

## Financial Development-Income inequality nexus in Developing economies in post-Covid-19 Era: Evidence from Nigeria

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### Abstract:

**Issues:** To have a thriving economy post-COVID-19, relevant and viable policies need to be put in place. The incidence of COVID-19 has reduced the last 5 years efforts towards reducing global poverty and income inequality to nothing as poverty and income inequality have further widened. Income inequality is the disparity in income distribution that has further widened due to the income loss of people because of the lockdown instigated to curb the spread of the pandemic. While the lockdown affected global productivity, developing economies are more likely to be more affected because the pandemic exposed the vulnerabilities of economies due to the pre-existing developmental issues plaguing developing economies. Therefore, measures must be taken drastically to ensure that developing economies have an economy to look forward to post-COVID. **Methods:** This study analysed how financial development can effectively aid income inequality reduction in Africa, focusing on Nigeria. The study examined the Nigeria Baseline Household survey conducted by the World Bank during the heat of COVID-19 with the aid of descriptive statistics. **Findings:** findings show that financial development can drastically reduce income inequality when electronic measures are embraced.

**Keywords:** 1. COVID-19 2. Pandemic 3. Income Inequality 4. Income Distribution 5. Financial Development 6. Poverty Reduction 7. Financial Access.

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### 1. Introduction

Coronavirus (COVID-19) pandemic has exposed the world to both health and economic crises, the kind never before experienced for over a century. (1) described the COVID-19 pandemic could be described as the combination of the 1918 flu pandemic and the Great Depression being experienced at the same time. The outbreak of COVID-19 has put policymakers on their toes to ensure that there will be an economy after the

pandemic. Although, this could present an opportunity for building a formidable economy towards sustainable development. However, if appropriate recovery policies and programmes are not implemented to tackle the consequences of the pandemic, such as poverty, income inequality, food insecurity, among others, the achievement of the United Nations (UN) Sustainable Development Goals (SDGs), particularly, SDG-1&10, reducing extreme poverty and inequality, may be a fluke.

As of January 2022, across the globe, about 315,345,967 cases of COVID-19 have been confirmed, and deaths are totalled at 5,510,174 deaths (2). The COVID-19 pandemic that first broke out in late 2019 in Wuhan city, China, became a global pandemic within the first quarter of 2020 because of its sporadic spread (3). From the WHO data, the Americas and Europe were hit the hardest by the pandemic, with both regions constituting approximately 75% of the deaths. Africa is the second least affected by the pandemic, with about 2.9% of the total COVID-19 deaths (2). In as much as Africa is the second least COVID-19 deaths and confirmed cases, the continent's economy has contracted significantly because of the pandemic, which is the same predicament as other developing countries.

Loayza (2020) noted that the aftermath of the COVID-19 pandemic in the world would vary, with developing countries being affected more adversely than other countries. Consequently, Africa, which comprises majorly developing countries, witnessed an economic contraction of 2.1% (4). It is important to note that the global economy also experienced a contraction of 3.5% (5). The contractions have been described as the consequence of the lockdown and social restrictions imposed to contain the spread of the COVID-19 virus (6). The restrictions consequently impacted economic productivity such that it is estimated that 48 to 135 million people are likely to slip into poverty (7).

The International Labour Organisation [ILO] (8) observed that while the economic impact of the lockdown greatly affected the productivity of high-income countries the most, these high-income countries will recover faster than the middle-income and low-income countries. This is possible because these high-income countries have policy packages that can stimulate productivity, unlike developing countries (8). Apart from the policy package stimulus, other factors that distinguish the post-COVID-19 era recovery speed in developing economies from that of advanced countries, like the fact 70% of the labour force in the developing countries are employed by the informal sector (9). This has led to further economic consequences for the developing economies because these informal businesses neither have the capital requirement or access to government support to continue operations.

A consequence of the aftermath of COVID-19 is the loss of jobs (10). Thus, more people were probably out of employment in the pandemic compared to when there was no pandemic, reducing household income leading to income disparity. It is estimated that because of the pandemic, the hours of work globally in 2021 was above 3.9% lower than pre-COVID-19, the fourth quarter of 2019 (11), which is equal to 125 million full-time employees. This scenario implies a significant revision of the June estimate of about 4% employment rate (11). Without adequate recovery policies and programmes, efficient financial systems, technology, among others, a 'huge divide' in employment recovery trends existing among developing and developed countries will become wider (11).

In late 2021, hours worked in developed economies were approximately 4% less than in the fourth quarter of 2019 (11). The implication is that the gap in high-income economies is about 6%. In lower-middle-income countries, about 7% from a regional perspective, Europe and Central Asia witnessed the least loss of hours worked compared to the pre-COVID-19, which is about 3%. This was followed by Asia and the Pacific regions, at 4.6%. Africa, the Americas and the Arab States experience a reduction of 5.6, 5.4 and 6.5%, respectively

(11). This is a cause for concern as it suggests the loss of jobs in the economy, which implies that some people do not have a source of income, which further exacerbates the income inequality in the economy.

More so, it has been observed in the literature that people whose incomes are below the federal poverty threshold and are vulnerable are the ones who are mostly affected by a crisis in the economy (12,13). Therefore, with data on the updated Gini coefficient, it is estimated that the pandemic has led to increased income inequality, especially since it was majorly high skilled jobs that were retained during the pandemic. International Labour Organisation (11) observed that jobs in finance, information and communication industries experience growth when calculated with job working hours. This further illustrates the forecasted income inequality problem arising from the pandemic. (4) reports that 30 million to 39 million people are expected to slip into poverty, which is no surprise as where income inequality thrives, poverty is not far behind.

Furthermore, due to the lockdown, school closures led to about 1.5 billion school children being out of school (14–16). While some schools where children could transition to online learning, the lack of infrastructure (poor access to electricity and internet access) in developing countries led to school children missing a whole year of schooling. Therefore, further exacerbating education inequality, which can further escalate income inequality because the inability to build human capital will hinder people from getting jobs that will further increase their income. Thus, perpetuates the persistence of income inequality in developing countries, including Africa.

The COVID-19 pandemic, therefore, escalated the challenges faced by developing countries. Thus, economies witnessing higher poverty levels before the pandemic are expected to double. Economies with high external debt are expected to have an increased debt profile. All of which sum up the characteristics of a developing country, therefore, emphasising the need for drastic action to be taken. According (9), 2020 is expected to be the first year there will be an increase in world poverty since the 1990s. While it is disconcerting that five years of work trying to reduce global poverty and income inequality has been erased by a singular COVID-19 pandemic, drastic action must be taken to mitigate these consequences and stir the economy to recovery post-covid. The World Bank (7) stipulated that even if the economy picks up, it will not be sufficient to compensate for the widened income inequality that the pandemic has instigated.

There has been a consensus on the developmental role of financial development in economic growth since the study of (17). Despite that, the role of financial development in income inequality is still in contention among researchers. However, the post-pandemic recovery calls for fiscal and monetary policies to fast-track the economic recovery process, especially in developing countries (1,3). Thus, financial development has a role in reducing income inequality post-covid era, especially as better access to finance can further the capacity of small and medium buisnessed. Considering this, the study focused on understanding the financial role of income inequality post-covid era in developing countries using Nigeria as a case study.

The study uses Nigeria as a case study because it is the largest economy in Africa. Since it has been proposed that economic growth can reduce income inequality in the economy, income inequality should reduce drastically in Nigeria, but this is not the reality. More so, Nigeria exhibits the characteristics of a typical African country in terms of being endowed with natural resources and being plagued with developing issues like the misuse of resources, political conflicts and insecurity. Furthermore, Nigeria has a high poverty level, with more than half of the population living below the poverty line (18). Lately, Nigeria has also been ranked by (19) as one of the least committed to reducing income inequality. Therefore, the outcome of this paper will add to the body of knowledge on the appropriate policies to formulate and implement to encourage income inequality reduction in Nigeria and other developing countries. In effect, this research achieves the objective

of determining the impact that financial development had on income inequality during the COVID-19 pandemic.

The rest of this paper is sectioned as follows; section two gives a brief review of the conceptual issues as well as theoretical and empirical literature, section three addresses the methodology used to achieve the objective of the research as well as the data sources, section four describes the result in detailed discussion while section five concludes the paper in a summary and policy recommendations.

## **2. Literature review**

This literature review examines a brief description of financial development, income inequality and previous literature on financial development and how finance could help bring about income inequality reduction in the post-COVID-19 Era.

### **2.1 Conceptual review**

#### ***2.1.1 Income Inequality***

Inequality can be referred to as a state of being uneven or unequal (20). This unequal state is somewhat considered in terms of opportunities, status and rights. Therefore, income inequality in simple parlance means unequal distribution of income. It must do with how income is distributed in an economy. Income inequality can be referred to as the measure of the gap in income across various households in a given population or society (21). Income inequality is often substituted with economic inequality because theory shows that income inequality is a result of an unequal distribution of economic resources (22).

For the past decade, the unequal distribution of resources has been a menacing challenge across countries. Both advanced and developing economies have been witnessing widening income gaps between rich and people whose incomes are below the federal poverty threshold keeps especially since the global financial crisis that occurred in 2008 (13). Income inequality has been gaining attention among researchers for the past decade as the global trend of income inequality has been on the increase. Not only is income inequality bad for economic growth and development, but if it continues to go unchecked, it breeds social disappointment and raises the danger of social and political agitation. (23) proposed that increased income inequality in an economy can intensify the likelihood of upheavals, mass savagery, and compromised property privileges while negatively affecting venture and investment, and as a result, diminishing economic and financial development.

#### ***2.1.2 Financial development***

Financial development can be explained as the advancement of financial systems. More so, the financial system is seen as a multidimensional process (24, 25, 26). As a result, finance is considered an engine of growth. (27) was the first to propose the relevance of financial development by stating that financial development encourages investment that leads to innovation and, consequently, economic growth (61, 62). There is now more consensus that financial development leads to economic growth since the work of Levine in 1997. Other studies have also empirically ascertained the positive effect of financial development on economic growth (28, 29, 30).

It has also been argued that economic growth leads to financial development and the existence of a feedback relationship between financial development and economic growth (31). This is because, as the economy

experiences growth, more financial products and services will be demanded (62). As a result, the financial system must be developed to meet these demand. In this vein, financial development is connected to various sectors of the economy. In relation to the manufacturing sector, (32) observed that financial development was a driving force, which is consistent with the findings of (33). The role of finance has also been analyzed concerning the energy sector (34) and entrepreneurship (35) just to mention a few. Financial development has also been associated with poverty and income inequality reductions; however, how financial development impacts poverty and income inequality is still debatable.

### ***2.1.3 Financial development and income inequality***

Theory poses that financial development not only encourages growth but influences economic development as a development of the financial system provides finance to perform investment opportunities (36). Similarly, (37) noted that financial development could lead to income inequality through increased access to finance. In contrast, (38) observed that the financial system might need to be developed to a certain level before income inequality can start reducing. It has been observed that certain constraints can hinder access to finance, especially for the poor and vulnerable.

The existence of collateral constraints could play a critical role in underdeveloped economies being a significant restriction, thereby limiting access to finance for the poor. People whose incomes are below the federal poverty threshold and vulnerable do not have the type of collateral demanded by financial institutions in most occasions. (39) noted that constraints could also be in the form of transaction and information costs. These constraints are generally regarded as financial imperfection constraints. It follows from (40) theory, which proposed that financial imperfections limit the ability of development in the financial system to facilitate income inequality reduction.

In terms of how income inequality can impact financial development, it has been opined that income inequality can instigate financial crises (41,42). With rising income inequality, measures can be put in place to relax the regulations in finance to enable the poor to access finance, which will, in turn, leave the finance system vulnerable to internal and external shocks. Consequently, unchecked income inequality is harmful to any economy. Nonetheless, propositions have been put forward for attention to be given to the stability in the process of financial development (see 43–45) as this will enable the financial system to withstand shocks while increasing the access of people to financial products. Therefore, as the financial system develops, access to finance will be increased for the poor and vulnerable, bringing about income inequality reduction.

## **2.2 Theoretical review**

(46) was the first to establish a relationship between income inequality and economic development with the proposition of an inverted U hypothesis. This implied that as the economy developed, income inequality widened until a certain level of development is attained before income inequality begins to decline. Following the work by Kuznets, (47) were the first author to establish a connection between income inequality and financial development. The study proposed that an inverted U-shaped curve best depict the relationship between financial development and income inequality. This implied that as the financial system develops, income inequality will rise and keep rising until a certain financial development threshold is attained, after which income inequality begins to decline.

Over the years, researchers have developed various hypotheses to understand the dynamics between finance and income inequality. (48) proposed the income inequality-widening hypothesis, where the development of the financial system leads to increased income disparity. That is, as the financial system expands, access to

financial products will be restricted to the hands of a few. Consequently, the rich keep getting richer while the poor remain poor. This happens the reality of most developing countries as the 5% of the rich holds over 50% of the income of the bottom 20%.

There is also a contrary theory, which is the income inequality-narrowing hypothesis. This hypothesis proposes that as the financial system develops, it encourages income inequality reduction (49,50). This suggests that as the financial system develops, the poor will have access to a broader range of financial products and services which can be used for investment purposes or capacity building (human capital development), thereby breaching the income gap. Researchers have attempted to ascertain these hypotheses in the empirical literature (51–53).

### **2.3 Empirical review**

(54) used the simulations method to examine the impact of the COVID-19 on poverty, and the result showed that savings account depleted for about 30% of the population. The authors also noted that the pandemic negatively affected people's income flow. This could explain the reliance on savings and the depletion. Therefore, without further access to finance, that percentage of the population will not be able to handle additional shock to the economy. Similarly, (55) observed the occurrence of depreciation on savings accounts while evaluating the effect of the pandemic on economic growth in middle-income countries, which was responsible for exposing the microfinance institutions to stability. It was observed that due to unstable income flow, individuals were likely to default on previous loans, thereby exposing the financial institutions to risks. This calls for regulatory policies to make the financial institutions more formidable.

(56) also called for more development policies of financial institutions after discovering that financial inclusion proxies failed to encourage economic growth in Nigeria during the pandemic significantly. In terms of the sectors majorly affected by the pandemic outbreak, it was the informal sector that was the employer of 80% of the Nigerian population, therefore, widening income disparity in Nigeria (57). Using survey data for Nigeria, Ethiopia, Malawi and Uganda, (58) showed that about 77% of the population experienced income lost to the pandemic. The study analyzed pre-COVID-19 and during COVID-19 survey data with a focus on non-farm enterprises to truly capture the effect of lockdown orders on household incomes and concluded that policies need to be implemented to cater to the income loss experienced by the populace. However, like the study of (57), attention was not given to the role of finance in reducing income disparity.

(59) employed the social accounting matrix (SAM) to analyze how COVID-19 has impacted different sectors of the economy. The result provided evidence that while the education and food sectors were experiencing shock in the magnitude of 50% and 80%, respectively, emanating from the pandemic, the finance service sector witnessed 0% shock. This supports the argument that financial development is a viable and essential channel for facilitating income inequality and poverty reduction in Nigeria in the post-COVID era.

### **3. Methods of the study**

This section explains the method used in this study. This study obtained data from the COVID-19 National Longitudinal Phone Survey 2020 conducted by the Nigerian National Bureau of Statistics (NBS) in collaboration with the World Bank (60).

The World Bank made available ways of helping the spread and effect of COVID-19. One of the many ways to help reduce the spread of the disease is to make available data that will enlighten evidence-based policies and programmes which may aid contain the impact of the pandemic. The COVID-19 survey by (60) is conducted

to help assess the pandemic's socioeconomic consequences on households. This study used the (60) baseline phone survey to determine the nexus between financial development and income inequality with evidence from Nigeria. The study engaged descriptive statistics to achieve its objectives.

This study uses two variables to examine the extent of financial development among household heads during COVID-19. These variables are – since mid-March, the heat of the pandemic if the household could successfully go to the bank, money agent, or use the ATM to access funds and households who could successfully access loan from a financial institution as a coping strategy. Alternatively, income inequality was measured by the level of households' income during COVID-19. For example, the income of households in the same increased at the same proportion stayed the same or reduced because of the pandemic. The descriptive statistics used graphs to describe the extent of inequality and access to finance among households in the sample. The survey cuts across gender, location (rural or urban), states and geopolitical zones of Nigeria. The study uses a household head sample of about 2,718 household heads.

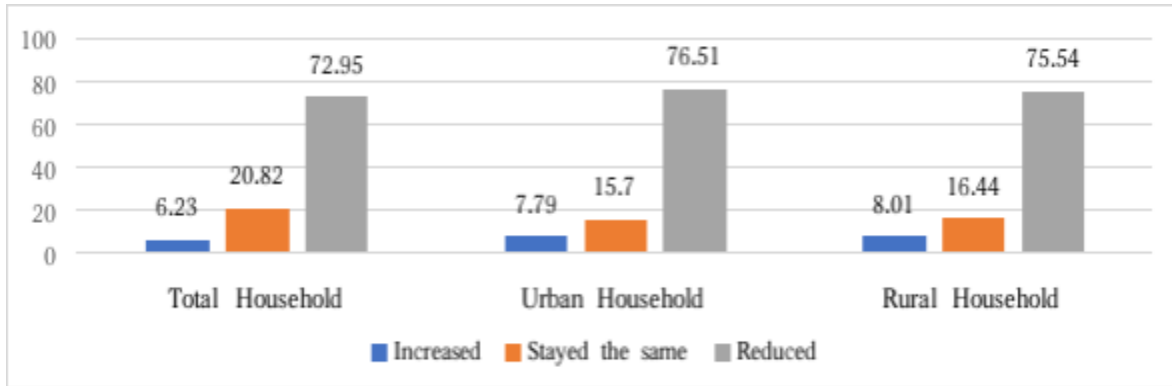
## 4. Results and Discussion

### 4.1 *The extent of Household income disparity*

The result of the descriptive analysis is presented in this section. This ascertains the extent of income inequality and access to finance among households in Nigeria. This is crucial because financial development has been related to poverty and income inequality declines; nevertheless, how financial development impacts income inequality is still up for debate.

Figure 1 presents the level of income inequality among household heads in the sample during COVID-19. This is measured by the extent of their income level. The proportion of increased income stayed the same or reduced because of COVID-19. From Figure 1, because of COVID-19, about 73% of the households experienced a reduction in income level, about 21% of the households had the level of their income stayed constant. In contrast, a lesser proportion, only about 6% of the households, had an increased income level.

With different income levels among households, it can be argued that there is income inequality among households orchestrated by COVID-19. It is not surprising to observe that inequality is higher in urban areas than in rural areas. The graph shows that among those who experienced income reduction, 76.51% from urban households, and 75.54% from rural households. Similarly, it is observed that for those who experienced an increased income level, rural households were relatively more with 8.01%, compared to 7.79% of urban households. Alternatively, for those whose incomes remained constant, 16.44% were rural households, while 15.70% were urban households.

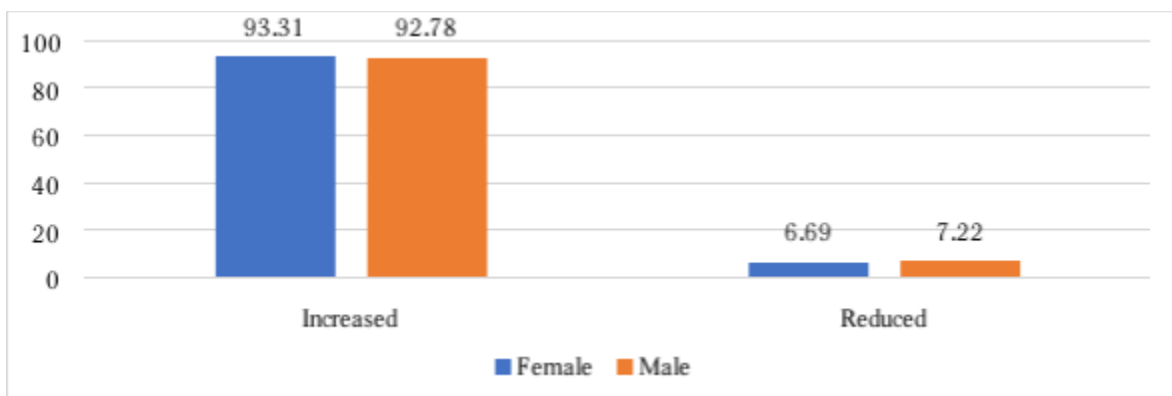


**Figure 1: Income level among households**

Source: Authors’ compilation using the (60) COVID-19 survey

**4.2 Income distribution by Gender**

Figure 2 shows that in relation to male-female headed households, female headed households have more (93.31%) in terms of the increase in the level of income in relation to the male-headed households, 92.98%. In the same way, male-headed households experienced relatively higher increased in the reduction of income with 7.22% compared to their female counterparts, 6.69%.



**Figure 2: Income level by Gender of the households**

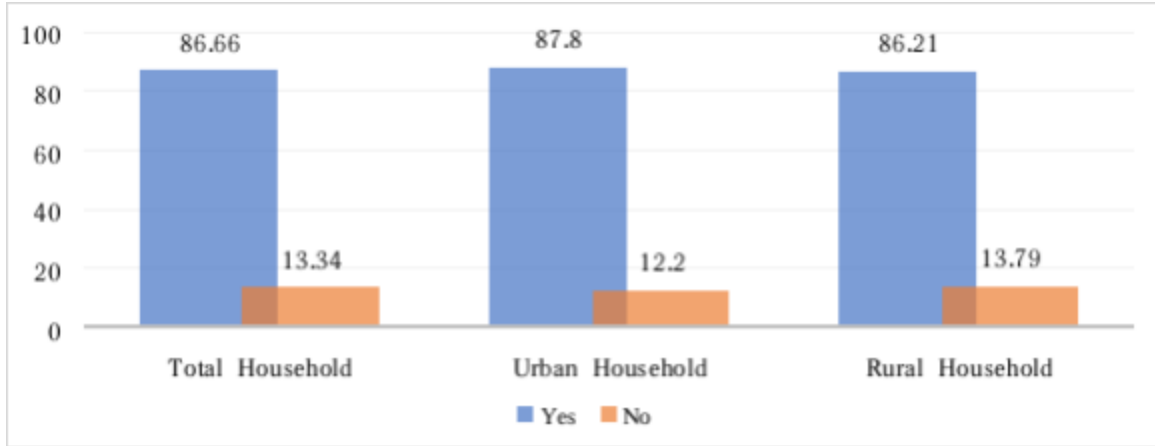
Source: Authors’ compilation using the (60) COVIDI-19 survey

**4.3 Access to Finance**

The extent of financial development is examined, measured by the households’ access bank, mobile money agent and the Automated Teller Machine (ATM).

Across the households, it shows that 86.66% of the household heads have access to banks and own ATM cards, while only 13.34% have no ATM. Additionally, about 88% of urban households’ have ATMs and access to finance relative to their counterpart, rural households’ with about 86%. In the same vein, those without access are more in rural areas, about 14%, compared to urban households at about 12%.



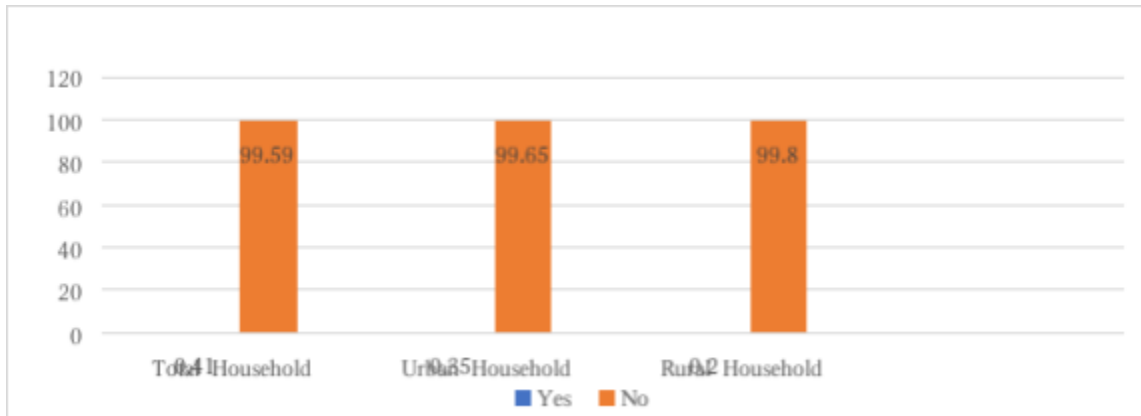


**Figure 3: Access to a bank, mobile money agents and ATM by households.**

Source: Authors' compilation using the (60) COVID-19 survey

#### 4.3.1 Access to loan from a financial institution by Households

The way households coped with shock resulting from COVID-19 was also examined. It was discovered that in the heat of the lockdown (mid-March 2020 to November 2020) during the pandemic, only 0.41% of the total households had access to loans. However, the urban households accessed more loans to cope with the pandemic than the rural households, with the former being 0.35% and the latter being 0.2%, as evidenced in Figure 4. This finding is contrary to the number of households that had access to finance (see Figure 3). Considering that the poor and vulnerable are more likely to go to informal means to get loans than financial institutions, this could explain why limited rural households sought to take loans to cope with the pandemic. More so, people are more likely to access loans from physical, financial institutions than from mobile money agents or ATMs. With the lockdown restrictions, people could hardly walk into a financial institution to obtain loans.



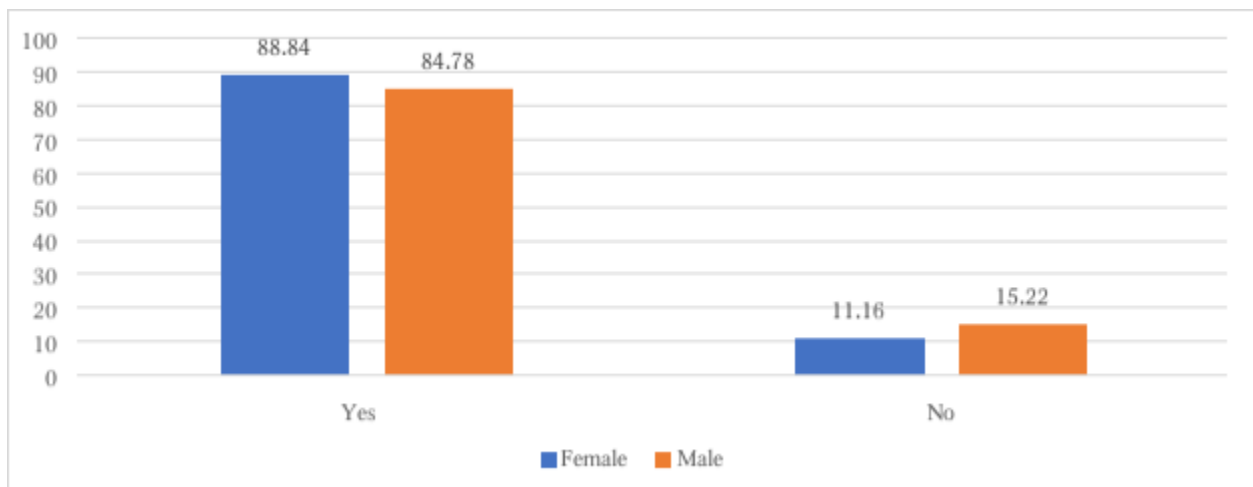
**Figure 4: Loans accessed by households to cope with**

**the pandemic shock**

Source: Authors' compilation using the (60) COVID-19 survey

#### 4.3.2 Access to finance by gender

The study disaggregate the analysis of access to finance by evaluating which gender had more access to finance, which can be found in Figure 5. Finance was majorly accessed by households headed by females. 15.22% of the male household heads had no access to finance, whereas just approximately 11% of the female household heads did not have access to banks, mobile agents, or ATMs (Figure 5). This supports the study of Quartey, Turkson, Abor and Malik (2017), which suggested that access to finance is more available to top managers who are more female than male.



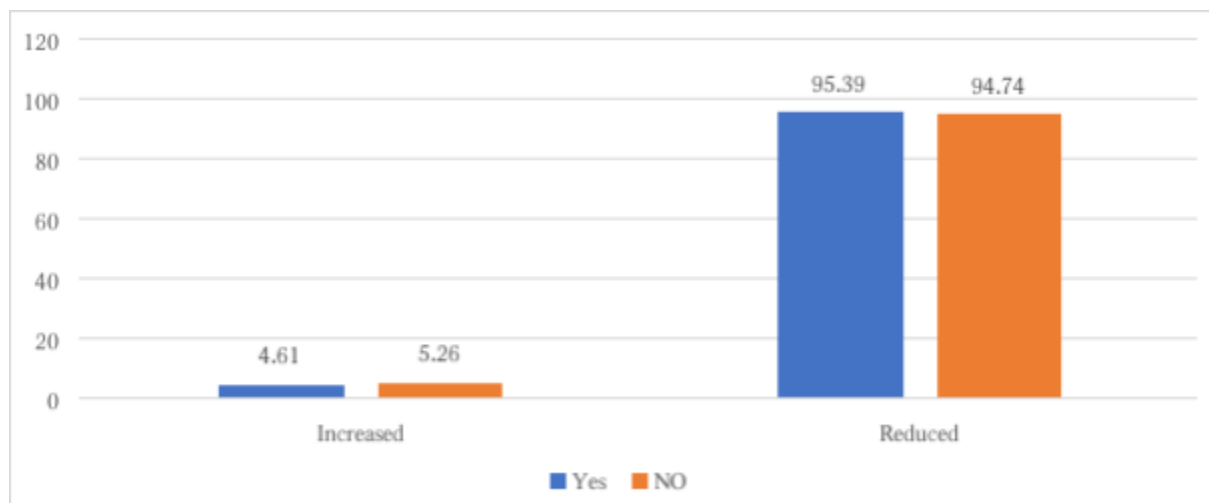
**Figure 5: Access to a bank, mobile money agents and ATM by gender**

Source: Authors' compilation using the (60) COVID-19 survey

The female household heads having more access to finance than the males could explain why the female household heads experienced a more increased income than the males (see Figure 3).

#### 4.3.3 Income distribution and Loan Access

The income levels of households were analysed concerning household heads that subscribed to taking loans as a medium to cope with the pandemic shock, as evident in Figure 6.



**Figure 6: Loan access by household based on income disparity**

Source: Authors' compilation using the (60) COVID-19 survey

#### 4.4 How finance can help improve inequality in the post-COVID-19 era

The suggested ways in which finance can aid income inequality in low-income countries in the post COVID era. include:

The need to restore emergency public money relief bundles and extend cover to countries that cannot adequately help themselves due to limited resources. In other words, developed countries could offer help through available monetary foundations in developing nations, including development banks. Additionally, quantitative easing arrangements by banks in advanced countries could be used to help relief efforts in low-income countries and perpetual bonds, which can, in turn, benefit low-pay families and small and medium enterprises (SMEs) in developing nations. This will further reduce income inequality and engender financial inclusion.

### 5. Summary, Conclusion and Recommendation

Since the pandemic outbreak that resulted in the lockdown across, researchers have sought to understand how the lockdown had affected the workings of the economy and answer the question of what post-COVID-era would be. Policymakers have been put on their toes to formulate policies that guarantee the emergence of a thriving economy after the pandemic. This is not an easy job for policymakers as the pandemic has reversed developmental efforts for the past decade. Income inequality levels are expected to rise globally and poverty as (16) noted that 135 million people would be pushed into poverty in Africa. No doubt, developing countries will be more affected by the aftermath of the pandemic than advanced countries as the pandemic has exposed vulnerabilities in countries.

Developing countries are more vulnerable than advanced countries because they have more developmental issues like poor infrastructure, political instability, and inadequate health facilities. These are the characteristics of most countries in Africa. Therefore, this study focused on how financial development can mitigate one of the issues resulting from the pandemic, which is increased income inequality in Africa, with a

focus on the largest economy in Africa, Nigeria. While income inequality data for the pandemic period will not be available for the next 2 to 3 years, the study used Nigeria household survey data conducted by the world bank in 2020 during the heat of the pandemic to conduct descriptive statistics.

The descriptive statistics revealed that fewer households witnessed increased income due to the pandemic. In contrast, most households, both rural and urban, had their income remaining the same or reduced. This helped to emphasise the income disparity among households due to the pandemic. It was also revealed that households had more access to finance through mobile money agents and ATMs. More so, female household heads had more access to finance than males and the females witnessed a more increased income than the male. Therefore, the study recommends that policies should be channelled towards availing financial products and services to the household. Electronic means should be adopted so that the populace can be captured.

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