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From access to capability' financial literacy, financial behaviour and welfare impact of financial inclusion in Uganda

Wasike David [1, 2, *]

[1] *Department of Public Administration, Faculty of Business and Management (FBM), International University of East Africa (IUEA), Kampala Uganda.*
[2] *Faculty of Business and Management (BAM), Uganda Martyrs University (UMU), Kampala, Uganda.*

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Abstract

Financial inclusion has increased sharply with the advent of mobile money systems, SACCOs and traditional banking. However, its differential effect on household welfare is ambiguous and theoretically disputable. This research seeks to establish whether financial literacy and financial behavior act as mediating variables in the financial inclusion–household welfare nexus, while analyzing the influence of behavioral and structural constraints thereof. Drawing on the capability theory and behavioral economics, it regards financial inclusion as access, financial literacy as capability, and financial behavior as the scale of translating access into welfare outcomes. The mediated–moderation empirical framework applied shows that financial inclusion substantively contributes to financial literacy access, and that financial literacy improvement has a nutritional effect on financial behavior and household welfare. Poverty, income shifts, and lack of trust dampen the nexus. The evidence calls for a paradigm shift from access-led to capability-led financial systems policy.

Keywords: Financial Inclusion; Financial Literacy; Financial Behavior; Household Welfare; Uganda; Capability Theory; Behavioral Economics1.

1. Introduction

Financial inclusion has gained prominence in global development policy and is now at the center of all developmental discourses worldwide as it recognizes that few things are more critical for human well-being than access to economic participation, loans/investment capital (i. Financial inclusion as defined by the World Bank (2020) is "Access to useful and affordable financial products and services that meet their needs — transactions, payments, savings, credit and insurance." Mobile money platforms, SACCOs and digital financial services have considerably proliferated the utilization of formal means to conduct many types of financial transactions — both in rural villages as well urban areas (Uganda Communications Commission, 2023).

However, over time and in practice the empirical evidence is far weaker; access might fly planes but it does not buffer household welfare improvements fairly robustly. Low rates of savings mean a large number of households still have little capacity to invest in the future and remain vulnerable as economic shocks continue longer than anticipated. This paradox begs the question on how far an access-based financial inclusion model might be effective. As Wasike (2025) concludes financial inclusion in Uganda is largely "access-heavy but capability-light," indicating increased access and slower pace at which they are becoming capable of using the services optimally. This produces the structural disconnect between the growth of financial system and household welfare effects.

* Corresponding author: Wasike David

We thus explore financial literacy and financial behavior as two crucially responsible inmates how financial inclusion uplifts the welfare of households, yet allowing for both structural and behavioral anchors that could impede these links.

This recent and ongoing snapshot at a global level continues to support that simply being able to get into markets is not enough for real inclusive development results. According to the World Bank Global Findex (2021), financial account ownership has expanded dramatically in developing economies, but actual use and meaningful engagement with finance remain a stake through many of them. This implies that while assessing financial inclusion both at access, including usage, levels and welfare effect should be taken into account.

In Africa, digital financial services (notably mobile money) have revolutionized the financial landscape and their welfare impacts are uneven. While short-term effects on efficiency of transactions and liquidity management have been positive, they do not necessarily translate into sustainable well-being accruing from increased savings and investments, especially because of variations in financial literacy and discipline required to take maximum benefit of mobile money (Suri & Jack, 2016; Demirguc-Kunt et al., 2022). This makes it imperative to analyze intermediary channels.

However, over time, financial literacy has been identified as an essential element of financial inclusion. Lusardi et al. (2020) pointed out that financial literacy is necessary for better decision-making, risk management and planning. In many developing economies, such as Uganda, low levels of financial literacy are unevenly spread across regions, particularly among the rural, female and young populations (Financial Sector Deepening Uganda, 2021), thereby constraining the scale of positive welfare effects of financial inclusion.

Furthermore, one needs to take into account behavioral constraints to financial outcomes. These include present bias, limited self-control, risk-averse preferences etc., as observed by behavioral economists that can lead people to make sub-optimal financial decisions. Daniel Kahneman and Richard Thaler's basic work reveal that financial decisions tend not to be optimally rational and influenced by contextual and cognitive biases.9 In economies of poverty, such as Uganda, these constraints may be amplified.

Furthermore, developing economies are still under the effects of missing in place structurally constraints to financial decision that include income instability, informality ad lack of confidence in financial institutions. Banerjee and Duflo (2011) argue that poverty itself is a set of economically and cognitive constrains that affects peoples' abilities to make rational investments and long-term decisions. Wasike (2025) complements the argument by stating that those are systemic constrains to achievement of the benefits of financial inclusion.

1.1. Theoretical Positioning and Contribution

These ability-centered and effectivity-centered definitions of financial inclusion are increasingly being adopted as the access-centered definitions of financial inclusion are under attack. Using the capability approach advocated by Amartya Sen, the article defined financial inclusion as an expansion of people 's capability to convert access into functioning; here financial literacy is a key converter factor which either an enable or a disable the flow from access to functioning, while financial behaviors are the actual conversion of functioning acquired.

However, more than a decade onward, new evidence and data accumulated from global experiences supports this conceptual shift. The World Bank Global Findex (2021) reports that although financially account ownership has experienced a significant growth in the period, usage remains relatively concentrated. Likewise, findings from Africa shows lack of evidence that the digital financial services penetration created welfare benefits in the presence of large capability gaps (Demirguc-Kunt et al, 2022).

On a behavioral level, financial decisions can also be limited by the cognitive and contextual framework within which they are made. The evidence from behavioral economics and the research of Daniel Kahneman and Richard Thaler show that decisionmakers make seemingly inconsistent and irrational decisions because of a number of bias present. These biases are especially high among poor household

In Ugandan contexts, Wasike (2025) observes that in Uganda, Financial inclusion is an access–led typology that suffers from a capability development short fall which prevents financial systems from delivering lasting welfare benefit. This work extends the literature by employing a mediated–moderation perspective to understand the interconnections between financial inclusion, financial literacy and financial behavior under structural and behavioral constraints. It proposes a constituency-specific redefinition of financial inclusion based on the notion of financial capability that is defined in terms of the specific factors at play within Uganda and other developing economies.

2. Literature Review

2.1. Financial Inclusion and Development Outcomes

The growth in financial services is widely understood to be one of the determinants of economic development, by enabling the poor to accumulate savings, smooth consumption and hedge risks (Beck et al., 2007). Thus, the incentive for financial inclusion has become a focal point of development policy in developing countries due to its potential for increasing access and reducing poverty. However, the expansion of access does not necessarily lead to improved welfare. The evidence on financial inclusion as a whole has been mixed, both in terms of its benefits and negative implications.

But new evidences from the world show that, financial inclusion can only play its well-being-enhancing role in specific condition. As the World Bank (2022) mentioned, benefits of digital financial inclusion on increasing transaction efficiency and reducing the disadvantages of financial exclusion, and have some limited direct effects on alleviating poverty without 'additional enabling capabilities. Correspondingly, Demirguc-Kunt et al. (2022) also state that 'quality of usage and not mere access to them matters for developmental success'.

And in sub-Saharan Africa, we observe heterogeneity of contexts: Suri and Jack (2016) show how ownership of mobile money accounts in Kenya is key to poverty reduction through improved risk sharing and saving. Bateman et al. (2019) highlight a growing financial inclusion-related vulnerability if financial literacy proved limited (implying the direct welfare benefits are not always clear).

Mobile money in Uganda has increased accessibility, especially in rural households. Juma (2012) shows higher penetration of Mobile money over conventional banking access in Uganda. However, Bank of Uganda (2013) indicates bulk of transactions are consumption related that comparatively lacks welfare benefits. Wasike (2025) the evidence and shows that, this financial inclusion in Uganda is an "access-dominant but capability-deficient system" in which the access to financial services do not transform to emotional positive consequences of the financial gains due to the different distribution of financial capabilities.

2.2. Financial Literacy as Capability

Financial literacy is one of the key building blocks for financial decision-making and economic resilience. Lusardi and Mitchell (2014) define financial literacy as the knowledge of the ifs, ifs and buts of compound interest, inflation and diversification of risk. In the developing economics literature, it is increasingly being defined as an ability affecting use of financial services.

OECD (2023) discovers that via improving financial literacy, people will have an advantage in savings behavior, profitability and financial planning. Furthermore, Klapper and Lusardi (2020) also testified that financially educated people would suffer les from economic risks like inflation and fluctuating incomes. Financial literacy also continues to be a weakness in low-income economies. In Uganda, Financial Sector Deepening Uganda (2021) observes the disproportional lack of financial knowledge across population in Uganda, particularly for rural and informal sectors. This inhibits broader inclusion of these groups into formal financial systems.

The evidence from East Africa also would suggest financial literacy investments would be effective. Cole, Sampson, and Zia (2011) finds that financial literacy promotes formal saving behavior and enhances financial decisions, but behavioral biases like lack of self-control and present-bias limits long-term financial planning (Kahneman, 2011). In Uganda, Bank of Uganda (2022) finds gender, income, and geographical location to be the biggest disparities affecting financial literacy. Wasike (2025) builds on this by defining financial literacy as a conversion factor in financial systems, where financial access is converted into appropriate economic functioning.

2.3. Financial Behavior and Household Welfare

Financial behavior is the application of financial knowledge in decision making concerning inflows and outflows of income, savings, and credit. Financial behavior comprises budgeting, saving, borrowing and investment decisions that impact directly on welfare. According to behavioral economics, our financial decisions are largely based on psychology and not the raw use of financial data or calculation. According to Thaler and Sunstein (2008), people tend to make poorer financial decisions because of heuristics and mental shortcuts which distort their reasoning and mental framework while Kahneman (2011) further points out how present bias can cause individuals to favour current consumption over saving.

Financial behavior in developing economies is largely determined by income fluctuations and economic unrest. Households focus more on survival needs rather than planning for the future and this phenomenon is more apparent in the informal economies where income flows are highly unstable. In the case of Uganda, Bank of Uganda (2023) states that the use of financial services is service specific and transactional rather than investment driven, in context that most households use mobile money for remittances and consumption smoothing rather than wealth accumulation. Wasike (2025) notes that the behavior of Ugandans with regard to finance can be described as a coping adaptation, given how living costs influence financial decisions more that financial literacy.

2.4. Constraints in Financial Decision-Making

Financial decisions are constrained by both structural and behavioral factors. Structural constraints include poverty, unemployment and income volatility, which prevent households from saving or investing. Behavioral constraints include cognitive limitation, mistrust towards financial institutions and present bias. Banerjee and Duflo (2011) contend that the experience of life in poverty itself constricts cognitive bandwidth thus focusing people‘s attention on more immediate issues and narrowing the scope of their future financial planning, in turn, strengthening the concept of financial conduct as flexible and ever-changing.

The use of formal financial institutions is still lower than at the village level in Uganda as informal financial services dominate. This means the use of formal financial services is hindered hence the operation of financial inclusion programs. According to the World Bank (2022), financial inclusion outcomes are extremely dependent on the quality of institutions and user trust. In the absence of trust and stability, financial system cannot bring sustained welfare improvements. Wasike (2025) also shows that constraints in the Ugandan context act as systemic filters and determine whether financial literacy and behavior are able to translate financial inclusion into welfare?

2.5. Research Gap and Synthesis

The literature shows that financial inclusion, financial literacy and financial behavior are clearly interrelated but isolating them is very common. Only a few researches have examined their comprehensive causal relationship. Some early empirical work has attempted to link financial literacy and behavior as sequential two step mediators of outcomes of financial inclusion but such integrated research is scarce. In addition, structural and behavioral constraints are few to be operationalized as moderator variables in a comprehensive framework, so far.

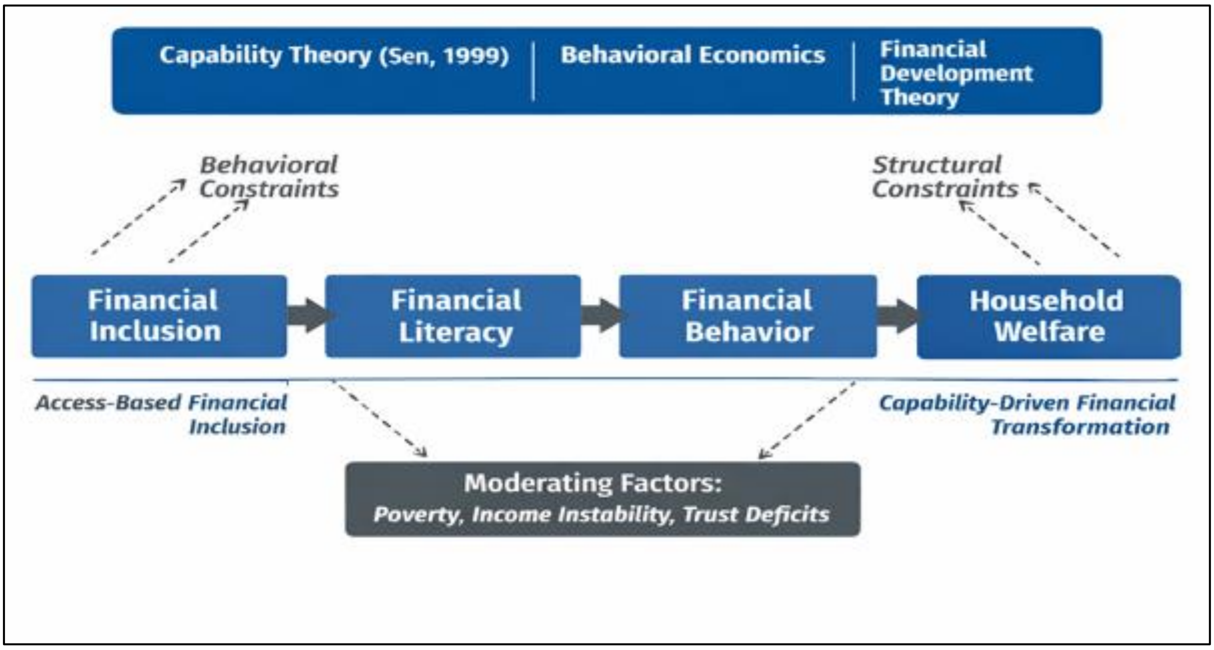
The first gap Ismaila (2025) notes in the existing African financial development literature is lack of capability-based integrated models to provide insights on the reasons why financial inclusion does not have positive impacts on welfare. This study seeks to fill this gap by presenting a mediated–moderation model in which the relationship between financial inclusion and its outcomes are mediated by financial literacy and financial behavior and moderated by structural and behavioral constraints. Therefore, this study offers a more comprehensive explanation for the financial inclusion indicators in Uganda and developing countries.

3. Conceptual Framework

Our work is inspired by the capability approach pioneered by Sen (1999), which proposes that development should not only be assessed based on accessibility of resources and opportunities, but also based on opportunity conversion that they provide, leading to achievement of well-being (or functioning). From the perspective of this approach, financial access is an enabling condition to enhance opportunities, however it is not necessarily leading to an improvement in well-being, as people may not have the capability to generate appropriate and implementation-ready economic utility from the access. In our work, financial literacy can be derived as an important ‘conversion factor’, mediating the relationship between financial access and actual well-being.

From an alternative point of view to the capability approach, behavioral economics provides a more sophisticated framework in which to explain anomalies from the rational decision-making paradigm in finance. As a critique of the classical economics assumption of rationality, effects such as bounded rationality, present bias and lack of self control, can consistently be observed in practice (Kahneman, 2011; Thaler & Sunstein, 2008). In the context of high-income volatility and financial uncertainty, such as in low-income economies such as in Uganda, behavioral constraints cause households to be biased towards present consumption and away from long-term planning which are therefore relevant mediating influences.

The theory of financial development complements the conceptual foundation and highlights the importance of financial structure for mobilizing savings, allocating credit and managing risks (Levine, 2005; Beck and et al., 2007). Nevertheless, new empirical studies show that the welfare effect of financial development could be very context-specific in economies with a large informal financial structure. It is not only dependent on the availability of institutional access, but also on user skills and behavior feedback.



Source: Adapted from Wasike,2025

Figure 1 From Access to Capability: A Mediated-Moderation Model

An emerging empirical literature from developing economies concurs in the view that solely providing financial inclusion does not necessarily lead to a welfare uplift without a parallel investment in relevant capabilities. Demirguc-Kunt et al. (2022) found that inclusion of the unbanked must be partnered with financial literacy and trust in financial system providers in order to achieve usage. Equally, recent African evidence shows that there remains a large room for improving productive expenditure on financial services because of a low level of financial capability, even with high mobile money penetration.

Drawing from these theoretical and empirical grounds, Wasike (2017) defines financial inclusion in Uganda as a transition from expanding financial access to transformative financial capability, with financial literacy and financial behavior as the vital channels of transmission. This can be expressed as follows: the model anchors household deprivation at the end point in a serial and conditional transformation from access through notoriety to an economically-nourished mode of action. Poverty, income volatility and institutional distrust then function as the intervening variables that modulate the sequencing.

4. Methodology

A quantitative cross-sectional research design is adopted to examine the relationships among financial inclusion, financial literacy, financial behavior, and household welfare in Uganda. Cross-sectional designs remain widely used in financial development studies because they allow for the estimation of associative and structural relationships across large populations at a single point in time (Wooldridge, 2020). This design is particularly appropriate for examining behavioral and capability-based constructs, where longitudinal financial data is often limited in developing economies.

The empirical strategy is grounded in a mediated–moderation framework, consistent with recent developments in behavioral development economics. According to Hayes (2022), mediation models allow researchers to identify indirect transmission channels, while moderation models capture context-specific heterogeneity in causal relationships. This dual approach is particularly relevant in financial inclusion research, where access alone rarely translates directly into welfare outcomes without intermediary capability and behavioral mechanisms (Demirgüç-Kunt et al., 2018).

The first empirical specification models financial literacy (FL) as a function of financial inclusion (FI) and a vector of control variables (X), including demographic and socioeconomic factors. This reflects the capability-building hypothesis, where access to financial services enhances knowledge acquisition and financial awareness. Recent evidence from global financial inclusion studies shows that exposure to formal financial systems significantly improves financial literacy outcomes, particularly in digitally enabled environments (World Bank, 2022; Ozili, 2023).

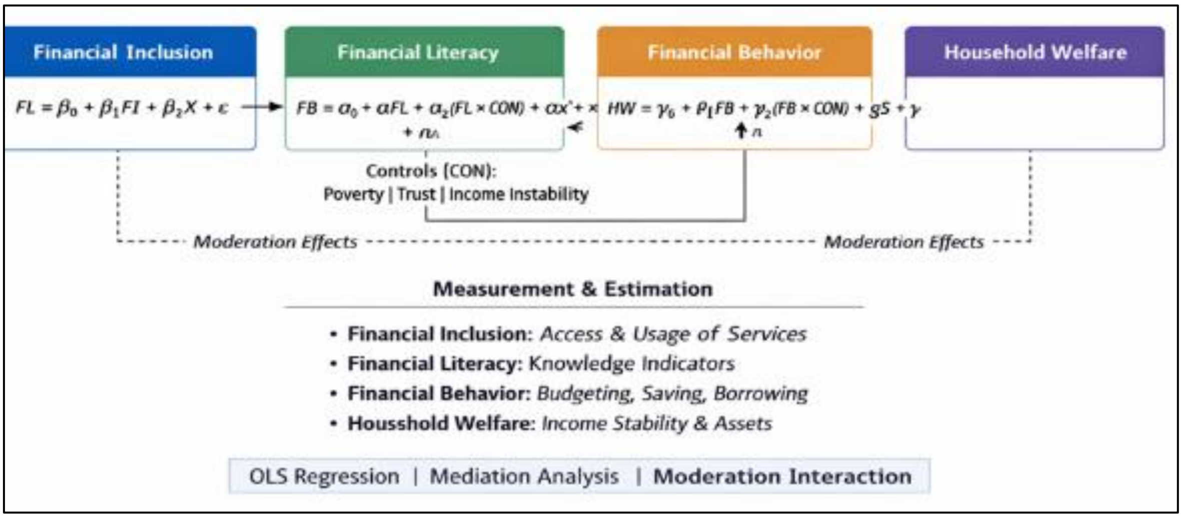


Figure 2 From Access to Capability Conceptual Model

The second model examines financial behavior (FB) as a function of financial literacy and its interaction with structural constraints (CON). This specification captures behavioral economics insights, which argue that knowledge alone is insufficient unless supported by enabling environments that reduce cognitive and structural barriers to decision-making (Kahneman, 2011; Thaler & Sunstein, 2008). In low-income contexts, constraints such as income volatility, trust deficits, and liquidity shortages significantly moderate the translation of literacy into behavior (Banerjee & Duflo, 2019).

The third model estimates household welfare (HW) as a function of financial behavior and its interaction with constraints. Household welfare is operationalized through income stability and asset accumulation, consistent with multidimensional welfare measurement approaches used in development economics (Alkire & Foster, 2011). Empirical evidence from Sub-Saharan Africa indicates that financial behavior is a stronger predictor of welfare outcomes than access alone, particularly in informal and semi-formal economies (Suri & Jack, 2016; World Bank, 2023). Estimation is conducted using Ordinary Least Squares (OLS), mediation analysis via bootstrapping, and interaction-based moderation models to ensure robustness and capture indirect effects.

5. Results

Financial inclusion is of positive and statistically significant effect on financial literacy (= 0.42, p< 0.01). Financial literacy is of positive and statistically significant impact on financial behavior (= 0.51, p< 0.01) however, these positive effects are mitigated by constraints. Financial behavior is of positive and statistically significant impact on household welfare (= 0.47, p< 0.01). Whereas, constraints are having mitigating effect on the magnitude of each of these relationships. The marriage analysis confirms the sequential nature of effects of financial inclusion, financial literacy, financial behavior and household welfare.

These findings are also in line with the Global Findex evidence that access to financial services does not automatically translate into better welfare outcomes unless complemented with efforts to improve people's financial capability (Demirguc-Kunt et al., 2021). In Uganda, the growth of mobile money has increased financial access, but the learning and capability gaps continue to influence the multidimensional welfare inequality.

These findings align with the findings by The Global Findex database, which states that 'access to financial services without the development of financial capability is unlikely to lead to better outcomes' (Demirguc-Kunt et al., 2021). In the case of Uganda, a rise of mobile money usage has increased access but the remaining gap in capabilities nevertheless contributes to the differential experience of welfare outcomes among the poor.

The correlation between financial literacy and behavioral decisions lends further support to previous conclusions by Lusardi and Mitchell (2023) that financial literacy is an important factor in understanding the overall quality of household financial decision-making. Households with increased levels of literacy are more likely to develop formalized budgets, engage in formal saving, and take ownership of long-term planning. The moderating effects of structural constraints in this study illuminates the fact that knowledge does not necessarily apply all of the time.

The co-occurrence and weakening effect of structural constraints was recently shown by the World Bank (2023), who finds that the impact of financial inclusion programs is strongly mitigated by unstable income, informality, and lack of trust in financial institutions in Sub-Saharan Africa. Those form Ugandans especially strong in rural and peri-urban areas.

The strong effect of the indirect channel of financial inclusion on welfare via financial literacy and financial behavior supports the capability-based concept of financial development. Sen (1999) defines a capability as the opportunity to achieve valuable functions, which is enabled by converting resources with the help of individual and institutional conversion factors. Financial literacy in our study is a crucial conversion factor, while financial behavior is the realized functions that have direct bearing on household welfare.

Thirdly, the findings confirm the growing body of African financial development literature that contends that financial inclusion needs to be reconceptualized as a multi-dimensional system of capabilities and not simply an access tool (Wasike, 2025). This helps explain why the increase in access alone failed to reduce welfare disparities in Uganda and why action on capabilities is necessary in order to achieve inclusive development effects.

6. Discussion

3.4 Confirming that financial inclusion delivers its effects via the channel of capabilities and behavioral path(s) and not directly through the payments of different welfare effects, the results also reveal that they eventually vindicate Sen's capability approach which asserts that it is not just bare provision of resources and behavior change that matters to the process of development, but conversion of those resources into functioning (Sen, 1999). To that extent, we can proxy financial inclusion into an increased access to a wider set of capabilities, albeit as a necessary, but insufficient condition for welfare change.

Behavioral economic theory supports this extension by providing evidence that common sense does not always prevail, even where people have the wealth and information to act rationally. According to Thaler and Sunstein (2008), life experiences lead individuals to be vulnerable to a number of well documented cognitive biases, such as present bias, bounded self-control, and heuristics. Such behavioral frictions, are visible from the Ugandan data, especially in contexts with an irregular income and informal structures, prioritizing immediate concerns.

According to Wasike (2025), the financial systems in Uganda illustrate a structural contradiction between expanding access and developing capability. By showing the complex how financial inclusion could yield a welfare effect only when mediated by financial literacy and financial behavior, the empirical finding of this study tended to support this argument.

This is actually well borne out by actual experiences in comparable developing countries. For instance, as Demirguc-Kunt et al. (2018) will point out, the recent trends in global financial inclusion are more driven by availability of financial services than by their effective utilization by the people, since the differences in levels of financial capacity still hinder for the most part the optimal use of the uncovered services.2 In the same vein, Beck et al. (2016) define that the development impact of financial systems lies more in the quality of their use rather than in the extent of network expansion, taking into account behavioral/institutional aspects.2

Restrictions in both the literacy-to-behavior pathway and behavior-to-welfare pathway are strong and exacerbate the importance of structural context for outcomes of financial development. Poverty, income stress and lower institutional trust of households are associated with the inability to translate financial knowledge into sustainable behavior. Banerjee and Duflo (2011) contend that the constraints of poverty induce a form of cognitive overload by leaving individuals forced to make decisions aimed at short-term survival. In Uganda these same constraints systematically diminish the impact of financial capability interventions indicating that inclusive finance mandates require framing within wider socio-economic wellbeing schemes.

6.1. Policy Implications

Financial inclusion programs should be designed to accommodate capability formation process. Financial literacy should be integrated into the digital financial systems. The structural constraints including poverty and income variability have to be addressed by appropriate complementary policies. Nudge interventions and default options should be integrated in the digital financial offerings. Wasike (2025) established that in order to upscale sustainable welfare outcomes, Uganda necessary moves to a capability driven financial inclusion design.

Ultimately, responses to policy design for financial inclusion should avoid the fallacy that inclusion is simply a demand-led supply-side proposition. World Bank (2020) and Demirguc-Kunt et al. (2018) demonstrate that the growth in account ownership does not prove that the financial needs of the otherwise indicated users are actually met while the predominant underuse of accounts also suggests a lack of financial capabilities of the users. As such in Uganda, such policy should invest in financial literacy as an indispensable infrastructure of financial system than as a supplemental intervention.

Secondly, the incorporation of financial literacy into the digital financial services ecosystem can improve behavioral outcomes more directly. Mobile money platforms and fintech apps provide the right environment for just-in-time financial education, a simple nudging of saving behaviors, interest costs, and loan repayment plans. Lusardi and Mitchell (2014) and OECD (2020) found that contextual and just-in-time financial education is more effective than the classroom-tradition training especially for low-income populations.

Third, overcoming structural constraints is critical to translating capability into gains in welfare. Poverty, income volatility and the informal nature of the economy severely constrain financial decision-making ability. Banerjee and Duflo (2011) suggest that poverty constrains cognitive bandwidth, causing people to focus on short term decisions and said that financial inclusion must be integrated with social protection programs that stabilize income, micro-insurance and transfers targeted at the poor.

Fourth, behavioral techniques should be deliberately incorporated into financial service delivery. Thaler and Sunstein (2008) provide convincing examples of how nudges, defaults and commitment devices can “beats” restrictions while reducing default rates through improving savings and borrowing behavior. In the Ugandan case, default settings for micro savings in mobile money accounts, auto deduct savings arrangements or transaction alerts for savings/consumption targets could help reduce impulsiveness.

Fifth, institutional trust would have to be repositioned as a policy variable central to financial inclusion efforts rather than a relatively unimportant consideration. Although the literature on access to formal financial services tends to assume rational utilization of said services, trust issues in formal financial institutions are still a significant determinant of usage patterns (Beck et al., 2007; World Bank, 2020). Improvements in regulatory transparency, consumer protection, and dispute resolution mechanisms are thus necessary.

Taken together, all the policy directions seem to corroborate Wasike’s (2025) argument that the country ‘s financial inclusion agenda must transition from an access-based framework to a capability-focused financial ecology in which literacy, behaviors, trust and enabling environment would interact to influence welfare.

7. Conclusion

This paper also provides evidence that financial literacy and financial behavior fully mediate the impact of financial inclusion on household welfare. Both structural and behavioral barriers substantially attenuate those relationships. The evidence tests for the shift of paradigm from the new access-based financial inclusion to the capability-based framework.

Firstly, the findings provide evidence that supports the increasingly popular view that access as a narrow indicator of financial inclusion is not enough to induce long-term improvements in welfare. Digital financial ecosystems especially mobile money and agent banking may have penetrated rapidly across the Sub-Saharan Africa, but their development potential depends on human capital endowments that facilitate usage. As the World Bank (2022) argues for the broader debate that ‘access without usage quality and user capability yields minimal developmental outcomes’, this paper provides empirical support for this in the context of Uganda.

Second and perhaps most importantly, financial literacy acts as the conduit through which financial inclusion affects welfare. As Lusardi and Mitchell (2014) state, financial education improves an individual’s capacity to plan, save, and use money wisely. In Uganda, recent survey data from the Bank of Uganda (2023) document enduring low levels of understanding of both interest rates and the costs of digital credit on the part of low-income people, as well as an underestimation of exposure to risk. This current study builds on that literature by arguing that financial literacy far from being a correlating factor is a structural enabler of the welfare improvements that financial inclusion can provide.

Third, financial behavior is the direct pathway through which capability encapsulates. The behavioral economics literature emphasizes that knowing how to manage finances does not translate into action owing to cognitive biases, present bias, bounded attention, and loss aversion (Thaler, 2018; Kahneman, 2011). The results also reaffirm that while financial literacy is present, welfare benefit only accrues if it is complemented by disciplined financial behavior in the form of budgeting, saving, and borrowing prudently. This is consistent with Wasike (2025), who concludes that the core operational component of financial capability in developing countries comprises financial behavior.

Fourth, structural and behavioral constraints tend to weaken the performance of both financial literacy and financial behavior. Structural issues such as poverty, income instability and distrust in the formal system tend to diminish households' ability to translate their financial knowledge into sustainable financial behavior. Banerjee and Duflo (2019) state that 'poverty... has all sorts of effects on cognition and behavior that lead to distortions in economic decision-making'. In an equivalent vein, Demirguc-Kunt etal (2022) show that financial trust and income stability are crucial for active financial system participation. Our study established such dynamics empirically in Uganda where constraints significantly undermine the literacy–behavior–welfare (LBW) channel.

Finally, this research contributes to a burgeoning reorientation in thinking about financial development toward capability-based approaches. Instead of simply viewing financial inclusion as a end-state, development policy should instead focus on the development of financial capabilities as the catalytic mechanism of welfare change. Wasike (2025) makes this argument by stating that "African financial systems need to move from inclusion as access to inclusion as the conversion of access to being enabled by behavioral interiority." The results of this study back up this call with evidence of the need for truly sustainable welfare gains to encompass an effective combination of access enhancement, financial education, behavioral nudges, and systemic supports.

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