



COVID-19 and Entrepreneurship Development among Nigerian Women

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ABSTRACT

Introduction: The study examines the effect of COVID-19 on entrepreneurship Development among women entrepreneurs in Adamawa state.

Materials and Method: The study used survey research design using primary data and obtained data through administration of structured questionnaire (5 points likert scale) to women cooperative societies groups registered with the ministry of commerce and industry in Yola. Target population size is 480 women with a sample size of 218 which was determined using Taro Yamane formula. The study employed Cronbach's alpha to test the reliability of each construct. The study used regression to analyze the data collected from the respondents and econometric software were used to analyze the data.

Results: Findings revealed that there is negative and insignificant effect of COVID-19 on entrepreneurship development (innovation) among women entrepreneurs in Adamawa State of Nigeria.

Conclusion: The study recommended that Government of Adamawa State of Nigeria should try to encourage women entrepreneurs since they are affected with COVID-19 and its policy implementation such as social distance and lock-down due to increase in the number of the death, increase in the tests and increase in the conformed cases of COVID-19.

Key words: COVID-19, Entrepreneurship Development, Innovation and decline in demand

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INTRODUCTION

The current economic situation has significantly reduced the average Nigerian's purchasing power, especially because the collapse of oil prices has led to inflation. The same amount of money now purchases fewer goods. This situation is worse when you consider the millions who lost their jobs or received pay cuts. As a result, people are focused on spending on necessities and things perceived to give real value. COVID-19 is expected to have a severe effect on the entrepreneurship development among women in Nigeria. The crisis obliged slow down their production and this will negatively influence entrepreneurship development and its contribution to the GDP, which were 4.7% and

16.2% in 2018, respectively.

After the first infections in China at the end of 2019, the Coronavirus disease (COVID-19) has continued to spread across the world. No continent has been able to escape this virus. Declared a pandemic by the World Health Organization (WHO) on 11 March 2020, COVID-19 has become a global emergency, given its impact on the entire world population and the entrepreneurs.

In Nigeria, the Government is making efforts to contain the virus including closing all land, sea and air borders, closing down markets, schools and putting a halt to social gatherings. As businesses except those providing essential or emergency services are shut down, the populace has been plunged into a vulnerable state. Federal and Sub-national Governments are responding with lockdown policies epitomized by restriction of human and vehicular movements and closure of businesses. Consequently, domestic demand and

supply have fallen, and micro, small and medium scale enterprises (MSMEs) are the worst hit as they rely on imports for their raw materials used in production [1]. At the grassroots, the situation is aggravating experiences of marginalisation, exclusion, deprivations, inequality and poverty.

The outbreak of coronavirus disease-2019 (COVID-19) has severely affected national and global economies. Various businesses are facing different issues with a certain degree of losses. Particularly, entrepreneurs are facing a variety of problems such as a decrease in innovation in terms of technology, product and process innovation. Nevertheless, it is quite clear that entrepreneurs around the globe are experiencing the significant effect of COVID-19 outbreak on their businesses and this problem affected innovation of their products.

Furthermore, the fairly big changes in food consumption preferences were reported [2]. Also, in another study, there was a significant decrease in family incomes and a significant increase in family expenditures during the pandemic outbreak [3]. Psychological stress during COVID-19 pandemic can cause fear and worry among people about their health and financial conditions, and loss of support services they rely on. It can also cause changes in sleeping or eating patterns, sleeping problems, concentration difficulties, and exacerbate chronic health problems, mental health conditions, usage of tobacco, alcohol, and other substances [4]. Evidence from recent studies suggests that current pandemic-related coping strategies may harm mental health, such as decreased well-being and increased posttraumatic stress disorders, depression and anxiety symptoms [5,6], insomnia, and anger [7-9]. Besides, fear of the disease and social isolation may lead to stress reactions that could develop into other psychological disorders [10]. Also, inactivity due to COVID-19 disease can have a negative effect on physical and mental health and coping with stress and anxiety during isolation time [11,12]. Besides, there were some negative lifestyle changes due to the COVID-19 pandemic [13].

The objective of this study is to examine the effect of COVID-19 on entrepreneurship development among women entrepreneurs in Adamawa State of Nigeria. The specific objective is to examine the effect of COVID-19 on innovation among women

entrepreneurs in Adamawa State of Nigeria.

Concept of Entrepreneurship

Roth (2014) described entrepreneurship “as the capacity and willingness to develop, organize, and manage a business venture along with any of its risks to make a profit [14]. Entrepreneurship means “what an entrepreneur does”. Thus, the art of innovating, initiative, risk taking and implementing is called entrepreneurship. Generally, entrepreneurship development is the key to poverty eradication, employment generation and rapid economic development [15].

Innovation

According to Zwingina and Opusunju (2017) innovation is the application of technological, institutional, human resources and discoveries to productive processes, resulting in new practices, products, markets, institutions and organisations that need organizational improvement or performance in terms of sales, profitability-pro and market shares [16]. According to Kuratko and Hodgetts (2004), innovation is the creation of new wealth or the alteration and enhancement of existing resources to create new wealth [17].

Control Variable

Demand for a commodity is its quantity which consumers are able and willing to buy at various prices during a given period. For a commodity to have demand, the consumer must possess willingness to buy it, the ability or means to buy it and must be related to per unit of time i.e., per day, per week, month or per year. Demand can be attributed to the desire for an item, the possession of the means to pay for it or the purchasing power, the willingness to pay and a time period over which it is made.

Most significantly, demand is determined by the “price of the commodity”. It is often said that quantity demanded of a good depends on its price. The simple law of demand is that if price of a commodity rises, the goods become more expensive such that the amount of money we have will buy less of that commodity. In order words there is an important relationship between the quantity demanded and the price. Hence when price increases an individual consumer becomes less inclined to purchase more of those commodities relative to others [18].

Method

The study adopted survey design. The population of this study comprise of all the women cooperative societies in Adamawa South and Central Senatorial zones registered by the State Ministry of Commerce and Industry Yola. There are 16 registered women societies in these zones, each with about 30 members. Thus, the total target population of the study is 480. The target population of 480 and sample size of 218 was derived using a best-known formula.

The sample size of this study is 218 and the researcher added additional 20% copies of questionnaire to enable successful return of the 218 copies of questionnaire from the respondents. The study used simple random sampling technique to consider its sample from the population. The simple random sampling technique is that all units or strata in the population have equal probability of being considered in the sampling process and these copies were randomly shared. Primary data was used as a method of data collection through the use of questionnaire as an instrument for data collection. The questionnaire is designed using 5-point Likert scale: “Strongly Agreed”, “Agreed”, “Undecided”, “Disagree” and “Strongly Disagree”.

The study used Cronbach’s alpha to test the reliability of each instruments or construct. Reliability is established if the scales have alphas greater than or equal to the standard cut-off of 0.7. Therefore, the copies of questionnaire were tested so that questions are answered properly, and Table 1 indicates the reliability value of the variables.

Regression is a statistical measure used to determine the degree of the relationship between the variables. The method also uses to estimate

the cause-and-effect relationship between COVID-19 and entrepreneurship Development (innovation). Regression coefficient is the change in independent variable for one unit of change in the dependent variable while holding other independent variables in the model constant and regression isolates the role of one variable from all of the others in the model. T-statistical test is used to indicate the significant level of one independent variable on the dependent variable at a particular probability value. The f-statistics test is used to show the overall significance of two or more independent variables on the dependent variable. P-statistic is used as a basis for decision making and it is at 1% level of significance, 5% level of significance and 10% level of significance. This study used 5% level of significance as a basis for decision making.

RESULTS

45.41% of the respondents strongly agreed that product innovation is a major practice among women entrepreneurs in Adamawa State of Nigeria, 22.47% of the respondents agreed that product innovation is a major practice, 21.10% of the respondents strongly disagreed that product innovation is a major practice, 9.63% of the respondents disagreed that product innovation is a major practice and 1.38% of the respondents were undecided (Table 2).

30.28% of the respondents strongly agreed that women entrepreneurs hardly introduce technology innovation in their businesses, 20.18% of the respondents agreed that women entrepreneurs hardly introduce technology innovation in their businesses, 30.73% of the respondents strongly disagreed that women entrepreneurs hardly introduce technology innovation in their businesses, 16.97% of the respondents disagreed that women entrepreneurs hardly introduce technology innovation in their businesses and 1.83% of the respondents were undecided.

Table 1: Reliability test.

Variables	Number of Items	Cronbach’s Alpha
Entrepreneurship development	4	0.86
COVID-19	4	0.79
Decline in Demand	3	0.78

Table 2: Analysis of Entrepreneurship Development (Innovation).

Items	Strongly Agreed	Agreed	Undecided	Strongly Disagreed	Disagreed
Product innovation is a major practice	99(45.41)	49(22.47)	3(1.38)	46(21.10)	21(9.63)
Women hardly introduce technology innovation	66(30.28)	44(20.18)	4(1.83)	67(30.73)	37(16.97)
Women do not frequently change the innovation processes	99(45.41)	72(33.02)	1(0.46)	18(8.26)	28(12.84)
Women hardly change organizational policy and principles along with structure	81(37.16)	31(14.22)	2(0.92)	88(40.37)	16(7.34)

45.41% of the respondents strongly agreed that women entrepreneurs do not frequently change the innovation processes of their businesses, 33.02% of the respondents agreed that women entrepreneurs do not frequently change the innovation processes of their businesses, 8.26% of the respondents strongly disagreed that women entrepreneurs do not frequently change the innovation processes of their businesses, 12.84% of the respondents disagreed that women entrepreneurs do not frequently change the innovation processes of their businesses and 0.46% of the respondents were undecided.

37.16% of the respondents strongly agreed that women entrepreneurs in Adamawa State of Nigeria hardly change organizational policy and principles along with structure, 14.22% of the respondents agreed that women entrepreneurs hardly change organizational policy and principles along with structure, 40.39% of the respondents strongly disagreed that women entrepreneurs hardly change organizational policy and principles along with structure, 7.34% of the respondents disagreed that women entrepreneurs hardly change organizational policy and principles along with structure and 0.92% of the respondents were undecided.

24.77% of the respondents strongly agreed that there is increase in the total number of tests of COVID-19, 14.68% of the respondents agreed that there is increase in the total number of tests of COVID-19, 39.90% of the respondents strongly disagreed that there is increase in the total number of tests of COVID-19, 19.72% of the respondents disagreed that there is increase in the total number of tests of COVID-19 and 0.92% of the respondents were undecided (Table 3).

36.69% of the respondents strongly agreed that there is increase in the number of confirmed COVID-19 cases, 26.15% of the respondents agreed that there is increase in the number of confirmed COVID-19 cases, 20.18% of the respondents strongly disagreed that there is

increase in the number of confirmed COVID-19 cases, 15.14% of the respondents disagreed that there is increase in the number of confirmed COVID-19 cases and 1.83% of the respondents were undecided

45.87% of the respondents strongly agreed that the number of COVID-19 deaths are increasing, 39.91% of the respondents agreed that the number of COVID-19 deaths are increasing, 9.63% of the respondents strongly disagreed that the number of COVID-19 deaths are increasing, 3.67% of the respondents disagreed that the number of COVID-19 deaths are increasing and 0.92% of the respondents were undecided.

34.40% of the respondents strongly agreed that the policies of government in COVID-19 such as lock-down, social distance and washing of hands are negative to increase in businesses, 30.28% of the respondents agreed that the policies of government in COVID-19 such as lock-down, social distance and washing of hands are negative to increase in businesses, 27.06% of the respondents strongly disagreed that the policies of government in COVID-19 such as lock-down, social distance and washing of hands are negative to increase in businesses, 5.04% of the respondents disagreed that the policies of government in COVID-19 such as lock-down, social distance and washing of hands are negative to increase in businesses and 3.21% of the respondents were undecided.

41.74% of the respondents strongly agreed that businesses experienced conditions, whereby the prices of goods and services brought about a decline in demand, 31.65% of the respondents agreed that businesses experienced conditions, whereby the prices of goods and services brought about a decline in demand, 20.18% of the respondents strongly disagreed that businesses experienced conditions, whereby the prices of goods and services brought about a decline in demand, 5.05% of the respondents disagreed that businesses experienced conditions, whereby

Table 3: Analysis of COVID-19.

Items	Strongly Agreed	Agreed	Undecided	Strongly Disagreed	Disagreed
There is increase in the total number of tests of COVID-19	54(24.77)	32(14.68)	2(0.92)	87(39.90)	43(19.72)
There is increase in the number of confirmed COVID-19 cases	80(36.69)	57(26.15)	4(1.83)	44(20.18)	33(15.14)
The number of COVID-19 deaths are increasing	100(45.87)	87(39.91)	2(0.92)	21(9.63)	8(3.67)
The policies of government such as lock-down, social distance and washing of hands are negative to increase in businesses	75(34.40)	66(30.28)	7(3.21)	59(27.06)	11(5.04)

Table 4: Decline in demand.

Items	Strongly Agreed	Agreed	Undecided	Strongly Disagreed	Disagreed
Businesses experienced conditions, whereby the prices of goods and services brought about a decline in demand	91(41.74)	69(31.65)	3(1.37)	44(20.18)	11(5.05)
The income levels of producers and consumers are affected due to COVID-19	99(45.41)	61(27.98)	3(1.37)	49(22.48)	6(2.75)
The prices of goods and services have increase affecting patronage	114(52.29)	49(22.48)	2(0.92)	22(10.09)	31(14.22)
There are instances where consumers are not willing to buy despite the rise in the price of goods and services	109(50.00)	62(28.44)	1(0.45)	23(10.55)	23(10.55)

the prices of goods and services brought about a decline in demand and 1.37% of the respondents were undecided (Table 4).

45.41% of the respondents strongly agreed that the income levels of producers and consumers are affected due to COVID-19, 27.98% of the respondents agreed that the income levels of producers and consumers are affected due to COVID-19, 22.48% of the respondents strongly disagreed that the income levels of producers and consumers are affected due to COVID-19, 2.75% of the respondents disagreed that the income levels of producers and consumers are affected due to COVID-19 and 1.37% of the respondents were undecided.

The table indicates that 52.29% of the respondents strongly agreed that the prices of goods and services have increase affecting patronage, 22.48% of the respondents agreed that the prices of goods and services have increase affecting patronage, 10.09% of the respondents strongly disagreed that the prices of goods and services have increase affecting patronage, 14.22% of the respondents disagreed that the prices of goods and services have increase affecting patronage and 0.92% of the respondents were undecided.

The table indicates that 50.00% of the respondents strongly agreed that there are instances where consumers are not willing to buy despite the rise in the price of goods and services, 28.44% of the respondents agreed that there are instances where consumers are not willing to buy despite the rise in the price of goods and services, 10.55% of the respondents strongly disagreed that there are instances where consumers are not willing to buy despite the rise in the price of goods and services, 10.55% of the respondents disagreed that there are instances where consumers are not willing to buy despite

the rise in the price of goods and services and 0.54% of the respondents were undecided.

Fisher-statistics (F) is 3.207 with an associated P statistic value of 0.000 which suggested that the model is a good fit. The coefficient of corona virus (COVID-19) is negative and insignificant in enhancing entrepreneurship development (innovation) among women entrepreneurs in Adamawa State of Nigeria. The INV= 2.9-0.04 COVID-19 which indicates that COVID-19 decreased by 4% for every 1% increase in entrepreneurship development (innovation) among women. The p-value of 0.49 is more than the t-Statistic value of -.679 and the standard error value of 0.06 is more than the t-statistic value which implies that there is negative and insignificant effect of COVID-19 on entrepreneurship development (innovation) among women entrepreneurs.

The coefficient of Decline in demand (DID) is positive and insignificant in enhancing entrepreneurship development (innovation) among women entrepreneurs in Adamawa State of Nigeria. The INV=2.9+0.71DID which indicates that decline in demand will increase by 71% for every 1% increase in entrepreneurship development (innovation) among women entrepreneurs in Adamawa State of Nigeria. The p-value of 0.71 is more than the t-Statistic value of 1.3 and the standard error value of 0.06 is less than the t-statistic value which implies that there is positive and insignificant effect of decline in demand on entrepreneurship development (innovation) among women entrepreneurs in Adamawa State of Nigeria.

The coefficient of determination (r²) of 0.61 indicates that about 61% variation in entrepreneurship development (innovation) among women entrepreneurs in Adamawa State of Nigeria can be explained by COVID-19. The

remaining 39% can be explained by other related factors not noted in the regression model.

DISCUSSION

Hambolu et al. focused on the influence of COVID-19 pandemic on women entrepreneurial success in Oyo State, Nigeria. The paper concluded that the lockdown to stay-safe at home had to be observed for people to be protected from being infected and the infected people be quarantined for medical attention to avoid the spread of the virus. It also recommended that government should release money to the commercial and microfinance banks with specifications and directives on how loans will be given to the eligible people [19].

Inshanet al. studied the impact of COVID-19 on entrepreneurship [20]. Due to preventive measures taken by governments to limit virus transmission, there was a prodigious disruption socially and economically to entrepreneurship, at different levels, of which small scale businesses and start-ups were among the most vulnerable. The adverse impact was observed in businesses worldwide and most of the newly formed businesses and start-ups were compelled to dismiss their employees, leading to issues such as widespread unemployment, lack of productivity, and the downturn of economies. COVID-19 also impacted the global supply chain, which resulted in a contraction of the worldwide economy. Many entrepreneurs and start-ups faced a significant reduction in revenue due to the impact on the global supply chain of both goods and services. In this article, we have discussed the challenges which entrepreneurs have experienced in the catastrophic time of COVID-19, and the measures taken by them to protect their ventures. It can be concluded that COVID-19 has significantly caused disruption to economies and entrepreneurship, and has posed several unprecedented challenges, however, the absolute impact remains unclear, as more in-depth longitudinal studies are required to better investigate this issue.

If containment measures are lifted early, there is a chance of re-emergence of the infection. These qualitative outcomes give a sense of the role of social distancing on COVID-19 transmission [21]. An underlying assumption in these epidemiology models is that the transitions between the states

of health are exogenous with respect to economic outcomes. This means that the expected decrease in consumption activities or hours worked due to COVID-19 are not accounted for in SIR models. This condition cannot be ignored because of the "lives vs. livelihood" trade off that weighs heavily in any general analysis of pandemics that incorporates the public health outcomes and the economic outcomes. A central focus of this strand of the literature is the efficiency of that trade off, i.e., how to reduce the rate of infections at the lowest possible costs to economic welfare. Eichenbaum et al. address that the prevalence of infection depends on the degree of interaction between agents when consuming and working, as well as the random chance of contracting the virus [22].

Therefore, the susceptible population can lower the chances of infection by reducing their consumption activities and their labour supply (outside of their residences). Based on their assumptions and calibration techniques, they find that aggregate consumption fell by 9.3 percent over a 32-week period. On the other hand, labour supply or hours worked followed a U-shaped pattern, with a peak decline of 8.25 percent in the 32nd week from the start of the pandemic. However, long-run declines in hours worked are lower because a higher proportion of the population survive and return to work compared to the counterfactual.

The results of the analysis indicate that there is negative and insignificant effect of COVID-19 on entrepreneurship development among women entrepreneurs. This implies that COVID-19 has negative effect on entrepreneurship development among women entrepreneurs. The negative effect is that the economic and social disruption caused by the pandemic is devastating. The situation is therefore very worsening for women entrepreneurs as the government of Nigeria introduced lock down policies and social distances who negatively affect innovative ability of women entrepreneurs in Adamawa state of Nigeria. The situation made the demand of the consumers to at very low rate (decline in demand) since entrepreneurs were not introducing new products or modifying the existing products due to decline in demand because of COVID-19 in Nigeria. The study is in tandem with the finding of Inshanet al. who

found that there is a negative and insignificant relationship between variables [20]. The study disagrees with the finding of Hamboluet al. who found significant relationship between the variables [19].

CONCLUSION AND RECOMMENDATION

The study concluded that the negative effect of COVID-19 on entrepreneurship development among women entrepreneurs in Adamawa State of Nigeria is already been seen in the loss of jobs, increase in the prices of goods and services, high prices of fuel and decline in demand of the entrepreneur's product. Due to the decline in demand, the entrepreneurs hardly introduced new products or developed the existing products to increase the demand of the product. There is shortage of products in the market due to poor innovation among entrepreneurs since government of Nigeria implemented lock-down policy and social distancing. The study recommended that Government of Adamawa State of Nigeria should try to encourage women entrepreneurs since they are affected with COVID-19 and its policy implementation such as social distance and lock-down due to increase in the number of death, increase in the tests and increase in the conformed cases of COVID-19.

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