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Behavioral finance and financial inclusion: A conceptual review and framework development

Nelly Tochi Nwosu [1,*] and Oluwatosin Ilori [2]

[1] *Independent Researcher, Chicago, IL, USA.*
[2] *Independent Researcher, Irving, TX, US.*

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Abstract

This review paper examines the intersection of behavioral finance and financial inclusion, offering a conceptual framework to address the behavioral barriers hindering access to formal financial services. Through an analysis of key behavioral factors—including risk perception, overconfidence, present bias, and social norms—and an evaluation of existing interventions, the paper highlights the complexities of financial decision-making and the challenges of expanding financial inclusion. The proposed framework outlines intervention strategies to promote positive financial behaviors and empower individuals to achieve greater financial well-being. By integrating behavioral insights into policy design and implementation, policymakers and practitioners can enhance the effectiveness of financial inclusion efforts, ultimately fostering economic empowerment and sustainable development.

Keywords: Behavioral Finance; Financial Inclusion; Risk Perception; Overconfidence; Present Bias; Social Norms.

1. Introduction

Financial inclusion, the universal access to financial services and products, has emerged as a critical driver of economic development and poverty alleviation worldwide (Kara, Zhou, & Zhou, 2021; Mugo & Kilonzo, 2017). However, despite significant progress in expanding access to formal financial services in recent decades, a substantial portion of the global population remains excluded from the financial system. This exclusion disproportionately affects marginalised and vulnerable communities, hindering their ability to accumulate assets, invest in education, and cope with unforeseen financial shocks (Bank, 2020; Mendoza, 2010). In addressing this multifaceted challenge, the lens of behavioral finance offers invaluable insights into understanding and overcoming the behavioral barriers that impede financial inclusion efforts.

Behavioral finance, a branch of economics that integrates psychological principles into financial decision-making, provides a nuanced understanding of how individuals make financial choices under conditions of uncertainty and bounded rationality (Pompian, 2012). By exploring cognitive biases, heuristics, and emotional influences on decision-making processes, behavioral finance illuminates the complexities of human behavior that traditional economic models often overlook. In financial inclusion, where individuals face diverse socio-economic contexts and institutional constraints, the insights from behavioral finance are particularly pertinent (Birochi & Pozzebon, 2016; Fernández-Olit, Martín Martín, & Porras González, 2020).

Central to our discussion is the notion of financial inclusion itself. Financial inclusion goes beyond mere access to basic financial services; it encompasses the empowerment of individuals to participate effectively in the formal financial system, regardless of their income level or social status. This includes access to savings, credit, insurance, and payment

* Corresponding author: Nelly Tochi Nwosu

services that are affordable, convenient, and tailored to the needs of diverse populations. Achieving meaningful financial inclusion requires addressing infrastructural barriers and behavioral factors that shape individuals' perceptions, preferences, and decisions regarding financial matters (Demirgüç-Kunt & Klapper, 2013; Sanderson, Mutandwa, & Le Roux, 2018).

Against this backdrop, this paper aims to provide a conceptual review and framework development at the intersection of behavioral finance and financial inclusion. By delving into the theoretical foundations of both disciplines, we seek to elucidate the behavioral dimensions of financial inclusion and explore how psychological insights can inform more effective strategies for promoting inclusive finance. Our study endeavors to define key terms such as behavioral finance and financial inclusion, establishing a common conceptual understanding for subsequent analysis.

The significance of this research lies in its potential to inform policy and practice in advancing financial inclusion agendas globally. By integrating behavioral insights into the design and implementation of interventions, policymakers, financial institutions, and development practitioners can develop more targeted and impactful strategies to reach underserved populations. Furthermore, this study contributes to the academic discourse by offering a comprehensive framework synthesising theoretical perspectives from behavioral finance and financial inclusion, providing a roadmap for future research and practical applications.

2. Theoretical Foundations

Behavioral finance, rooted in the synthesis of economics and psychology, offers a paradigm shift in understanding financial decision-making processes. At its core are several key concepts illuminating the complexities of human behavior in finance (Baker & Nofsinger, 2010; Monahan, 2018). Bounded rationality, heuristics, and biases are central to this framework, shaping individuals' perceptions, preferences, and choices in financial matters.

Bounded rationality, as posited by Herbert Simon, challenges the traditional economic assumption of perfect rationality by recognising the limitations of human cognitive capacity (Egidi, 2017). When faced with complex financial decisions, individuals often rely on simplified mental models and rules of thumb to navigate uncertainty and information overload. This cognitive constraint leads to systematic deviations from optimal decision-making, as individuals may overlook relevant information or struggle to process it efficiently (Ajayi & Udeh, 2024a; Igbinenikaro & Adewusi, 2024d; Ingale & Paluri, 2022; Shah & Ali, 2022).

Heuristics, or mental shortcuts, represent another cornerstone of behavioral finance theory. These cognitive tools allow individuals to make decisions quickly and efficiently but can also introduce biases and errors (Mousavi, Gigerenzer, & Kheirandish, 2016; Ricciardi, 2008). Common heuristics include anchoring, where individuals rely heavily on initial information when making subsequent judgments, and availability heuristics, where an event's perceived frequency or likelihood is based on its ease of recall. These heuristics influence financial decision-making by shaping perceptions of risk, return, and value, often leading to suboptimal outcomes (Ajayi & Udeh, 2024c; Forbes, Hudson, Skerratt, & Soufian, 2015; Igbinenikaro & Adewusi, 2024c).

Biases, arising from the interaction of cognitive limitations and heuristics manifest as systematic deviations from rationality in decision-making (Weyman & Barnett, 2016). Cognitive biases such as overconfidence, loss aversion, and confirmation bias profoundly influence individuals' financial behavior. Overconfidence, for example, leads individuals to overestimate their knowledge and abilities, potentially resulting in excessive risk-taking or underestimating uncertainty. On the other hand, loss aversion causes individuals to weigh losses more heavily than equivalent gains, leading to risk-averse behavior and reluctance to engage in beneficial financial activities (Kosasih, Lesmana, Judijanto, Cahyati, & Al-Shreifeen, 2024; Shukla, Rushdi, & Katiyar, 2020).

In parallel, the theoretical framework of financial inclusion encompasses a set of goals, challenges, and strategies aimed at expanding access to financial services and promoting inclusive economic development. Financial inclusion seeks to empower individuals and communities by providing them with the tools and resources needed to participate effectively in the formal financial system (Singh & Yadav, 2012). This includes access to savings, credit, insurance, and payment services that are affordable, convenient, and tailored to the needs of diverse populations. However, achieving meaningful financial inclusion faces numerous challenges, ranging from infrastructural barriers to institutional constraints and socio-economic disparities (Diniz, Birochi, & Pozzebon, 2012). Limited access to banking infrastructure, high transaction costs, and regulatory barriers often hinder individuals' ability to engage with formal financial services, particularly in underserved rural and remote areas. Moreover, cultural norms, trust deficits, and lack of financial literacy exacerbate exclusionary dynamics, preventing marginalised populations from fully benefiting from financial inclusion initiatives (Ajayi & Udeh, 2024b; Igbinenikaro & Adewusi, 2024a; Oliveira Santanna, 2019).

The intersection of behavioral finance and financial inclusion theories offers valuable insights into understanding and addressing these challenges. By recognising the behavioral dimensions of financial decision-making, policymakers and practitioners can design more effective strategies for promoting inclusive finance. For instance, leveraging insights from behavioral economics, interventions can be tailored to account for individuals' cognitive biases and decision-making heuristics, thereby increasing their effectiveness and relevance (Bauer & Capron, 2020). Furthermore, integrating behavioral insights into financial education and product design can enhance individuals' understanding of financial concepts and encourage responsible financial behavior. Financial inclusion initiatives can foster greater engagement and uptake of formal financial services among underserved populations by addressing psychological barriers such as procrastination, present bias, and social influences (Agarwal, Chomsisengphet, & Lim, 2017; Danladi, Prasad, Modibbo, Ahmadi, & Ghasemi, 2023; Igbinenikaro & Adewusi, 2024b).

3. Behavioral Factors Affecting Financial Inclusion

Financial inclusion, the universal access to and usage of financial services, is not solely hindered by infrastructural barriers but also by behavioral factors that influence individuals' financial decision-making and access to formal financial services. Understanding these behavioral factors is crucial for designing effective interventions to promote financial inclusion. This section identifies and analyses various behavioral factors that impact financial inclusion, including risk perception, overconfidence, present bias, and social norms. We also discuss their implications for individuals' financial behavior and access to financial services.

Risk perception significantly shapes individuals' financial decisions and willingness to engage with formal financial services (Hansen, 2012). Behavioral finance research suggests that individuals often exhibit biased risk perceptions, overestimating the likelihood of negative outcomes and underestimating the potential benefits of financial products and services. This bias can lead to risk aversion, causing individuals to avoid financial products perceived as risky, such as loans or investments, even when they could benefit from them. As a result, individuals may forego opportunities for wealth accumulation and financial empowerment, contributing to their exclusion from the formal financial system (Diacon, 2004; Okatta, Ajayi, & Olawale, 2024b; Olawale, Ajayi, Udeh, & Odejide, 2024a).

Overconfidence, another prevalent behavioral bias, can also impede financial inclusion efforts. Overconfident individuals tend to believe they possess greater knowledge and abilities than they do, leading them to make suboptimal financial decisions (Baker & Nofsinger, 2010; Gentile, Linciano, & Soccorso, 2016a, 2016b). In financial inclusion, overconfidence may manifest as individuals' reluctance to seek financial advice or engage with financial education programs, assuming they can manage their finances effectively. This overestimation of one's financial literacy and competence can hinder individuals' access to information and resources that could help improve their financial well-being.

Present bias, the tendency to prioritise immediate rewards over long-term benefits, poses a significant challenge to financial inclusion initiatives (Korteling, Paradies, & Sassen-van Meer, 2023). Individuals exhibiting present bias may prioritise short-term consumption over saving or investing for the future, leading to inadequate financial planning and limited asset accumulation. This behavior can perpetuate poverty and financial vulnerability cycles, as individuals fail to build financial resilience and prepare for future expenses or emergencies. Moreover, present bias can deter individuals from engaging with formal financial services that require long-term commitments, such as retirement savings or insurance, further exacerbating their exclusion from the financial mainstream (Mitchell & Utkus, 2004; Okatta, Ajayi, & Olawale, 2024a; Olawale et al., 2024a).

Social norms and cultural influences also play a crucial role in shaping individuals' financial behavior and access to financial services (Ojong, 2018). Norms surrounding saving, spending, borrowing, and investing vary across cultures and communities, influencing individuals' attitudes and perceptions towards financial products and services. In some cultures, for example, stigma may be attached to borrowing money or seeking assistance from financial institutions, leading individuals to rely on informal or alternative financial services. Social networks and peer influences can also impact individuals' financial decisions, shaping their preferences and choices regarding financial products and providers (Agarwal et al., 2017; Kuchler & Stroebel, 2021).

4. Policy Implications and Interventions

Understanding behavioral finance offers valuable insights for policymakers seeking to promote financial inclusion by addressing the behavioral barriers that impede individuals' access to and use of formal financial services. In this section, we examine the policy implications derived from behavioral finance research, evaluate existing interventions to address behavioral barriers to financial inclusion and propose potential policy interventions or strategies informed by behavioral insights to enhance financial inclusion outcomes.

4.1. Policy Implications Derived from Behavioral Finance

In understanding the complexities of financial decision-making and the challenges of expanding financial inclusion, behavioral finance research underscores the significance of designing policies and interventions that recognise and accommodate individuals' cognitive biases, preferences, and decision-making heuristics. Policymakers are urged to adopt a behavioral lens, eschewing assumptions of perfect rationality, to comprehend and address the behavioral factors shaping individuals' financial behavior. Key policy implications derived from behavioral finance include simplifying decision-making processes. Given individuals' limited cognitive capacity, policymakers are encouraged to design simple, transparent, and easy-to-understand financial products and services. By reducing complexity and cognitive load, policymakers can facilitate more informed financial decisions and alleviate decision paralysis.

Moreover, behavioral insights suggest the potential of nudges in influencing individuals' behavior towards beneficial outcomes. Policymakers can implement subtle changes in the decision environment, leveraging nudges to encourage savings, investment, and other financially advantageous behaviors. Examples include default enrollment in retirement savings plans or opt-out organ donation programs, which preserve individuals' freedom of choice while promoting desirable behaviors.

Furthermore, timely and personalised feedback emerges as a potent tool in shaping individuals' financial behavior. Behavioral research demonstrates the efficacy of such feedback in influencing behavior, allowing policymakers to deliver tailored financial guidance and feedback through technology. This personalised approach assists individuals in tracking their financial progress and making adjustments aligned with their preferences and goals.

Lastly, social norms and peer influences cannot be understated in shaping financial behavior. Policymakers can harness these forces to promote positive financial behaviors and attitudes within communities. By leveraging social norms and peer influences, policymakers foster a financial inclusion and empowerment culture, facilitating broader participation in formal financial systems. These policy implications, grounded in behavioral finance principles, offer actionable strategies to enhance financial inclusion and empower individuals to achieve greater financial well-being.

4.2. Existing Interventions and Initiatives

Various interventions and initiatives have been implemented to address behavioral barriers to financial inclusion and promote more inclusive financial systems, leveraging behavioral insights to tailor interventions to individuals' cognitive biases and decision-making processes. One such intervention is financial education and literacy programs, which aim to enhance individuals' financial knowledge and skills, empowering them to make informed financial decisions. By incorporating behavioral insights into curriculum design and delivery, these programs effectively address cognitive biases and misconceptions about financial matters (Amagir, Groot, Maassen van den Brink, & Wilschut, 2018; Cohen & Nelson, 2011; Hung, Yoong, & Brown, 2012; Olawale, Ajayi, Udeh, & Odejide, 2024b; Williams, 2007).

Another effective intervention is the use of digital financial services, such as mobile banking and digital payments, which have the potential to expand access to formal financial services, particularly among underserved populations. By leveraging technology and behavioral insights, these services can overcome barriers such as distance, time constraints, and lack of documentation, making financial services more accessible and convenient for individuals (Dara, 2018; Pazarbasioglu et al., 2020). Additionally, savings and commitment devices, such as savings accounts with restrictions on withdrawals or commitment contracts, help individuals overcome present bias and encourage long-term savings behavior. These devices facilitate asset accumulation and financial resilience by automating savings contributions and providing incentives for reaching savings goals.

4.3. Proposed Policy Interventions and Strategies

Drawing from the policy implications and existing interventions discussed, we advocate for strategies to bolster financial inclusion outcomes. First, policymakers should collaborate with financial institutions to craft products and services that integrate behavioral insights, aligning with individuals' cognitive biases and preferences. These offerings may encompass simplified savings products, goal-oriented financial planning tools, and personalised advisory platforms. Second, deploying behavioral nudges in diverse settings can promote desirable financial behaviors, such as emergency savings, debt repayment, and educational investments. These nudges, delivered through digital platforms, public campaigns, or workplace initiatives, capitalise on social norms and peer influences to enhance their effectiveness.

Additionally, integrating financial education and literacy initiatives into broader social programs, including health, education, and poverty alleviation efforts, can effectively reach underserved populations and address their distinct financial needs. Policymakers can maximise outreach and impact by embedding financial education within existing service delivery channels. Lastly, fostering public-private partnerships for inclusive innovation is crucial. By incentivising private sector actors to develop and scale innovative solutions that tackle behavioral barriers to financial inclusion, policymakers can leverage the expertise and resources of both sectors to broaden access to formal financial services. These collaborative endeavors promise to advance financial inclusion and foster economic empowerment on a broader scale.

5. Framework Development

To effectively promote inclusive finance while addressing the behavioral barriers that impede financial inclusion, we propose a conceptual framework that integrates principles of behavioral finance and financial inclusion. This framework aims to guide policymakers, financial institutions, and development practitioners in designing targeted interventions and strategies to foster greater financial inclusion outcomes. The framework comprises three key components: behavioral factors, intervention strategies, and desired outcomes.

5.1. Behavioral Factors

Behavioral factors are crucial in shaping individuals' financial decisions and access to formal financial services. Risk perception influences individuals' willingness to engage with financial services, as their subjective assessment of risk impacts their decision-making process. Addressing individuals' risk perceptions is vital for designing interventions that mitigate perceived risks and promote financial inclusion. Overconfidence is another significant behavioral factor leading individuals to underestimate risks and overestimate their ability to manage financial matters. Targeted interventions aimed at addressing overconfidence can help individuals make more informed financial choices, thus enhancing their financial well-being.

Present bias, the tendency to prioritise immediate rewards over long-term benefits, challenges financial inclusion efforts. Individuals exhibiting present bias may struggle with savings and investment behavior, leading to financial exclusion. Interventions that mitigate present bias and promote future-oriented decision-making are crucial for fostering financial inclusion and encouraging individuals to engage with formal financial services.

Additionally, social norms and peer influences play a significant role in shaping individuals' financial behaviors. Cultural norms and peer pressures influence attitudes and behaviors towards financial matters, impacting individuals' financial decisions and access to financial services. Understanding and leveraging social norms can help promote positive financial behaviors within communities, facilitating greater financial inclusion and empowerment.

5.2. Intervention Strategies

To enhance financial inclusion, intervention strategies are crucial in addressing behavioral barriers that impede individuals' access to formal financial services. Simplifying financial products is imperative, involving the design of straightforward and transparent offerings that mitigate cognitive barriers, facilitating greater financial inclusion. Leveraging behavioral nudges, such as defaults or reminders, can encourage desirable financial behaviors and help individuals overcome decision inertia.

Personalised financial education is another pivotal strategy tailored to address individuals' unique needs and preferences, improving financial literacy and empowering individuals to make better financial decisions. Additionally, digital financial solutions offer promising avenues for expanding access to formal financial services, especially among underserved populations, by leveraging technology to deliver accessible and user-friendly digital financial services. These intervention strategies foster a more inclusive financial system, ultimately promoting economic empowerment and sustainable development.

5.3. Desired Outcomes

The framework envisions three core desired outcomes to advance financial inclusion and empower individuals within the formal financial system. It seeks to bolster access to formal financial services, encompassing a broad spectrum including savings, credit, insurance, and payment solutions, thereby breaking down barriers to entry and expanding financial opportunities for individuals from all walks of life. It aims to foster improved financial well-being by addressing the behavioral barriers that often hinder sound financial decision-making. The framework promotes positive financial behaviors through targeted interventions, enhancing individuals' ability to manage their finances effectively and navigate economic challenges with greater resilience.

Moreover, the framework enhances economic empowerment for individuals and communities. Equipping individuals with the tools and knowledge necessary to participate actively in the formal financial system empowers them to take control of their financial futures and pursue economic growth and prosperity opportunities. Ultimately, the framework's overarching goal is to promote financial inclusion and sustainable development, fostering economic empowerment at the individual and community levels. Through these desired outcomes, the framework strives to create a more inclusive and equitable financial landscape where all individuals have the opportunity to thrive and prosper.

Future Research and Practical Applications: The proposed framework provides a holistic approach to addressing behavioral barriers to financial inclusion, offering guidance for policymakers and practitioners in designing and implementing targeted interventions. Future research can further refine the framework by examining the effectiveness of specific intervention strategies and identifying innovative approaches to promoting inclusive finance. Practical applications of the framework can inform the design and implementation of financial inclusion initiatives, ensuring they are tailored to individuals' cognitive biases and preferences. By integrating behavioural finance principles into policy and practice, the framework can contribute to more effective and sustainable efforts to promote inclusive finance and empower individuals to achieve greater financial well-being.

6. Conclusion

In conclusion, this paper has explored the intersection of behavioral finance and financial inclusion, presenting a conceptual framework that integrates key principles from both disciplines. Through an examination of behavioral factors influencing financial inclusion, such as risk perception, overconfidence, present bias, and social norms, as well as evaluation of existing interventions and policy implications derived from behavioral insights, we have elucidated the complexities of financial decision-making and the challenges of expanding access to formal financial services.

The proposed framework offers a comprehensive approach to addressing behavioral barriers to financial inclusion, outlining intervention strategies to promote positive financial behaviors and empower individuals to achieve greater financial well-being. By recognising individuals' cognitive biases and preferences, policymakers and practitioners can design targeted interventions that facilitate access to formal financial services, enhance financial literacy, and promote responsible financial decision-making. Moreover, the framework underscores the importance of collaboration between public and private stakeholders, leveraging technology and innovation to drive inclusive finance initiatives. By integrating behavioral insights into policy design and implementation, policymakers can enhance the effectiveness and relevance of financial inclusion efforts, ultimately fostering economic empowerment and sustainable development. Moving forward, future research and practical applications of the framework can further refine our understanding of behavioral factors influencing financial inclusion and inform the design of more effective interventions. By exploring innovative approaches and evaluating the impact of specific intervention strategies, researchers and practitioners can contribute to advancing knowledge and catalysing action towards achieving greater financial inclusion and empowerment for all.

In conclusion, addressing behavioral barriers to financial inclusion requires a multifaceted approach that leverages insights from behavioral finance, integrates technology and innovation, and fosters collaboration across sectors. By adopting a behavioral lens and prioritising the needs and preferences of individuals, policymakers and practitioners can create more inclusive financial systems that enable individuals and communities to thrive economically and socially.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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