



Financial Inclusion and Resilience to COVID-19 Economic Shocks in Nigeria

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Abstract

We examine the role of financial inclusion, ownership of bank accounts, and previous use of formal financial saving facilities as a resilience factor in the effect of COVID-19 on households' welfare in Nigeria. Using a novel data set that tracks food security among families in Nigeria before and during COVID-19, we find a negative effect of COVID-19 on welfare. The impact is more severe among male-headed households, those living in the southern region of Nigeria, and lower educated households. We also test how financial inclusion mitigates this effect through a triple difference analysis in which the households that are

financially included and in non-agricultural sector are considered as the treatment group. Financial inclusion did not support resilience to shock among non-agricultural homes. Given the magnitude and multisectoral dimension of the COVID-19 shock, financial inclusion was not enough to mitigate the effect. This, therefore, points to a role for stronger government support in a large shock like COVID-19.

Introduction

The present study investigates the influence of financial inclusion on the resilience of households to economic shocks caused by the COVID-19 pandemic in Nigeria. As Africa's largest economy and most populous country, Nigeria has been significantly impacted by the multisectoral effects of the global pandemic. The COVID-19 crisis has brought to light the critical issue of poverty and inequality, and its implications for the international and national economies (World Bank, 2022). The impact of the pandemic continues to be felt worldwide, with mitigation efforts varying across countries. Without comprehensive social protection programmes, poor households in developing countries, including Nigeria, are particularly vulnerable to food insecurity and other adverse effects of the pandemic (Amare *et al.*, 2020; Balde *et al.*, 2020). The World Bank (2020) has reported that the pandemic has set back, by at least four years, global efforts to end poverty.

Given the issue's significance, numerous studies have sought to examine the efficacy and relevance of various government and donor interventions to address the challenges and gaps created by the COVID-19 pandemic. At a global level, the World Bank (2020a) has estimated that without adequate socioeconomic support, up to 150 million people could fall into extreme poverty because of the pandemic by 2021. In addition to global assessments, there have been numerous country case studies that have analysed the impact of the pandemic on household incomes and welfare, as well as individuals' responses to the economic shocks associated with the pandemic (Ozili, 2020; Sánchez *et al.*, 2021; Akim *et al.*, 2021).

Our study attempts to deepen this literature with a further investigation of how various households' characteristics and assets (financial assets) support resilience to COVID-19 shocks. Even though financial inclusion and resilience have been widely studied jointly and separately (see Andam *et al.*, 2020), our study is interested in the specific role that financial inclusion plays during the COVID-19 economic disruption using Nigeria as a case study. Given that COVID-19 is still nascent, there is a dearth of empirical studies addressing financial inclusion's role in mitigating the adverse COVID-19 economic shocks.

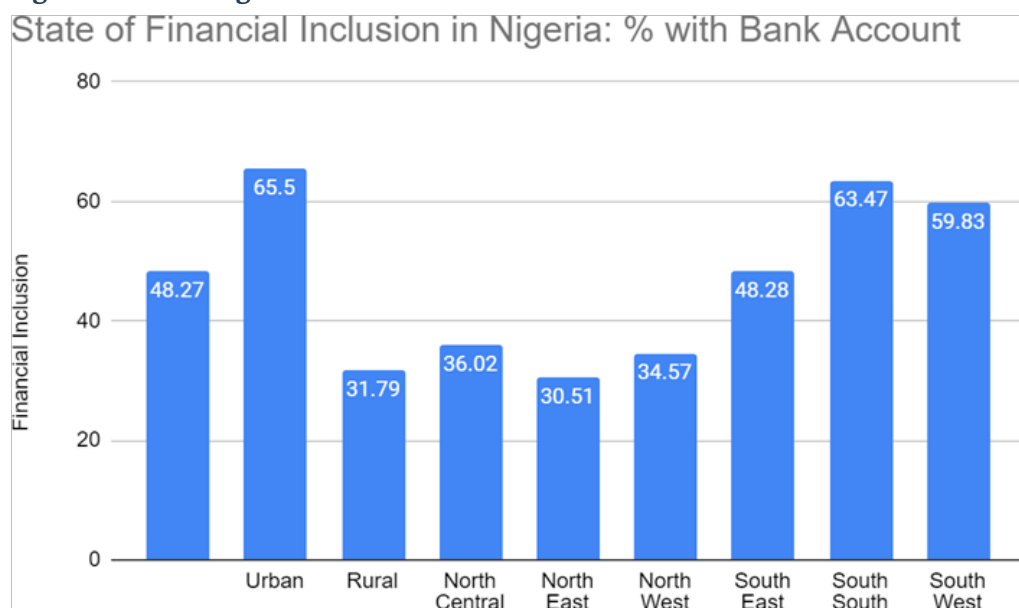
The study focuses on Nigeria and is motivated by two reasons. First, Nigeria has responded relatively better to COVID-19 than most African countries. However, the World Bank estimated that an additional five million people had been pushed into poverty due to the pandemic (World Bank, 2020b). Ozili (2021) reported significant

social palliative spending amounting to NGN 3.5 trillion that was directed to selected economic sectors, including households, businesses, stakeholders, and regulated financial institutions affected by the pandemic to mitigate its effects. The central bank also made other interventions, including extending loan payment moratoria, lowering interest rates on intervention loans, and giving credit facilities for businesses like hotels, hospitals, and airlines. Despite these massive government efforts, which are among the largest in Africa, Ozili (2021) observes they did not prevent economic and food crises in Nigeria. This issue raises questions about individuals' characteristics, such as financial inclusion, that could amplify or mitigate the shock. Second, the availability of household surveys before and during COVID-19 provides a novel data set to assess the impact of COVID-19 and the mitigating effect of financial inclusion.

Background of the study

Several existing sources of data on financial inclusion in Nigeria consistently report high levels of financial exclusion. For example, according to the General Household Survey conducted by the National Bureau of Statistics (NBS, 2019), the number of individuals who own a bank account or an account in other formal financial institutions in Nigeria was 48.5% (see Figure 1). Furthermore, as shown in Figure 1, individuals are more financially included in the urban areas (65.5%) than in rural areas (31.79%). Further, the southern region (South-South, Southwest, and Southeast) has a highest level of financial inclusion than the northern region. Due to the region's relative economic development, the southern region is a major contributor Nigeria's economy.

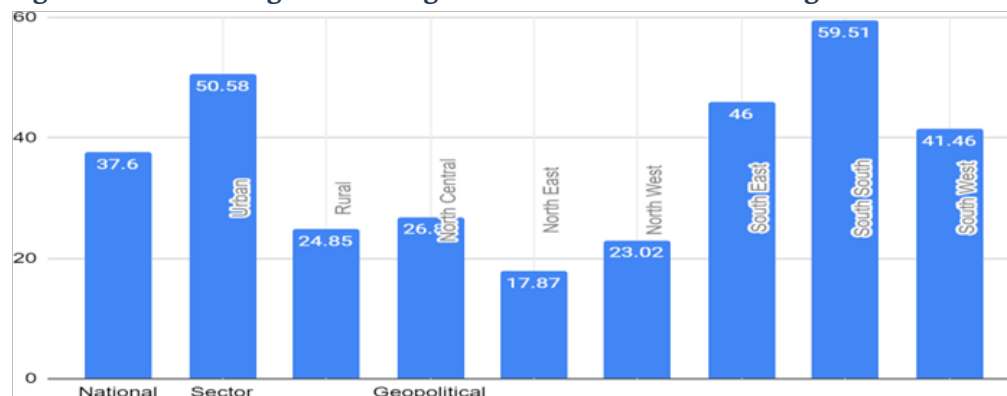
Figure 1: Percentage of individuals that own a bank account



Source: NBS (2019), General Household Survey (GHS).

While owning a formal bank account is considered a component of financial inclusion, actively using the bank account benefits the account holder. For example, to secure a loan, most banks and financial institutions require a prospective borrower to register as a customer and actively use the account for economic transaction. Figure 2 shows that, in Nigeria, the urban population makes up over 50% of bank account holders who use their accounts for savings, compared to 37.6% in rural areas.

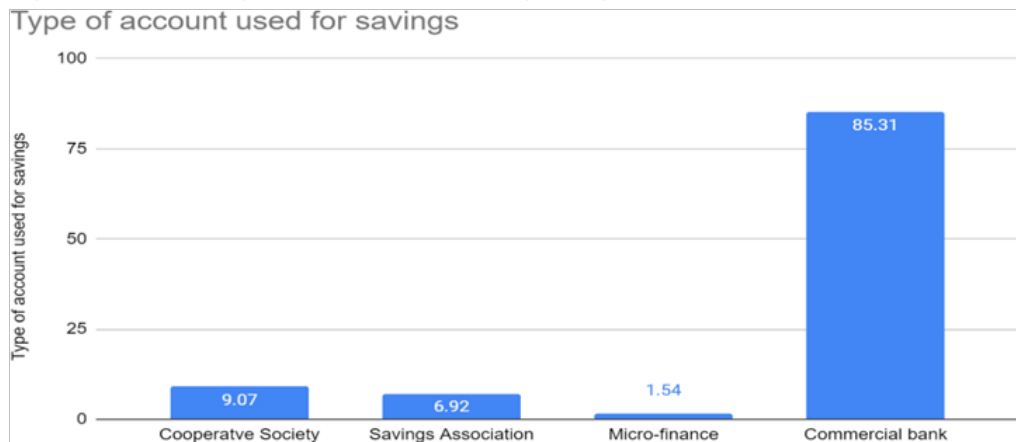
Figure 2: Share of Nigerians using their bank account for savings



[Source: NBS (2019), General Household Survey (GHS)]

The GHS estimate is consistent with other data sources regarding the higher rate of financial exclusion in Nigeria. For example, the National Population Commission (2018) in its Demographic Health Survey shows that the percentage of the adult population with formal financial products is 20.5%. Looking at the main modality of financial inclusion in Nigeria, the GHS data (see Figure 3) further reveals that commercial banks have been the main financial intermediaries supporting financial inclusion, compared to other formal financial institutions (such as microfinance banks), informal financial institutions, cooperative societies, and savings associations. Access to commercial banks comes with various financial products, namely, savings, loans, and mobile banking that can be crucial in times of crises.

In the presence of shocks such as COVID-19, access to financial services might not be enough in view of the types of financial products accessible to households. Access to loans, internal banking, and digital connectivity are crucial aspects of financial access that could support resilience. For COVID-19, physical restriction, and the use of formal financial institutions in implementing palliatives were crucial, and they made understanding the depth of financial access important.

Figure 3: Percentage of individuals saving using other means

Source: GHS (2018).

Effect of COVID-19 pandemic on the Nigerian economy and implications for financial inclusion

On 27 February 2020, Nigeria reported its first case of COVID-19. Like most parts of the world, there was a spike in the number of cases over a relatively short period, leading to pragmatic policy responses. The government initially introduced a four-week lockdown halting all non-essential activities in four of the most industrialized states in the country—Lagos, Ogun, Kano, and Abuja, the Federal Capital Territory (FCT). Curfews were imposed across other affected states while travels both within and outside the country were halted entirely. Banks and markets were closed, and the only means of economic transaction moved through neighbourhood markets or digital platforms.

The containment efforts had severe implications for many households' economic activities and welfare. For example, the monthly longitudinal phone survey by the National Bureau of Statistics (NBS) shows that the number of households engaged in employment activities stood at 57.44% in April, coinciding with the restriction periods (see Table 1). Table 1 also shows that many of the businesses (81.2% in April) recorded lower or no revenue due to the pandemic. Similarly, the Center for International Private Enterprise and Organized Private Sector (CIPE & OPS, 2020) reports that more than two-thirds of businesses in Nigeria experienced significant difficulty in accessing finance and sourcing capital, resulting in financial liquidity problems, raw material shortages and, more importantly, a huge dip in demand.

The pandemic also affected every household's food security and livelihood. Between 52% and 59% of the households reported that they could not purchase rice and cassava, the two main Nigerian staple foods. As of December 2020, a significant

number of households were still facing constraints in accessing food. The implications of livelihood disruption and food insecurity include a rise in extreme poverty and slow economic recovery. Household resilience is, therefore, affected by multiple shocks from COVID-19.

Table 1: Impact of COVID-19 on firms and households in Nigeria from April to December 2020

Dimension of Impact	April	August	December
Employment			
- % of adult population not working	57.44	30.55	29.86
Revenue losses: Change in business revenue			
- Lower/no revenue	81.2	46.02	37.37
- No change in revenue	8.25	17.13	17.9
- Higher revenue	10.54	36.85	44.74
Food security: % of respondents who are unable to buy Nigerian staple food			
- Rice	59.14	36.56	20.33
- Cassava	51.79	17.56	12.82

Sources: Ekeruche and Adeniran (2021) based on World Bank (2021) and National Bureau of Statistics (2021); COVID-19 National Longitudinal Phone Survey 2020.

The deleterious effect of the COVID-19 pandemic could vary between households and firms based on access to financial institutions and services. First, there was a shift to digital platforms due to restriction on physical movement and interactions. Transition to a digital platform is more likely for those that are already within the financial ecosystem, with capacity to use the digital payment system. Second, many government interventions, including cash transfer, grants, and loans to firms, were majorly channelled through the financial system. Third, the literature has shown that financial inclusion increases household savings (Aportela, 1999), and this has implications for responding to shocks such as COVID-19 by drawing down on the savings.

Hypotheses development

Against the documented economic and health background around COVID-19, we set out to test two key hypotheses. First, as observed in the literature, a change in welfare can be represented by changes in household consumption patterns before and during (COVID-19) shock, which also measures resilience to shocks (Alfani *et al.*, 2015; Upton, 2019). Further, as discussed in the next section, wellbeing or welfare can also be measured by food insecurity (Upton, 2019) and access to basic needs (United Nations Children's Fund [UNICEF], 2018; Jones & Samman, 2016). So, it is possible that the COVID-19 mitigation measures, such as lockdowns and movement restrictions, limited households' income generating activities, thus effectively impairing their ability to afford food and basic needs. We, therefore, state hypothesis one as follows:

The COVID-19 pandemic was negatively associated with households' welfare.

There is evidence to suggest that financial inclusion helps in mitigating the risks faced by the poor (Mehrotra *et al.*, 2009) and that individual and household welfare are deeply linked to financial inclusion (Sanderson *et al.*, 2018). These risks include the inability to afford food and basic needs. Thus, individuals and households, who are financially included, are better equipped to absorb economic shocks, such as those associated with COVID-19, than their financially excluded counterparts. Consequently, considering the literature, we state our second hypothesis:

H2: The negative association between the COVID-19 pandemic was weaker for financially included households.

Data source

The study uses a novel data set, the COVID-19 National Longitudinal Phone Survey (NLPS), collected by the Nigeria Bureau of Statistics (NBS) and World Bank between March and December 2020 to track households' welfare and socioeconomic outcomes during the pandemic. The households surveyed in the NLPS were sampled from those participating in the 2018/19 General Household Survey (GHS) Wave 4, which predates COVID-19. Hence, combining the two data sets ensures we can track the household welfare dynamics before and during the pandemic. Both surveys are nationally representative and cover the various geopolitical zones in the country.

The GHS covers 4,976 households interviewed twice—first, after the planting season (post-planting) between July and September 2018 and second, after the harvest season (post-harvest) between January and February 2019. The NLPS has a much lower sample comprising 1,950 households participating in the phone survey. From the initial sample of 4,976 households interviewed in the post-harvest survey, the phone numbers of 4,961 households were collected. Respondents with available phone details constitute the population from which participants for the NLPS were drawn. For national representativeness and accounting for non-responses, the baseline NLPS successfully contacted 69% of this population. Among those contacted, 94% or 1,950 households were fully interviewed. These 1,950 households constitute the final sample for the NLPS. We can uniquely identify all these households using the household identifier for food security and financial inclusion modules. This gives panel data of 1,950 households before and during COVID-19 (2018/2019 and 2020).

However, selection bias and non-response are higher with phone surveys, as most poor households have no access to phones. It has been shown that this can be addressed using appropriate sampling weight (see Wooldridge, 2007). Again, the NLPS applied the GHS-panel weight, but adjusted for non-responses and excluded households with no phone contact. We applied the corrected sampling weights to all analyses to reduce this bias.

Conclusion and policy implications

This study has empirically tested the link between financial inclusion and resilience to COVID-19 economic shocks in Nigeria. We sought to establish whether the COVID-19 pandemic was negatively associated with households' welfare and whether the negative association with the COVID-19 pandemic was weaker for financially included households. While we measured the resilience of households to shock through variations in food security over time, financial inclusion is represented by households' access to financial products and services from commercial banks and microfinance. Our study used a novel data set that tracked food security among households in Nigeria before and during COVID-19. We find a negative effect of COVID-19 on welfare, where the effect is more severe among male-headed households living in the southern region of Nigeria, and lower-educated households. Given that COVID-19-induced lockdowns restricted movements leading to business closures and access to market, this would ultimately negatively affect welfare.

We also tested how financial inclusion mitigates the negative impact on welfare through a triple difference estimate. We find that financial inclusion did not support resilience to shock among non-agricultural households or only moderately reduce the impact of the pandemic among those in the agricultural sector. The result suggests that, despite the high level of financial inclusion, the impact of the pandemic is higher among those in the non-agricultural sector. There are two perspectives to evaluate this result. First is that the scale and size of the shock are significant, and as such, there is limited capacity from individuals alone to avert its full impact. The pandemic chain of effect manifests in various forms, including on the supply chain, labour supply, food prices, and market access (with movement restriction). The period of the shock is prolonged, with complete closure over the first three months and gradual phasing out of the various restriction measures over another six months. The shock's multi-dimensional and prolonged nature suggests that individual mitigation strategy is insufficient.

Another perspective to gauge the findings is the measure of financial inclusion used in the study. By using only bank account ownership and previous use for savings, the depth of financial inclusion is not examined, which is a significant limitation of this study. The nature of COVID-19 shock suggests that the depth of financial inclusion will

be necessary. For example, a survey by the CIPE and OPS (2020) shows that the firms in Nigeria want government mitigation efforts to focus on business loans, followed by the tax cut and subsidies for inputs and services. Government policy responses, which primarily focus on credit support, also reinforce this. However, this is very limited, and the role of financial institutions in providing affordable credits or insurance will have complemented the government's efforts. Data shows that only 3.78% of the bank account holders were able to loans from formal financial institutions (Okafor, 2022), an indication of lack of depth of the financial system in Nigeria. These results suggest that the Nigerian financial system and the level of financial inclusion will need to scale up to better support household welfare.

This study has several policy implications. There is persistent risk of a rise in food insecurity due to shocks; as such, better preparedness is crucial. A robust financial system needs to be part of this disaster preparation and management. For the financial system to play this role might require improvement in quality of financial services that comes with financial inclusion such as credit access, financial advisory, digital payment, among others. This is crucial because financial access is the starting point in attaining the four dimensions of financial inclusion: access, usage/depth, quality, and impact. However, as COVID-19 shock demonstrated, individual resilience measures might be limited in addressing prolonged and multisectoral shocks. Other supporting measures and government social policy will be integral part of the larger preparedness measures to enhance food security and resilience.

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