		
1 time	2	4.4
2 times	37	80.4
3 times	7	15.2
Total	46	100
Enough food to eat at home during lockdown		
Yes	5	10.9
No	41	89.1
Total	46	100
Enough money to buy food during Covid-19		
Yes	2	4.4
No	44	95.6
Total	46	100

Table 3. Coping strategies of cocoa farmers during Covid-19 pandemic

Variables	Frequency	Percentage
Awareness of corona virus (Covid-19)		
Yes	44	96
No	2	4
Total	46	100
Relied on less expensive food during lockdown		
Every day (7 days)	32	69.6
3-6 days	13	28.3
0-2 days	1	2.2
Total	46	100
Borrowed food from friends during Covid-19		
Every day (7 days)	6	13
3-6 days	3	6.5
0-2 days	37	80.4
Total	46	100
Reduced number of meals during the lockdown		
Every day (7 days)	29	63
3-6 days	16	34.8
0-2 days	1	2.2
Total	46	100
Reduced portion or size of meals		
Every day (7 days)	31	67.4
3-6 days	14	30.4
0-2 days	1	2.2
Total	46	100
Coping strategies with income loss		
Relied on savings	12	26.1
Relied on off-farm income	3	6.5
Reduced food consumption	26	56.5
Relied on income from farming	5	10.9
Total	46	100

their food consumption due to income loss,

63% reduced the number of meals eaten daily while 67.4% reduced the ration of meal eaten daily during the pandemic. This could be as a result of low income or sale, reduced farm activities, inability to purchase food items due to lockdown or restrictions in movement. This is also in line with Amare *et al.* (2020) where it was discovered that hours are lost as a result of sickness or care given to sick ones which

Awareness and Coping Strategies Relationship

Table 4 shows the result of the chi-square test analysis on the relationship between the awareness of cocoa farmers and the coping strategies adopted by farmers during the pandemic. The table shows

is significant relationship between the aware-

ness of cocoa farmers about Covid-19 and their reliance on less expensive food, coping strategies with income loss, reliance on support/ palliatives received as well as the type of support received during Covid-19.

Nigeria shares a similar experience with Bangladesh with regards to the impact of Covid-19 on the country's small- and medium- sized enterprises (SMEs), or simply, small- holdings. The Bangladeshi experience is worth exploring here. Sarker *et al.* (2022), remark that the main economic backbone of Bangladesh is the small- and medium-sized enterprises (SMEs), which we are told, act as the key driving factor for economic inclusivity and socio-economic stability in the country. The SMEs do this by increasing national

Table 4. Results of Chi-Square analysis showing the relationship between cocoa farmers' awareness and their coping strategies to Covid-19 pandemic

Variables	df	Chi-square value ($\div 2$)	p value
Reliance on less expensive food	3	14.388 ***	0.002
Coping with income loss	5	22.519 ***	0.000
Palliatives supplied	1	7.161 ***	0.007
Reliance on support	2	16.013 ***	0.000
Type of support	3	21.271 ***	0.000

*** Significant at 1%.

with other developing economies, SMEs in

Bangladesh were adversely affected by the Covid-19 pandemic, which destroyed the stability of economic growth in the country. Writing in the same vein, Oyewale *et al.* (2020) stated that in Nigeria, the lockdown and mobility restrictions imposed by the government restricted entrepreneurial economic activity in the country. In a study undertaken by the authors to tease out the effect of Covid-19 on Small and Medium Scale Enterprise in Nigeria, it was revealed that the effect was felt in both the agriculture and non-agricultural sectors. Some entrepreneurs who were sampled in the study stated that the pandemic, along-side governmental mobility restrictions (i.e. partial and total lockdowns), both had significant effect on Small and Medium Scale Enterprise in Nigeria. Specifically, their study revealed that government-imposed partial and total lockdowns greatly hindered access to inputs at the local markets, created difficulty in exporting and importing goods, thereby affecting investment. This finding is consistent with other studies in other

CONCLUSIONS

The study revealed that many cocoa farmers in Ondo State, Nigeria, experienced monetary hardship; hence their inability to access basic needs such as

healthcare. The study exposed the level of

awareness and coping strategies adopted by cocoa farmers to Covid-19 in the study area. It also disclosed the effect of the long neglect suffered by the cocoa sector especially on the national economy. It is heartening to note that the cocoa sector was able to withstand the social crises caused by the Covid-19 pandemic. It can be positively asserted, therefore, that the cocoa sector in Nigeria has been resilient in the face of the numerous challenges that it has faced. More importantly, cocoa has contributed immensely to the growth of the Nigerian economy; hence government, stakeholders and all those in the cocoa sector must

REFERENCES

- Afolayan, O.S. (2020). Cocoa production pattern in Nigeria: The missing link in regional agro-economic development. *Analele Universităţii din Oradea, Seria Geografie*, 30 (1), 88–96.
- Ajayi, I. R.; M.O. Afolabi; E.F. Ogunbodede & A.G. Sunday (2010). Modeling rainfall as a constraining factor for cocoa yield in Ondo State. *American Journal of Scientific and Industrial Research*, 1(2), 127–134.
- Akinagbe, O.M. & A.R. Ajayi (2010). Assessment of farmers' benefits derived from Olam Organisation's sustainable cocoa production extension activities in Ondo State, Nigeria. *Journal of Agricultural Extension*, 14 (1), 11–21.

- Amare, M.; K.A. Abay; L. Tiberti & J. Chamberlin (2020). Impacts of Covid-19 on food security: panel data evidence from Nigeria. *IFPRI Discussion Paper 1956*. International Food Policy Research Institute (IFPRI). Washington, USA.
- Bartlett, J.R.; D.N.O. Tackie; D. Reid; A. Adu-Gyamfi & A. McKenzie-Jakes (2018). An analysis of the characteristics and practices of selected Florida small livestock producers: a focus on production and processing. *Professional Agricultural Workers Journal*, 5(2), 40–58.
- CBN (2020). CBN moves to cushion the impact of COVID-19 crisis. *CBN Update*, 2(4), 1–3.
- FAO (1983). *World Food Security: a Reappraisal of the Concepts and Approaches*. Director Generals Report, Food and Agriculture Organization, Rome.
- Harris, J.; L. Depenbusch; A.A. Pal; R.M. Nair & S. Ramasamy (2020). Food system disruption: initial livelihood and dietary effects of Covid-19 on vegetable producers in India. *Food Security*, 12(4), 841–851
- Isere, E.E.; A.M. Adejughagbe; A.T. Fagbemi; S. Fagbemi; A.G. Famokun; T.O. Omoju & W. Adegbenro (2021). Outcome of epidemiological investigation of Covid-19 outbreak in a southwestern state of Nigeria, March to August 2020. *Open Journal of Epidemiology*, 11, 163–177.
- Jacobs, E.D. & M.I. Okeke (2022). A critical evaluation of Nigeria’s response to the first wave of Covid-19. *Bulletin of the National Research Centre*, 46, 44.
- Jena, P.R.; R. Majhi; R. Kalli; S. Managi & B. Majhi (2021). Impact of Covid-19 on GDP of major economies: Application of the artificial neural network forecaster. *Economic Analysis and Policy*, 69, 324–339.
- NBS (2020). *Covid-19 Impact Monitoring: Nigeria, Round 4*. National Bureau of Statistics; World Bank, Washington, DC.
- Obayelu, E.A.; O.A. Obayelu; K.K. Bolarinwa & R.A. Oyeyinka (2021). Assessment of the immediate and potential long-term effects of Covid-19 outbreak on socio-economics, agriculture, security of food and dietary intake in Nigeria. *Food Ethics*, 6, 5.
- Oriola, E.O. (2009). A framework for food security and poverty reduction in Nigeria. *European Journal of Social Sciences*, 8 (1), 132–139.
- Platje, J.; J.A. Harvey & L.R. Bacchus (2020). Covid-19 – reflections on the surprise of both an expected and unexpected event. *Central European Review of Economics and Management*, 9(1), 149–162.
- PWC (2020). Impact of Covid-19 on the supply chain industry. *Report*. Price Water House Coopers, Lagos, Nigeria.
- Sabo, B.B.; S.D. Isah; A.M. Chamo & M.A. Rabi (2017). Role of smallholder farmers in Nigeria’s food security. *Scholarly Journal of Agricultural Science*, 7, 1–5.
- Sarker, R.; S.M.A. Rahman; A.K.M.H. Islam; F.F. Bhuyan; S.E. Supra & K. Ali (2021). Impact of Covid-19 on small- and medium-sized enterprises. *Global Business Review*, 1–14.
- Seth, N. J.; M.A. Ganaie & F. Zafar (2020). Impact of Covid-19 (Corona virus) on small and medium enterprises (SMEs) in Pakistan. *SMEDA Survey Report*. Small Medium Enterprises Development Authority, Pakistan.
- UNCTAD (2020). *The Covid-19 Pandemic Impact on Micro, Small and Medium Sized Enterprises*. United Nations Conference on Trade & Development. United Nations.
- Yeyati, E.L. & F. Filippini (2021). Social and economic impact of Covid-19. *Global Working Papers*. Brooking Institutions, Washington, DC.

0

Agulanna