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## AN EMPIRICAL ANALYSIS OF COVID-19 REALITIES INFLUENCING SMALL BUSINESS BEHAVIOR

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**ABSTRACT:** *The novel coronavirus otherwise known as Covid-19 has opened the world to new abnormal “realities” that are posing serious business-related challenges to both national and global economies. This study examines the various realities--in the form of variables--associated with the Covid-19 pandemic and determines the influence of these realities on the behavior of micro, small and medium scale businesses. The data was collected using interview and structured questionnaire. The questionnaire was administered to 1883 respondents across five states in Nigeria using convenient sampling. Twenty-four variables were identified and Exploratory Factor Analysis was used to examine these variables reducing the number to sixteen influencing variables. Multiple Regression was used to determine the contributions of these variables to the behavior of micro, small, and medium scale businesses. The study findings indicate that eleven of these variables were statistically significant and eight significantly influence the behavior of these businesses.*

**KEYWORDS:** coronavirus (Covid-19), business behavior, micro, small, and medium scale businesses

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### INTRODUCTION

In the early months of 2020, the world woke to the outbreak of the novel coronavirus and this outbreak has stressed both national and global public health institutions to their limit. For Lau and Chan (2015), coronavirus has been causing serious health challenges in both humans and animals over the past two decades. The authors cited major examples of the virus to include the Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV), Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and the Porcine Epidemic Diarrhea Virus (PEDV). To Shereen et al. (2020), the novel coronavirus (2019-nCov) also known as Covid-19 is the most recent strain of this virus. The virus, according to medical scientists, is infectious and caused by a pathogen named “severe acute respiratory syndrome coronavirus 2, SARS-Cov-2” (Harapan et al., 2020). It is known to belong to the beta ( $\beta$ ) group of coronavirus with a much higher human-to-human transmission rate (Shereen et al. 2020; Bubdey & Ray, 2020). Some of the signs of Covid-19 include fever, running nose, coughing, sneezing, shortness of breath and pneumonia; and it is transmitted through respiratory droplets from an infected person (Sheikhi et al. 2020; Hassan et al. 2020).

The outbreak which was first reported in Wuhan, China in late December 2019, and linked to a seafood market gradually spread to many countries of the world including

Nigeria. The World Health Organization (WHO) on January 30, 2020, declared the disease a “public health emergency of international concern” and at the time, the outbreak was only reported in 18 countries. As at December 17, 2020, according to WHO, the outbreak has been reported in about 222 countries totaling 72,851,747 confirmed cases and 1,643,339 confirmed deaths. Nigeria, a key regional actor popularly referred to as the giant of the African continent has had its share of the virus outbreak. Nigeria confirmed its first case of Covid-19 on February 27, in Lagos State. As at December 17, 2020, Nigeria’s National Center for Disease Control (NCDC) reported 76,207 confirmed cases spread across the 36 states plus the Federal Capital Territory (Abuja); and of these reported cases, 67,110 were confirmed to have recovered from the virus while 1,201 died.

Arguably, the Covid-19 pandemic has opened the world to new abnormal “realities”. Scholars like Bubdey & Ray (2020) see these realities in the context of timing, and note that the timing of the outbreak was “unfortunate” given its negative effects on human health. This is supported by Ohia et al. (2020) whose analyses of the realities are from the perspectives of human health and health facilities especially in developing countries. Health, as it is said, is wealth; and this is the reason why the pandemic is posing a lot of inter-related challenges specific to the business economy. It has been predicted that generally, the impact of the pandemic will be significantly higher than that of the previously reported SARS—and this is already being experienced given the number of globally confirmed cases. This impact, in the economic sense, is linked to the new realities the pandemic has opened global businesses to. For instance, Donthu & Gustafsson (2020) listed some of these realities to include, closure of both international and local borders, restriction in citizens’ movements, social (physical) distancing and confining citizens in quarantine (isolation). To Aladejebi (2020) these realities have created severe disruptions in enterprises, especially the micro, small and medium scale businesses. By extension, it is impacting on both the national and the global economies. Most of the micro, small and medium scale businesses—considered to be the engine room of any economy—closed or are not operating in full capacity. And this is a direct response to current realities posed by Covid-19 infections. The resulting effect is that most of the world economies are drafting toward economic recession which Nigeria is already in.

Donthu & Gustafsson (2020) further acknowledged a history of fear and uncertainty that is associated with pandemics such as Covid-19-- not only in regard to health-- but to businesses as well. This fear is fueled by the realities created by the pandemic, particularly as they influence and control the type of decisions a business owner makes and the way the business behaves in order to survive. For instance, the authors opined that in this occurrence, there is generally a low return on assets as businesses during this time are reluctant to invest for fear of the obvious - loss. Similarly, Tucker (2020) posits the possibility of businesses in the various sectors going bankrupt given that consumers are encouraged to stay-at-home due to lockdown—a core reality of the Covid-19 pandemic. Also, the International Trade Centre (ITC) acknowledges the influence these current realities are having on the behavior patterns of small businesses especially in areas of sales and access to business inputs. Thus, around the world, and specifically in Nigeria, businesses are reducing their workforce to meet up

with the financial realities created by the outbreak. Small businesses considered vulnerable include hair salons, petty traders, food vendors—including the sellers of traditional bean cakes by the road side, car mechanics, pharmacists, taxi/tricycle drivers, tailors/fashion designers, bookshops, laundry services, restaurants, momo/paga (point of sale, POS) agents, supermarkets, estate agents, photography studios, and other small shop operators. To make things worse, consumer purchasing behaviors are also changing due to various factors (realities) such as reduction in income (purchasing power), uncertainty regarding when things will return to normal, and prioritizing essentials based on critical needs. All these impose terrible disruptions in business activities, especially in micro, small and medium businesses.

In view of the above, this study explores the various realities associated with the Covid-19 pandemic and determines the influence of these realities on the business behaviors of micro, small and medium scale businesses.

## **LITERATURE REVIEW**

The micro, small and medium scale enterprises (businesses) are critical players in today's organized private and informal sector and these categories of businesses are vital to the development and growth of the economy of a country. Various studies have referred to them as either the "backbone" or "engine room" of the economy because of the multiple contributions these businesses make to the economy as private sector participants. For instance, Nigeria has a population of more than 200 million people and according to the World Bank, the public sector merely employs a paltry 5% of its productive work force (The World Bank-IBRD, IDA). What this means is that the private sector employs the bulk of this work force and the majority is distributed among the micro, small, and medium enterprises. This claim is supported by Nigeria's Centre for the Study of the Economies of Africa (CSEA, 2014) which posits that the non-oil sectors are considered the natural and most important job creators, and that the public sector function is to provide the incentives and the enabling environment for the private sector to thrive. This explains why governments across the globe aim for a viable, organized and stable private and informal sector in their micro economic policies.

### **Definition of Micro, Small and Medium Enterprises (MSMEs)**

In literature, various terminologies have been used to describe small businesses. To Barisha and Pula (2015), this nomenclature has become an issue as variations among scholars range from "small businesses", to "small and medium enterprises", or "micro, small and medium enterprises". However, for Barisha and Pula, these are all grouped in a general category of "small businesses." And as if the issues related to the right terminology were not enough, literature further reveals the various schools of thought with regards to what constitute the definition for micro, small and medium scale businesses. To some scholars, these terms are defined in the context of the number of employees; while others look at it in terms of annual turnover, assets base, or a combination of all these (Ayodele, 2018; Ramli et al. 2017; Anastasia, 2015; Reeg, 2013). For instance, in defining SMEs, Akeem (2013) considered capital base and number of work force, and lumped micro and small enterprises together as one

category. Thus the author defined a small scale enterprises as a business with a capital base of less than 100 million Nigerian Naira, with 10 to 70 full-time employees; while a medium scale enterprise has a capital base of less than 300 million Nigerian Naira and a staff strength ranging from 71 to 200. For White (2018), micro and small businesses in some countries are generally informal in nature and in most cases do not have registration with the regulatory agencies. Similarly, Baumbach (1994) as cited in Ebitu et al. (2016) defines a small business as a business where its core managers are its owners. It is very personalized, local in terms of its operations, small in the context of its size in the industry, and with a source of capital mostly internal— from the proprietor. On this premise, it is easy to start a small business.

From another perspective, the features and definitions of MSMEs differ just as the strength and micro economic policies of a nation differ. In this context, literature provides definitions by countries, and international agencies aim at creating a standard. In Ayodele (2018), the European Commission defines micro, small and medium businesses in terms of number of employees—in this case companies with 0 to 9 employees for micro, 10 to 99 for small businesses and 100 to 499 employees for medium scale businesses. According to Anastasia (2015), the United States Small Business Administration echoes the definition of the European Commission and adds that these categories of businesses are generally economically disadvantaged. In other words, they have low income, and are with limited or no access to capital and other essential resources required for the success of a business. Similarly, Berisha & Pula (2015) posit that by World Bank standards, a micro business has less than 10 employees with less than or equal to 100,000 US dollars benchmark for either annual turnover or total assets. For small businesses, the benchmark is 11 to 50 employees and either the annual turnover or total assets must be greater than 100,000 US dollars but less than or equal to 3 million US dollars. And for medium scale businesses, the benchmark is 51 to 300 employees and either the annual turnover or total assets must be greater than 3 million US dollars but less than or equal to 15 million US dollars. In Nigeria, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) - the regulatory agency for small and medium enterprises- has through its National Policy document on micro, small and medium enterprises defined micro businesses as having employees less than 10 and assets valued at less than 5 million naira; small businesses as having employees of 10 to 49 and assets valued between 5 million to 49.9 million naira; and medium businesses as having employees of 50 to 199 and assets valued between 50 million to 499.9 million naira. In these definitions, as noted in the policy document, the assets do not include properties such as land and buildings.

### **Micro, Small and Medium Businesses: Role in the Economy**

According to literature, micro, small and medium scale businesses contribute in many dimensions to both the economy of a country and the global economy. The United Nations DESA Report (2012) connects the roles of micro, small and medium businesses in the economy to three basic areas, namely: economic activity, creating employment, and income creation. In this light, scholars like Oduyoye et al. (2013), Agwu & Emeti (2014), Yahaya, et al. (2016) and Ebitu et al. (2016) have referred to them as the “engine room” while Du & Banwo (2015) referred to them as the

“lifeblood” for developing and growing a country’s economy, especially in developing countries. Du & Banwo’s use of the descriptive term is premised on the fact that these categories of businesses provide “livelihoods” to the vulnerable. Also, in the AFI Survey Report (2017), these categories of businesses are the “backbone” of the economy and the “seedbed of entrepreneurial skills and innovation” that contribute to the creation of employment opportunities. According to Du & Banwo (2015) this assertion is supported by the International Financial Corporation (IFC) which stated that 60 percent of global employment was provided by the MSMEs.

Ayodele (2018) also posits that in addition to job creation, micro, small and medium businesses contribute to wealth creation and economic growth. Abudul (2018) as cited in Aladejebi (2020) added improving citizens’ standard of living and well-being to the roles of micro, small and medium businesses. Neagu (2016) pointed out that these businesses play active roles in encouraging “healthier” and “competitive” economies. Yahaya, et al. (2016); Hassan & Ahmad, (2016); Aladejebi, (2020) reported that these businesses contribute substantially to the country’s gross domestic product (GDP), while Ifekweni & Adedamola (2016) outlined the contributions of micro, small and medium businesses to the Nigerian economy to include: mobilization of local resources, provision of employment, equitable distribution of income, provision of raw material services, mitigation of rural-urban migration, and the generation and conservation of foreign exchange. It is in this regard that scholars reiterate the importance of micro, small and medium scale businesses to economic development - especially in developing countries like Nigeria - adding that their significance cannot be taken for granted or overemphasized.

### **COVID – 19 Realities**

The novel coronavirus pandemic is opening the world, and particularly micro, small and medium businesses, to unusually harsh realities (Aladejebi 2020). “Realities” in the Oxford Learner’s Dictionary is, “the true situation and the problems that actually exist in life, in contrast to how you would like life to be”. This definition represents the “new normal” in the Covid-19 pandemic world. Donthu and Gustafsson (2020) point out that these realities are made up of challenges in the supply chain, disengagement of workforce, and cash-flow; and increase in consumer demand, consumption patterns, and low sales. On access to technology, businesses with no capacity for internet-based transactions also struggle during this pandemic. Additional ‘realities’—given their effects on people’s daily lives— include the closure of both international and local borders, restriction in movement, social (physical) distancing and the quarantine of citizens for several days or weeks.

In a survey report, “the impact of Covid-19 on SMEs”, authored by Seth et al. (2020), the reality of enforcing a lockdown has negatively impacted on businesses thereby driving the economy to experience a “sluggish” growth rate and gradual dive into economic recession. As a result of the lockdown and closure of borders, micro, small and medium businesses, experienced distortions in supply chain, loss in income (capital), and unavailability of cash-flow to continue running business operations. In summary, the report by the International Trade Centre (ITC) shows that in every three small businesses in Africa, two are strongly impacted by the realities of Covid-19

especially in areas of sales and access to business inputs. All these Covid-19 realities impose an “unprecedented disruption” of business activities forcing businesses, especially micro, small and medium businesses to readjust or adapt to the current challenges by cutting or shutting-down their business activities, asking employees to work-from-home to limit physical (one-to-one) contacts, and reviewing operations.

In view of these, Subban (2020) opined that the Covid-19 pandemic has resulted in a large percentage of production being shut down. The author added that disruptions in the supply chain network have triggered global undulation effects in every sector of the economy in a manner that has never been experienced in economic history. In the economic sense, the multiplier consequences of Covid-19 have in many instances already been experienced given the fact that demand for “raw materials and commodities” sourced from Africa in the global market declined, and the continent was denied access to industrial components and goods manufactured from other regions of the world. These realities are promoting further uncertainty in a continent that was already struggling with widespread instability in the geopolitical and economic sectors. According to the International Monetary Fund (IMF), Nigeria is one of the countries severely hit economically by the coronavirus outbreak given the sharp fall in oil prices, a major export earner for the country.

### **COVID-19 Policy Responses**

In literature, governments recognize the fact that SMEs are the “lynchpin” acting as a bridge between the pandemic and economic recession. For this reason, responsible governments are scrambling with limited resources to lessen the effect of Covid-19 on micro, small and medium businesses. Consequently, new policies are being introduced, not only to address the health challenges, but to also assist these businesses handle the short-term risks and the strategic (long-term) implications (International Trade Centre, ITC, 2020). The ITC report further notes that these responses vary in magnitude across countries, and that small businesses operating in the developed richer countries received high-level assistance from their governments unlike those operating in less developed poorer countries.

After the announcement of the pandemic in far-away China, Europe and America, the Nigerian federal and state governments announced several initiatives and measures-- in the form of policies-- targeted at cushioning the direct effect of Covid-19 on the health of citizens, and particularly, micro, small, and medium businesses. For instance, some of the measures put in place included closing of all borders—land, sea and air, social distancing and working from home. Similarly, public gatherings of any kind were either restricted or banned. The federal government also announced a number of “stimulus packages” targeted at micro, small, and medium businesses under the National Economic Sustainability Plan (NESP). These included the 75 billion naira “survival fund and guaranteed off-take schemes” as reported on the Nigerian Investment Promotion Commission, NIPC, website. This fund is at the core of a 2.3 trillion naira stimulus package initiative. To alleviate the impact of the pandemic, the Central Bank of Nigeria (CBN) also provided a 50 billion Nigerian naira credit facility for both households and micro, small and medium businesses.

### **Business and Consumer Behavior**

Business behavior could be considered a general term that describes the behavior of businesses in response to certain negative or positive factors in the business environment. Fliess & Gordon (2001) see business behavior from the context of “promoting standard of business conducts and practices” in relation to certain environmental, health, and safety issues. Natural outbreaks such as the Covid-19 pandemic have the potential of changing the behavior of both businesses and consumers. And in order to survive economic challenges and realities and continue to operate successfully, businesses have to adapt to or work with change. Donthu & Gustafsson (2020) echoed Jaworski et al. (2000) on the dynamic nature of the market and as such, their behaviors must also change in order to thrive in the fluid business environment. To Gesteland (2012), in markets all over the world, the way businesses behave is evolving and this is impelled by a combination of factors which include increased exposure to happenings within the global markets and economies. In this changing business behavior, small businesses are at the center. Du & Banwo (2015) note the “fuzzy” structure of small businesses which allows for easy adaptation of business operations to serve the customers better.

On the other hand, consumer behavior, as remarked by Barmola & Srivastava, (2010), is considered as behavior consumers display while “searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy their needs”. And such behavior is influenced by various factors like individual, environmental and business decisions. The authors further posit that it is imperative to understand the “consumer buying behavior process” such as buyer recognition, information search, evaluation of alternatives, purchase and post purchase decision. In a report by Accenture on “How Covid-19 will permanently change consumer behavior”, the Covid-19 realities are changing the world including the people living in it as consumers are living and acting differently, making purchases differently, and also thinking in different ways. Mehta, et al. (2020) argue that for any business, the consumers are the major drivers of competitiveness and growth, and therefore where there is an “economic instability” like what the world currently faces, consumers will undergo behavior transformation.

## **RESEARCH METHODOLOGY**

### **Research Design and Population of the Study**

The study explores the quantitative method of research design. The sampling population is the micro, small and medium scale businesses operating in selected states of Nigeria - Adamawa, Taraba, Kaduna, Lagos, and the Federal Capital Territory (Abuja). According to a survey report (2017) by Nigeria’s National Bureau of Statistics and the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), the total number (population) of micro, small and medium businesses in these five states is 6,990,737.

### **Sample Size, Data Collection, and Sampling Procedure**

For sample size determination, the Krejcie-Morgan formula was used at 95% confidence level and 2.5% margin of error. The sample size benchmark based on this

formula is 1,536. The data was collected through interview sessions with selected small business operators/owners and the use of a structured questionnaire. The interview session was used primarily to allow inclusion of Covid-19 “realities” variables that aligned with the Nigerian context. The questionnaire was designed into four sections: Section A contains personal information, section B has business information, section C collates information on Covid-19 realities influencing business behavior, and section D contains information on business behavior. Sections C and D were designed using a 5-point Likert scale. Survey assistants were recruited and trained for this purpose. The survey assistants administered the questionnaires to the respondents (small business operators) at their various business locations using convenient sampling, a non-probability sampling method. A total of 1,883 questionnaires were received.

### Method of Data Analysis

The Exploratory Factor Analysis (EFA) is used in this study to examine the various Covid-19 “Realities” influencing the behavior of small businesses during this Covid-19 outbreak. According to DeCoster (1998), EFA examines serious and important commonality within a set of variables. To Fricker et al. (2012), EFA explores a set of variables with the view of identifying key actors in the model. In order to test the suitability of the data set for EFA as provided in literature, the Keiser Mayer-Olkin (KMO) and Bartlett’s test of statistical significance was used. For this study, the KMO benchmark is set at 0.7 and above (Howard, 2016) and the Bartlett’s test being significant confirmed the suitability of data set for Exploratory Factor Analysis. For factor extraction and retention, the Principal Component Analysis (PCA) was explored. Factors with eigenvalues equal to or greater than 1 were extracted and retained.

For this study, the identified Covid-19 Realities variables include: *V<sub>1</sub>-lockdown, V<sub>2</sub>-face mask/shield, V<sub>3</sub>-fear of infection, V<sub>4</sub>-hand washing with soap/sanitizing,, V<sub>5</sub>-no customers, V<sub>6</sub>-decline in sales, V<sub>7</sub>-no investment possibility, V<sub>8</sub>-no return-on-investment, V<sub>9</sub>-fear of goods expiring or damaged in storage, V<sub>10</sub>-border closure, V<sub>11</sub>-diverting capital for domestic use, V<sub>12</sub>-fear of going out of business –liquidation, V<sub>13</sub>-personal protection, V<sub>14</sub>-fear of spreading the infection to other family members, V<sub>15</sub>-supply chain, V<sub>16</sub>-technology to power online transaction, V<sub>17</sub>-stay-at-home, V<sub>18</sub>-work-from-home, V<sub>19</sub>-drop in oil prices, V<sub>20</sub>-unemployment, V<sub>21</sub>-fear of isolation, V<sub>22</sub>-fear of death, V<sub>23</sub>-social (physical) distancing, and V<sub>24</sub>-government palliative.*

Multiple regression analysis was used to determine the extent of influence these identified factors (latent variables) have on business behavior (dependent variable). Multiple regression, according to Daniel & Onwuegbuzie (2001), is a “powerful tool” for analyzing relationships existing among variables. Kall & Beltrame (2016) also consider multiple regression as a useful statistical analysis for identifying variables with valued contributions to the model. Regression structure coefficient is used to determine the contributions of these independent variables in the regression analysis. Daniel and Onwuegbuzie (2001) state that since structure coefficients are correlations, and therefore not susceptible to misrepresentation, they provide a more consistent and reliable statistic. The study proposed a theory in the form of hypothesis (H<sub>0</sub>) as thus:



The variables have no significant influence on the behavior of small businesses during the Covid-19 pandemic.

### **Reliability Test and Analysis**

For this study, Chronbach Alpha was used to test the reliability of the latent factor variables. An acceptable benchmark value of Chronbach Alpha,  $\alpha$ , was set at,  $\alpha \geq 0.7$  (George & Mallery 2003 as cited in Gliem & Gliem 2003).

### **RESULTS AND FINDINGS**

**Demographic profile of the respondents:** The results of the analysis indicate that 61.2% and 38.8% of the respondents were males and females respectively, and spread across the age brackets of under 20 (5.1%), 21 to 30 (41.5%), 31 to 40 (37.3%), 41 to 50 (12.9%), and above 50 (3.2%). It further shows that 86.9% of the respondents operated the micro businesses, 10.5%, small businesses, and 2.6%, medium scale businesses. In terms of industry coverage, petty traders – 24.9%, service sector – 15.6%, agriculture – 10.5%, mining – 0.8%, manufacturing – 1.6%, power and energy – 1.6%, construction – 3.3%, wholesales and retails – 14.3%, transportation – 6.2%, hospitality and tourism – 2.0%, ICT – 4.9%, financial sector – 1.4%, real estate – 1.2%, leasing – 0.8%, scientific and technological services – 0.6%, water and environmental – 1.4%, education – 5.2%, health and social work – 2.4%, culture, sports and entertainment – 1.1%, and others – 0.2%.

**Factor analysis:** In the factor analysis, the study originally had twenty-four (24) variables as influencing business behavior during the Covid-19 period. The result of the Exploratory Factor Analysis (see Table 1) indicates value of KMO = 0.928 and that the Bartlett test is statistically significant. These tests confirmed the existence of “patterned relationship” - hence the use of EFA is suitable for the dataset. It also indicates higher values of Communalities as shown in Table 1 indicating a good fit and better Exploratory Factor Analysis solution. Furthermore, a four-factor solution is revealed with each variable loading at 0.4 and above factor loadings using the principal component analysis. Factor one (F<sub>1</sub>) has nine variables—V<sub>2</sub>, V<sub>3</sub>, V<sub>12</sub>, V<sub>13</sub>, V<sub>14</sub>, V<sub>20</sub>, V<sub>21</sub>, V<sub>22</sub>, V<sub>23</sub> and account for 31.563% of the total variance. Factor two (F<sub>2</sub>) has seven variables – V<sub>1</sub>, V<sub>5</sub>, V<sub>6</sub>, V<sub>11</sub>, V<sub>15</sub>, V<sub>17</sub>, V<sub>18</sub> and account for 10.289% of the total variance. Factor three (F<sub>3</sub>) and Factor four (F<sub>4</sub>) has four variables each accounting for 6.439% and 5.192% respectively of the total variance. The variables are as follows: F<sub>3</sub> – V<sub>4</sub>, V<sub>16</sub>, V<sub>19</sub>, V<sub>24</sub>, and F<sub>4</sub> – V<sub>7</sub>, V<sub>8</sub>, V<sub>9</sub>, V<sub>10</sub>.

The reliability analysis indicates that F<sub>1</sub> at Chronbach alpha,  $\alpha = 0.869$ , and F<sub>2</sub> at Chronbach alpha,  $\alpha = 0.831$  were reliable. However, F<sub>3</sub> at Chronbach alpha,  $\alpha = 0.546$ , and F<sub>4</sub> at Chronbach alpha,  $\alpha = 0.621$  were not reliable hence eliminated. What this means is that sixteen variables of F<sub>1</sub> and F<sub>2</sub> -- V<sub>1</sub>, V<sub>2</sub>, V<sub>3</sub>, V<sub>5</sub>, V<sub>6</sub>, V<sub>11</sub>, V<sub>12</sub>, V<sub>13</sub>, V<sub>14</sub>, V<sub>15</sub>, V<sub>17</sub>, V<sub>18</sub>, V<sub>20</sub>, V<sub>21</sub>, V<sub>22</sub>, V<sub>23</sub>, were identified as influencing the behavior of businesses during the Covid-19 period. To determine the extent of the influence these variables have on the dependent variable, multiple regression analysis was explored.

**Table 1:** Factor Analysis and Communalities

	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	Communalities
V <sub>1</sub> – lockdown		.672			.606
V <sub>2</sub> - face mask/shield	.621				.587
V <sub>3</sub> - fear of infection	.725				.582
V <sub>4</sub> – hand washing/sanitizing			.649		.551
V <sub>5</sub> – no customers		.680			.580
V <sub>6</sub> – decline in sales		.678			.613
V <sub>7</sub> – no investment possibility				.524	.533
V <sub>8</sub> – no return-on-investment				.543	.534
V <sub>9</sub> – fear of goods expiring/damaged in storage				.717	.530
V <sub>10</sub> – border closure				.451	.323
V <sub>11</sub> – diverting capital for domestic use		.555			.588
V <sub>12</sub> – fear of going out of business (liquidation)	.504				.548
V <sub>13</sub> – personal protection	.753				.612
V <sub>14</sub> – fear of spreading the infection to other family members	.743				.593
V <sub>15</sub> – supply chain		.436			.432
V <sub>16</sub> – technology			.684		.608
V <sub>17</sub> – stay-at-home		.738			.597
V <sub>18</sub> – work-from-home		.735			.598
V <sub>19</sub> – drop in crude oil prices			.550		.440
V <sub>20</sub> – unemployment	.404				.411
V <sub>21</sub> – fear of isolation	.647				.528
V <sub>22</sub> – fear of death	.704				.524
V <sub>23</sub> – social (physical) distancing	.603				.491
V <sub>24</sub> – government palliative			.491		.429
Reliability (Chronbach Alpha)	0.869	0.831	0.546	0.621	
Percentage Variance Explained	31.563	10.289	6.439	5.192	
Total Variance Explained					12.834
KMO					0.928
Bartlett’s Test of Sphericity					0.000

**Regression analysis:** In this analysis, the business behavior represents the dependent variable while the identified sixteen variables from the EFA represent the independent variables. The result of the regression analysis model is as shown in Table 2. In this table, the multiple regression result indicates that the independent variables jointly

explain 24.5% (R-square) of the variance in predicting business behavior. The proposed regression model is significant at  $\alpha = 0.05$ .

**Table 2:** Multiple Regression Analysis—Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate	F	df1	df2	Sig.
1	.495 <sup>a</sup>	.245	.239	1.219	37.812	16	1862	.000

a. Predictors: (Constant), V<sub>18</sub>, V<sub>14</sub>, V<sub>15</sub>, V<sub>20</sub>, V<sub>11</sub>, V<sub>22</sub>, V<sub>1</sub>, V<sub>2</sub>, V<sub>12</sub>, V<sub>23</sub>, V<sub>5</sub>, V<sub>17</sub>, V<sub>21</sub>, V<sub>3</sub>, V<sub>6</sub>, V<sub>13</sub>

In Table 3, the unstandardized regression coefficients in addition to the individual standard error of the estimates for each of the independent variable is displayed. It also has the structure coefficient ( $r_s$ ) as well as the significant levels. A look at the regression coefficients indicate variables with both positive and negative values. In other words, the sign as represented in the regression coefficient indicates the type of correlation existing between each of the independent variables and the dependent variables. For instance, where it is a positive coefficient (V<sub>1</sub> = 0.043), it means that as the value of the independent variable V<sub>1</sub> increases, the mean of the dependent variable is likely to increase. Where it is a negative correlation, for example, V<sub>5</sub> = - 0.043, it means that as the value of the independent variable V<sub>5</sub> decreases, the mean of the dependent variable is likely to decrease.

The various statistics as indicated in Table 3 show that for V<sub>1</sub>, the regression coefficient indicates that for every additional lockdown day, we expect the way businesses behave to increase moderately by an average of 0.043 with standard error of the estimate at 0.026, and the test is not significant given that the  $p$ -value of 0.098 is greater than  $\alpha = 0.05$ . For V<sub>2</sub>, the regression coefficient indicates that for every additional wearing of face masks/shield, we expect the way businesses behave to increase by an average of 0.111 with standard error of the estimate at 0.029. It has a high structure coefficient of 0.721 and the test is significant given that the  $p$ -value of 0.000 is less than  $\alpha = 0.05$ . The regression coefficient for V<sub>3</sub> is 0.141 indicates that for every additional fear of getting infected, the business behavior is likely to increase by an average of 0.141 with standard error of the estimate at 0.030. The variable has a high structure coefficient of 0.758 and the test is significant as  $p$ -value of 0.000 is less than  $\alpha = 0.05$ . In the case of V<sub>5</sub>, the regression coefficient of -0.043 indicates that for every reduction in customers, there is a likely decrease in the way businesses behave by an average of 0.043 with standard error of the estimate at 0.030. It also has a low structure coefficient, and the test is not significant given that  $p$ -value of 0.159 is greater than  $\alpha = 0.05$ . Regarding V<sub>6</sub>, for every decline in sales, the way businesses behave will decrease by an average of 0.070 with standard error of the estimate at 0.028 and a low structure coefficient of 0.143. The test is significant at  $p$ -value = 0.014. In V<sub>11</sub>, the regression coefficient is -0.065 which indicates that as diverting capital for domestic usage reduces, there is a likely decrease in the way businesses behave with 0.028 as standard error of the estimate. The structure coefficient of 0.168 is low and the test is significant. For V<sub>12</sub>, in every additional exhibition of fear of liquidation, we expect an increase in the way businesses behave by an average of 0.052 with standard error of the estimate of 0.025. The value of the structure coefficient – 0.451, is relatively high and the test is significant. In the case of V<sub>13</sub>, the

regression coefficient of 0.122 indicates that for every inclination to additional personal protection, we expect an increase in business behavior by an average of 0.122 with 0.031 as standard error of the estimate. The structure coefficient of 0.747 is high and the test is significant at  $p$ -value = 0.000. The statistic in  $V_{14}$  has regression coefficient as -0.001 which indicates that as businesses reduce their fear of spreading Covid-19 to other family members, we also expect a decrease in the way their business behave with standard error of the estimate of 0.029. The value of the structure coefficient of 0.628 indicates a high correlation and the test is not significant given that  $p$ -value of 0.967 is greater than  $\alpha = 0.05$ . In the case of  $V_{15}$ , for every additional disruption in supply chain, there is a likely increase in the business behavior with 0.022 standard error. The structure coefficient of 0.307 is low and the test is significant at  $p$ -value = 0.030. In  $V_{17}$ , for every additional day required to stay-at-home, we expect a corresponding increase in the way businesses behave by an average of 0.018 with 0.028 standard error. The value of the structure coefficient of 0.152 is low and the test is not significant since the  $p$ -value of 0.509 is greater than  $\alpha = 0.05$ . The statistic in  $V_{18}$  has regression coefficient as -0.099 meaning that as the number of days people are required to work-from-home is reduced, there is going to be a decrease in the way businesses behave by an average of 0.099 with standard error of the estimate of 0.026. The structure coefficients value (0.049) is very low and the test is significant at  $p$ -value = 0.000.  $V_{20}$  has a regression coefficient of 0.095 which means that as unemployment increases, we expect an increase in the way businesses behave by an average of 0.095 with standard error of the estimate of 0.025. The structure coefficient of 0.560 is high and the test is significant at  $p$ -value = 0.000. In the case of  $V_{21}$ , it has regression coefficient of 0.107 meaning that as businesses exhibit fear of being isolated, we expect a likely increase in business behavior by an average of 0.107 with standard error of the estimate of 0.029. The structure coefficient (0.697) is high and the test is significant at  $p$ -value = 0.000.  $V_{22}$  has a regression coefficient of 0.010 which means that as businesses continue to exhibit fear of death, we expect an increase in the way businesses behave by an average of 0.010 with standard error of 0.027. The structure coefficient of 0.604 is high and the test is not significant given that  $p$ -value of 0.711 is greater than  $\alpha = 0.05$ .  $V_{23}$  has regression coefficient of 0.151, standard error of estimate of 0.029. The structure coefficient of 0.691 is high and the test is significant at  $p$ -value = 0.000.

**Table 3:** Regression Coefficients

	Unstandardized Coefficients ( $\beta$ )	Std Error of the Estimate	Structure Coefficients ( $r_s$ )	t	Sig.
(Constant)	1.527	.124		12.332	.000
$V_1$	.043	.026	0.333	1.657	.098
$V_2$	.111	.029	0.721	3.796	.000
$V_3$	.141	.030	0.758	4.757	.000
$V_5$	-.043	.030	0.222	-1.411	.159
$V_6$	-.070	.028	0.143	-2.448	.014
$V_{11}$	-.065	.028	0.168	-2.329	.020
$V_{12}$	.052	.025	0.451	2.040	.041
$V_{13}$	.122	.031	0.747	3.910	.000

V <sub>14</sub>	-.001	.029	0.628	-.042	.967
V <sub>15</sub>	.049	.022	0.307	2.173	.030
V <sub>17</sub>	.018	.028	0.152	.661	.509
V <sub>18</sub>	-.099	.026	0.049	-3.773	.000
V <sub>20</sub>	.095	.025	0.560	3.858	.000
V <sub>21</sub>	.107	.029	0.697	3.659	.000
V <sub>22</sub>	.010	.027	0.604	.371	.711
V <sub>23</sub>	.151	.029	0.691	5.225	.000

a. Dependent Variable: Business Behavior

Table 4 allows for the testing of the research hypothesis.

H<sub>0</sub>: The variables have no significant influence on the way small businesses behave during the Covid-19 pandemic.

According to the analysis of variance table (Table 4), the *p*-value is 0.000 which indicates that the overall test is significant. That is, *p*-value of 0.000 is less than the significance level,  $\alpha = 0.05$ . In this case, the H<sub>0</sub> is rejected meaning that the variables significantly influence the way small businesses behave during the Covid-19 pandemic. However, it is noted that some of the variables—V<sub>1</sub>, V<sub>5</sub>, V<sub>14</sub>, V<sub>17</sub>, and V<sub>22</sub>, as indicated in Table 3 were not significant.

**Table 4:** Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	898.965	16	56.185	37.812	.000 <sup>b</sup>
	Residual	2766.784	1862	1.486		
	Total	3665.749	1878			

a. Dependent Variable: Business Behavior

b. Predictors: (Constant), V<sub>18</sub>, V<sub>14</sub>, V<sub>15</sub>, V<sub>20</sub>, V<sub>11</sub>, V<sub>22</sub>, V<sub>1</sub>, V<sub>2</sub>, V<sub>12</sub>, V<sub>23</sub>, V<sub>5</sub>, V<sub>17</sub>, V<sub>21</sub>, V<sub>3</sub>, V<sub>6</sub>, V<sub>13</sub>

## DISCUSSION OF FINDINGS

From the exploratory factor analysis it was established that out of the twenty-four (24) Covid-19 reality variables, only sixteen were identified as influencing variables for business behavior. These include: V<sub>1</sub>-lockdown, V<sub>2</sub>-face masks/shield, V<sub>3</sub>-fear of infection, V<sub>5</sub>-no customers, V<sub>6</sub>-decline in sales, V<sub>11</sub>-diverting capital for domestic use, V<sub>12</sub>-fear of going out of business (liquidation), V<sub>13</sub>-personal protection, V<sub>14</sub>-fear of spreading the infection to other family members, V<sub>15</sub>-supply chain, V<sub>17</sub>-stay-at-home, V<sub>18</sub>-work-from-home, V<sub>20</sub>-unemployment, V<sub>21</sub>-fear of isolation, V<sub>22</sub>-fear of death, V<sub>23</sub>-social (physical) distancing.

The regression analysis as noted in the methodology enabled us to determine the extent to which these variables influence the behavior of businesses during the pandemic. We first note that while some of the regression coefficients take on negative values, many others are positive. These indicate the nature of the relationship between the dependent variable and each of the sixteen independent variables. For instance,

variable  $V_5$ ,  $V_6$ ,  $V_{11}$ ,  $V_{14}$  and  $V_{18}$  takes on negative coefficients meaning that the nature of their relationship with the dependent variable is negative.

Furthermore, given the structure coefficients of 0.758, fear of infection ( $V_3$ ) becomes the most important variable that significantly influences the way small businesses behave during the Covid-19 pandemic. This is supported by, Funk et al. (2009), Mayer et al. (2020) and Mertens et al. (2020). According to Funk et al., putting up a responsive behavior in the presence of an outbreak has the ability of preventing contracting the infection or spreading to others and this responsive behavior may potentially be driven by fear of infection. In the view of Mertens, et al., fear is define as “an adaptive emotion that serves to mobilize energy to deal with potential threat.” In other word, fear of infection is a key factor that dictate the way and manner small businesses operate in order to continue in business as well as deal with potential threat associated with Covid-19.

It is fear of infection that makes small businesses begin to think of personal protection ( $V_{13}$ ) first - which in this study is found to be the second most important reality influencing business behavior. According to Bouey (2020), personal protection is a priority for small business operators given that they regard their employees as assets and will do more to protect them, and by extension, their customers. This finding further confirmed responses from respondents who noted that one particular way their business behavior was changing is in how they were sanitizing their premises. For example, in a normal period, they clean about twice or thrice before close of business. But in the Covid-19 era, they had to clean regularly in a day depending on the flow of customers. In addition, this also prompted movement to home delivery with limited person-to-person contacts in a bit to protect both employees and customers. It is in this regard that Funk et al. (2009) posit that outbreaks of this magnitude institute new behavioral changes that point more to “personal protection” than managing a business. These arguments could be extended to fear of spreading the infection to other family members ( $V_{14}$ ) given its high structure coefficient.

This act of protecting oneself can be done through various ways such as the use of face masks/shield ( $V_2$ ) and according to our findings, face masks/shield is the third most important reality that influence small business behavior during the Covid-19 pandemic. In Guner, et al. (2020), the use of face mask/shield was advised in busy public spaces including small businesses such as grocery stores and shopping malls. However, Liu, et al. (2020) put forward that wearing of face masks for a long period of time poses a human health risk and reduces, significantly, the individual feeling of comfort. This in itself has the potential of influencing behavioral change especially in business locations.

Just like fear of infection, fear of isolation or quarantined ( $V_{21}$ ) is the fourth most important reality influencing business behavior. Donthu & Gustafsson (2020) looked at isolation as being “harmful” to humans and this by extension is likely to cause a “dramatic change” in the way businesses behave or act. In the study findings, social (physical) distancing ( $V_{23}$ ) is also a major reality that influences small business behavior. According to Funk et al. (2020), social (physical) distancing has the power

to effect changes in behavior. And in a study on social distancing and its influence on travel behavior, De Vos (2020) established that social (physical) distancing was causing a change in the behavior of travelers. Also, Lutfi et al. (2020) added that social (physical) distancing along with others realities were raising serious concerns that were forcing small businesses to change their plans and implement new strategies. Fear of death ( $V_{22}$ ) is another Covid-19 reality that is influencing the way businesses behave and act and according to Menzies & Menzies (2020), it constitute an essential part of the Covid-19 experience.

## **IMPLICATION TO RESEARCH AND PRACTICE**

In this section, the findings of the study are discussed in the context of their implications to research and practice. According to our findings, fear is a fundamental element influencing behavioral changes in small businesses operations during the Covid-19 pandemic. This position is reflected by Donthu & Gustafsson (2020) who assert that fear is an associated phenomenon to pandemic outbreaks. This is probably because people are generally more interested in their present conveniences than in the happenings of the future. So when a pandemic or other uncontrollable situation happens, the absence of knowledge or assuring solutions cause fear. The authors further argue that overcoming challenges generated by fear is not a guarantee for a “promising” future given that unpreparedness for situations such as pandemics will always present the new world we transition to as a different one. One of the ways to prepare is for governmental and non-governmental organizations, and other supportive agencies led by medical scientists, to provide evidence-based messages on safety protocols to enable small business operators operate safely and profitably. Consistent messaging according to Xiao & Torok (2020) reduce the “anxiety” and “distress” associated with misinformation, and it is therefore critical that credible sources broadcast the information which mitigates fear.

Literature has attributed behavioral changes during this pandemic to the belief of personal protection from infection through the use of instruments such as face masks and shields. Acknowledging the importance of these instruments, Cirrincione, et al. (2020) supported organizing an “essential.” training program on their usage and production, as this would go a long way in ensuring the functionality and effectiveness of the protective measures that influence the lifespan of small businesses. Other scholars have stated the need for research-based public education on the different types of masks, how they are worn, and the associated risks they pose to human health. Tso & Cowling (2020) and Humphreys (2020) have criticized agencies such as the World Health Organization (WHO) for inconsistent messaging on the use of face masks. Humphreys affirms that WHO got it wrong more than once; and this is very serious as leading health-based agencies must provide credible leadership in broadcasting evidence-based information that will guide anticipated behavioral transformations in any affected community and in particular, the business community.

According to Tuzovic & Kabadayi (2020), social distancing is a public health measure to curtail the spread of the virus but it is also creating unprecedented challenges in the business community. These include the loss of social gestures like handshakes,

hugging, and touching close friends - essential features for personalized and local business-customer relationships. Lutfi et al. (2020) see this from the context of “economic gaps” and also made reference to the study by Baum et al. (2009) which found that social distancing causes socioeconomic burdens. Burdens compound negative behavioral changes and they can be triggered by basic things like lack of evidence-based knowledge or consistent factual messaging on how to handle the circumstance driving the situation.

Scholars have continued greatly to outline the importance of small businesses to the economy and this provides the basis for individual governments to be strategic in stimulus package decisions and programs. Cumbie (2017) as cited in Aladejebi (2020) discussed the vulnerability of small businesses when it comes to financial resources, and he emphasized that access to this lifeline is the “biggest challenge” to long and short term recovery of small businesses in unforeseen circumstances. As established in this study, this challenge is worse in this Covid-19 era due to multiple factors -- many of which are offshoots of inconsistent messaging and misinformation. In this regard, stimulus package decisions and programs need to be tied to the right messages and targeted at promoting positive behavioral changes that will keep these essential businesses open and running.

## **CONCLUSION**

The Covid-19 pandemic has caused serious economic consequences globally and influenced the pragmatic changes in the operations of businesses. The study findings revealed that out of the sixteen influencing variables, only eight impacted significantly on the way small businesses behave. Majority of these influencing variables were connected to sustaining human health. This means that although making more sales was important and critical for the success of businesses, an overriding concern was how to stay alive. Surprisingly, according to study findings, no variable with direct connection to business turnover/sales such as no customers (V<sub>5</sub>), and decline in sales (V<sub>6</sub>) was found to have a major influence on small business behavior during the Covid-19. Of more interest is the fact that lockdown (V<sub>1</sub>) - which literature has noted to impact business sales or turnover- has a relatively low influence on the way small businesses behave or act in the Covid-19 era. Overall, the test was significant, and the conclusion is that there is a significant influence on small business behavior. Tests for variables V<sub>1</sub>, V<sub>5</sub>, V<sub>14</sub>, V<sub>17</sub>, and V<sub>22</sub> were not significant and this means that they did not significantly influence the way small businesses behave.

## **LIMITATION AND SUGGESTION FOR FURTHER RESEARCH**

The study was conducted in five states of Nigeria: Adamawa, Lagos, Kaduna, Taraba, and Federal Capital Territory. The study findings cannot therefore be generalized to include other states.

It is suggested that future studies should be conducted to cover other states to allow for a holistic analysis of MSMEs in the nation.



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