

From Access to Outcome: Digital Financial Usage and Financial Wellness Among Unbanked and Underbanked U.S. Households

Keitha Y. Pansy

Doctoral Candidate, DBA Program | LeBow College of Business, Drexel University

Advisor: Dr. Greg Nini

Problems Addressed, Aims, and Research Question(s)

Despite the rapid expansion of digital financial services in the United States, financial vulnerability remains widespread. In 2023, the Federal Deposit Insurance Corporation (FDIC) reported that 4.2% of U.S. households, approximately 5.6 million, were unbanked, and an additional 14.2% were underbanked, relying on costly alternative financial services, such as check cashing and payday lending, for everyday transactions (FDIC, 2023). While digital tools, including mobile banking apps, prepaid debit cards, online bill payment, and peer-to-peer (P2P) payment services, have expanded access to financial services, it remains unclear whether engagement with these technologies is associated with improved financial wellness outcomes. Existing research has focused primarily on access to financial services, rather than the downstream outcomes of that access, representing both a scholarly and practical gap.

This study shifts the focus from financial access to financial outcomes, based on the following research question: *How is digital financial usage associated with financial wellness among unbanked and underbanked U.S. households, and how do financial literacy and institutional trust shape this relationship?*

Justification: Why This Research Matters and to Whom

Limited access to traditional banking and reliance on high-cost alternative financial services can reinforce systemic inequalities and constrain upward economic mobility for many households. While traditional financial inclusion efforts emphasize access to bank accounts, this study examines whether engagement with digital financial tools represents an alternative pathway to improved financial outcomes among unbanked and underbanked households. For financial institutions and Community

Development Financial Institutions (CDFIs), understanding how digital usage relates to financial wellness can inform product design, customer engagement, and risk mitigation. For policymakers, this research supports a shift from access-based metrics toward outcome-based measures of financial inclusion. For scholars, it advances research about the societal impact of technology adoption and the role of institutional trust in underserved populations.

Although this study uses U.S. data, its implications can extend to global contexts where digital financial services are expanding faster than outcome-based inclusion measures, making the findings relevant to international policymakers, fintech firms, and development institutions.

Theoretical Basis

This study integrates two complementary frameworks – Financial Capability Theory and Technology Acceptance Model (TAM). Financial Capability Theory suggests that financial well-being depends not only on access to financial tools but also on the knowledge, skills, and willingness to use them effectively (Sherraden, 2013). TAM explains the behavioral and attitudinal factors influencing adoption of digital financial tools among underserved populations (Davis, 1989). Together, these frameworks support a moderated mediation model in which digital usage functions as a behavioral input, financial literacy as a capability-building mechanism, and financial wellness as the outcome. Institutional trust, household income, and educational attainment serve as contextual moderators.

The hypotheses reflect the sequential logic in which engagement with digital financial tools precedes financial literacy capability development, which in turn precedes financial wellness outcomes. Theoretically, this study extends Financial Capability Theory into a digital and AI-mediated context, where behavioral usage precedes and conditions capability and wellness outcomes.

Research Design

This quantitative study uses nationally representative microdata from the Federal Deposit Insurance Corporation's (FDIC) 2021 and 2023 National Survey of Unbanked and Underbanked U.S. Households. Digital financial usage is operationalized as the frequency and breadth of tool use (e.g.,

mobile banking, P2P payments, prepaid cards) and serves as the independent variable. Financial wellness, the dependent variable, is measured via composite indicators such as savings behavior, ability to cover unexpected expenses, and reduced reliance on high-cost alternative financial services. Financial literacy is the proposed mediator, while institutional trust, household income, and educational attainment are tested as moderators. Five hypotheses are tested using a moderated mediation regression analysis, while controlling for demographic characteristics. Given the cross-sectional nature of the data, findings will be interpreted as associations rather than causal effects.

Relevance and Practical Importance

Potential findings from this study can inform the design of digital financial tools that not only expand access but actively improve financial wellness. For example, if digital usage and financial literacy jointly predict wellness outcomes, a startup fintech could embed structured financial education, such as goal-setting prompts, spending feedback, and savings nudges, directly into its onboarding and transaction flows, rather than treating literacy as a separate, external intervention. They could also embed personalized financial insights and trust-building features to support more effective financial decision-making among underserved users. More broadly, this research strengthens the case for equity-centered financial inclusion strategies that treat measurable financial wellness, not access alone, as the benchmark for impact.

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