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Article

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COVID-19 Pandemic and Business Survival as Mediation on the Performance of Firms in the FMCG-Sector

By Bimbo Onaolapo Adejare[*], Gbemi Oladipo Olaore[±], Ekpenyong Ekpenyong Udofia[°] & Oluwaseun Ademola Adenigba[♠]

COVID-19 pandemic has become a global issue causing the restriction of people and international trading and it has affected the loss of jobs and closure of firms all over the world. This paper aims to examine COVID-19 pandemic and business survival as a mediation on the performance of firms in the Fast moving consumer goods (FMCG) sector: insight for the future of business operation. Cross-sectional survey research design was adopted making use of stratified and simple random sampling technique as a guide to select participants while data analysis was subjected to exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation model (SEM). The findings show that COVID-19 pandemic has affected the performance and survival of businesses in Nigeria leading to the loss of jobs, firm productivity, customer retention, increase unemployment rate, closure of businesses and GDP of Nigeria as a whole. The research has been able to provide insight on the need for full integration of technology into all the firm operational process and for the firm to remain flexible to accommodate changes as imposed on the firm's operations through environmental uncertainties such as the pandemic. The study is the first of its kind to examine the extent of the effect that COVID-19 pandemic have had on the survival, performance of businesses and the gross domestic product (GDP) of the country since its eruption and announcement in China and has been able to provide insight by exposing most organization's weakness especially with regard to technology-adoption and its integration into all the firm operational capabilities as is the reason why most firm struggle to meets customer needs during the lockdown.

Keywords: *COVID-19 pandemic, performance, survival, customer retention, Nigerian economy, GDP*

Introduction

The novel corona virus (COVID-19) pandemic ravaging the world sprung from Wuhan City, China and has since spread it tentacles to over 216 countries of the world. There are 4,125,533 global cases and 280,965 deaths as at Mid-May, 2020 (Kampf et al. 2020). However, investment in research and development on

[*]Doctoral Research Scholar, Department of Business Administration, School of Economics and Management, University of Minho, Portugal.
[±]Researcher/PhD Scholar, Department of Business Administration, Faculty of Business, Karabuk University, Turkey.
[°]Doctoral Research Scholar, Department of Business Administration, University of Lagos, Nigeria.
[♠]Research Fellow, Selinus University of Sciences and Literature, Italy.

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vaccine creation to combat the effect of COVID-19 has practically reduce the global cases to 111, 419, 939 and 2,470,772 deaths as at late August 2021 (Wang and Tu 2020). The last pandemic that halted business activities and social gathering was the Spanish flu. The COVID-19 pandemic brought a new way of life, business and otherwise (Nicola et al. 2020). The major worry and cause of anxiety in the business world as at 2019 was the trade war happening between the United States of America and China, coupled with the move for Brexit. The anxiety in the business world was focused on the impact the trade war and Brexit will have on the global economy and analysts are split on the impact (Michie 2020). The International Monetary fund (IMF) also joined in the debate predicting a moderate growth of about 3.4% of the global economy (Bentolila et al. 2019).

COVID-19 pandemic brought a disruption like no other (Ozili and Arun 2020), business environment uncertainty necessitates critical decisions for survival, including laying off of workers, salary cuts by as high as 75%, and compulsory leave without pay (Nadeem 2020). Global stock dipped with a stock market loss of about USD 6 trillion within a week of the pandemic outbreak declaration, while the United States recorded its highest unemployment rate (14.7%) since the great economic depression era (Bernanke 2020). Nigeria is not left out of the crisis as price of crude oil (being the major export and foreign currency earner for Nigeria) fell. The price of crude oil as at January, 2021, was about $54.77, and highly unstable, while Nigeria forecasted $57. The difference in price will trigger government borrowing to cushion the effect (Ozili and Arun 2020), while the Nigerian economic temporary shut-down had tremendous impact (Nkengasong and Mankoula 2020). Due to the COVID-19 pandemic, businesses have had to shut down operations, significant number of jobs were lost, low production especially for essential firms producing consumables goods and services. This pandemic gave rise to technology inclined firms to thrive and many employees were forced to work from home.

Thus, as the pandemic is exposing the weakness in most countries labour force especially Nigeria making many jobs to become obsolete and thereby leading to joblessness, it also gave voices to technology inclined organizations and some technological software (Zoom, meetings etc.) to became the new order of holding and conducting business meetings, delegating task and a means to assess employee performance and productivity since physical contact is discouraged due the COVID-19 pandemic. This shows that as the pandemic is disrupting the usual physical work flow and schedule, it is also indirectly preparing the mind-set of the people especially organizations and government all over the world to adopt and fully integrate a virtual work mode that's capable of delivering expected result in terms of conducting businesses, meetings and all forms of transactions and engagements (Türker 2012, Allam and Jones 2020).

FMCG is one of the most essential sectors contributing significantly to Nigeria's GDP. The fast moving consumer goods (FMCG) sector are responsible for the production of essential product and services necessary for everyday living and this is why many government all over the world including Nigeria gave firms in this sector special privileges to operate at a minimum capacity in order to cater for the essential needs of their citizens during the lockdown (Barua 2020, KPMG

2020). In Nigeria, food, beverage and tobacco subsector of the FMCG industry contribute up to 5% of the total GDP of the country in 2019. Furthermore, the Nigerian stock exchange market report that FMCG sector constitute 17% of the value of equity in its market capitalization (KPMG 2020). This shows the significance of the sector to the Nigeria economy. While some other studies have examined the implication of COVID-19 on the oil sector and the educational sector in Nigeria, there's still dearth of study on the implication of the COVID-19 pandemic, this serves as the novelty of this study as this study researched on the impact of the pandemic in the FMCG sector vis a vis the health challenges created by COVID-19, the uncertainty in the global business outlook, the shutdown of businesses in Nigeria, and the looming recession which necessitated a study to appraise the challenges posed by COVID-19 on business survival, with focus on the FMCG sector.

Literature Review

COVID-19

Research show that Corona Virus (COVID-19) is from a large number of viruses which usually cause sickness linked to common cold, severe acute respiratory syndrome (SARS-CoV), middle east respiratory syndrome (MERS-CoV), etc. Global cases increase daily despite measures to reduce the spread, alas, the spread of the COVID-19 virus remains very high and astounding (Açikgöz and Günay 2020). COVID-19 can be described as a global pandemic simultaneously affecting all spheres, and little hope kindles bearing in mind that a vaccine is unavailable as at late 2020 (Anderson et al. 2020). However, the first quarter of 2021 recorded many significant breakthroughs in the development of COVID-19 vaccines in countries such as USA, Russia, and UK among others (Wang and Tu 2020). There is possibility for increased individualization, less need for religious gatherings, and governments will adopt new forms of engagement regarding economic, social or political integration to mitigate the spread (Gössling et al. 2020).

Global Economy and COVID-19

China, the virus's origin has over 1.4 billion population. China's economy was beginning to rank with the United States before the outbreak of the pandemic; clocking $13.7 trillion as gross domestic product (GDP). China started battling with the outbreak of the virus around December, 2019, leading to shut down of almost all activities as demand and supply also plummet; affecting the Chinese economy in the first quarter of 2020 and spilled over to other economies (Açikgöz and Günay 2020). The global economy has been projected to fall by 2.4% in 2020 due to the outbreak of the pandemic, while some experts predict worse (1.5%) come first quarter of 2021 (Barua 2020).

China shut-down meant 20.2% of world's total crude oil became redundant. In addition, oil price war between Saudi Arabia and Russia adversely affected oil price (Michie 2020). International Labour Organization (ILO) projected 5.3 million to 24.7 million job loss due to the pandemic, tethered to revenue loss (between $860 billion to $3.4 trillion) by December, 2020. Such revenue loss can trigger global financial crisis and recession (Bloomberg 2020b). The global stock market price is falling sharply over the uncertainty in the global economy as the FTSE, Nikkei, Dow Jones have all witnessed share price fall since the beginning of the COVID-19 pandemic (Anderson et al. 2020). The United States had to inject $2.2 trillion into the economy to save the vulnerable citizens, the United Kingdom did likewise by paying up to 80% of employees' wages to prevent massive layoffs, bankruptcy, and economic meltdown. The major problem is experts predict an economic recession after the pandemic (Bernanke 2020).

FMCG Sector and COVID-19 Pandemic in Nigeria

The outbreak of the COVID 19 pandemic brought unprecedented challenges to the FCMG sector in Nigeria. The COVID 19 pandemic lead to drastic fall in the demand for goods and services by consumers while some manufacturers had to shut down completely in order to obey government regulations and to prevent spread of the virus among their workforce (Adesoji and Simplice 2020, National Bureau of Statistics 2020b). While safety measures are being embraced and COVID 19 strictly being adhered to by firms in the FMCG sector in Nigeria, this makes it impossible for them to attain full production as it was before the pandemic outbreak and after some months of partial operations, most of the firms in the FMCG sector in Nigeria had to fully shutdown their production operations (KPMG 2020). Few firms in the sector tried to rise to the occasion by seeking innovative means of dealing with the situation but it was a situation not foreseen and most of these firms in the FMCG sector in Nigeria end up incurring more cost than usual leading to more disruptions in production. The restrictions imposed on Nigeria's border trade by the Federal Government of Nigeria due to the pandemic outbreak also significantly disrupted supply chain for the FMCG sector starving them some components of raw materials needed for continued production and placing them also at the verge of losing some already acquired materials for production due to material expiry and inability to continue production activities (National Bureau of Statistics 2020a). Some states in Nigeria like Lagos state and Ogun state which are the major hubs used by FMCG firms for production were also in total shutdown as directed by the government due to the COVID 19 pandemic outbreak, this total shutdown further acted a bigger impediment for production thereby forcing production in the sector close to a near zero margin (KPMG 2020). The FMCG sector is projected to contribute 5% of Nigeria's GDP before the COVID 19 pandemic outbreak and the question remains if the FMCG sector in Nigeria will still be able to contribute this percentage to Nigeria's GDP post COVID 19 or if the sector itself will be able to bounce back from the present near zero production and operation.

COVID-19 and the Nigeria Economy

The outbreak of the COVID-19 pandemic disrupted economic and business activities in Nigeria like most other parts of the world; The Nigeria government in recent time has not experienced such pandemic and also did not have any preparations in place to cushion the effect of the COVID-19 pandemic. Nigeria's economy high dependence on imports especially imports from China aggravated Nigeria's economy vulnerability as imports and raw material imports from China into Nigeria's economy constitutes about 70%. Also, Asia and Europe combined contributed about 86% of Nigeria's import indicating that the restrictions imposed across Asia and Europe on cross border trades has distorted supply chains to Nigeria and starving the Nigeria economy the needed raw material input for production (National Bureau of Statistics 2020c). The total lockdown order and travel restrictions from various parts of the world limited Nigeria's economy access to raw materials and also prevented export of goods and services from Nigeria's economy to other economies of the world which in turn starved the Nigeria economy from earning foreign exchange that could have help further to boost the economy. The global oil price also went from over $62 to as low as $23 due to the outbreak of the COVID-19 pandemic; this had a devastating effect on Nigeria's economy because Nigeria economy is majorly dependent on crude oil export and Nigeria mostly earn her major foreign exchange from oil export (Bloomberg 2020b, Ozili and Arun 2020).

The Nigeria Federal Government also had to embark on some strict measures necessitating cutting of spending and expenditure while putting available resources into managing the health pandemic brought about by COVID 19, though the move by the Federal Government of Nigeria was logical bearing the serious need to curtail the COVID-19 virus but the move also lead to other aspect of the economy been starved of needed fund (Adesoji and Simplice 2020). The Nigeria economy is also expected to experience one of its deepest recession since 1980s due majorly to the COVID-19 pandemic outbreak and the disruptions caused by the COVID-19 pandemic. The Nigeria economy has witnessed disruptions leading to lower oil prices and remittances, enhanced risk aversion in global and local markets; the Nigeria economy is also projected to contract around 4% due to the COVID-19 pandemic (World Bank 2020b). While the Federal Government of Nigeria is still working on how to revive the economy, it's still very uncertain how long the recovery of the Nigeria economy will take and if the current effort of the Nigeria government will yield the desired result.

Underpinning Theory

Profit Maximization Theory and Survival-Base Theory

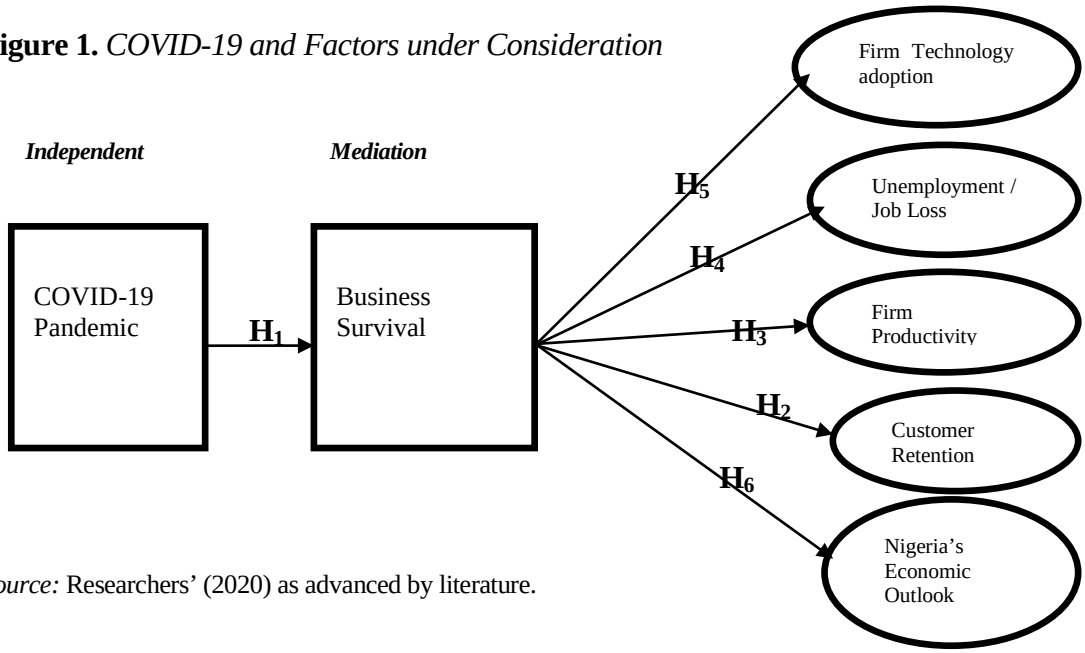
Profit maximization theory was propounded by Adam Smith and was first used in his publication titled the wealth of nations, stating every business will act in self interest in order to maximize profit from their business engagements. While

the Survival-based theory was originally developed by Herbert Spencer (Miesing and Preble 1985), the theory was very popular in the 19th and 20th century and the theory places emphasis on survival of the fittest as every business organization will put every available strategy in place to ensure survival. The theory of profit maximization argues that every business owner or organization will act in self-interest at every point in time in order to maximize profit, ensure longevity and to increase aggregate benefit derived by the society (Lynch et al. 2000, Jafar et al. 2010). The theory also assumed an economic perspective reiterating that organizations seek to maximize profit by equating marginal revenue to its marginal cost. The theory further stated that profit maximization is the ultimate goal of the organization as long as law and ethical custom are followed in the conduct of the organization's business activities (McAleer 2003).

While Survival-Based theory on the other hand based its arguments on the survival of the fittest and explains that organizations must do everything legally possible to thrive, compete and survive (Dwyer et al. 2003). Survival-Based theory emphasizes that it's normal for competitors to put in efforts to produce the fittest organization that adapts easily and is efficient. The theory assumes ruthless business rivalry supports the goal, which is legitimate survival (Lantos 2001). The application of the theory in the corporate turnaround of businesses is relevant till date, as ailing organizations usually face financial difficulties, loss of personnel, failing products, loss of market share, etc. An organisational resurgence may require reduction/layoff of its employees, cutting of salaries, selling of the organization's under-capacity asset, repositioning their product to aid survival (Gössling et al. 2016). The primary aim of organizations is efficiency, flexibility, and profitability; these ensure survival (Coad et al. 2013). All measures adopted by firms, especially post COVID-19 outbreak supports these theories (profit-maximization and survival), hence, they are relevant.

Conceptual Framework and Hypotheses Development

Figure 1. *COVID-19 and Factors under Consideration*



Source: Researchers' (2020) as advanced by literature.

COVID-19 and Business Survival/Customer Retention

The COVID-19 pandemic has affected businesses as well as the stock market in Nigeria. The Nigerian stock market lost about NGN2.3 trillion (US$5.9 billion) with possibility of further loss (Ozili and Arun 2020). Nigerian businesses were lost due to low patronage and sustained supply disruption (Nseobot et al. 2020). Retaining customers is more difficult as orders from customers are at its lowest. A lot of experts and economic analysts have predicted a very glooming picture regarding business survival in Nigeria and the study done by (Ozili and Arun 2020) looks at COVID-19 and economic crisis, but the study did not look at the effect on businesses survival neither was the study domesticated within the Fast-Moving Consumer Goods (FMCG) sector in Nigeria. This necessitated the formulation of hypotheses one and two to see if COVID-19 has affected the possibility of business survival and customer retention within the FMCG sector.

Ho1: COVID-19 pandemic affect business survival in the FMCG sector
Ho2: COVID-19 pandemic through business survival have indirect impact on customer retention in the FMCG sector

COVID-19 and Firm Productivity/Business Survival

The FMCG industry in Nigeria has faced series of challenges overtime. The decline in consumer purchasing power due to the 2016 recession in Nigeria is an example. The FMCG industry was one of the major hit industries by COVID-19, compounded by Dollar inaccessibility and weak macroeconomic conditions (Ogunlela and Lekhanya 2016). Among the challenge faced by firms in the FMCG sector is the issue of disruption in all facets of the firm causing many firms to lay off staff or enforce a compulsory leave without pay (Nseobot et al. 2020). The pandemic's effect on firm's productivity in the FMCG industry is evident in production rate, indirectly affecting their market share. Some research has focused attention on COVID-19 and how it has affected some selected industry and general outlook of events in Nigeria (Teriba 2020, Açikgöz and Günay 2020), but none of the research is yet to really domesticate the study within the FMCG industry, a gap this study intends to fill. Hypothesis three examines business survival and firm productivity in the FMCG industry, and the effect of COVID-19.

Ho3: COVID-19 pandemic through business survival have indirect impact on firm loss of productivity in the FMCG sector

COVID-19 and Unemployment/Business Survival in the FMCG Sector

Unemployment is a major problem, especially in Nigeria and Africa as a whole. The government and private sector in Nigeria collaborate to tackle unemployment and create opportunities for the working age bracket. Unemployment can lead to increase in poverty, and the COVID-19 pandemic is already showing signs that the gain made fighting unemployment maybe undone (Akanle and Omotayo 2020). The study done by Adu et al. (2019) assessed unemployment situation at some

selected industries in Nigeria, but the study did not include the FMCG sector. This informed the formulation of hypothesis four to x-ray the unemployment situation that maybe increased within the FMCG sector in Nigeria due to the COVID-19 pandemic.

> Ho4: COVID-19 pandemic through business survival have indirect impact on unemployment/job loss in the FMCG sector

COVID-19 and Technology Adoption/Business Survival

The outbreak of the novel COVID-19 virus was unexpected. It necessitated a halt to most activities and a need to adopt other forms of engaging remotely to sustain economic activities to avoid total shut-down (Ting et al. 2020). COVID-19 forced information technology (IT) adoption for many firms and government establishments (Allam and Jones 2020). Adoption of technology became a must, increasing operational cost. Share value of online video platforms like Zoom, Microsoft teams, Skype etc., increased (Ting et al. 2020). Did COVID-19 force IT adoption across firm value chain or was it just a mere coincidence? Hypothesis five looks at COVID-19, technology adoption and business survival.

> Ho5: COVID-19 pandemic through business survival have indirect impact on firm level of technology adoption in the FMCG sector

COVID-19 and the Nigeria Economy Outlook

Nigeria witnessed an economic crisis in 2009 caused by the global financial crisis, and 2016 caused by the sudden fall in the international oil price. Currently, the COVID-19 pandemic has affected price of crude oil, the major foreign currency earner for Nigeria. The difference in price of crude oil is already showing a major trouble for the Nigerian economy (Ozili and Arun 2020). Besides inadequate funds to support budget, business closure leads to a fall in taxes and income accruable to government (Nkengasong and Mankoula 2020). The study done by Nseobot et al. (2020) looks at the aftermath for businesses in Nigeria but did not highlight the effect of COVID-19 on Nigeria's economy and lessons from it. Hypothesis six investigates COVID-19 and Nigeria's economic outlook.

> Ho6: COVID-19 pandemic contribute negatively to Nigeria's economy outlook

Methodology

The study is descriptive in nature because it employs both primary and secondary methods to gather the needed data to test hypotheses. Hypotheses one to five used responses from survey data, while hypothesis six used data from National Bureau of Statistics (NBS) and Central Bank of Nigeria (CBN) to examine the effect of COVID-19 pandemic on Nigeria economy. The study sample- size consists of twenty FMCG firms from among the total population of

35 recognised FMCG firms by Nigerian Stock Exchange (NSE). The justification for selecting 20 firms from the list of 35 recognised FMCG firms in Nigeria is to have a representative whole from among the list of recognised FMCG firms. Simple random and stratified sampling techniques were employed to select forty senior employees in each of the selected FMCG firm, making a total of eight-hundred senior employees selected for sampling. Due to the COVID-19 pandemic that is restricting movement and causing social distancing, the questionnaire items were created in a google form and sent to the respondents (So et al. 2014). The data collation took up to four month (September to December 2020) for distribution and collation of data for this study. The justification for selecting senior level employees at each FMCG firms is to be able to assess the deep effects of the COVID-19 pandemic on business survival in Nigeria.

Instrumentation

Questionnaire items were adapted from literature; customer retention (Gustafsson et al. 2005), firm productivity (Buuri 2015, Leitão et al. 2019), unemployment (Arnout 2019), technology adoption (Ratchford and Barnhart 2012, Türker 2012), while questions on COVID-19 were adapted from (Caldera and Wirasinghe 2014, Udofia et al. 2020). To access the homogeneity and data adequacy before testing hypotheses using structural equation model (SEM), the exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were employed. The study assessed the general reliability of the instrument by conducting a pilot study of one hundred respondents selected across ten FMCG firms and the result revealed 0.87 which is above the recommended threshold (Nunnaly 1978). The justification for using SEM is the need of the study to test the causal relationship existing between measured, observed and latent variable in the study. Within the four month duration of the data collection, only six-hundred and seventy return rate was achieved (83.8% return rate) and was used for the analysis.

Table 1. *Measurement Items*

COVID-19 (COV)		
COV1	My country experienced positive tests of the novel COVID-19 virus	Udofia et al. (2020)
COV2	My country has never experienced a pandemic of this magnitude	Udofia et al. (2020)
COV3	The virus has disrupted my company supply chains services	Udofia et al. (2020)
COV4	The COVID-19 virus is present in all parts of the country	Caldera and Wirasinghe (2014)
COV5	COVID-19 virus has made a serious impact to the way we conduct business	Caldera and Wirasinghe (2014)
Firm Technology Adoption (FTA)		
SD1	We have fully embraced technology adoption into all the company value chain	Türker (2012)
SD2	The pandemic led to wide spread automation of performance and service delivery	Ratchford and Barnhart (2012)
SD3	I find it difficult to deliver effectively using technology	Türker (2012)
SD4	The overall performance of the company was affected due to working from home policy	Türker (2012)
SD5	I am more productive using technology to deliver work from home	Ratchford and Barnhart (2012)
Business Survival (BS)		
OP1	The company is facing a high financial challenge due to the pandemic	Bates (1995)

OP2	There is significant reduction in the production of goods and services due to the pandemic	Singh (2017)
OP3	We have recorded low sales and return as a results of low production in the past few months	Korunka et al. (2011)
OP4	We have had to lay off staffs to cushion the effects of the pandemic	Singh (2017)
OP5	We have had to reduce employees work hours per day to cushion salaries and or wages payment	Bates (1995)
Customer Retention (CR)		
CS1	We have remain consistent in retaining both new and current customers	Gustafsson et al. (2005)
CS2	Technology gives us the leverage we need to provide unwavering service needs to our consumers	Gustafsson et al. (2005)
CS3	Our effective online engagement has brought in more customers for the company	Vasic et al. (2019)
CS4	We struggle to retain customers during the pandemic	Chavez et al. (2016)
CS5	Our products and service demands skyrocketed during the lockdown	Vasic et al. (2019)
Unemployment (U)		
ORP1	The pandemic significantly reduced hours of jobs available	Furnham (1982)
ORP2	There is a mismatched between contemporary market needs and employees skill set	Furnham and Hesketh (1988)
ORP3	Inability of unemployed people to adapt to new working conditions	Feather (1990)
ORP4	There are lack of intelligence and ability among unemployed people	Furnham and Hesketh, (1988)
ORP5	Work from home strategy exposed many employees deficiency with regards to technology usage in the organization	Furnham (1982)
ORP6	There is a huge gap between the current job market realities and the educational system	Furnham and Hesketh, (1988)
ORP7	Low production capabilities result into loss of job opportunities	Feather (1990)

Data Analysis

Table 2. *Demographics of the Respondents*

		Frequency	**Valid Percent**	**Cumulative %**
Gender	Male	402	60.0	94.2
	Female	268	40.0	100
	Total	670	100	
Salary Range	Less than 5million per Annum	102	15.2	15.2
	5million-10million	383	57.2	72.4
	10million-15million	175	26.1	98.5
	15million & Above	10	1.5	100
	Total	670	100	
Highest qualification	BSc/HND	232	34.6	34.6
	MBA/MSc	300	44.8	79.4
	Postgraduate/Professional Certification	138	20.6	100
	Total	670	100	
Department	Production/ Supply chain	492	73.4	73.4
	Marketing & Sales	38	5.7	79.1
	Operations	140	20.9	100
	Total	670	100	

Assessing Multivariate Analysis Assumptions

In conducting structural equation model (SEM), assumptions of sample-size, normality, missing-values and multicollinearity were tested (Kline 2005). The recommended 200 sample size (Iacobucci 2010) was met given that the sample size used for this study is six hundred and seventy (670). To address normality, questionnaire items were assessed for skewness and kurtosis and the results were within the threshold of -1 to +1 (Amin et al. 2014). Frequency count revealed neither outlier nor missing values in the data set (Yana 2007). Multicollinearity was tested by correlation analysis. Correlation value above 0.5 is good (Field 2005), correlation for all the variable was above 0.5. Furthermore, we examine common method bias by looking at the second approach of Harman which is a more comprehensive and rigorous-technique (Podsakoff et al. 2003 and 2012) using CFA method. This was achieved by loading all twenty-five items used in the study into a single-factor using CFA. The result shows a poor fit as (chi-square=21.347, IFI=0.62, CFI=0.42, TLI=0.63, NFI=0.61, and RMSEA=0.24). Hence, the common method bias rule was not violated in this study.

Principal axis-factoring using EFA reduced redundant items and examined constructs loadings. Homogeneity was tested via Kaiser–Meyer–Olkin (KMO) and the Bartlett's-test of sphericity (BTS), recommended values of acceptance are 0.05 and 0.000 respectively (Orçan and Yang 2016). The KMO results from the EFA analysis is 0.828 and Bartlett's-test of sphericity (BTS) is (χ2=28155.593, p=0.000, and <0.05). Homogeneity and data adequacy were achieved.

Table 3. *Measurement Model*

Measurement Items	Constructs	CFI	R^2	Mean	SD	Factor Loading	Cronbach Alpha	CR	AVE
FTA1	Firm Technology Adoption	0.911	0.331	4.18	0.921	0.772***	0.763	0.711	0.656
FTA2			0.555	4.06	0.992	0.786***			
FTA3			0.441	4.00	0.818	0.852***			
FTA4			0.540	3.75	0.995	0.779***			
FTA5			0.507	3.84	1.121	0.828***			
FTA6			2.383	3.93	1.174	0.895***			
COV1	COVID-19 Pandemic	0.924	0.411	4.00	1.034	0.773***	0.752	0.738	0.545
COV2			0.941	3.75	1.171	0.846***			
COV4			0.655	4.04	1.074	0.778***			
BS2	Business Survival	0.910	0.443	4.03	1.062	0.804***	0.833	0.728	0.603
BS6			0.373	3.87	1.067	0.744***			
U1	Unemployment	0.915	0.359	4.05	1.053	0.660***	0.810	0.721	0.745
U2			0.775	3.99	1.068	0.710***			
U3			0.289	4.12	0.992	0.662***			
U4			0.686	4.09	0.818	0.704***			
U5			0.557	3.84	1.071	0.884***			
U6			0.949	3.96	1.074	0.774***			
FP1	Firm Productivity	0.912	0.299	4.05	1.009	0.562***	0.833	0.803	0.632
FP2			0.419	3.77	1.068	0.614***			
FP4			0.992	3.64	1.097	0.784***			
FP5			0.301	4.05	0.983	0.811***			
CR1	Customer Retention	0.905	0.432	4.13	0.905	0.670***	0.810	0.710	0.650
CR2			0.996	3.97	1.021	0.750***			
CR3			0.464	4.09	0.935	0.692***			
CR4			0.564	4.07	1.191	0.650***			

Note: CR: Composite Reliability, **AVE:** Average Variance Extracted, **CFI:** Comparative fit indices, χ^2**:** Chi-square Value.
Source: Field Survey, 2020.

A unidimensionality analysis was conducted to assess the fitness of the model for conducting SEM and the measures was assessed through composite reliability (CR), average variance extracted (AVE), Cronbach alpha, factor-loading, mean and standard deviation. The reliability of the construct was assessed using Cronbach-Alpha reliability technique and the results was above 0.70 as recommended by Nunally (1978) (see Table 1). The factor loadings for each of the twenty-one items have values greater than 0.5 as shown (see Table 1), hence, the data loaded very well and shows a good fit for the measurement model.

Comparative fit index (CFI) is used to assess whether the study model compare with the null-model supposing there are no correlations between the models constructs. As shown in (Table 2) the CFI value for all the constructs is greater than 0.90 and therefore shows a good fit for the measurement model (Bagozzi and Yi 2012). Hence, the CFI value shows acceptable model fitness. *Composite Reliability* is used to check the internal consistency of each constructs with regard to the variance from an observed variable from their latent factor. A composite reliability that is ≥ 0.70 has internal consistency, Table 1 shows all five constructs had consistency via higher values. AVE is the extent of the variance captured by a construct from the total amount of measurement error experience in a model. Maravelakis (2019) puts the threshold at 0.50, and Table 1 shows non-violation. Hence, homogeneity was achieved for the model used to test the hypotheses stated in the study through SEM. Thirty-one items were subjected to CFA and only twenty-five items were deemed fit. Customer retention, business survival, firm productivity, and COVID-19 pandemic had (CR5), (BS2, BS4), (FP3) and (COV3, COV5) deleted respectively.

Table 4. *Results of CFA*

	X^2	df	p	CFI	TLI	IFI	GFI	RMSEA
Measurement Model	2.328	290	0.000	0.915	903	0.920	0.911	0.06
Recommended Value	≤ 2 or 3			>0.9	>0.9	>0.9	>0.9	< 0.08

The model fit generally shows the comparative fit index (CFI=0.915), tucker lewis index (TLI=0.903), incremental fit index (IFI= 0.920), goodness of fit index (GFI=0.911), chi-square (X^2=2.328), degree of freedom (Df=290) and root mean square error of approximation (RMSEA=0.06), all of which shows that the model is above the recommended threshold for acceptance and is therefore fit to test the stated hypotheses see Table 2 (Nusair and Hua 2010, Hair et al. 2017).

Hypotheses Testing

Table 5. *Path Model*

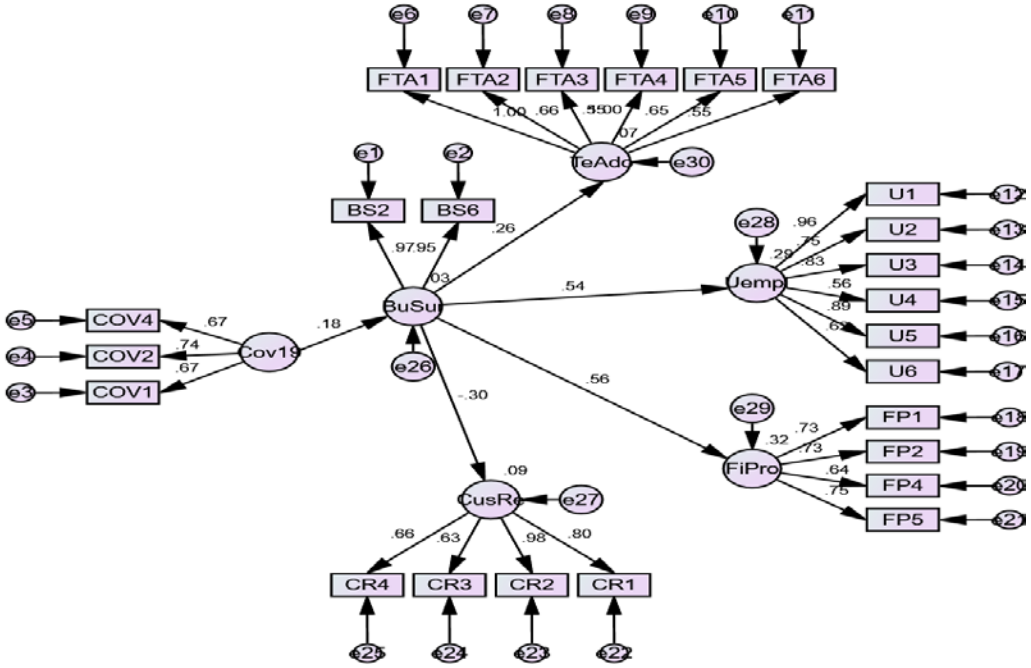
Hypothesized Model	R^2	Standardized Effect	t-value	P-value	Remark
COV⟶BS	0.034	0.18 (DE)	3.679	0.000	positive and direct effect
COV⟶BS⟶FP	0.316	0.56 (IE)	11.919	0.000	positive and indirect effect
COV⟶BS⟶U	0.289	0.54 (IE)	14.075	0.000	positive and indirect effect
COV⟶BS⟶CR	0.088	-0.30 (IE)	-6.946	0.000	negative and indirect effect
COV⟶BS⟶FT	0.067	0.26 (IE)	6.274	0.000	positive and indirect effect

P<0.05; Where: DE=Direct Effect, IE=Indirect Effect, BS=Business Survival, FTA=Firm Technology, FP=Firm productivity, U=Unemployment, CR=Customer Retention, COV=COVID-19 Pandemic.

Six hypotheses were examined; however, the first five hypotheses were analysed using SEM and the direct, indirect, and standardized regression weights are shown in Figure 2. The sixth hypothesis was analyzed using a narrative discourse that compare the third and fourth quarter of 2019 to the first and second quarter of 2020 using secondary data that was derived from NBS and CBN in order to examine the impact of COVID-19 pandemic on the Nigerian economy outlook. The result from the SEM analysis shows that (*H1)* there is a direct relationship between COVID-19 pandemic and FMCG firms' performance (t-value=3.679 at p=0.005), therefore, the hypothesis was accepted. This means that the sudden occurrence of COVID-19 pandemic have adverse impact on business continuity and survival in the FMCG sector. The indirect hypotheses (H2 to H5) examine the survival of businesses in the FMCG sector as a result of the impact of COVID-19 pandemic using firm performance measures such as firm productivity, unemployment, customer retention and firm technology adoption. The result shows that COVID-19 pandemic have indirect impact on all the performance measures used in the study and therefore, affect the operations of many organizations in the FMCG industry thereby determining the survival and or failure of this firms.

Although, the analysis shows a positive and indirect effect of COVID-19 pandemic on firm productivity, unemployment and firm technology adoption as the significant (t-value=11.919, 14.075 and 6.274 at p=0.05), making these hypotheses accepted. Hypothesis (*H2*) that examined the COVID-19 pandemic on customer retention and business survival of FMCGs show a negative, indirect, and significant effect (t-value=-6.946 at p=0.05). The significant impact therefore, make *H2* to be accepted. The negative relationship could be as a result of the lockdown which make it difficult for organization and customers to have a consistent transactional relationship among each other's thereby forcing customers to look for alternative firms whose online presence is strong and can immediately satisfy theirs needs during the lockdown.

Figure 2. *Standardized Hypothesized Structural Equation Model*



Ho6: COVID-19 pandemic negatively impact Nigeria's economy outlook

The Nigerian economy outlook can be measured by the gross domestic product, inflation rate and interest rate (Bello and Aliyu 2016). However, the study used the GDP and inflation rate to measure the Nigerian economic outlook in order to assess the impact of COVID-19 pandemic on the Nigerian economy when compared to the preceding year 2019. This would highlight the extent of damage the pandemic has caused on the Nigerian economy and would ascertain the acceptance or rejection of H6.

Table 6. *Nigerian Economy Outlook 2019 and 2020*

GDP	**2019 (%)**	**GDP**	**2020 (%)**
(Quarter 1)	2.55	(Quarter 1)	1.87%
(Quarter 2)	1.87	(Quarter 2)	-6.10%
(Quarter 3)	-6.10	(Quarter 3)	-3.62%
(Quarter 4)	-3.62	(Quarter 4)	0.11%
Annual	2.27	Annual	-1.92
Inflation		**Inflation**	
August	11.02%	August	13.22%
September	11.24%	September	13.7%
October	11.61%	October	14.23%
November	11.85%	November	14.9%
December	11.98%	December	15.8%

Source: National Bureau of Statistics (2020).

The Nigerian GDP grew by 1.87% in the first quarter of 2020, this represents a decline when compared to the growth of 2.55% of 2019 4th quarter. The decline

in GDP in 2020's 1st Quarter could be trace to halted international trading (National Bureau of Statistics 2020c, Adesoji and Simplice 2020). Similarly, the GDP in the second quarter experience a -6.10% decline as against the growth experienced in the preceding quarters. The third quarter also experienced a decline of 3.62% as against the preceding quarter. However, the fourth quarter shows a relief growth in the GDP with 0.11% and overall, put the GDP annual growth rate to a decline of 1.92 as against the preceding year. Hence, this decline shows the damage COVID-19 has had generally on the economic outlook of Nigeria.

Additionally, the Nigerian inflation rate shows that it has been increasing at an alarming rate from the last five month of 2019 through to the last five month of 2020. Although, the trend of these increase is consistent from the beginning of 2019 and therefore, cannot be categorically stated that the continuous increase in the year 2020 is as a result of the COVID-19 pandemic. However, given the annual decline in the GDP of Nigerian in 2020 (-1.92) amidst the global pandemic compare to the annual increase (2.27) experienced in 2019; then we can state that COVID-19 pandemic impact negatively the Nigerian economic outlook, thereby leading to the acceptance of the hypothesis.

Discussion of Findings

The study examined COVID-19 pandemic, business survival and FMCG firms' performance. Six hypotheses were examined, five hypotheses were analysed using SEM and the sixth hypothesis was analyzed using a narrative discourse. Among the five hypotheses (one direct and four indirect) examined with SEM; all the five hypotheses were supported. The study revealed that COVID-19 pandemic affected business survival in the FMCG industry due to compulsory lockdown by Nigerian government. This affirmed Bloomberg (2020a) report that businesses who are forced to lockdown face liquidation and survival challenge all over the world. Furthermore, findings revealed that COVID-19 pandemic exposed the level of firm technology usage and their survival in the FMCG industry. This aligns with survival-based theory and profit maximization as any firm who could not produce at optimum capacity nor maximize profit risk the chance of surviving and thriving. The 21st century business environment of today is currently working at a pace where firm can hardly get anything done without full integration of technology into its operations. This is the reason why many firms struggle to meets customer needs online while other competitor leverage technology to meets existing and new customers' needs using technology (Mutlu et al. 2015). It is evident that many FMCG firms had minimal technology adoption across its value chain as revealed by the finding. Hence, firms need to comprehensively integrate IT into its value chain to mitigate uncertainties that could adversely affect performance (Mutlu et al. 2015) as this is seen as one of the contribution to knowledge for this study.

Findings also revealed that the COVID-19 pandemic affect unemployment rate and or loss of job thereby affecting business survival in the FMCG industry. This finding aligned with reports by (International Labour Organization 2020, World Bank 2020a, Nkengasong and Mankoula 2020) that COVID-19 pandemic

affect the unemployment rate in many countries leading to the loss of jobs and income. The findings support the theory of profit maximization and survival-based as all organization are looking for the most effective ways to maximize profit, and hence, would do everything legally possible to keep the organization in operations. Since the finding of the study shows that COVID-19 pandemic affect business survival in the FMCG industry, it translates into more unemployment in the country (International Labour Organization 2020).

Furthermore, finding shows that COVID-19 pandemic affect firm's productivity and business survival in the FMCG industry. Firms had to reduce their manpower and production schedule especially those regarded as essential product producers, complicating optimal performance. This effect on firm productivity will affect customer needs, supply, firm revenue and profitability (World Bank 2020b, Nkengasong and Mankoula 2020). This finding also aligned with the submission of profit maximization and survival-based theory as profit and survival can only be achieved when organization produce at optimum capacity, otherwise, firms would look for every means possible to remain in business even if it means drastic manpower reduction.

Findings of the study show that COVID-19 pandemic has a significant negative indirect effect on customer retention and business survival. Developed nations contributes to citizens welfare during the lockdown by providing basic households needs in order to curtail the spread of COVID-19 pandemic and restrict the urge of citizens wanting to go out of their house (Nkengasong and Mankoula 2020, Açikgöz and Günay 2020). However, this is not the case in Nigeria as many citizens are left stranded without any provision for basic household's needs thereby making citizens to source for basic needs; hence, risking contact, exposure and the spread of COVID-19 pandemic. Thus, less physical and more virtual interface/engagement with customers must be implemented by firms to satisfy customers regardless of location (Mutlu et al. 2015).

Finally, finding showed that COVID-19 pandemic negatively affect the annual GDP of Nigeria's making the economy outlook to experience (-1.92%) decline as against the preceding year. This is not surprising given the halt to international trading and lockdown experienced by businesses across the country. COVID-19 pandemic affected 60% of the global-oil-prices and given the reliance of the country economy on oil revenue, then it is certain that the GDP will be adversely affected (National Bureau of Statistics 2020c). Also, the finding shows that as the country GDP is experiencing decline, inflation rate is also increasing at an alarming rate making the country currency to experience a major setback in valuation when compared to foreign currency such as dollar ($) (Nkengasong and Mankoula 2020, Nseobot et al. 2020).

Implications

COVID-19 pandemic brought a new normal to business operations all over the world and especially FMCG firms and has been able to expose organizations

directly and indirectly to their various weaknesses with regards to their operational flexibility, technology adoption and readiness to accept change as imposed by both internal and external pressures in the business environment (Michie 2020, Nkengasong and Mankoula 2020). The current business environment is dynamic and multifaceted, elevating uncertainty. Thus, IT integration to value chain operations is pivotal to customer satisfaction, retention and business survival.

Furthermore, the study revealed that COVID-19 pandemic affected jobs, firm productivity, and unemployment rate in Nigeria (and the world). Though, many countries and especially developed ones are supporting corporations to cushion the effect of COVID-19 pandemic. Hence, the government needs to also support FMCG firms in Nigeria to survive the effect of COVID-19 pandemic in order to manage job loss (Gössling et al. 2020). The study found a negative indirect relationship through COVID-19 pandemic and customer retention and business survival in the FMCG industry. COVID-19 pandemic exposed the weakness of many firms to re-assessing the level at which they can remotely attend to customer needs and keep customer engaged in the organization using technology. The world is changing so fast and this has made many firms to move from traditional means of engaging customers to digital means (Dadzie et al. 2017). Thus, firms who are able to survive the pandemic have to fully adopt digital content marketing communication strategy and fully integrate technology into firm value chains in order to keep firm customers engaged, satisfied and retained (Dadzie et al. 2017, Mutlu et al. 2015).

Furthermore, FMCG firms in Nigeria may also need to adopt pay per hours of work rather than monthly salary (9am to 7pm of work) as is the usual practice FMCG firms and other industry. This would enable firms to reduce the number of hours that all employees can work in a day in order to give opportunity to everyone thereby reducing the unemployment and hardship situation in the country especially as the pandemic as worsened for everyone (Açikgöz and Günay 2020, Allam and Jones 2020). Finally, finding also shows that COVID-19 pandemic has adverse effect on the Nigerian economy outlook considering the decline in GDP and continuous increase in the country's inflation rate. This has triggered continuous borrowing from other country in order to survive and avoid incessant recession, hardship and unemployment as worsened by the COVID-19 pandemic (Michie 2020).

Conclusion

COVID-19 has become a global phenomenon ravaging the entire globe and also a serious concern to various Businesses, Government and individuals at various levels. This paper examines the COVID-19 pandemic and business survival as a mediation on the performance of FMCG firms. Plus, the general economic outlook in the face of the COVID-19 pandemic. The study showed that there is a direct impact between COVID-19 pandemic and survival of businesses, firm productivity, unemployment, customer retention and firm technology adoption in the FMCG industry. Findings also show a drop in the growth of the Nigeria GDP when

examining the Nigeria economic outlook through the pandemic. This is as a result of halt in local production, international trading due to the compulsory lockdown of the economy to mitigate the impact and spread of the pandemic, although, major breakthrough has been recorded in the creation of vaccines across countries (UK, USA and Russia, among others) to mitigate the further spread of this virus and if possible to eradicate its existence across countries (Wang and Tu 2020, Liang and Litscher 2020). However, this study emphasise a serious need for workable policy frameworks and economic reforms by the Nigerian government to ensure the economy is revived and set on the path of growth and development towards reducing unemployment and the burden of job-loss. They also need to create avenue for businesses to thrive/survive in the country and create a means to prevent total economic collapse due to the COVID-19 pandemic especially in the FMCG sector.

Suggestions for Further Research

The study examined COVID-19 pandemic and business survival as a mediation on performance of FMCG firms. The study was able to recover only six hundred and seventy employee responses from the selected FMCG firms. Further research can be done on the same subject with a larger sample size. Also, the study focuses specifically on the impact of COVID-19 pandemic on the survival of FMCG firms, further research can extend to other industries to establish a holistic view of the effect of COVID-19 pandemic on the Nigerian economy and provide further insight to the future of business operations. Further research can also be done to look at a comparative impact of COVID-19 pandemic on business survival and performance in develop and developing economies. The findings would serve as guide to government especially in developing economies about the importance of supporting firms and building a sustainable and conducive business environment.

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