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## THE FINANCIAL IMPACT OF COVID-19 ON POULTRY INDUSTRY IN NIGERIA

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**ABSTRACT:** *The covid-19 pandemic as declared by WHO in March 2020 is a game changer that introduced a “new normal” of every facet of life, every sector of the economy and every cluster of the population. The key indicators of business plan and continuity, government policies and security impacting logistics have been affected and in all affecting the short-term survival rate of the poultry industry. The analysis revealed that all proxies of covid-19 indicators such as business plan and continuity, government policies and security impacting logistics have a significant positive effect on the financial health of the poultry industry (Adjusted  $R^2 = 0.949$ ,  $F$ -statistics = 5.512 :  $p = 0.000 < 0.05$ ). Thus, the research concluded that a well-managed Covid-19 indicators and proxies have a significant positive effect on the financial health of the poultry industry in Nigeria.*

**KEYWORDS:** poultry industry, COVID-19, .Gross Domestic Product, cycle management.

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## INTRODUCTION

The World Health Organisation declared COVID-19 a pandemic on March 11, 2020, having serious and critical impact on people's lives, families, businesses and communities at large. The COVID-19 pandemic has introduced many challenges in all sectors of the economy but focus of this paper will be on the agricultural livestock sector and specifically the poultry industry. The Poultry industry can be broadly categorized into two, namely the meat and egg industry. The two broad categories however exhibit the same trait and thus can benefit or suffer from the same fate or fortune.

SARS-CoV-2 (the virus that causes COVID-19) represents the latest member of the coronavirus family affecting humans of which virus type is commonly found in humans and other mammals. In humans, coronavirus has four strains that cause mild clinical symptoms, usually referred as the common cold. This was a virus that broke out in China in December 2019 but globally WHO declared it a pandemic in March 2020.

The financial and non-financial performance of the industry are the two broad oxygen pipes that ensure the survival of the industry and thus it will be logical to briefly consider the non-financial performance criteria before x-raying the financial performance measures with particular focus on the short-run survival strategies since it takes just a few seconds to survive kneeling on one's neck. SMEs are financially more fragile and cash-strapped when market aggregate demand is down and a typical response will be availability of emergency funding programs with lower interest rates, deferred or waived taxes and fees, or easier lending policies as additional measures to help the SMEs survive this harsh period of stagnancy.

According to GAIN (Global Alliance for Improved Nutrition), in the survey they conducted at the beginning of this pandemic, 94% reported being impacted by the pandemic, mainly via decreased sales (82%), difficulty accessing inputs (49%), and difficulty paying staff (44%). 81% and 64% of firms reported urgently needing financial and technical support, respectively, to cope with the effects of the pandemic and thus the need for governments and other development agencies /partners to react positively to these challenges will bring oxygen back to the live of these SMEs including the poultry industry.

### **Objective**

The objective of this study is to establish whether the utilisation of management information system has any significant effect on the quality of corporate reporting and specifically the objectives are broken down into

1. Evaluate the effect of Covid-19 impacts on the profitability of the Poultry industry in Nigeria.
2. Examine the effect of Covid-19 on the Expansion capacity of the Poultry industry in Nigeria.
3. Assess the impact of Covid-19 on the Cashflow liquidity position of the Poultry industry in Nigeria.

### **Research Hypothesis**

Hypothesis in the null form have been put forward for the purpose of study:-

Ho1 : Covid-19 factors do not impact significantly on the profitability of the Poultry industry in Nigeria.

Ho2 : Covid-19 factors do not have any significant impact on the Expansion capacity of the Poultry industry in Nigeria.

Ho3 : Covid-19 factors do not have any significant impact on the cashflow liquidity position of the Poultry industry in Nigeria

## **THEORETICAL FRAMEWORK**

Theoretical framework as a fundamental structure helps to mould a solid position and provide the basis of further empirical review in any study. (Adom,Hussein & Adu-Agyem,2018). It also serves as a pathfinder that also provides credibility for a study.

### **Contingency Theory**

The contingency theory of leadership was proposed by the Austrian psychologist Fred Edward Fiedler in his 1964 article, "A Contingency Model of Leadership Effectiveness" (Peteromode, 2012).The contingency theory emphasizes the importance of both the leader's personality and the situation in which that leader operates. According to Preferred & Scale, 2010, there are three distinguished factors that affects and can define situations which are positional power, leader-member relationship and task structure. These three concept of situations basically in different modes will combine to determine what right action should be taken in the right mix to get the best result at any point in time by management.Contingency theory simply can be summarised as stating that the success or otherwise of a leader or management depends on the situation and the style

adapted/adopted to manage each occurring situation and there is no universally applicable set of management principles cast in gold to manage organisations.(Omoluabi 2016)

### **Prospects Theory**

Daniel Kahneman (Nobel Prize in economics in 2002) and Amos Tversky, (1979) developed the Prospect Theory in their article". Prospect Theory: An Analysis Of Decision Under Risk"

According to Gbiglino and Tvede (2000). The Prospect theory explains that we all have an irrational tendency to be less willing to gamble more with losses than profits. It is concerned with behaviour of decision makers who have got to take decisions between two alternatives in a risky atmosphere. According to Hamelers (2020), Prospect theory postulates that gain versus loss framing has the tendency of shaping preferences for different interventions and demonstrate that gain frames of the coronavirus promote support for risk-averse interventions, whereas loss frames result in more support for risk-seeking alternatives. Frustration and powerlessness are key features of loss frames awoken by stronger negative emotions, they concluded that framing the pandemic in terms of gains may be most effective in promoting support for the strict preventative measures that have been taken throughout the globe.

### **Empirical literature**

The SME sector is the backbone of major developed economies, as well as important contributors to employment, economic and export growth. In South Africa, SMEs account for 91% of businesses, 60% of employment and contribute 52% of total GDP. In Nigeria, SMEs contribute 48% of national GDP, account for 96% of businesses and 84% of employment.

According to the Nigeria Bureau of Statistics, small and medium scale enterprises (SMEs) in Nigeria have contributed about 48% of the national GDP in the last five years. With a total number of about 17.4 million, they account for about 50% of industrial jobs and nearly 90% of the manufacturing sector, in terms of number of enterprises.

According to the 2010 Survey report on SMEs in Nigeria conducted by the National Bureau of Statistics (NBS) in collaboration with SMEDAN, the SME sector in Nigeria is strategically positioned to absorb up to 80 percent of jobs, improve per capita income, increase value addition to raw materials supply, improve export earnings, enhance capacity utilisation in key industries and unlock economic expansion and GDP growth

### **Profitability in Pandemics**

In order to explore the impact of coronavirus , Bartik,Bertrand, Cullen,Glaeser,Luca, and Stanton. (2020) discovered that mass layoffs and closures had already occurred with just a few weeks into the crisis and many more are expected in the days ahead and Post-Covid. Also, the risk of closure was negatively associated with the expected length of the crisis as businesses had widely varying beliefs about the likely duration of COVID-related disruptions.Next is the fact that many small businesses are financially fragile with poor liquidity and unstructured cashflow system. And finally majority of businesses planned to seek funding through the Coronavirus Aid, Relief, and Economic Security (CARES) Act with many anticipated problems in accessing the program, such as bureaucratic hassles and difficulties establishing eligibility.

**Capacity Management/Digital Transformation During The Pandemics.**

The implementation of social distancing makes people limit activities outside their home, consequently sales turnover decreases and consequently SMEs need to change the mindset in running business by utilizing technology transformation. Though this approach is believed to continue the sustainability of SMEs but some SMEs do not have knowledge about digital skills that are relevant to their business. In fact, during covid-19 condition, online business can result sustainability in their business that can take place now and in the future. Winarsih and Khoirul(2020 ).

The lockdown induced scarcity of basic essential goods is manifesting and shortages of foods, water, toiletries, drugs and other essential items will impact all business areas as existing products and commodities in the warehouses and those on the shelves at the supermarkets, open markets and malls will run out.

In the agricultural sector, farmers inability to go to farms or work in the farms optimally to produce more or push out from the barns and various storage facilities tending more towards zero productivity and empty markets stalls will be the order of the day. The security apparatus set up to monitor the inter-state lockdown will also ensure that agricultural produce cannot be mobilized from surplus area particularly the hinterlands into the cities. All these will combine to further weaken the economy and projecting towards another round of recession likely in Q4 2020 or Q1 2021. With the undeveloped nature of logistics in Nigeria, almost all food items are transported via trucks. Lack of clarity over the exemption status of logistics companies at the initial stage resulted into serious disruption to agricultural supply chains.

As Nigerians and the world globally stays locked down as a means of halting the spread of the disease, shifting consumer behaviour to the various online trade channels and digital platforms has been seen as a solid means of promoting e-commerce industry. (NM Partners 2020).

The crisis is not unique to Nigeria as there is an element of uniformity in the effect of the crisis across Africa, from Ghana to Uganda, Kenya and South Africa with logistics businesses suffering a significant decline. In Kenya, 40% of imports come from China. With the pandemic, shipments have dropped 40%. At the port of Mombasa, 47 ships cancelled their arrival and a number of ships are showing up empty as supplies from China dry up. The Food and Agriculture Organisation has warned against the looming food security crisis with about 50% decline in Agricultural products resulting from the various African countries imposed lockdowns.(Abubakar 2020 ; Mogaji 2020; Babatunde 2020)

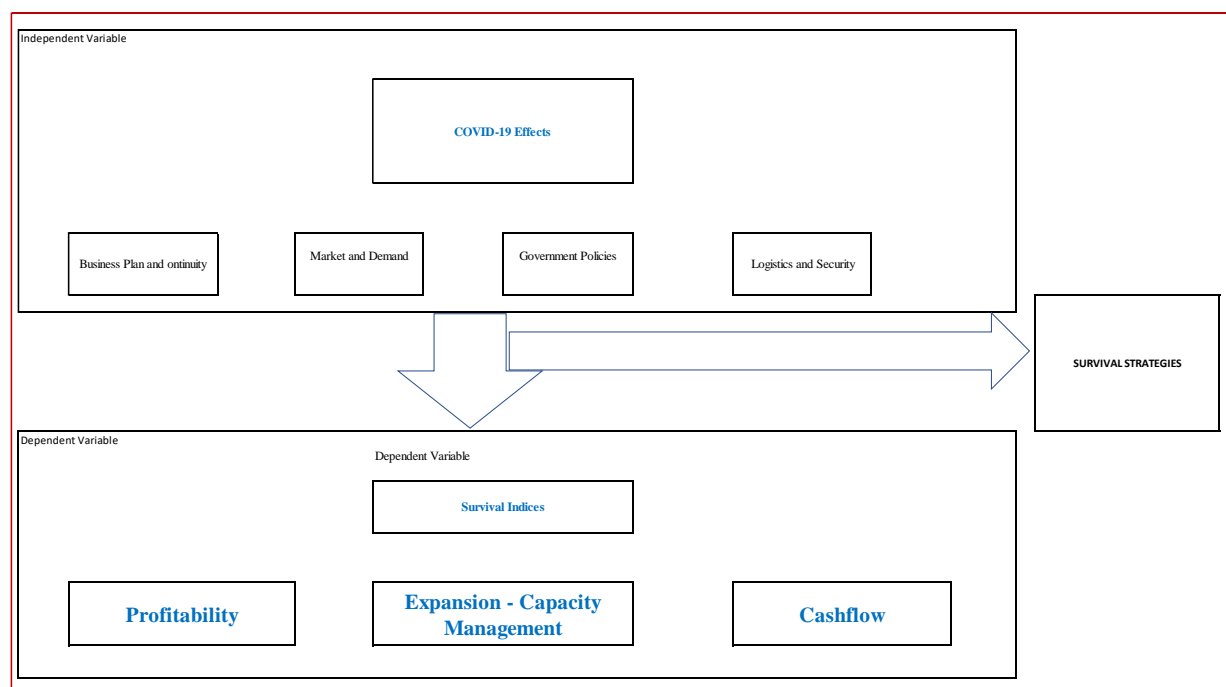
**Pandemics And Cashflow.**

Financial distress which can be clearly outlined by few indicators like Breaches of debt covenant ratios; Negative operating cashflows; Solvency issues ; Liquidity issues and Increasing working capital cycles are all pointers of cashflow management (Khoury 2020). The topmost issue in this pandemics for the poultry industry is aptly captured in the need for a short-run survival as the cost of inputs (cash outflows) increase and the cash inflow is reducing through low market demand and consequently low turnover.

Francois(2020) quoted Christophe Engel as saying “short and accurate monitoring of cash planning is essential in every business. When the market is difficult and changing, this need is reinforced because it is very important to be able to respond quickly to this situation. If you have a clear view of your cash flow and you can adjust it quickly, then you keep control”. There are six clear positions to optimize during the pandemics and each of them as soon as possible, Commercial receivables, Inventory management, Commercial debts, Purchases, Fixed costs and Investments. In order to reduce cash outflow or achieving a sustainable positive net cashflow and preserve liquidity in the crisis period, the need for proactive measures at ensuring that suppliers payment plan is longer than customers payment options and the principle of Just-In-Time purchases, Vendor-Managed inventory, supplies outsourcing among other measures are critically utilized in the right mix, there must be cash inflow to cater for survival and profitability.

PwC(2020) highlighted three steps and actions that need be taken in stabilizing an organisation cashflow, they are 1.Rapidly understand the current financial position, 2. Take action to protect the position, and 3. Manage internal and external stakeholders.

## CONCEPTUAL REVIEW



**Source: Authors Conceptual Model (2020).**

The independent and dependent variable for this research is Covid-19 factors (X) and Poultry Farms performance factors (Y) respectively. The independent variable Covid-19 factors (X) is measured using the following dimensions: business plan and continuity, market and demand, government policies and logistics/security system while the dependent variable is measured using

four key variables of profitability, expansion/capacity management and cashflow as well as a combination of the whole variables.

## METHODOLOGY

The target population for this study comprises of key players in the poultry industry as distributed in Table 5 below. As this pandemic was not really anticipated to be so when it started in China in 2019, a lot of the farms were caught unaware and thus the sampling limited only to Managers and Owners of the business who are in a better position to do a quick assessment of the impact, this is in addition to the key suppliers of inputs (maize, Soya Bean Meal, drugs, vaccine and feed additives). This study utilized the effectiveness of questionnaire as the method of data collection using a closed-ended version and was used structurally with interview to have the required reach. These include better and straightforward generation of statistics such as coding, tabulation and analysis (Ajay & Micah, 2014). In addition, closed-ended questionnaire is among the reliable data collection instrument widely used. It encourage the respondents to make a choice fast and easy, and is easier for the researcher to code the data for further analysis (Taderdoost, 2017; Young, 2016). Additionally, the items of the questionnaire were gauged on five-point Likert scale. Out of the 80 questionnaires distributed 68 were returned and filled correctly and were used for analysis as the 85% response rate was considered adequate (Young 2016 )

**Table 5 : Target Population**

S/No	Group	Sample
1	Poultry Association of Nigeria Ogun State	30
2	Poultry Association of Nigeria Oyo State	15
3	Poultry Association of Nigeria Lagos State	10
4	Chicken and Egg Sellers	10
5	Veterinary Consultants including Animal Health Scientists	5
6	Input Suppliers	10
7	Poultry Farm Workers	10
8	Transport Service Providers	15
	Total	105

**Source: Researcher's Study, 2020.**

### Model Specification

The variables for this study operationalized thus:

$$Y = f(X)$$

Where Y = PF Performance (PFP), and;

$y_1$  = Profitability (PFT)

$y_2$  = Expansion Capacity Management (ECM)

$y_3$  = Cashflow (CSF)

$X$  = COVID-19 Impacts (FMP)

$X = (x_1, x_2, x_3, x_4, x_5)$

$x_1$  = Business Plan (BUP)

$x_2$  = Market and Demand (MKT)

$x_3$  = Government Policies (GPS)

$x_4$  = Logistics and Security (LAS)

### Hypothesis One

$Y = f(x_1)$

$y_1 = \beta_0 + \beta_1 x_1 + \varepsilon_i$

$PFT = \beta_0 + \beta_1 BUP + \beta_2 MKT + \beta_3 GPS + \beta_4 LAS + \varepsilon_i$  -----Equation 1

### Hypothesis Two

$Y = f(x_2)$

$y_2 = \beta_0 + \beta_2 x_2 + \varepsilon_i$

$ECM = \beta_0 + \beta_1 BUP + \beta_2 MKT + \beta_3 GPS + \beta_4 LAS + \varepsilon_i$  -----Equation 2

### Hypothesis Three

$Y = f(x_3)$

$Y_3 = \beta_0 + \beta_3 x_3 + \varepsilon_i$

$CSF = \beta_0 + \beta_1 BUP + \beta_2 MKT + \beta_3 GPS + \beta_4 LAS + \varepsilon_i$  ----- Equation 4

$PERF = \beta_0 + \beta_1 BUP + \beta_2 MKT + \beta_3 GPS + \beta_4 LAS + \varepsilon_i$  ----- Main Model

Where  $\beta_0$  = the constant of the equation

$\beta_1 - \beta_4$  = the coefficient of variables in the equations;

$\varepsilon_i$  = the stochastic function that accounts for the errors that may arise in the equation.

### Test of Hypothesis – Main Model

**Research Objective :** evaluate the effect of COVID-19 on the poultry industry in Nigeria.

**Research Question:** Does COVID-19 has any impact on the Financial survival of the Poultry Industry in Nigeria?

**Research Hypothesis (Ho):** COVID-19 does not have any impact on the financial survival of the Poultry in Nigeria

**Table 4.14 Covid Effects Main Model**

Variable	Main model			
	Coefficient	Std. Error	t- stat	Prob.
Constant	.785	.558	1.406	.162
Business Plan and Continuity(BUP)	.096	.105	2.267	.025
Market and Demand(MKT)	.533	.203	11.604	.000
Government Policies(GPS)	.364	.123	5.687	.000
Logistics and Security(LAS)	.011	.109	.216	.829
$R^2$	.989			
Adjusted $R^2$ : Overall	.977			
F-Stat	1411.954(0.000)			

**Dependent Variable: Covid Effects****\*significance at 5%****Source: Researcher's Study, 2020****Model**

$$WCM = \beta_0 + \beta_1 BUP + \beta_2 MKT + \beta_3 GPS + \beta_4 LAS + \varepsilon_i$$

$$WCM = 0.785 + 0.096BUP + 0.533MKT + 0.364GPS - 0.011LAS$$

The regression estimates shows that COVID-19 business factors measured by business plan, market demand, government policies and logistics & security positively affects performance measured by profitability, expansion and capacity management and cashflow. This is indicated by the signs of the coefficient.  $(\beta_0 = 0.785; \beta_1 = 0.096; \beta_2 = 0.533; \beta_3 = 0.364$  and  $\beta_4 = 0.011)$ . Also, from Table 2, business planning has a positive insignificant effect on performance ( $\beta = 0.096$ ,  $t = 2.267$ ,  $p = .025$ ), market demand has a positive significant effect on performance ( $\beta = 0.533$ ,  $t = 11.604$ ,  $p = .000$ ), government policies has a positive significant effect on performance ( $\beta = 0.364$ ,  $t = 5.687$ ,  $p = .000$ ), logistics and security has a positive insignificant effect on performance ( $\beta = 0.011$ ,  $t = 0.216$ ,  $p = 0.829$ ).

The Adjusted  $R^2$  of the model showed that 97.7% of the variations in poultry industry performance can be attributed to the COVID-19 business proxies used in this study, while the remaining 2.3% of the variations in profitability, capacity expansion and cashflow of selected poultry farms are caused by other factors not included in this model. The overall F-Statistics is 14.119, while the P-value of the F-Statistics is 0.000 which is less than 0.05 adopted for this work. Implying that COVID-19 effect on the performance of the poultry industry is significant. Hence, the null hypothesis may not be accepted and the objective is achieved.



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## DISCUSSION OF FINDINGS

The purpose of this study was to determine or affirm the effect of COVID-19 on the financial performance of poultry ind Nigeria. Primary data were used for the analysis. From the descriptive regression analysis, the following are the findings:

The model shows that the adjusted coefficient of determination is 0.977. This indicates that the four factor proxies of COVID-19, namely business plan and continuity, market and demand, government policies and logistics/security affect the financial health of the poultry industry while the remaining 2.3% is due to other external factors not considered in this study. The positive relationship as denoted by the positive integers indicate that when there is business plan and continuity, market and demand, government policies and logistics/security well articulated and revised will lead to an increase and or improvement in the financial health of the poultry industry in Nigeria.

Rafliis, Ishak & Jusoh (2020) opined that the COVID-19 government actions and prevention methods resulting in the lockdown, confinement, limited movement order and social distancing are amongst the key factors contributing to public health including business health. Dogan and Christina(2020) highlighted how the pandemic locked down the world's economy almost overnight with attendant unprecedented confrontation forcing strategists to seek for strategies to flatten the COVID-19 curve such as community lockdowns, social distancing, stay-at-home orders, travel and mobility restrictions which resulted in temporary closure of many businesses and significantly decreased the demand for businesses that were allowed to continue to operate.. Bartik, Bertrand, Cullen, Glaeser, Luca & Stanton(2020 Identified that the pandemic resulted in mass layoffs and closures just a few weeks into the crisis, next is the risk of permanent closure that can be associated with the expected length of the crisis coupled with the fragility of the financial status of many businesses with threatened cashflow leading to seeking of intervention and development funds of the government either as grants or soft loans. Kost(2020) highlighted that months after the WHO declaration, there's still no end in sight to the pandemic and survival ability of small-business owners wanes by the day with strict safety protocols not being enough to get customers and move the market demand for small businesses who are battling under the heavy weight of inventory and overhead costs with input costs becoming more expensive than the rate and ability of price adjustments.(Murtala, Awolaja & Bako, 2012).

## RECOMMENDATIONS

The Business planning strategy focus should be sharpened to think "people first". and this will include accepting all viable short-term focus and demonstrate true leadership. Secondly, the market demand stimulus should be focused bearing in mind the sharp reduction in consumers purchasing power because of weakened currencies, naira and even the convertible US dollars. The restrictions in movement and change of lifestyle to a new normal will mean means of rwaching out to the customers may have to change and more digital channels and door-to-door service delivery engaged. The third focus is not just to be aware of the various government policies but to be able to maximise the potentials that each support policy and drive avails the farmers. The nchor

Borrower Scheme, Covid-19 Financial Stimulus, TraderMoni among other intervention programmes should be consolidated and the network expanded to boost productivity and trade in farm produce. And lastly, though government at all levels have recognised agriculture as “essential services” the attendant security implications should be better managed to protect the farmers. Lastly, the various stakeholders should continue to be coordinated to ensure that the supply value-chain is enhanced, these include ,Farmers , Input Suppliers, Veterinary Professionals and Nutritionists, Market Women Associations, Poultry Association of Nigeria, The State Government Ministry of Agriculture and Transporters

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