Providing Digital Loans to Assess their Impact on the Welfare of Users in Nigeria

Digital technologies enable new financial products to reach historically unbanked populations, increasing financial access but also raising questions as to their broader social and economic impact. In Nigeria, researchers are working with a digital financial service provider who provided loans to applicants to assess how access to digital loans impacts the welfare of borrowers. The study found that being approved for a digital loan improves the applicant’s subjective well-being in the short term but does not significantly impact other measures of welfare such as income and expenditures, resilience, and women’s economic empowerment. Increasing the size of loans for approved applicants also had no significant impacts.

Policy Issue

While digital financial services have catalyzed financial inclusion, access to financial services remains an obstacle in low- to middle-income countries (LMICs), where only 63 percent of adults have formal financial accounts. In Sub Saharan Africa, fewer than 43 percent of those aged 15 and older have a financial account at a financial institution or mobile service provider. Credit access also remains low. Between 2008 and 2018, credit extension rose from ten percent to eighteen percent while the population grew by 33 percent to one billion people. Without available credit services, smallholder farmers, small-and-medium enterprise (SME) owners, and vulnerable populations may have difficulty obtaining important loans to make profitable investments or pay off debts.

There is extensive research about the impact of formal and informal credit access on recipients in LMICs. However, because digital credit is relatively new, robust evidence about their impact is still developing. This project adds to the growing literature by assessing how digital loans impact consumer welfare economically, socially, and psychologically.

While digital technologies enable new financial products to reach poor and historically unbanked populations, regulators are grappling with how to limit potential harms from these technologies. One option is to duplicate existing forms of regulation designed for analog products. However, digital environments may enable new ways of protecting consumers, providing new avenues to regulation. This project proposes and assesses a new tool for financial lenders to track consumers’ loan repayment probabilities that can also be used in the industry to enhance digital consumer protection altogether.


**Evaluation Context**

The financial technology sector in Nigeria has grown considerably in recent years, generating over US $600 million in funding between 2014 and 2019. As an effect of the expanded market, the number of Nigerians financially included rose by almost 50 percentage points between 2010 and 2015. When Nigeria released its 2020 National Financial Inclusion Strategy, the government set a target for 80 percent inclusion. However, in 2020, over one third of Nigerian adults were still excluded from financial services like loans and credit, with the exclusion most felt by women, northern Nigerians, and rural populations.

**Details of the Intervention**

In Nigeria, researchers partnered with a Financial Services Provider (FSP) who offered digital loans via a smartphone application to assess the impact of digital loans on consumers’ social and economic welfare.

The researchers launched a randomized evaluation of new applicants who installed the app between August 2019 to February 2020 to participate. The applicants were randomly divided in half into the following groups:

- **Auto-approval**: Participants were automatically approved for credit, regardless of their credit score.
- **Standard approval**: Participants were approved only if their credit score exceeded a threshold. Applicants who were approved received a randomly assigned maximum initial loan offer, selected from NGN 1000, 2000, 5000, 10,000, or 13,000 (US $2.75 - $35.75). Customers who repaid their initial loan on time were subsequently eligible for future loans.

Roughly three months after the impact evaluation started, the researchers surveyed 1,618 applicants and examined the impact of the increased access to digital loans on standard measures of welfare like finances, ability to cope with shocks, women’s empowerment, and mental health.

Using data from the randomized evaluation and recent innovations in machine learning, the research team is now developing welfare-sensitive credit scores that aims to predict the likelihood that a loan applicant will derive a positive welfare benefit from receiving a loan. The positive score would indicate to the lending institution that the consumer would use the loan to make economic decisions that would improve their wellbeing and be more likely to pay back the loan, whereas a negative welfare score would indicate that the consumer would likely not benefit and be less likely to pay back the loan. In the future, lenders will be able to consider these scores alongside a standard credit score to systematically prioritize borrower welfare in their lending decisions.

**Results and Policy Lessons**

*Note: These are preliminary results. Further results about the welfare credit scores are forthcoming.*

Researchers found that increase in access to digital loans improves subjective well-being, with a significant impact for those who were auto approved. However, the access to loans does not significantly impact other measures of welfare like income and expenditures, resilience, and women's
economic empowerment. Increasing the size of loans also had no significant effect on borrower welfare.

Sources


7. 984 individuals were in the auto-approval group, while 634 were in the standard-approval group.