LUISS

Libera Università Internazionale degli Studi Sociali Guido Carli

Department of Political Science

Degree Program in Politics: Philosophy and Economics

Chair: Behavioural Economics and Psychology

# Breaking the Debt Cycle in Tanzania:

# Addressing Behavioural Biases and Scarcity Traps in MFIs and VSLAs through Nudge-Based Interventions

Prof. Giacomo Sillari

SUPERVISOR

Carlotta Naibo Matr. 104422

CANDIDATE

Academic Year 2024/2025

RINGRAZIAMENTI

**TABLE OF CONTENTS**

# INTRODUCTION

"Every year, 9 million children die before their fifth birthday. A woman in sub-Saharan Africa has a one-in-thirty chance of dying while giving birth - in the developed world, the chance is one in 5,600. There are at least twenty-five countries, most of them in sub-Saharan Africa, where the average person is expected to live no more than fifty-five years. In India alone, more than 50 million school-going children cannot read a very simple text." (Banerjee & Duflo, 2011, p. 3). To cite the words of developmental behavioural economists Banerjee and Duflo, this opening paragraph from their seminal work *Poor Economics* is exactly the kind of passage that might prompt any reader to close the book - and, by extension, this dissertation - and dismiss altogether the discourse on global poverty. As the two academics reiterate, this is because "the problem seems too big, too intractable". The objective of this thesis, as well as that of the authors of *Poor Economics*, is precisely to challenge this tendency: to encourage the reader, especially those residing in the Global North, to avoid ignoring distant realities, as these may be interconnected to theirs in significant ways and, therefore, addressable through targeted interventions. Moreover, this dissertation is grounded in the belief that, for such interventions to be particularly meaningful, they must be designed with consideration for how people actually think, feel, and make decisions, even in environments characterised by pressure and economic scarcity.

This perspective becomes particularly compelling when investigating the economic situation of one specific country: Tanzania, where almost a third of the population subsists on less than $1.25 per day (World Bank, 2009a). In this context, the delivery of fundamental financial services is typically delegated to two primary access channels: Microfinance Institutions (MFIs) and Village Savings and Loan Associations (VSLAs). Still, despite having promoted enhanced financial inclusion, these organizations have not yet succeeded in engendering a sustainable and lasting improvement in the economic conditions of their beneficiaries. The reason for this paradox lies in a limitation that has not yet been widely explored by the existing literature, the disclosure of which is the intention of the present dissertation. Specifically, based on studies backed by real-world evidence, it was possible to demonstrate that the inefficiencies of the Tanzanian

microfinance system do not stem exclusively from structural factors, but have their roots in deeply behavioural mechanisms. Indeed, according to Mullainathan and Shafir (2013), the behavioural biases involved - which are already particularly burdensome for the poor in the Global South, often excluded from formal markets - can transform credit from a tool of empowerment into a mechanism that perpetuates poverty through vicious debt cycles.

Building on these behavioural insights, the present dissertation puts forward the following research question: "*How do behavioural biases limit the effectiveness of MFIs and VSLAs in Tanzania, and how can behavioural interventions - in the form of culturally adapted nudges - strengthen financial well-being and break vicious debt cycles?"*

In fact, unlike many other descriptive analyses, which merely document existing financial habits, this research aims to understand *why* existing savings and lending practices do not immediately translate into economic resilience, and to explore *how* interventions inspired by behavioural economics can bridge this gap. Such a specific structure reflects a broader personal interest in understanding how, in developing countries, scarcity conditions influence and hinder financial decision-making processes. Moreover, the choice to focus on Tanzania stems from the belief that developing welfare-enhancing behavioural tools in this country is not only feasible, but urgently needed to prepare Tanzanian families to face future crises, shocks, or, simply, unexpected daily events. Yet, while having transformative potential, all this must still avoid another *top-down* approach imposed from outside. To this end, this thesis proposes *bottom-up,* culturally sensitive solutions aimed at improving the financial well-being of Tanzanian communities, particularly the poorest and most marginalised, by enabling them to become protagonist of their own journey towards economic resilience.

The structure of the thesis reflects this objective. Chapter 1 reconstructs the evolution of MFIs and VSLAs in the Tanzanian historical-institutional context, critically analysing the contradictions of an externally imposed development through the lenses of *Dependency Theory* and *Post-Development Theory*. Chapter 2 explores the main behavioural biases - *scarcity trap*, *present bias*, and *social pressures* - highlighting their impact on economic choices and on the consolidation of vicious debt circles and inadequate savings habits. Finally, Chapter 3 introduces and analyses the behavioural nudge developed here, called

*Commitment Savings Mechanism with Default Enrolment, Emotional Goal Framing, and Social Feedback Loop*, illustrating its structure, experimental design, and potential policy implications for local development actors.

To ensure that all this has a consolidated scientific basis in the implementation phase and is not reduced to mere theoretical abstractions, the methodology of this research is based on a careful study of the microfinance literature, with a specific focus on the Tanzanian context, integrated by a systematic behavioural analysis aimed at complementing, not replacing, traditional economic approaches. The effective analysis of the intervention then makes use of consolidated tools of behavioural economics, namely, the *COM-B Mod*el (Michie et al., 2011), which examines how Capability, Opportunity and Motivation interact to generate desired financial Behaviours, and the *EAST Framework* of the Behavioural Insights Team (2024), which orients the design of nudges according to the principles of Simplicity, Attractiveness, Social relevance and Timeliness. The present dissertation also presents a replicable experimental design, based on a comparison between Control and Treatment groups, measuring indicators such as *propensity to save*, *default rate,* and *resilience to economic shocks*. All of this has been done in order to render the intervention sustainable, scalable, and compatible with the community dynamics of the MFIs and, above all, of the Tanzanian VSLAs, avoiding the imposition of other models extraneous to the local cultural context.

From this methodological framework, a final realisation emerges: in the Tanzanian context, where microcredit has all too often deepened dependency, the real opportunity may lie precisely in rethinking savings as a foundation for resilience, supported by targeted behavioural strategies. The following chapters set out to demonstrate how this change can be put into practice.

# CHAPTER 1: BACKGROUND AND LITERATURE REVIEW

## 1.1 Tanzania: A Historical and Structural View on Financial Institutions and Savings Practices

Tanzania is an East African country with a diverse geography and a complex history, making it an ideal environment to study behavioural economics, psychology, and financial inclusion, particularly in the context of savings and vicious debt cycles.

Historically, Tanzania's economy has been heavily affected by constant foreign interference, followed by internal adjustments. After a brief Portuguese occupation in the 17th century, Tanzania fell under German rule in the late 18th century. After World War I, however, the British administration took control of it, subjecting the country's territories to a regional structure that also included Kenya and Uganda, known as the *High Commissioner for East Africa*. This system, however, has been shown to greatly disadvantage Tanzania, which has historically achieved considerably lower development advantages in comparison to the other two countries (Mabele et al., 1980). Moreover, in the course of its colonial history, the nation's economy was designed exclusively to serve external interests, particularly through agricultural production for export and through the extraction of wealth. These manoeuvres have led to a lack of investment in the native economy, consequently leaving this country with a fragile economy at the dawn of its independence, based on subsistence agriculture and poor integration into global markets.

This legacy illustrates what Acemoglu and Robinson (2012) call "extractive institutions", colonial organizations designed primarily to transfer wealth from colonies to colonial powers, ignoring local development and more inclusive economic practices. Such institutions significantly undermine a country's ability to achieve long-term economic growth and equitable distribution of resources, prolonging cycles of poverty and inequality. This is exactly why the post-independence period saw a remarkable shift towards socialist-inspired economic policies driven by ideas expressed through the concept of *Ujamaa na Kujitegemea*, a term translated as "socialism and self-sufficiency". The *Ujamaa* philosophy, characterized by the presence of characteristic values of community solidarity, has led to initial progress for the country (Mabele et al., 1980). However, despite the initial optimism, the implementation of centralized planning and

collective agricultural policies also meant inefficiency and stagnation, thus contributing to severe economic problems in the late 1970s and early 1980s (Mori et al., 2024).

As a consequence of this, after the mid-1980s, Tanzania's economy underwent liberal-oriented changes, mainly implemented through Structural Adjustment Programs (SAPs), funded by the World Bank (WB) and the International Monetary Fund (IMF). The institutional adjustments undertaken have led to quantifiable economic benefits, such as a decline in the real growth rate of GDP of more than 5% per year, as well as a decrease in inflation from over 30% in 1995 to around 5% by 2001 (Kinyondo & Okurut, 2009). Despite this, the World Bank (2009a) still reported that, in the early 2000s, only 10% of Tanzanians could avail themselves of formal financial services. This had the effect of classifying Tanzania, in those years, as one of the states with the highest rate of extreme poverty in the world, with 88.5% of the population living on less than $1.25 a day and 96.6% on less than $2 a day (World Bank, 2009a). Even more so, socioeconomic mobility remained limited because many individuals were still unable to actively participate in the economy (Brannen & Sheehan-Connor, 2016). This has led to an increase in unemployment, as well as exclusion from quality education and healthcare. To address these systemic challenges, the Tanzanian government, following the guidelines of the Bank of Tanzania (BoT), has begun to implement more and more financial inclusion programs. A key effect of such policies has been the widespread emergence on Tanzanian soil of Microfinance Institutions (MFIs), built specifically to cater to disadvantaged rural and urban communities with minimal guarantees and inadequate financial literacy (Kinyondo & Okurut, 2009; Anyango et al., 2007). Alongside these institutions, informal and semi-formal financial systems have also emerged, the most striking example of which is that of time-bound Village Savings and Loan Associations (VSLAs).

Indeed, inspired by the already consolidated Mata Masu Dubara (MMD) model present in Niger, the NGO CARE International has created VSLAs in Tanzania. Specifically, the innovation of the VSLA model lies in its structure: composed of groups of 15–30 individuals, it facilitates savings, borrowing, and the annual redistribution of funds through an event called an "action audit" (Anyango et al., 2007). Already from these features, it can be clearly seen why this financial structure has been transposed to Tanzanian soil: its characteristics are particularly compatible with the community values inspired by the traditional *Ujamaa* doctrine, thus favouring its widespread adoption,

particularly in culturally cohesive regions, such as Zanzibar (ibid.). However, despite their success, these informal systems still encounter several limitations: they have a minimum financial capacity and a weak administration, which is complicated by frequent internal discussions (Mori, 2019). The above-mentioned MFIs are also not exempt from these types of constraints. Indeed, despite considerable progress, problems such as a small capital base, lack of transparency, and over-reliance on external financing sources persist, demonstrating significant structural and operational inadequacies in the "revolutionary" Tanzanian microfinance system (Mori et al., 2019). Moreover, both of these institutions (that is, VSLAs and more traditional MFIs) still maintain a narrow point of view, focusing solely on providing short-term loans rather than encouraging greater improvements in financial well-being through additional services, such as savings schemes, affordable insurance policies, or financial literacy initiatives.

Turning then to more formal institutions, Tanzania's financial environment also includes commercial banks, community banks, and Savings and Credit Cooperative Organisations (SACCOs). As mentioned above, commercial banks continue to provide services mainly to metropolitan regions and large companies, effectively excluding rural and low-income households, due to bureaucratic and geographical constraints. This trend is confirmed by the decline in credit creation, which fell from 141.4% in 1990 to 38.8% in 1998 (World Bank, 2002; cited in Kinyondo & Okurut, 2009). During this period, commercial banks became increasingly risk-averse and showed a growing preference for safer government bonds, which increased in value from US$2.4 million in 1990 to US$167.4 million in 1998 (ibid.). Community banks and SACCOs, on the other hand, provide more localized and inclusive financial services. However, their scope of operations remains relatively limited due to their inadequate governance and periodic liquidity concerns.

To overcome this situation, the BoT decided to launch the Tanzania Instant Payment System (TIPS) in 2022, i.e., a digital payment platform. This mobile money application has actually managed to improve the operational efficiency of financial institutions scattered throughout the territory, connecting as many as 45 of them (including 39 banks) to a unified digital infrastructure, thus reducing transfer costs and increasing payment speed (Bank of Tanzania, 2024). These initiatives have led to an expansion of access to financial systems, which have seen an increase in their use from 65% in 2017 to 76% in 2023 (ibid.). In addition, the BoT presented the Third National Framework for Financial

Inclusion (2023-2028), building on the success of the implementation of the Second Framework, which ended in December 2022[1]. The new plan places a strong emphasis on reducing barriers to entry, improving quality standards in consumer protection and supporting financial literacy initiatives, both inside and outside the formal education system (ibid.).

While these policies demonstrate encouraging progress by the Bank of Tanzania, historical, institutional, and sociocultural factors continue to influence the savings habits, economic resilience, and financial judgements (or rather misjudgements) of Tanzanian households. Therefore, in order to successfully address vicious cycles of debt and inadequate savings habits, it is essential to understand this complex interplay between Tanzania's historical experiences, contemporary institutional frameworks, and behavioural dynamics. This all-encompassing view offers important insights for the creation of welfare-enhancing and culturally appropriate behavioural interventions for the country's MFIs and VSLAs.

The following section will consequently analyse these financial bodies in depth (both the more formal MFIs and the more informal VSLAs) with a view to integrating the principles of behavioural economics within their existing structures.

### 1.2 Historical Background: Evolution of microfinance institutions globally, with a focus on Africa

Having provided a detailed overview of Tanzania's economic development, it is now crucial to offer a broader presentation of the historical evolution of MFIs and VSLAs on a global scale and to explore their significant implications for economic empowerment and poverty reduction. To do this, it is first necessary to provide a definition of what is meant by "microfinance". This term refers to a range of financial services (including small loans, savings accounts, and insurance) provided to people who typically do not

[1] The main achievements of the Second Framework are: an increase in the proportion of adults accessing formal financial services from 86% in 2017 to 89% in 2023; a growth in the use of formal financial services from 65% in 2017 to 76% in 2023. Moreover, this notable increase was mainly attributed to the high adoption of digital financial services, increased awareness of financial products and services, and strong collaboration between public and private actors interested in financial inclusion (UNCDF, 2023).

have access to traditional banking and financial systems (i.e., women, rural communities, and informal sector workers) (Cai et al., 2025).

While many people tend to think that contemporary microfinance is solely the work of Muhammad Yunus and his Grameen Bank, founded in Bangladesh in the mid-1970s, it is possible to argue that the concept was already rooted in previous cultures and eras (Cai et al., 2025). Historical antecedents of microfinance date back to the 17th and 18th centuries, with lending initiatives aimed at the poorest by Jonathan Swift and Benjamin Franklin (Cai et al., 2025), as well as German cooperatives operating mostly in rural areas (Guinnane, 2011). All these efforts were then complemented by sociological studies in this field, done mainly by Le Play and his followers (including Engel), who helped lay the foundations of microcredit within a broader economic, social, and political context (Fouillet et al., 2013).

This background helped pave the way for Yunus's experimental success with BRAC and the Grameen Bank, for which he was awarded the Nobel Peace Prize. This is due to the fact that Yunus has not confined himself to offering more affordable loans to the impoverished; he was instead able to recognize that he was better placed to do so when respecting their real and concrete needs (Banerjee & Duflo, 2011). Efficient operational mechanisms have thus been developed by him, including group lending and regular debt collection meetings, which have resulted in a significant decrease in default rates (Cai et al., 2025). This led to the establishment of microfinance institutions on a global scale in the late 20th century: according to Daley-Harris (2006), this development could be considered a significant "revolution" in the global fight against poverty.

In addition to its practical applications, microfinance has also developed as a structured area of academic research, thanks to the formal introduction of the term in the economic literature by Jonathan Morduch in 1999, in an article of *The Journal of Economic Literature*. This has helped to legitimize microfinance research as a genre, particularly among economists (Fouillet et al., 2013). Importantly, Murdoch's pioneering work has not only identified the clear boundary between "traditional" banking activities and those of microfinance, but also drawn a distinction between microfinance's two main objectives: poverty reduction (the social purpose) and financial self-sufficiency (the commercial purpose) (Morduch, 2000, p. 617). This dual nature, compared in Banerjee

and Duflo's book (2011) to the image of the "two-headed monster" from Greek mythology, has stimulated extensive academic and governmental discussions about the effectiveness, sustainability, and ethical components of microfinance. Several Randomized Control Trials (RCTs) have experimentally confirmed this: that is, although microfinance is an encouraging source of profitable investments, capable of improving liquidity management, it has not shown a transformative effect in reducing poverty and spreading entrepreneurship (Banerjee & Duflo, 2011; Banerjee et al., 2015).

In this regard, Banerjee and Duflo (2011) have identified two main explanations for why microfinance has such a limited transformative capacity: first, many poor borrowers lack the entrepreneurial aspiration or ability to efficiently manage business activities because they are distracted by thousands of daily tasks[2]. Second, the strict repayment schedules and focus on maintaining the "zero default" policies of these institutions limit borrowers' flexibility, thereby undermining their ability to invest in high-risk, high-return businesses. In fact, the constant focus on reimbursement discipline makes microfinance unsuitable for entrepreneurs who wish to grow their businesses beyond the "micro-enterprise" level. This is a necessary side effect of the microfinance operating model, which requires the provision of modest loans at low interest rates, in order to reach the largest possible number of individuals from the various strata of society, without risking bankruptcy. However, these two limiting factors - an expression of the compromise between social inclusion and financial sustainability - result in a further criticality, which is particularly worrying. We are referring to the widespread use of channels operated by predatory moneylenders, which, unlike many classic microfinance programmes, are favoured for their speed in providing money, for their involvement in few bureaucratic procedures, and for their greater flexibility in terms of repayment imposed (Banerjee & Duflo, 2011).

Against the backdrop of the tensions generated by the two personalities of this "two-headed monster", the broad debate raised by the growing commercialization of MFIs also fits in. Drawing on the *Oxford Review of Economic Policy on Microfinance* (2013), it can be seen that commercialization has had both advantages and disadvantages for

[2] The so-called *fire-fighting* phenomenon, which will be described in more detail in section 2.3, dealing with issues such as *present bias* and *hyperbolic discounting*, two of the most well-known behavioral biases to which those who contract debt from microcredit institutions or collective lending and savings groups are subjected.

microfinance. Regarding the challenges related to this, many concerns have been raised about "mission drift", whereby the imperatives of economic feasibility led to giving preference to the richest borrowers over the poorest and most disadvantaged ones (Fouillet et al., 2013; Cai et al., 2025). In contrast to these criticisms, however, commercialisation has also been shown to provide various benefits. It has, in fact, allowed MFIs to free themselves from donor budgets, thus expanding the proportion of the population they serve (Fouillet et al., 2013), as well as facilitating the adoption of innovative digital financial tools, such as mobile banking, blockchain, and AI-based credit scoring (Cai et al., 2025). These tools have helped to reduce transaction costs, increase transparency, and improve accessibility, especially among rural populations.

### 1.2.1 Historical Background: Evolution of Microfinance Institutions in Africa

In the African context, microfinance institutions have contributed substantially to financial inclusion by overcoming the historical obstacles inherent in traditional banking systems. However, structural factors (the lack of adequate infrastructure, the small amount of money involved in financial operations) and geographical factors (low population density and the risk inherent in agricultural investment) have made it difficult to expand into rural and more dispersed regions. This is referred to by Johnson et al. (2006) as a "frontier of provision", beyond which centralized services are unable to function sustainably. As a result, the main model by which microfinance has developed in Africa is through group lending practices, in which each member offers their mutual commitment to repaying loans, in such a way as to create a kind of "social guarantee".

As mentioned in section 1.1, VSLAs are a prime example of microcredit in the African continent. Other examples of informal systems are those of the Rotating Savings and Credit Associations (ROSCAs), which are able to facilitate the purchase of durable goods (Besley et al., 1993), impose some discipline on savings (Bauer et al., 2008; Gugerty, 2007; Dagnelie & LeMay-Boucher, 2008), and enable women to safeguard savings from various family obligations (Anderson & Baland, 2002). Similar structures are the Village Community Banks (VICOBAs), active in unbanked villages, the Senegalese *Susu*, the *Tontine* of French-speaking Africa, and the aforementioned SACCOs, particularly widespread in West and Central Africa, which offer low-interest loans through the pooling of savings (Jamborow LTD, 2021).

In support of such collective models, Ghatak and Guinnane (1999) highlight that this specific approach has a number of advantages: (1) it mitigates the problems of information asymmetry in determining the risk of default by borrowers; (2) ensures the productive investment of loans, due to constant monitoring among the various members of the group; (3) implements "light penalties" in case of non-compliance; (4) strengthens the share capital through forms of mutual insurance. Despite their wide adoption and alleged advantages, group lending strategies still present a number of challenges, including freeriding and excessive social pressure. This has therefore led, to date, many MFIs to move towards individually responsible credit models, with only limited group components, in order to preserve flexibility and trust in the community (Cai et al., 2025). By virtue of this, Cai et al. (2025) argue that, since the microfinance sector is highly diversified, future research should focus on developing a model that is not *one-size-fits-all*. They argue, in fact, that the focus should be, first and foremost, on the development of customized digital financial products, specifically designed to meet the specific needs of individual borrowers (Cai et al., 2025), especially in complex socioeconomic environments such as Tanzania.

### 1.3 Literature Review: Theoretical View of Microfinance

This theoretical literature review aims to clarify the research question underlying this thesis and to direct the study to aspects insufficiently examined in the previous section, about the historical evolution of microfinance and its models in theory. In particular, this analysis will proceed with a more in-depth investigation of MFIs through theoretical frameworks such as *Dependency Theory* and the transition from *top-down* to *bottom-up* development strategies.

Starting from the *Dependency Theory*, it can be said that, rather than being just a theoretical construct, it represents a way to understand the political and economic relations historically rooted in peripheral countries (Desai et al., 2002). For this reason, it provides an ideal theoretical basis for critically examining the role of microcredit within the broader context of global economic inequalities. Originating around the 1960s and 1970s as a critique of the paths adopted in the peripheral Global South, the *Dependency Theory* can be better understood if conceptualized as an analysis of the "development of underdevelopment". This terminology refers to the fact that trade imbalances between the periphery and industrialized economies have only aggravated global inequalities, as

pointed out by economists such as Prebisch, Furtado, Singer, and Sunkel. As a matter of fact, the current model of capitalism was seen to be inadequate by these academics, who therefore proposed structural changes. These were often referred to as Import Substitution Industrialization (ISI), and their aim was that of favouring the transition to greater domestic production (Desai et al., 2002). These structuralist alternatives were then explored from a Marxist perspective by André Gunder Frank (1978), who argued that the process of decolonization, rather than attenuating, had actually reinforced neo-colonial imperialist logic. This idea was further developed within Wallerstein's *World-System Theory* (1974), which offers an even more all-encompassing analysis of the core-periphery relations within the global capitalist system.

In this context, the theories of these scholars are, thus, identified as a real critique of the first models of post-colonial development, *de facto* perceived as the reflection of the same colonial programs they intended to oppose. It is precisely in reaction to these *top-down* approaches, with strong centralized state guidance, that microfinance has proposed itself as a *bottom-down* alternative, aimed at promoting, in these developing countries, economic independence through indigenous systems of community cooperation and trust (Armendáriz & Morduch, 2010). Conversely, both Desai et al. (2002) and Bateman (2010) caution that microfinance could unwittingly perpetuate the very dependency it seeks to eradicate, particularly as it transforms from informal, socially conscious entities to formal, profit-driven financial institutions (Fouillet et al., 2013). One of the most striking examples of such "institutional hybridization" (Battilana & Dorado, 2010) was that of *BancoSol* in Bolivia in 1992, whose transformation saw it move away from its original target groups, consisting of poor, less profitable, and riskier customers. This resonates profoundly with the discourse surrounding the pervasive commercialisation of MFIs and the consequent risk of "mission drift", which has already been discussed in §1.2. In this regard, it is necessary to refer to the emblematic paper *From MF to inclusive financial markets: The challenge of social regulation* by Susan Johnson (2013). This study criticises the current discussion on financial inclusion in the microfinance sector for simplifying the concept of poverty to mere income deprivation, without considering the exploitative relationships that generate it. Therefore, Johnson proposes to fill the gaps in the development agenda of the "MF for social inclusion" through economic anthropology and sociology, so that microfinance can return to being a genuine vehicle

for *bottom-up* development, not compromised by commercial or institutionalized logics (Fouillet et al., 2013).

This is precisely the objective of the continuum of the *Dependency Theory*, also known as *Post-Development Theory*, which moves beyond the rhetoric of traditional development to embrace more pluralistic solutions. Indeed, academics such as Majid Rahnema and Arturo Escobar advocate a radical rethink of the concept of "development", prioritising local community-driven initiatives as an alternative to externally imposed models that reflect Western superiority. In particular, in *The Post-Development Reader* (1997), Rahnema and Bawtree describe development as a *myth of development* created by colonial and capitalist ideologies to justify standardization and rapacious interventionism. However, their emphasis on small communities suggests a concrete alternative: small-scale, community-led interventions as forms of revival of the "*people's arts of self-governance"*. From this perspective, it becomes readily apparent that the promotion of inclusive and *bottom-up* approaches, based on cultural identity and knowledge, and local action, could really embody the perfect replacement for conventional *top-down* models.

In this regard, it should be, indeed, noted that microfinance is not only confined to its most co-opted and profit-driven forms. On the contrary, it fully aligns with the previous vision when community instruments such as the VSLAs embody it, rejecting the logic of external dependence and valuing social capital and mutual trust. Unlike many MFIs, which are often led by external donors and perpetuate *top-down* dynamics, these group lending models are entirely managed by the members themselves. Returning to the country under analysis in this dissertation, namely Tanzania, it can be said that in it, the VSLAs are in fact places of community agency, where social empowerment is inextricably linked to economic activities. Decisions are made by mutual agreement, meetings take place in community spaces, and trust, rather than collateral, becomes the foundation on which financial interactions rest. This means that the economic conduct is inextricably linked to the social networks in which it is performed, a claim supported by Granovetter (1985), who argues that microfinance is a social activity rather than a strictly transactional one. However, it is also pointed out by Nustad (2001) that even *bottom-up* approaches require strong institutional structures: by this, it is meant that the linking of

institutions such as VSLAs to external criteria, such as bank profitability, risks compromising their community self-determination.

### 1.4 Literature Review: Empirical View of Microfinance

In order to better identify the gaps in the literature and demonstrate how behavioural economics approaches can improve the effectiveness of financial interventions proposed by microcredit institutions, it is considered necessary to add, following the previous theoretical review of the concept of microfinance in section 1.3, a critical analysis of the currently available empirical data on the results and shortcomings of MFIs and VSLAs. In fact, the initial excitement surrounding the transformative potential of microcredit, which emerged in the 1970s, has increasingly come under scrutiny through rigorous empirical research.

As previously stated, the findings of numerous empirical research endeavours have demonstrated a plethora of advantages associated with microfinance. The primary one is the increase in financial access, particularly for those who are usually excluded from conventional banking (Desai et al., 2002), such as the female gender. Lindvert et al. (2018) report that, in underdeveloped countries, women entrepreneurs typically run small businesses in the informal sector (Dzisi, 2008) and therefore face difficulties in obtaining external funding (Amine & Staub, 2009). In this context, microfinance represents for them a vital tool, providing key resources to start or grow businesses and improving financial autonomy (ibid.). According to Fouillet et al. (2013), building on the work of Ashraf et al. (2010), this process marks a significant transition from social exclusion to access and purchase of durable goods specifically designed to meet women's needs. In addition, microfinance strengthens community resilience during economic shocks or environmental disasters by providing crucial financial instruments to level out income and safeguard livelihoods, in conjunction with mechanisms for providing liquidity under appropriate conditions (Ullah & Khan, 2017). The first tool mentioned acts as an income stabilizer, that is, it allows families to withstand periods of recession; the latter, on the other hand, has been designed to make the poor adopt proactive rather than reactive approaches (ibid.). Ullah and Khan (2017) then demonstrate, in the conclusion to their study, that emergency loans and savings products supported by social capital are capable of boosting individual and community resilience when microfinance is embedded in a wider social context. Finally, microcredit lends legitimacy to the concept of business

(Lindvert et al., 2018). With this claim, Lindvert et al. specifically refer to the fact that the preponderance of microfinance institutions mandate that prospective borrowers initiate their loan application by accumulating a modest sum on a weekly basis prior to the disbursement of the loan. Meanwhile, during the repayment period, they usually receive commercial training (such as accounting classes), which legitimizes them and further strengthens them in their role as entrepreneurs (ibid.). This legitimacy is important for attracting initial customers, building relationships with suppliers, and, thus, obtaining the products needed for sale.

However, despite these great achievements in terms of economic empowerment and financial inclusion over the years, microfinance has not necessarily improved the conditions for long-term financial stability. A large number of studies have identified the institutional set-up of many microfinance institutions as the main cause of this limitation. For instance, Uddin et al. (2024) analysed the results obtained from 1999 to 2018 from a global-scale dataset that they built, containing 1066 MFIs and 672 banks in 68 countries. They found that MFIs have significantly higher marginal operating costs than banks, impacting microfinance interest rates in terms of both net margin and lending rate. These higher operating costs are due to microcredit institutions needing to maintain extensive social networks (i.e., offices even in the most remote areas and a large pool of field staff) in order to provide financial services to low-income and often isolated communities (Uddin et al., 2022). In addition to this, Uddin et al. (2024) point to another structural barrier as a key factor in this issue: namely, the high costs associated with monitoring borrowers and issuing loans without collateral. Finally, MFIs, compared to traditional banks, often risk running into long-term financial sustainability problems, due to their dependence on funding from external donors[3]. This practice generates instability in their balance sheets, which hinders long-term financial planning. Indeed, in this setting, planning becomes more influenced by donors' priorities and external economic situations than by the needs of individual institutions and their borrowers (Fadikpe et al., 2022). The second cause for the problems currently facing microfinance is the limited time allowed for debt repayment. Indeed, the reimbursement periods of a considerable number of

[3] In fact, while MFIs often rely significantly on grants, contributions, and subsidies from governments, local and even foreign donors to finance their activities (Fadikpe et al., 2022), the typical commercial banking operating strategy involves mobilizing expensive deposits from competitive markets (Uddin et al., 2022).

microloans are generally monthly, commencing, thus, in close proximity to the disbursement of the loan. This rigid structure is often inadequate for the seasonal or sporadic nature of debtors' business activities (Komba & Komba, 2024). Farmers are a good example of this, since they generally only start to make a profit after the harvest. The same is true of small commercial enterprises, which are subject to irregular cash flows (ibid.). This is especially true in cases where there is an absence of institutionalised social assistance (ibid.). When this happens, borrowers often have to default, and the so-called phenomenon of "*fire-fighting*" (further explored in section 2.3) becomes the norm. This means that the needs of immediate survival from economic shocks end up prevailing over borrowers' repayment priorities (as well as their ability to save and not fall into a vicious circle of debt). Then, the third factor affecting the effectiveness of loans through MFIs concerns the social context of the borrower, as evidenced by group-lending models, including VSLAs, discussed in relation to Tanzania. On the one hand, several studies have highlighted the success of the microfinancial group-lending model in encouraging high repayment rates and, consequently, the feasibility of financial access in low-income contexts. For example, Allen and Hobane (2004) and Anyango (2005) found that, in Zimbabwe and Malawi, respectively, participation in VSLAs improved household wealth and quality of life, while CARE Tanzania (2006) (cited by Brannen & Sheehan-Connor, 2016) highlighted how these institutions led to an increase in women's economic participation. However, collective lending is compromised in times of crisis, as it depends on the social ties established by borrowers to support repayment, which risk breaking when defaults increase (Adbi et al., 2023). This can trigger a dangerous chain reaction of defaults capable, at the very worst, of destabilizing entire microlending organizations.

This risk is amplified for the most vulnerable borrowers: in times of crisis, peer monitoring and collective responsibility mechanisms frequently tend to reinforce processes of social marginalization, generating social pressures, stigma, and, in the most extreme cases, even expulsion from the group (Komba & Komba, 2024; Adbi et al., 2023). The social cohesion of the group is therefore crucial: in solid groups, repayment is bolstered, whereas in fragile groups, a single default can jeopardise the whole dynamic (López-Sánchez et al., 2022; Muchnik & Kollamparambil, 2015). This is consistent with broader findings that the performance of group-lending models depends very much on the social characteristics of the group itself. More precisely, Muchnick and

Kollamparambil (2015) have studied how group homogeneity, cohesion and mutual trust are positively correlated with repayment performance, so much so that they found that a single default by a member of a weak group can lead to a vicious cycle of defaults, as well as of debt (Muchnick & Kollamparambil, 2015). All this prompts us to reflect on the broader phenomenon of *microfinance traps*, which emerge within interdependent social groups when obligations to the family[4] collide with - and ultimately prevail over - the economic group commitments, as conceptualised by Lindvert et al. (2018). However, this dynamic will be explored in more detail in section 2.4.3, which deals with the social pressures faced by the debtors of microcredit institutions and the impact these dynamics have on their behaviour.

What is therefore evident from this empirical literature is that most of the problems of default, vicious circles of debt, and inadequate savings techniques result from the inappropriate analysis of the identified problems and the unsuitable solutions that microfinance proposes in relation to the real needs of populations. The traditional microfinance approach is, in fact, based on debt-driven interventions rather than savings-led ones, thus failing to promote genuine financial stability and sometimes contributing to poverty rather than alleviating it. Indeed, a recent study on over-indebtedness found that low-income individuals who rely heavily on credit as their main financial tool are more likely to become indebted (Schicks, in Fouillet et al., 2013).

Hence, a more detailed and context-specific examination of the reasons behind the failure of conventional methods of analysis of these issues is required. This is an examination that Chapter 2 below will carry out to subsequently pave the way for the behavioural solutions outlined in Chapter 3.

[4] For example, in Lindvert et al.'s (2018) research on Tanzanian women entrepreneurs, one participant revealed that, due to a lack of social safety nets or other sources of funding, a significant portion of her loan had to be redirected to cover emergency medical expenses for her sick child instead of the costs of her own business. Because of this family mishap, she was unable to complete her loan payments on time, causing stress in her loan group and increasing her chances of being denied future credit opportunities.

# CHAPTER 2: RECOGNIZING THE BEHAVIORAL GAP

As demonstrated in Chapter 1, the assumptions underlying traditional economic approaches are the main reason for their ineffectiveness in producing lasting improvements for MFI and VSLA borrowers in disadvantaged communities in developing countries.

Based on this, Chapter 2 will explore the reasons why traditional economic strategies have proven to be inadequate, analysing how the structural inefficiencies of MFIs and VSLAs, when compounded by specific behavioural constraints, ultimately result in negative outcomes, including excessive indebtedness, deficient saving techniques, and a deterioration in social networks. This analysis is necessary to come up with innovative solutions based on behavioural and context-sensitive approaches.

## 2.1 Why Traditional Economic Approaches are Inadequate

It is crucial, first of all, to understand *why* and *how* traditional economic models have not been able to adequately address the main problems related to MFIs and VSLAs, which are prevalent in emerging nations, and, in the particular instance of this dissertation, Tanzania.

To answer the first question, as to *why* traditional techniques have failed, it is necessary to refer to their basic assumption, which characterises humans as beings capable of acting rationally (Kremer et al., 2019). Following the logic of this premise, if individuals are actually seen as rational *homo economicus* who can maximise their utility, then problems related to microfinance must necessarily derive from a lack of knowledge or skills. However, research shows that the solutions that are typically adopted in these cases (i.e., financial literacy activities) usually fail to produce long-term changes in borrowers' behaviour (Alia et al., 2015), as the real cause of these issues is ignored: behavioural constraints.

To answer the second question, which relates to *how* traditional economic approaches have not achieved their intended objectives, it is necessary to highlight precisely *how* they attribute much of the responsibility for reimbursement problems to purely structural

factors, such as weak market infrastructures or slow regulatory frameworks. This line of reasoning proves to be fallacious from both the "supply-wallah" and "demand-wallah" points of view, for many reasons. The former are sponsored by the economist and former UN adviser Jeffrey Sachs and argue that strengthening institutional capacity through more external aid is the solution to overcoming market failures in low-income countries. This would supposedly generate a virtuous cycle of growth and investment (Banerjee & Duflo, 2011). Conversely, the "demand-wallahs", whose most prominent proponent is the *anti-aid* campaigner William Easterly, argue that aid undermines local institutions and markets, and that these should be allowed to operate independently so that these countries can solve autonomously their own problems (ibid.). Both of these approaches fail, however, because they neglect the inefficiencies caused by behavioural biases, thus revealing the inadequacies of the long-standing policy debate in development economics (Kremer et al., 2019).

In this regard, a valid, cost-effective, and welfare-enhancing alternative to the constraints imposed by the "supply-wallahs" and "demand-wallahs" is represented by behavioural development economics. It is indeed possible to assert this, given that the methodology employed by this branch of economics involves analysing systematic deviations from standard models and incorporating psychological insights into economic models (Rabin, 1998; DellaVigna, 2009; in Kremer et al., 2019). Hence, with this change in perspective, behavioural economists are no longer limited to addressing the question of "yes or no" to aid in a binary way, seeking instead to determine *how* and *when* such aid should be provided, in order to maximize its impact and get closer to the empirical reality of individuals on the ground (Banerjee & Duflo, 2011). An emblematic illustration of this contextual approach proposed by behavioural development economics comes from the book *Poor Economics* by Banerjee and Duflo (2011) and concerns the distribution of bed nets to prevent the spread of malaria in Africa (also reported in Kremer et al., 2019). The authors' targeted interventions, developed from an analysis of behavioural biases (such as framing messages about long-term benefits and community involvement), have, in fact, managed to increase the adoption of bed nets. This example, thus, clearly demonstrates how behavioural development economics is able to achieve the perfect balance between a universal approach and one that is more particularistic, i.e., one that is aware of the needs of the local community.

However, despite the fact that behavioural economics has gained widespread recognition in the field of development, many, including Davis (2012), continue to view it with scepticism. As a matter of fact, in his paper *Economics Imperialism under the Impact of Psychology: The Case of Behavioural Development Economics*, Davis provides a critical analysis of the shortcomings of this branch of economics, highlighting a series of warning signs and areas of doubt, the main ones being: (1) the tendency to classify certain behaviours (e.g. non-use of fertilizers) as irrational, without considering real economic constraints, such as income uncertainty or environmental/seasonal conditions (Rosenzweig and Udry; 2014); (2) the risk of promoting paternalistic policies[5]; (3) the significant challenges in translating behavioural insights processed through Randomized Control Trials (RCTs) into practical, large-scale policies.

While these critiques do indeed raise significant issues and do so with particular emphasis on the considerable challenges associated with implementation, they do not, in and of themselves, provide sufficient grounds for the wholesale dismissal of the approach, particularly when taking into consideration the empirically observed benefits that have been realised in analogous contexts. In virtue of this, the aim of the present dissertation is to use behavioural insights to reinforce, without distorting them, traditional savings and lending practices in Tanzania in order to address persistent cognitive biases (notwithstanding the methodological challenges mentioned above). In this way, it is believed that the proposed intervention will have the potential to promote greater financial self-sufficiency, rather than yet another external dependency.

### 2.1.1 Gaps in Existing Literature: The Behavioural Dimension of Microcredit Usage in Tanzania

Continuing the investigation set for this thesis, it is necessary to note that, despite the extensive theoretical and empirical analysis provided for the current microfinance industry, a clear gap in the literature can be identified. Indeed, returning to the main focus of this study, it can be seen that most research on MFIs and VSLAs has focused on the limits typically analysed by traditional literature: we are referring to institutional, structural, and market ones. As for the former, the various studies focused on short loan repayment periods (Mrindoko, 2022); with respect, instead, to the structural barriers, the

[5] It should be noted that this could be particularly problematic in delicate contexts, such as Tanzania, whose history is disseminated by multiple external interferences (see §1.1).

research focused on the high interest rates imposed by MFIs (Uddin et al., 2024); and finally, at the level of market constraints, there is ample documentation in the literature about the lack of adequate financial infrastructure, and the regulatory shortcomings that result in financial exclusion (Lindvert et al., 2018). To overcome these critical issues, the typical solution promoted by traditional economic models has often been employed: that is, financial literacy. Once again, this specific approach is based on the assumption of the presence of a direct correlation between knowledge of basic economic notions and an improvement in economic results. Nevertheless, the analysis of Mwombeki and Magwana (2023) showed that it did have a significant effect on the decision to access microcredit among rural households in Tanzania, but that this was negative. This finding reinforces the idea that, despite the valuable information these traditional interventions and their respective studies offer for this research, they often overlook a crucial yet frequently understated element: the behavioural and psychological factors that influence borrowers' financial decisions. This still happens in spite of the significant progress made in behavioural development economics following the pioneering work of Banerjee and Duflo (2011) and Mullainathan and Shafir (2013).

That being said, given these theoretical and practical shortcomings, the aim of this thesis is precisely that of addressing the identified gap by exploring the most prevalent behavioural biases and offering solutions that adhere to the theoretical principles of behavioural economics, while remaining culturally sensitive to the local Tanzanian context. In this regard, Table 1 schematizes these behavioural deviations, providing a brief definition of them and demonstrating how they can be empirically found in the local Tanzanian context. This will enable the theoretical analysis to be grounded in empirical reality, establishing what is defined in methodological terms as "behavioural realism" (Rabin, 1998, p. 13)[6]. The approach proposed by Rabin (and adopted here), while recognising the systematic deviations of human behaviour from standard rational models, does not intend to reject *S-frame* analyses, but rather to integrate them with those of the

[6] Rabin (1998), in his seminal article *Psychology and Economics,* published in the *Journal of Economic Literature*, prescribes that: "*tractability* and *parsimony* should be guiding principles in our efforts to make our research more realistic, not pretexts for avoiding this task." By adopting this approach, it is hypothesized the real possibility to pave the way for the formulation of more realistic and culturally adapted interventions, experimented elsewhere, but still little explored in the reality of Tanzania's MFIs and VSLAs.

*I-frame*. Consequently, while acknowledging the finding of Ullah and Khan (2017) that no single microfinance approach can offer resilience in every situation, it is believed that through this contextual approach, capable of combining structural changes with targeted behavioural interventions, the financial stability of MFIs and VSLAs can be significantly improved.

**Table 1: Selected Behavioral Biases in Tanzanian MFIs and VSLAs**

| Bias | Definition | Real examples from Tanzania |
|---|---|---|
| 1. Scarcity Trap and Bandwidth Tax | Chronic condition of scarcity that induces "tunnelling", "neglect" and "juggling", causing a cognitive tax (*bandwidth tax*) that reduces lucidity and control. | Widespread use of *mikopo umiza au kausha damu* (informal high-interest loans) and dysfunctional debt management; prevalence of ROSCAs and loans from friends/relatives; difficulties in initial repayments due to cognitive overload; savings practiced only for fear of default and not with a view to long-term goals. |
| 2. Present Bias | Tendency to privilege immediate benefits over future ones, aggravated by scarcity that taxes bandwidth and reduces long-term planning. | MFI and VSLA members allocate loans to urgent needs (medical expenses, celebrations) instead of investments; savings are irregular even if recognized as profitable; Many women resort to multiple loans to meet immediate family needs, neglecting future costs and generating defaults. |
| 3. Social Norms + Social Pressure | Financial behaviours driven by shared social expectations (empirical and normative), combined with social enforcement and the risks related to "herd behaviour" or "social image concerns". | Tensions between family and collective norms that push borrowers (especially women) to divert entrepreneurial funds towards domestic needs ("microfinance traps"); fear of social exclusion in the event of default; conformism to the behaviour of the group; reticence in asking for help for fear of appearing incompetent. |

### 2.2 Scarcity Trap and Bandwidth Tax

"Most conversations about poverty feature an elephant in the room" (Mullainathan & Shafir, 2013). With this metaphor, the two economists Mullainathan and Shafir address the concept of "poverty", highlighting how it is often overlooked that the "poor" adopt self-destructive behaviours (such as the inability to save, and many other impulsive

decisions[7]) not only because of economic or structural barriers, but above all because of psychological and behavioural problems. It is, in fact, clear that this problem goes beyond the mere lack of money or skills: these are all clichés about the conception of "poor", which causes their condition to be interpreted as a personal trait.

That these explanations were insufficient was understood, and for the first time conceptualized, precisely by Mullainathan and Shafir in their seminal book *Scarcity*. Thanks to the data they collected, they were able to show that it is poverty itself that creates these psychological and behavioural deficiencies, through a phenomenon known as "scarcity trap". This viewpoint helps to make sense of financial habits that may appear illogical or irrational at first, but are actually an adaptive response to scarcity pressures. This approach allows us to recognize scarcity not solely as a material condition, but as a broader concept, that extends beyond the Tanzanian context and manifests itself in diverse forms in each culture, affecting a wide array of global social problems.

In fact, scarcity can be understood as that precise condition in which one has less than what one perceives as necessary (be it money, time, or social resources) such that the mind obsessively focuses on that immediate need, limiting the decision-making capacity for long-term planning (Mullainathan & Shafir, 2013). An effective representation of this psychological phenomenon is offered by the metaphor of the "small suitcase", proposed by Mullainathan and Shafir (2013): the individual trapped in scarcity is forced to "re-pack" and continuously compress his choices, leaving little room for error. Scarcity is thus configured as a dysfunctional and chronic way of managing available resources, characterized by a constant "being one step behind". To correctly understand this vicious circle called the *scarcity trap*, it is therefore necessary to rigorously identify the key mechanisms and dynamics that determine its reproduction and consolidation over time. To this end, in the list below, reference will once again be made to the book *Scarcity* by Mullainathan and Shafir, which represents the main theoretical basis for analysing these processes:

[7] Another example is the lack of adoption of a very advantageous practice (i.e., weeding) in rural areas of India. Poor Indian farmers, despite being aware of the benefits of this practice, do not adopt it, even in the free time between harvests. Hence, even this behaviour, only apparently irrational, finds a coherent explanation in scarcity trap (Mullainathan & Shafir, 2013).

1. **Scarcity Mindset:** This first mechanism consists of the involuntary adoption[8] of a mental structure characterized by less mental flexibility, which characterizes those who are trapped in cycles of deprivation.
2. **Tunnelling**: From this focus generated by such a mindset, *tunnelling* develops, which represents an involuntary restriction of cognitive attention: the individual directs all his or her mental resources on what is in the "tunnel" in the present moment, thus neglecting equally important but not immediately urgent issues. This "tunnel vision" is the reason for both the benefits of scarcity (i.e., greater concentration, defined as *focus dividend*) and the associated cognitive costs, known as *tunneling tax*. The latter also gives rise to another psychological phenomenon known as "*goal inhibition*", in which non-urgent goals are inhibited, thereby disrupting the balance of decision-making.
3. **Neglect**: This "*tunnel vision*" inevitably leads to *neglect,* as well. This is tantamount to the typical attitude adopted under pressure, whereby there is a tendency to systematically neglect important, but not urgent areas (such as savings, education, or preventive health), even in circumstances where the future benefits are substantial.
4. **Juggling**: The two processes of *tunnelling* and *neglect* inevitably end up causing *juggling*, that is, a state in which individuals constantly shift their attention from one pressing need to another, in search of temporary and fragmentary solutions. By means of this mismanagement[9], predictable events appear as sudden shocks because, under pressure, we tend to neglect future problems, noticing them only when it is already too late.
5. **Bandwidth Tax:** This fragmented management gives rise to the so-called *bandwidth tax*, the cognitive burden that manifests itself as a direct consequence of scarcity and compromises the mental resources available to be lucid, patient,

[8] It has been said that this is an "involuntary" cognitive phenomenon since, as the psychologist and economist Daniel Kahneman would say, "scarcity captures the mind both when thinking fast and when thinking slowly" (2011).
[9] This mismanagement is defined by Mullainathan & Shafir (2013, p. 139) as a "patchwork of short-term, delayed and expensive solutions". Moreover, in this context, they cite the book *Portfolios of the Poor*, which studied how the poor use an average of about ten distinct financial instruments, thus creating a complex and fragile web of debts and credits.

and far-sighted in making complex decisions[10]. In particular, the bandwidth tax reduces both *fluid intelligence*, i.e., the ability to process new information, and *executive control*, which regulates impulsive behaviour. As a result of this, studies reported in the book *Scarcity* show that living in poverty can reduce cognitive ability by as much as a full night without sleep. This phenomenon is not attributable to individual traits (being poor or not), but rather to the impact of living in scarcity itself, which can temporarily reduce anyone's IQ.

6. **Lack of Slack:** In this context, the lack of *slack*, i.e., the margin of resources that allows external shocks to be effectively absorbed, is evident. Taking up the metaphor of the suitcase is once again useful here: in the "small suitcase" every space is precious, and every management error becomes expensive; conversely, in the "large suitcase" the limits are less binding. Economists call this phenomenon *decreasing marginal utility*, and it is because of this that the poor have less slack. Due to their limited resources, each unit has a very high marginal value for them and cannot be set aside without compromising immediate needs[11].
7. **Failure to capitalize on moments of abundance**: The last, but not least, mechanism of the *scarcity trap* concerns the frequent failure to make effective use of the rare moments of abundance: people tend to consume rather than save or invest, thereby wasting valuable opportunities to break the cycle of scarcity. In this context, every waste has more serious consequences and the risk of falling deeper into the trap.

### 2.2.1 The Academic Debate: Does a Scarcity Trap Really Exist?

In view of the fundamental mechanisms of the *scarcity trap* (the *bandwidth tax* being the most important), it is paramount to undertake a critical examination of the academic discourse that has arisen from this. In fact, while some scholars argue that scarcity impairs judgement and compromises economic decisions, others believe that poverty can

[10] The metaphor of the "overloaded computer", used by the authors (Mullainathan & Shafir, 2013, p. 46), effectively clarifies this phenomenon: just as a computer is slowed down by too many open applications, the mind of those who experience scarcity has fewer operational cognitive resources.

[11] In this regard, Banerjee reports that the "temptation tax" (Mullainathan & Shafir, 2013, p. 82-83) is more burdensome for the poor: a study he conducted in Indonesia shows that the poorest devote 10% of their consumption to discretionary goods (cigarettes, alcohol), while among the rich this share drops to 1%. Of course, in absolute terms the consumption of the rich is greater, but it affects their overall budget proportionately less, due to their greater availability of slacks.

paradoxically refine the quality of decision-making, making it more attentive and strategic. Therefore, this academic debate will now be briefly illustrated, concluding by siding with the former scholars. This will be done in order to ensure consistency with the arguments presented in this thesis.

Therefore, on the one hand, we have, as illustrated above, Mullainathan and Shafir (2013), who argue that cognitive resources are subject to a *bandwidth tax* generated by scarcity. In parallel, Banerjee and Duflo (2011) observe that persistent financial tensions among low-income individuals increase economic vulnerability by encouraging short-term lending cycles and preventing the development of productive activities. These conclusions are reinforced by the experimental RCT study conducted by Karlan and Zinman (2009) in the Philippines, which shows that loans from MFIs are often used, by poor individuals, for immediate consumption rather than for investment.

On the other hand, Fehr, Fink and Jack (2021) advance, in a counter-argumentative key, the thesis called "Poor but Rational", based on *rational inattention* models: according to the latter, scarcity, instead of compromising the decision-making process, should actually make it more rational, focusing attention on the most crucial choices and, therefore, increasing the stakes (as these researchers manage to confirm in their experimental study conducted on a sample of farmers in Zambia). Although this viewpoint emphasises certain adaptive responses to scarcity, it ultimately reinforces Mullainathan and Shafir's initial thesis (and also that of the scholars cited in the first line-up) that scarcity, despite focusing attention, incurs cognitive costs that reduce mental capacity and result in dysfunctional financial behaviours.

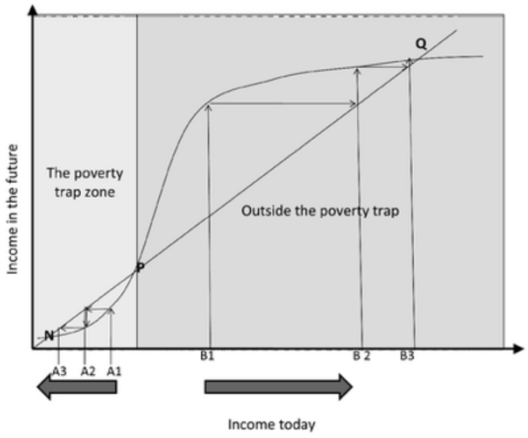
### 2.2.2 Mathematical Representation of the Scarcity Trap: The S-shaped Curve

In an attempt to formalize the mechanisms underlying the *scarcity trap*, behavioural development economics has introduced dynamic models based on non-concave production functions, in particular *S-shaped production functions* (Kremer et al., 2019). Unlike the usual concave production functions - in which poor households, with higher marginal returns, are expected to accumulate capital and converge towards a common steady state - *S-shaped functions* take on a convex shape at low capital levels and concave at high capital levels, admitting the possibility of multiple stable equilibria (ibid.). Which of these steady states a household converges to depends on its initial capital: if this is

below a critical threshold, it is likely to remain trapped in a low-return equilibrium, unable to accumulate sufficient resources to initiate a process of sustainable growth (Banerjee & Duflo, 2011).

Graphically, as shown in Figure 1, the curve has three points of intersection with the bisector (the 45-degree line where *present income = future income*): two correspond to stable equilibria (one *low-income*, the other *high-income*), while the central point represents an unstable equilibrium, i.e., the threshold that separates the two regimes. According to Banerjee and Duflo (2011), this model effectively reflects the reality of poor economies, where current conditions significantly determine future well-being. Households below this threshold will see their income decrease over time, as the curve is below the diagonal, forcing them to become progressively poorer and remain trapped in poverty, at point N. On the contrary, those who have sufficient resources to exceed the critical threshold will be able to benefit from increasing returns and start a growth trajectory, effectively reflecting the reality of poor economies, at least to a certain extent. This fate is represented graphically by the arrow that starts from point B1, moves to B2 and B3, and so on.

**Figure 1: Graphical Representation of an S-shaped Poverty Trap Curve**




*Source: Adapted from Banerjee & Duflo, 2011*

However, in the transition from theory to reality, significant practical, financial, and cognitive obstacles arise that make it difficult to overcome the critical threshold predicted by the model. Although some lumpy physical assets can theoretically become accessible through mediating instruments - such as flexible financial products, informal institutions

(e.g. ROSCAs) or public interventions - such mechanisms rarely generate the expected expansion of consumption in the presence of high marginal returns (Kremer et al., 2019). In other words, consumption growth is not consistent with the high rate of return offered by theoretically accessible investments, indicating the presence of deeper behavioural or structural constraints that prevent virtuous trajectories from being triggered. As will be explored in section 2.3.2, through the mathematical model of *hyperbolic discounting* developed by Laibson, these constraints do not reflect an irrationality in an absolute sense, but a form of rational adaptation to immediate pressures, which are amplified by the psychological effects of scarcity, such as *tunnelling* and the *bandwidth tax*.

In this context, the microfinance model offers a further critical point. While it extends access to credit to unbanked individuals, it also imposes high interest rates on precisely the most vulnerable borrowers in order to compensate for credit risk (Uddin et al., 2024). This only reinforces the logic of the *scarcity trap*, as described by Mullainathan and Shafir (2013), transforming credit from an investment opportunity into an immediate response to financial stress, with the result of exacerbating debt cycles and further reducing decision-making margin.

### 2.2.3 Empirical Observations of the Scarcity Trap in Tanzania

This theoretical and graphical representation of the *scarcity trap* finds a concrete empirical confirmation in the context of MFIs and VSLAs in Tanzania, where the initiation of beneficial savings practices or sustainable economic growth paths is hindered by the absence of sufficient initial resources (i.e., the positioning below the critical threshold illustrated in the *S-shaped curve*). Several studies confirm this mechanism.

Firstly, Komba & Komba (2024), citing Kihwelo (2023) and Banks et al. (2019), report that in recent years, in Tanzania, there has been frequent recourse to loans from financial institutions that impose rigid conditions and high interest rates. Such loans, commonly known as *mikopo umiza au kausha damu* (“loans that hit hard or drain blood”), deplete savings and lead many individuals, including small business owners and private citizens, to find themselves trapped in debt cycles. This can be attributed to the fact that most individuals obtained loans from small microcredit providers rather than from commercial banks, a choice that often turned out to be sub-optimal, but was nevertheless undertaken, as dictated by the *tunnelling* caused by financial stress. Added to this is the *bandwidth tax*

generated by predatory lending. The latter ultimately results in ineffective repayment management, perpetuating default rates and imposing a significant burden on several MFIs[12].

Secondly, it was highlighted by Anyango et al. (2007) that the habit of resorting to informal borrowing, which is still quite widespread among the Tanzanian population, is a symptom of the *scarcity trap*. Despite participation in structured savings programs such as those of MFIs and VSLAs, the most frequent sources of loans are still interest-free ROSCAs, followed by friends and relatives (18%), while SACCOs (2%), employers (2%), and banks (1%) represent minimal percentages. This shift in preferences towards riskier and more informal financial practices, rather than representing real economic independence, indicates a vicious cycle of reliance on short-sighted solutions, compounded by the absence of *slack* to deal with even small liquidity shocks. In fact, loans from friends and family are routinely used to meet short-term needs, such as school fees, celebrations, other debt payments (including loans from VSLAs), and medical or funeral emergencies (Anyango et al., 2007).

Thirdly, Anyango et al. (2007) found significant difficulties in repaying the first loan by VSLA members (particularly in the Wema Hauozi, Jiunge Ule, and Mwanzo Mgumu groups, whose behaviour was studied by the researchers). According to the members, this recurrent mismanagement of first-time loans is attributable to the fact that they were not yet fully acquainted with the programme and, more importantly, had not yet developed an effective understanding of credit management. This meant that they invested in inappropriate projects or used the funds for immediate needs. Yet, since participants had actually received financial training, behavioural economics attributes cognitive overload not to a lack of skills, but to the way in which scarcity alters the way decisions are perceived and approached, interfering with lucid processing of choices.

Finally, although saving is a crucial element, especially in developing contexts such as Tanzania, it remains largely underused compared to credit. As noted by the field studies

[12] For example, Mamboya et al. (2017) report that MFIs such as Foundation for International Community Assistance (FINCA) and Promotion of Rural Initiative and Development Enterprises (PRIDE) have default rates of 3.4% and 3.8%, respectively, exceeding the international limit considered acceptable (3%) (Korankye, 2014).

conducted by Komba & Komba (2024) on a number of Tanzanian communities, regular savings practices are considered to be essential mainly just for the purpose of pending loans being repaid. In this regard, a respondent in their survey (identified by Komba & Komba (2024) as Respondent 4), stated: "I am saving TZS 10,000 every day because I am worried about defaulting.", demonstrating that in practice the use of credit prevails.

According to Mullainathan and Shafir (2013), the use of loans depends as much on objective needs as on the reduced ability to assess future consequences when trapped in the "*mental tunnel*" of the *scarcity trap*. In this state, loans appear as quick fixes to "put out the fire" of the present, while future costs remain out of sight, and this ultimately results in costs being increased over time. This intertemporal dynamic is well summarized by the quote "*scarcity today creates more scarcity tomorrow*" (Mullainathan & Shafir, 2013), particularly relevant in the context of microcredit institutions in Tanzania.

### 2.3 Present Bias and Hyperbolic Discounting

Although everyone uses heuristics to guide their decisions, overusing these strategies can actually distort our behaviour, making it irrational, particularly in contexts of scarcity. One of these empirical strategies that individuals use in their choice architecture is the so-called *present bias*: the tendency to privilege immediate rewards over future benefits, even when the latter are superior. From a behavioural economics standpoint, Mullainathan & Shafir (2013) observe that this phenomenon emerges from an erosion of *self-control*. This latter represents one of the most important functions of *executive control*, which is also known as the second component of *bandwidth*. Indeed, when *bandwidth* is taxed, as happens in conditions of scarcity, the mind is not as profoundly absorbed by the future as it is by the present moment. As a result, attention is captured by the immediate urgencies that are "*inside the tunnel*", while future needs, less salient and cognitively distant, are neglected.

Moreover, as already pointed out above, during the analysis of the *scarcity trap*[13], certain behavioural biases (including the *present bias*) tend to be aggravated by poverty. In fact, people living in poverty are so absorbed by the problems of the present that they do not have the mental space to worry about the future (Banerjee & Duflo, 2011). In these

[13] See § 2.2

circumstances, Mullainathan & Shafir (2013) observe how this behavioural pattern can be defined as "*fire-fighting*": time is dedicated to "fighting the immediate fire", with "new fires constantly breaking out" because nothing is done to prevent them. A typical example of this tendency to postpone small costs to one's "future self" is the attitude towards saving: although the poor should feel the need to save more, scarcity reduces their *bandwidth*, focuses them on the present and causes them to prefer immediate consumption, perceiving saving as a distant, unrealistic and "unattractive" goal (Mullainathan & Shafir, 2013). The problem is that, by not saving, the poor will remain poor; they will resort to credit and find themselves trapped in the vicious circle of scarcity.

Furthermore, to get a more complete picture of how *present bias* both contributes to and is intensified by poverty, Kremer et al. (2019) propose an analysis of the structural factors that amplify it in developing countries. Prominent among them are: the high exposure to risk, the absence of social insurance, and, finally, subsistence living conditions, which leave populations in these regions with little room to adapt (Kremer et al., 2019). Given this, an example that illustrates the tendency to procrastinate due to *present bias* in the lives of people in developing countries is provided by the study of Duflo et al. (2011) on maize farmers in Kenya. Indeed, in their research, the economists found out that, despite recognising the benefits of using fertiliser, only 20% of the farmers utilized it regularly. Remarkably, despite many of them declaring their intention to purchase it before planting and having the necessary funds, they often postponed the decision until ultimately abandoning it (Duflo et al., 2011). This *mis-optimization* can be explained by going to the root cause of the problem, which once again proves to be *present bias,* combined with *partial naïveté*. This latter aspect shall be analysed in the next paragraph.

### 2.3.1 Naïveté about our Future Present Bias

As demonstrated in cases of procrastination among smallholder farmers in Kenya, *present bias* interacts with *naïveté*, i.e., the tendency to underestimate one's future present bias (Kremer et al., 2019). Because of this, farmers postpone useful investments, convinced that they will be able to control their inclination to procrastination in the future. However, the result is that they actually only generate a marked discrepancy between their intentions and their behaviour.

In this regard, it is important to distinguish - in terms of degree of awareness and self-control - between two categories of individuals subject to *naïveté*: firstly, there are the *fully naïve*, who are unable to anticipate their future difficulties and, consequently, do not adopt welfare-enhancing commitment devices; then, we find the *partially naïve*, which, on the contrary, try to use these tools, but often fail to do so because they underestimate the intensity of their *future present bias* (Kremer et al., 2019). In both cases, however, *naïve* individuals face a serious consequence: an inability to accurately predict future decisions causes them to postpone small investments in the short term, which would nevertheless generate a high return in the long term. This causes them significant losses in terms of welfare (ibid.). Additionally, these financial deficits are further accentuated by *endogenous liquidity constraints* (the latter being another side effect of *present bias*). Indeed, according to Kremer et al. (2019) and Angeletos et al. (2001), while the standard theory predicts that *risk-averse households* without access to credit accumulate reserve stocks to insulate themselves from risk, *naïve households* struggle to save, ultimately ending up below the minimum liquidity threshold necessary to manage risks or invest. This phenomenon is a clear representation of how the interplay between *present bias* and *naïveté* can push households further into the cycle of poverty, especially when this latter is also amplified by the addition of the scarcity-induced *bandwidth tax*. This dynamic will be analysed in the following sections using empirical evidence from Tanzanian microfinance[14].

To strengthen the analysis of the interaction between *present bias* and *naïveté*, Le Yaouanq and Schwardmann (2022) offer additional empirical evidence, which is particularly important for the sake of this dissertation. Indeed, these scholars, referring to the literature before them[15], noted the tendency of *naïveté* to persist even in repeated behaviours, where there would be ample learning opportunities, which, however, *naïve* individuals fail to grasp. This is because they tend to interpret their failures as being due to external factors, avoiding recognition of their intrinsic biases. This *misattribution*,

[14] See § 2.3.3

[15] *Present bias naïveté* has in fact been widely documented in the following everyday settings: in physical exercise (DellaVigna and Malmendier, 2006), in tobacco consumption (Giné et al., 2010), in saving behaviour (John, 2018) and in real-effort experiments (Augenblick and Rabin, 2019).

combined with the fact that human memory is selective and imperfect, hinders learning from experience and fuels procrastination (Le Yaouanq & Schwardmann, 2022).

### 2.3.2 Mathematical Representation of the Present Bias: The Hyperbolic Discounting

To address this problem, Laibson (1997) introduced the q*uasi-hyperbolic discounting model*, according to which individuals discount rewards much more in the short term than in the long term, generating *time-inconsistent* preferences. Harris and Laibson (2001) further formalized this behaviour through a *hyperbolic Euler equation* that incorporates *present bias* in the context of standard economic analysis. The latter can be expressed mathematically as follows:

$$u'(C_t) = f'(K_t)[\beta\delta C'(x_{t+1}) + \delta(1 - C'(x_{t+1}))]u'(C_{t+1})$$

In this formulation, C′(xt+1)=dCt+1/dxt+1 represents the marginal propensity to consume (MPC) from liquid assets. In addition, the *Euler equation* replaces the standard exponential discount factor δ with an effective discount factor, defined as a weighted average between the short-run discount factor βδ and the long-run exponential discount factor δ. Crucially, these weights depend on the expected PMC compared to the future liquidity available. For example, if an individual anticipates a high PMC (due to low expected liquidity), their actual discount factor will be closer to βδ, making them appear more impatient. Considering the typical liquidity constraints and the high PMC among households in developing countries, the inclusion of *present bias* in the equation provides an important interpretive key to the observed financial impatience and investment behaviour (Kremer et al., 2019).

On the basis of the analysis of present bias through the mathematical model of *hyperbolic discounting*, Angeletos et al. (2001) summarized the behaviours assumed by present-biased agents as follows:

- They quickly deplete liquid assets, effectively becoming tied to liquidity;
- They build a stock of illiquid assets that they are bound to repay in the long run;

- They leave high-yield investments unexplored;
- They are unable to regulate their consumption, which will move in tandem with income shocks, generating predictable changes in income.

### 2.3.3 Empirical Observations of the Present Bias in Tanzania

All the topics explored in the preceding paragraphs can be readily examined in the Tanzanian microfinancial context, where numerous studies have demonstrated that the majority of the population's financial behaviour is characterised by procrastination and short-term decision-making, rather than by long-term savings and investment objectives. Furthermore, Mndeme and Sinde's (2022) case study, which was conducted in the suburban area of Mbeya City Council, reveals how demographic and socioeconomic factors (such as limited income, occupational informality and vulnerability to unexpected shocks) contribute to irregular and inconsistent savings patterns in comparison to those observed in wealthier urban areas. Therefore, even when people are aware of the benefits of investing and of the protection that savings provide, long-term planning is overshadowed by the urgent needs of everyday consumption and constrained liquidity.

This trend observed on the Tanzanian mainland contrasts with what Brannen & Sheehan-Connor (2016) reported in their study of about 170 families, taking part in one of the oldest VSLA programs in Zanzibar. The results suggest that the VSLA model, overall, proves to be effective and sustainable, improving access to financial services for subjects that would otherwise not be reached by formal institutions. In particular, the structure of *action audits*[16] contributes greatly to promoting financial planning habits. This is because they ensure that savings and interest are redistributed proportionally each year, coinciding with periods of peak household financial demand, such as the start of the school year, national holidays, and major religious festivals (Brannen & Sheehan-Connor, 2016). Nevertheless, as demonstrated by the investigations of Anyango et al. (2007), the same structure of VSLAs, despite being inclusive and low-risk[17], has a propensity to encourage rapid access to funds to address pressing concerns, and consequently, also to fuel *present*

[16] See § 1.1, in which the programs of VSLAs have been first introduced within this dissertation thesis.
[17] In fact, the rates applied by VSLAs (often 5% per month) turn out to be much lower than those of predatory money-lenders who often charge up to 30% per month, but, in any case, slightly higher than those adopted by microfinance institutions affiliated with NGOs, which generally stand at less than 4% per month (Anyango et al., 2007).

*bias*. In the studies they conducted among 25 loan and savings groups, again on the island of Zanzibar, it emerged that some members of the VSLAs believed that the duration of the loans (which was of three months in this research) was too short to make long-term investments, forcing them to allocate the funds for urgent expenses, such as medical care, school fees or religious celebrations. Further confirmation of this can be seen in the analysis of the aggregate data presented in Table 2 (compiled by Anyango et al.), which illustrate in an exemplary way the three main uses of savings payouts: food and household expenses (49%), home modernization (48%), and, only finally, productive investments (31%). A gender-disaggregated reading also shows important differences: while women allocate funds mainly to housing (24%), household spending (21%), and family holidays (12%), men invest in housing construction costs and entrepreneurial activities (46%).

**Table 2: Three Main Uses of the Savings Payout**

| | Female | | | Male | | | Consolidated |
|---|---|---|---|---|---|---|---|
| | Main use, 1 | Main use, 2 | Main use, 3 | Main use, 1 | Main use, 2 | Main use, 3 | |
| | N=86 | N=72 | N=50 | N=48 | N=40 | N=28 | |
| Housing project/improvement | 24% | 13% | 6% | 46% | 20% | 7% | 48% |
| Household asset | 21% | 10% | 4% | 15% | 10% | 4% | 29% |
| Paid off debts | 16% | 10% | 14% | 6% | 5% | 7% | 26% |
| Family celebration e.g. Ramadhan, wedding | 12% | 8% | 14% | 8% | | 14% | 23% |
| Productive investment | 9% | 11% | 16% | 13% | 13% | 25% | 31% |
| Food/household expenses | 7% | 26% | 28% | 6% | 43% | 25% | 49% |
| Paying school fees | 6% | 8% | 6% | | 8% | 4% | 13% |
| Savings | 4% | 3% | 4% | 4% | | 4% | 7% |
| Investing in spouse's business | | 3% | | 2% | | 4% | 3% |
| Medical expenses | 1% | 6% | 4% | | 3% | | 6% |
| Other business assets | | 1% | | | | 7% | 2% |
| Lending to other | | 1% | 2% | | | | 1% |

The consolidated percentages total to more than 100% because members could list more than one use.

*Source: Adapted from Anyango et al., 2007*

In essence, these data suggest that a marked propensity to *present bias* is observed not only in MFIs on the Tanzanian mainland, but also in relatively stable and well-designed contexts, such as those of VSLAs on the island of Zanzibar. Hence, basically, everywhere in Tanzania, both men and women tend to favour immediate consumption over long-term accumulation and investment strategies.

A further insight into these dynamics, with particular attention to gender differences, is offered by the study by Kinyondo and Okurut (2009) on a sample of 150 registered clients

enrolled in the MFIs of PRIDE and FINCA in the Kariakoo division, in Dar es Salaam. Contrary to what is claimed by much of the microfinancial literature, according to which women are more reliable borrowers, the data collected show that they are more likely to participate in economically harmful practices. One example that emerges from Kinyondo and Okurut's research is the use of multiple loans from different MFIs. This is due to the fact that, as already demonstrated by the data collected by Anyango et al. in Table 2, it is predominantly women who regard microcredit as a means to cater to the requirements of the family (particularly those of the children) as opposed to their personal ones. Therefore, to meet all these needs as quickly as possible, they tend to accumulate several debts at the same time, which ultimately end up translating into a *de facto* financial burden. This behaviour reflects a pattern of *time inconsistency*, a central feature of *present-biased* choices, in which people tend to overestimate immediate benefits and underestimate future difficulties, particularly those related to loan repayments. With reference to this type of mindset, women perceive the possibility of diversifying sources of credit as something that can weaken the sense of urgency to meet deadlines. However, this also increases the risk of default. It can therefore be seen that the policies promoted by the Government of Tanzania (GoT) and the various microcredit institutions, aimed at greater gender financial inclusion, often resulted in unexpected negative consequences.

Ultimately, it is possible to argue that Mndeme and Sinde (2022), Anyango et al. (2007), and Kinyondo and Okurut (2009) presented a series of behavioural patterns that were damaging to those involved, as they impede the formation of capital essential for the accomplishment of poverty reduction. Yet, as Anyango et al. further observe, many members of MFIs and VSLAs in Tanzania continue to neglect financial literacy and training programs, despite recognizing their benefits (Anyango et al., 2007). Sometimes, it has also been observed that the organisations themselves favour immediate access to savings and loans, thus diverting attention away from training courses (ibid.). This choice reflects a *tunnel-like mentality*, oriented towards the satisfaction of urgent needs, which has led members to miss the opportunity to acquire fundamental skills for effective debt management. As a result, many people ended up using the funds for unplanned consumption expenses, as they were not equipped with any reimbursement strategy (ibid.). In this thesis, it is argued that such behaviour does not result from a lack of access

to knowledge, but from a behavioural propensity to neglect the investment in skills itself, undermining the sustainability of the microfinance model in the long run.

### 2.4 Social Norms and Social Pressure

Albeit with some modifications made for the sake of this study, this section explores the idea of *social norms*, mainly using the framework that Bicchieri (2017) provides of them in her book *Norms in the Wild*. Indeed, identifying the motivations behind a behaviour, whether derived from personal logic, social norms, or systemic rewards, allows one to select the most appropriate intervention to address inefficient or harmful collective practices. In the case of this thesis, this is particularly important for understanding and, if necessary, changing, collective patterns of behaviour within Tanzanian microfinance systems.

This need for clarity is all the more urgent when dealing with the persistence of social or economic practices that damage society, violate human rights or are simply inefficient (Bicchieri, 2017)[18]. These shared occurrences almost instinctively give rise to a series of significant research inquiries: *What drives this type of action? Why are they still being performed, even when there are laws prohibiting them? What political-economic structures or cultural norms continue to support them, still in 2025?* In order to answer these questions, it is necessary to gain an in-depth understanding of the nature of these collective behaviours, which are generally understood as "*behavioural patterns shared by a group of individuals*" (Bicchieri, 2017). As this conceptualisation is very extensive, it allows for a broad range of methods to be used to examine these group behaviours. Precisely for this reason, it is essential to adopt the methodological prudence typical of the social sciences. This requires distinguishing the observer's point of view from that of the actor, acknowledging that those taking part in collective behaviours frequently lack awareness of the broader implications of their actions, confining their behaviour to a mere following of the norms of their social context. From this perspective, a further essential

[18] For example, Bicchieri (2017, p.1) asks why corruption continues to persist despite reforms, or why, in some African countries, HIV infections are increasing despite the spread of information campaigns and preventive tools.

distinction that must be made to fully understand a collective activity is that between independent and interdependent collective behaviours[19] (ibid.).

If collective patterns of behaviour are diagnosed as *independent*, they refer to ways of acting that do not depend on the actions or expectations of others, and that are often driven by economic or natural factors. These behaviours include habits, customs, and moral laws[20]. In contrast, *interdependent* behaviours are based on decisions that are directly influenced by the actions and views of others. In these cases, it is not enough to analyse the individual in isolation; it is also necessary to study their entire reference network, since personal choices depend on what others do and consider appropriate. Therefore, transforming these behaviours requires an understanding of the shared beliefs and expectations that underpin them, including normative limitations, empirical expectations, and collective assumptions[21]. These final elements that have been catalogued underpin a wide array of interdependent conduct, encompassing trends, fashions, conventions (such as driving on the right-hand side of the road), and, most significantly, *social norms* (i.e., the focal point of this whole section).

However, although all *social norms* are *interdependent*, not all *interdependent* behaviours meet the minimum requirements to be identified as a *social norm* (Bicchieri, 2017). This is due to the fact that *social norms* perform two very distinctive functions: (1) they indicate appropriate behaviours in recurring situations (e.g., queuing at the supermarket) and (2) regulate action through the regulatory pressure exerted by social approval or disapproval. These two characteristics make them similar to *moral standards*, but with one crucial difference: "unconditionality" on the social level. By this, we mean that *moral norms* are followed independently of the behaviour or opinions of others, whereas *social norms* are based precisely on the expectations of others. In addition, *social norms*, as well as being grounded in the expectations of one's target group, additionally necessitate a

[19] However, although static definitions are used here for analytical purposes, it is important to underline that in social reality these categories are fluid, since behaviors can transform over time and take on different meanings depending on the context (Bicchieri, 2017, p.3).
[20] Bicchieri (2017, p. 3) provides representative examples for each category: opening an umbrella when it rains is a *habit*, wearing warm clothes in winter is a *custom*, while observing dietary restrictions related to religious beliefs is an example of *moral law*.
[21] Bicchieri (2017) also offers explanatory examples for these categories of social beliefs and expectations: *normative limitations* include the idea of what a good mother should do for her daughter; *empirical expectations* correspond to what others commonly do; while *shared assumptions* include, for example, the belief that education does not necessarily ensure a better future.

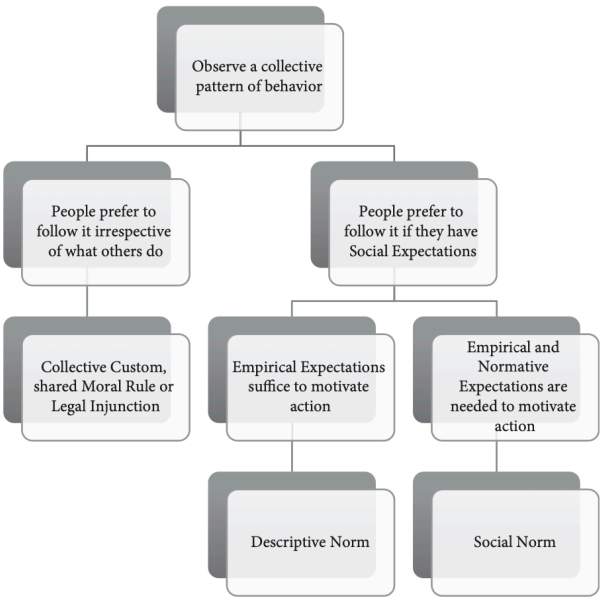
degree of *social enforcement*: in contrast to *conventions*, which are self-regulating, they can be breached without immediate repercussions, consequently making it necessary to intervene with social pressures or sanctions to ensure compliance.

In summary, on the basis of all these components, Bicchieri (2006) has arrived at an operational definition of social norm:

*"A social norm is a rule of behaviour such that individuals prefer to conform to it on condition that they believe that (a) most people in their reference network conform to it (empirical expectation), and (b) that most people in their reference network believe they ought to conform to it (normative expectation)."*

Moreover, now that the characteristics of each collective practice have been clarified, this section will conclude with a visual summary (see Figure 2). This illustrates the diagnostic process useful for determining a social norm and distinguishing it from other types of collective behaviour.

**Figure 2: Diagnostic process of identifying collective behaviours.**




*Source: Adapted from Bicchieri, 2017*

### 2.4.1 Dual Role of Social Capital: Ties that Bind

In order to design effective interventions within MFIs and VSLAs in Tanzania, it is first crucial to understand whether the observed collective behaviours are actually *norm-driven*. This classification is not only theoretical, but it represents a fundamental step to guide actions at the group level and maximize the impact of behavioural policies.

This approach forms part of a broader understanding, recognising that the social context in which microfinance programmes are rooted plays a decisive role in their success. In fact, as observed by Bhatt and Tang (1998), it is precisely the surrounding social infrastructure that provides a plausible explanation for the high success rates of many microfinance projects. In line with this perspective, the *Theory of Social Capital* proposed by Coleman (1990) emphasizes that the presence of cohesive social networks, supported by established norms, facilitates the emergence of behavioural models oriented towards cooperation and collective action. In this sense, when the members of an MFI share rules of accountability and reciprocity, transaction costs tend to be reduced. The latter costs are defined by Lindvert et al. (2018) as *nonfinancial costs*.[22] Among the social norms that contribute to reducing them, reciprocity stands out, understood as "*network members' expectations that exchanges will be reciprocated*" (Lindvert et al., 2018). This latter enables flexible cooperation based on shared long-term objectives rather than immediate, rigid exchanges.

Lindvert et al. (2018) also note that, even when the dynamics of exchange are more instrumental than value-based, they still find strength and stability precisely in shared expectations of reciprocity (Lindvert et al., 2018). Moreover, as demonstrated by the VSLA model, the presence of accountability and transparency at the institutional level further improves trust among group members: as previously stated, mechanisms such as *action audits*[23] promote accountability through public verification of accounting records and the application of penalties in case of non-reimbursement (Anyango et al., 2007). In this way, the system incentivises good behaviour and active participation, which are essential for the sustainable functioning of microfinance systems.

[22] For lenders, these include beneficiary identification, contract processing, and monitoring; for borrowers, time and resources spent traveling to institutions, organizing groups, attending meetings, and negotiating (Lindvert et al., 2018, p. 232)
[23] See § 1.1, § 2.3.3

This link between trust and reciprocity is of particular importance when analysing it in the context of a developing country (Kremer et al., 2019). While the *World Values Survey* (cited in Kremer et al.) indicates generally low levels of trust for these types of nations[24], local social norms nevertheless play a powerful role in strengthening economic cooperation.

### 2.4.2 Dual Role of Social Capital: Ties that Torture

However, even in contexts where social embeddedness is high (which is often considered a prerequisite for effective microfinance), the same social norms that support cooperation can generate undesirable effects, turning into *ties that torture* (Lindvert et al., 2018). These authors cite the tangled network of obligations that encumbers borrowers involved in multiple relational domains (family, commercial, community) as a seminal instance of this phenomenon, which ultimately culminates in inevitable overlap. They also note that this multiplicity of obligations can be particularly burdensome for low-income individuals, exposing them to a greater risk of late payments, or even default, resulting in high social costs. It is noteworthy that these costs include the strong social and psychological pressure that can negatively influence their choices, pushing them to divert loan funds towards the needs of their immediate family or to sacrifice domestic needs in order to fulfil their entrepreneurial commitments (ibid.). Lindvert et al. (2018) then point out this particularly worrying fact: the social and psychological pressure deriving from the trade-offs required for participation in microfinance groups can culminate in mounting frustration with the model itself. This discomfort is reported by these scholars through the accounts of borrowers annoyed by the obligation to attend meetings, the penalties they suffer for the shortcomings of others, and the need to continuously manage conflicting goals and overlapping commitments.

In addition to the aforementioned, it is also important to notice the considerable amount of stress related to the fear of potential social repercussions in the event of default. These repercussions are not just limited to being refused further loans in the future, but can also result in social exclusion and damage to one's reputation within the community (Lindvert et al., 2018). It is believed, in this regard, that this pressing climate contributes to

[24] In this sense, Nunn and Wantchekon (2011) show that the legacies of the slave trade have left a lasting impact on trust levels in Africa: individuals with ancestors from historically involved areas now show a lower propensity to trust (Kremer et al., 2019, p. 426).

triggering conformist behaviours, whereby individual choices are not guided by an autonomous evaluation of needs or possibilities, but rather endeavour to align themselves with shared expectations. Therefore, to gain a clearer understanding of the situation, it is useful to consider these dynamics in the context of the phenomenon called "*following the herd*", that is, a heuristic through which people tend to make decisions based on what they observe in others or in response to pressure exerted by a larger group (Helmer, 2015).

Based on this, we can refer to a further illustration of the negative impacts ascribed to social capital: that is, "*social image concerns*" (Kremer et al., 2019). Indeed, Kremer et al. stress that such concerns play a crucial role in shaping members' behaviours within a community, as they can prevent individuals from requesting information or advice for fear of being perceived as ignorant or incompetent[25]. Thus, following this reasoning, it was initially suggested by these academics that interventions aimed at reducing the social stigma linked to the demand for information could encourage collective learning, with greater adoption of cost-effective practices being favoured. However, it was also noted by them that these *social image concerns* not only influence the demand for information, but the supply as well. Hence, on the one hand, those who fear judgement tend not to ask for help; on the other, those who want to maintain a good reputation tend to select what to share, emphasising successes and omitting failures (Kremer et al., 2019). All of this results in two cognitive distortions: *selection neglect*, meaning the inability to recognize that the information observed is not random, but filtered through specific social channels, and *redundancy neglect*, which is an error in social learning that occurs when widespread actions are overestimated as if they were independent of each other (ibid.). In microfinance, this can cause community members to incorrectly assess the value of certain financial products, following examples that are not representative of their peers, with the risk that the entire community will become trapped in false beliefs about specific lending or savings techniques.

### 2.4.3 Empirical Observations of Social Pressures in Tanzania

These psychological and social mechanisms are part of a broader debate that has recently been relaunched by a growing economic literature, increasingly oriented towards a

[25] Kremer et al. (2019, p. 368) report as an example of what, if the request for clarification on the use of a new technology is perceived as a signal of incompetence, this can reduce the adoption of innovative, even if potentially beneficial, tools.

cultural and context-sensitive perspective on intersocietal variations in values, beliefs, preferences, and, consequently, in economic behaviours (Kremer et al., 2019). In this theoretical frame of reference is placed the contribution of the economists Guiso et al. (2006), who define culture as "*those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation*". Nunn (2012), instead, puts forward a more behavioural definition of the term culture, understood by him as a set of heuristics and rules of thumb that guide decisions. The latter are indeed influenced not only by ideas and values, but also by emotions and "*gut feelings*". Consistent with this approach, Kremer et al. report the development of new analytical methods. These recent techniques comprise cross-national experiments, studies of subjects having different cultural backgrounds but living in the same institutional context, and field surveys. The use of these methodologies is particularly effective, according to Kremer et al., since it helps to understand the real variations in social norms (trust, reciprocity, social control, etc.) that influence economic behaviour, especially in informal contexts such as microfinance.

The cultural perspective outlined above is particularly useful for accurately analysing behavioural dynamics in the Tanzanian context. Here, microfinance systems are deeply embedded in local social norms, and family and business goals are closely interconnected due to the country's specific cultural configuration. In this respect, Lindvert et al. (2018) carried out a three-month study, between 2009 and 2010, on a group of 20 female business owners in Morogoro (a small town of 200,000 inhabitants in central Tanzania). Their analysis exposed the existence of a tension between the "*Instrumental Group Norms*", which require financial responsibility and compliance with collective repayment obligations, and the "*Affective Family Norms*", which, instead, require prioritizing family needs. In virtue of this dualism, these scholars have also been able to observe that the overlap between family obligations and socioeconomic pressures has generated both material tensions (such as the diversion of entrepreneurial resources towards urgent domestic needs) and psychological stresses (through high levels of chronic stress that undermine financial management). It is in this context that, according to Lindvert et al. (2018), the so-called "*microfinance traps*" emerge, dynamics in which conflicting social norms undermine the sustainability of microcredit.

In this scenario, MacNeil's (1980, 2000) *Relational Exchange Theory* provides a particularly suitable theoretical model through which to interpret this phenomenon. In fact, according to this model, in informal contexts, economic relations are based on mutual trust, shared norms, and repeated social interactions rather than on formal contracts (MacNeil, 1980, 2000). Therefore, this theory is referred to by Lindvert et al. to underline precisely how, in the presence of conflicting social norms (as is the case with the Tanzanian women in their study), the same social capital that makes microcredit systems effective can *de facto* turn into a factor of vulnerability. It is here that the concept of "*role integrity*", developed within the *Relational Exchange Theory*, takes on particular relevance. This concept refers to an individual's ability to maintain coherence between different social roles, and, for this reason, it is particularly crucial in the microfinance field. For instance, returning to Lindvert et al.'s research, it was found that women who were able to consciously balance family and group obligations were less exposed to the risk of falling into *microfinance traps* (Lindvert et al., 2018).

Moreover, such tensions between social norms can be alternatively amplified or mitigated depending on the specific institutional architecture of microfinance systems. In this sense, the study by Mori et al. (2024) makes a key contribution by analysing the social impact of the organisational arrangements of MFIs in Tanzania. As a matter of fact, these authors were able to identify the three main institutional mechanisms common to Tanzanian MFIs: dynamic incentives, joint liability, and group meetings. Specifically, Mori et al. explain that *dynamic incentives*, such as the progressive disbursement of loans, are effective in overcoming information asymmetries, particularly when it comes to initial access to credit. Secondly, they demonstrate how *joint liability* improves internal transparency and reimbursement discipline. Finally, they showcase the effectiveness of *group meetings* in the Tanzanian cultural context, where community life is strongly valued. Indeed, it was observed that these meetings serve not only to facilitate financial administration, but also to address matters of a social nature (Mori et al., 2024).[26] All this confirms, once again, the ambivalent role, in microfinance systems, of social embeddedness: the latter, in fact, depending on how it is structured and managed in the

[26] Mori et al. (2024) report, in fact, that, in Tanzania, meetings of MFIs and VSLAs often include discussions on issues such as family problems, child rearing, community health and other issues of collective interest.

organizational dynamics of the various institutions, is capable of both promoting and hindering cooperation.

Consequently, institutional tools such as progressive sanctions or loans, while statistically associated with better repayment rates (Kinyondo & Okurut, 2009), may be ineffective if they do not take into account the psychological and cultural factors that influence borrowers' behaviour. As a matter of fact, even when such institutional mechanisms are in place, there is still the possibility that social pressures provoke deviations from repayment plans that, rationally, should instead be followed. Furthermore, these biased borrowing behaviours observed in many Tanzanian communities are also evident in their saving practices. As Mndeme and Sinde (2022) show, savings decisions are, in fact, influenced by a combination of institutional and psychological factors, including self-control, time preferences, and perceived social support. Thus, while affiliation to a socioeconomic group (MFI or VSLA) offers protection and access to resources, sociodemographic factors, such as gender, age, educational attainment, and source of income, significantly influence saving intentions, often directing them towards immediate consumption or impulse purchases, rather than long-term investment goals. Building on this evidence, Kinyondo and Okurut (2009) decided to propose a series of policies aimed at improving reimbursement performance among microcredit organizations' clients in Tanzania. These include: better training of groups, their retention, the introduction of more calibrated social sanctions, the reduction of transaction costs incurred by groups, and better coordination between the different MFIs (Kinyondo & Okurut, 2009).

Finally, *social image concerns* add a further layer of complexity to the social dynamics that influence the financial behaviour of Tanzanian borrowers and savers. As already illustrated in 2.3.3, Anyango et al. (2007) observed that, in the VSLAs of Zanzibar, women (more than men) have a propensity to use loans for expenditures considered socially relevant, such as weddings, gold acquisition, home renovations, or family support, which, however, frequently pertain to short-term requirements. These female choices reveal how normative pressures, social conventions, and internalised gender roles can significantly affect financial choices, inducing behaviours that deviate from purely economic optimisation-oriented logics. Hence, in view of all these dynamics, the need for context-specific behavioural interventions emerges clearly, which will be presented in the next chapter.

# CHAPTER 3: BEHAVIORAL SOLUTIONS TO STRENGTHEN TANZANIAN MFIS AND VSLAS

Building on the theoretical foundations established in Chapters 1 and 2, which emphasised that developmental behavioural economics provides a more psychologically realistic representation of financial behaviour than traditional economics, Chapter 3 focuses on its empirical potential.

The main goal is to explore how behavioural insights can be translated into interventions designed to be more effective, welfare-enhancing, and context-sensitive. The following sections will, thus, analyse how specific *behavioural nudges* can intervene on the main *behavioural biases* discovered in Tanzania, providing a more direct response to the concrete needs of MFI and VSLA customers.

## 3.1 The Usefulness of Nudges in Tanzanian MFIs and VSLAs

*"A nudge is any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options, or significantly changing their economic consequences. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates."* (Thaler & Sunstein, 2008b). Already starting from this definition, proposed for the first time in 2008 by Thaler and Sunstein in their influential book *Nudge: Improving Decisions about Health, Wealth, and Happiness*, it is possible to grasp the essence of the behavioural interventions known as *nudges*. To be classified as such, a "*nudge*" must, in fact, be easily avoidable and must not imply significant economic costs for those who decide not to follow it. Precisely because of this characteristic, nudges can be considered *libertarian* tools of intervention, since they are configured as choice-preserving, only "gently pushing" behaviours towards small adjustments that aim to encourage the adoption of more welfare-enhancing choice architectures.

This logic is particularly relevant in the context of development economics, where the combination of traditional design approaches and insights drawn from cognitive psychology can generate significant progress in the quality of economic decision-making for people living in poverty. Underpinning this perspective is the *dual process model* developed by the economist and psychologist Daniel Kahneman in 2011, according to

which human behaviour is based on two systems: one automatic and intuitive (*System 1*) and one reflective and cognitively demanding (*System 2*). It is precisely at this point that the reflection on poverty comes in. In this respect, as stated by Berndt (2019), individuals living in poverty frequently find themselves functioning within *System 1*, which is characterised by heuristics, mental shortcuts, and an absence of reflective awareness. Considering this, it seems, thus, illusory and ineffective to design interventions that impose forced changes or that presuppose implementing them on individuals endowed with perfectly rational behaviour

On the contrary, it proves necessary to introduce instruments that stimulate voluntary and sustainable changes in such a way that, as Berndt himself observes, external interventions, when psychologically informed, may be more legitimate and acceptable. In this direction is the reflection offered by Mullainathan and Shafir (2013), who claim that small adjustments in the decision-making environment, designed to alleviate the effects of *scarcity trap* and *bandwidth tax*, can "go some way toward *scarcity proofing* our environment". Ultimately, the effectiveness of nudges and their relevance for the purposes of the present research lies precisely in their underlying logic: instead of *opposing* cognitive biases, they should operate *alongside* them. This will allow more advantageous behaviours to be derived from these behavioural deviations.

### 3.1.1 Institutionalization of Nudging Interventions in the Developing World

Yet, despite the growing recognition of the value of behavioural approaches, their true institutionalisation in development policies has long been lacking. A turning point in this respect was the publication by the World Bank of the *World Development Report 2015: Mind, Society, and Behaviour*, which provided the most concrete evidence of the integration of behavioural economics into the applied field of development policies (Berndt, 2019). Confirming this transition, Datta and Mullainathan (2014) speak of a true "*science of design for development"*.

Hence, more and more academics and practitioners from different backgrounds have started to reinterpret the fundamentals of economic policy formulation and implementation from a behavioural perspective, recognising human behaviour not only as an object of analysis, but as a central lever for change and an operational tool to be

integrated into decision-making processes. Among these, scholars such as Dean Karlan, Michael Kremer, Eldar Shafir, Abhijit Banerjee, Sendhil Mullainathan, and Esther Duflo have designed *nudges* based on *behavioural insights* (BIs), tested both within the laboratory and through RCTs conducted directly in the field. These efforts have been supported by the growing network of specialized institutions and think tanks, including J-PAL (MIT), ideas42 (Harvard), and IPA (founded by Karlan). Relevant hubs have also established themselves in the Global South, such as J-PAL Africa and the Busara Center in Nairobi.

Research in the field of microfinance is being actively pursued at some of these centres. The study by Alia et al. (2015), for example, offered particularly relevant insights, highlighting how MFIs' clients often have a "latent financial self-esteem". In this context, the researchers were able to find out that nudges such as *experience games* (to set and pursue savings goals) and *trust games* (based on social responsibility) could actually incentivize cooperative and savings-oriented behaviours in peer-based systems.

#### 3.1.2 Contextually Sensitive Nudges for Microfinance in Tanzania

Based on the above, the following section will present a behaviourally solid and contextually appropriate *nudge*, with the aim of showing how to address and overcome some of the main behavioural barriers that are still widespread in the Tanzanian microfinance system.

### 3.2 Commitment Savings Mechanisms

When it comes to Tanzanian MFIs and VSLAs, one of the most promising behavioural interventions to combat chronic debt cycles and under-savings is believed to be the introduction of the *Commitment Savings Mechanism with Default Enrolment, Emotional Goal Framing, and Social Feedback Loop*. This is a "gentle push" that, rather than imposing external instruments, builds on pre-existing behavioural and social dynamics already embedded in local communities.

What is, nonetheless, most important to point out here is that this type of *nudge* acts simultaneously on all three key cognitive and behavioural biases analysed in the previous chapter: that is, *scarcity trap* (and therefore also the *bandwidth tax* associated with it), *biases deriving from established social norms*, and *present bias*. With respect to the latter

behavioural constraint, it is valuable to note that *present-biased* households tend to accumulate little liquid savings over time, focusing on the construction of illiquid wealth (Kremer et al., 2019). This behaviour, coupled with a certain awareness of one' own limits of self-control, generates a latent demand for commitment devices that can increase savings in the long run (ibid.).

Such tools (as will be illustrated in detail in the context under analysis) are, in effect, agreements to which an individual voluntarily adheres in order to facilitate the implementation of a future behaviour that would otherwise be difficult to realise due to intrapersonal conflicts or limitations stemming from poor *self-control* (Bryan et al., 2010). Important empirical evidence of these instruments comes from the field study conducted by Ashraf et al. (2006), who offered a commitment savings account to a randomly selected group of people in the Philippines: about 28% accepted this opportunity, and, after a year, their savings were significantly higher than those of the Control Group. However, many accounts have remained inactive. This was due to the absence of an initial motivational drive, which revealed an interesting behavioural paradox: although there are effective tools to overcome the limits of *self-control*, their activation still requires a first act of *self-control* (Kremer et al., 2019).

To overcome this paradox, it was decided to strengthen these commitment devices in the Tanzanian microfinance context through four *Behavioural Insights* that would increase their adoption: (1) *Default Enrolment* in these commitment devices, so as to exploit inertia in favour of adoption; (2) *Emotional Goal Framing*, aimed at promoting a perception of goal proximity and at counteracting the tendency to limited persistence in long-term savings plans, typical of low-income individuals; (3) *Technological Accessibility*, which allows these features to be integrated into a mobile app, making the saving process interactive and immediate; and (4) *Social Feedback Loop*, which offers the option to join a digital community where the borrower is able to receive updates on the progress of other members, activating dynamics of *social proof* and *social influence*, which can normalise savings behaviour and reinforce its sustainability over time (Helmer, 2015).

Based on this, an explanation will now be provided of how the interaction between these different *Behavioural Insights* is capable of generating a context in which individual engagement is publicly reinforced and socially supported. To present this, in the following

sections, this intervention will be examined through two central analytical frameworks in behavioural economics and applied psychology: the *COM-B model* (Michie et al., 2011) and the *EAST framework* of the Behavioural Insights Team (BIT, 2024), preceded by an explanatory *behavioural map* that visually illustrates the key moments and strategic points of activation.

### 3.2.1 Scope and area of Intervention: Behavioural Mapping

In order to better understand the proposed intervention, a behavioural map (Figure 3) was developed that identifies the key moments of involvement and the main points of nudge activation within the daily experience of members of MFIs and VSLAs in Tanzania.

1. The process begins when the individual applies for a loan at an MFI/VSLA or logs into their account's mobile interface (indeed, digitization allows the nudge to be integrated directly into the user journey)
2. The first strategic point of activation of the nudge (identified by the first *golden star* in the diagram) coincides with the signing of the loan contract, which includes a pre-selected checkbox for default enrolment to a committed savings plan.
3. If the borrower deselects the option (*opt-out*), the flow stops (red "END" symbol). Otherwise, a set percentage of the loan is transferred to the committed savings account.
4. During the digital onboarding phase on the app, the system requests two separate consents, which represent the second and third strategic nudge activation points (also marked with *golden stars*):
    - **Intervention 1**: consent to receive personalized, emotionally framed notifications and goal tracking feedback, linking savings to concrete goals (e.g., children's school, health care costs, etc.).
    - **Intervention 2**: consent to join a digital community, where the MFI/VSLA borrower receives updates on the results achieved by other members of their network.
5. The two paths can be taken independently, and the user's future behaviour will be influenced by the choice made:

- If the user consents only to personal notifications but not to entering the community, an individual motivation process is activated, supported by feedback on one's own progress ("*Motivation to save from personal feedback*" box). However, according to behavioural evidence, the absence of social stimuli makes it unlikely that there will be a subsequent interest in joining the community.
- If, on the other hand, the user consents only to the community component, exposure to the successes of others can stimulate, over time, the desire to also receive personalized messages related to individual goals. In this case, an *inverse motivational loop* is triggered (graphically represented by the *first blue dotted line*), in which the social dimension becomes the driving force for individual engagement.

6. Therefore, the feedback received (whether personal, social, or both) strengthens the motivation to save: the former act on personal identification and on the reduction of the psychological distance to future benefits; the latter create *social proof* dynamics, favouring emulation and normalizing behaviour at the community level.

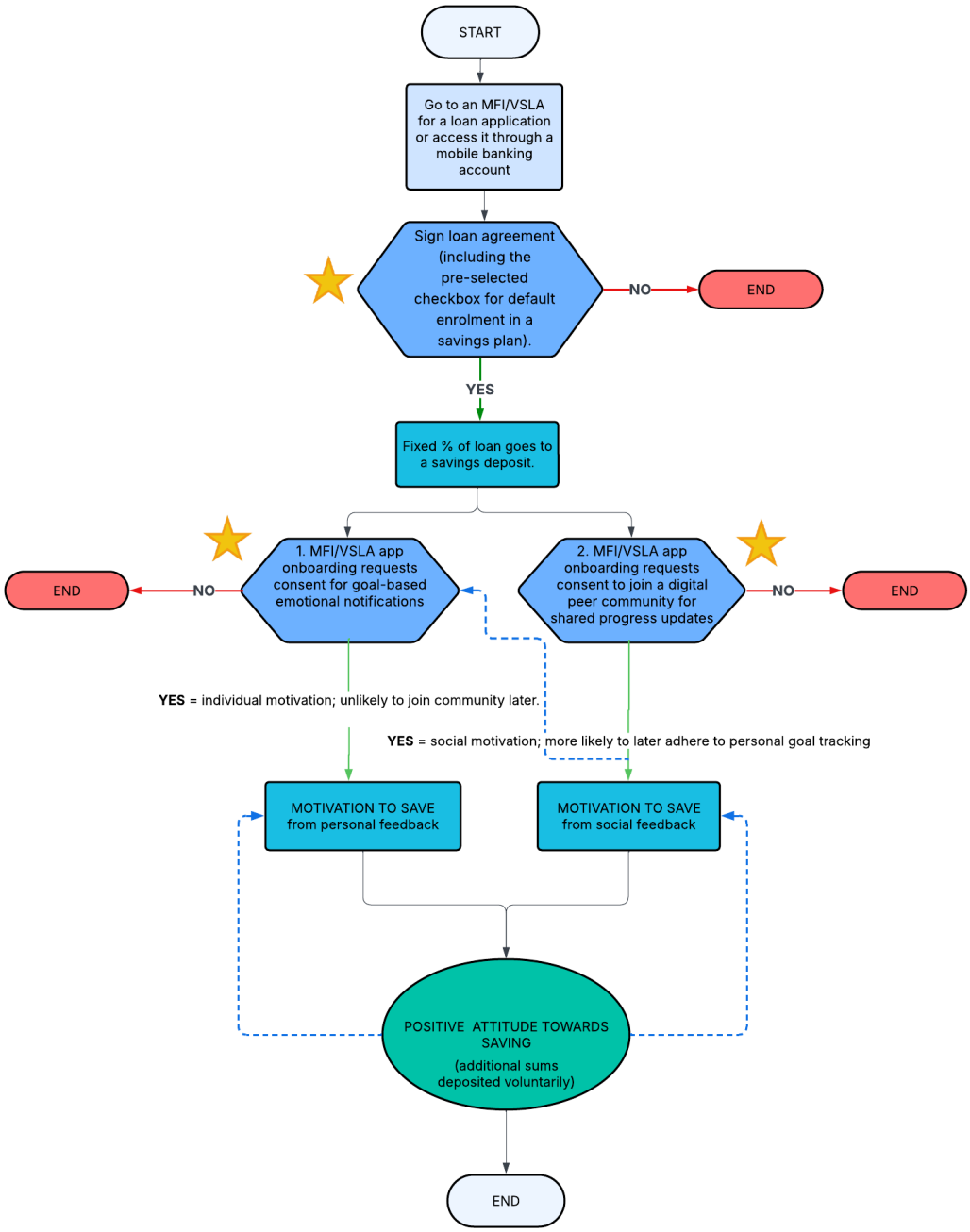
7. At this point, the user may decide to voluntarily increase their deposits beyond the initial bound quota.

8. If this does not happen, the process is limited to the initial effect of default. On the contrary, if he or she adopts a proactive attitude and starts depositing additional sums, a *positive feedback loop* is activated (graphically represented by the *two final blue dotted lines*). This loop makes personal progress visible and reinforces it through group emulation, which stimulates further individual motivation. This clearly illustrates a virtuous circle that favours the development of stable and sustainable saving habits over time.

Finally, with regard to the *three golden stars* in the diagram, it should be further specified that they highlight the strategic activation points of the nudge, i.e., the moments in which the intervention can exert the greatest impact. During these critical stages, the nudge

exploits to its favour cognitive biases, such as *inertia* and *present bias*, as well as the existing *social dynamics* already ingrained in the context of MFIs and VSLAs. This combination strengthens the behavioural effectiveness of the intervention, promotes growing confidence in the process, and significantly reduces the risk of early *opt-out*.

**Figure 3: Behavioural Map of the Intervention**




*Source: Personal Elaboration*

### 3.2.2 EAST Framework Evaluation

Firstly, it is possible to argue that the suggested intervention aligns with the Behavioural Insights Team's *EAST framework* (BIT, 2024), which emphasizes that behavioural interventions must simply be Easy, Attractive, Social, and Timely:

1. **EASY:** The intervention is *easy* to implement and adopt because it minimizes the effort required to start saving: members of MFIs and VSLAs are automatically enrolled in a savings plan once they have obtained a loan, with a portion of the amount set aside by default. Nevertheless, the possibility to opt out remains available to them. Still, since human beings are generally reluctant to give up a pre-selected option due to their natural tendency to inertia, making savings the default option is deemed to be the most appropriate choice in this context. In fact, this strategy is able to guide borrowers towards welfare-enhancing behaviours by simply exploiting, in their favour, their *default bias* (Banerjee & Duflo, 2011). This light and non-invasive push will thus facilitate, rather than limit, the freedom of choice of these subjects[27] (Madrian & Shea, 2001; Chetty et al., 2014).
2. **ATTRACTIVE:** Thanks to the combination of emotionally framed messaging and visual goal tracking, the intervention is *attractive* right from the digital onboarding phase, making the savings experience more salient and personal. Phrases such as "*Your child's future is in your hands. Act now!*" reduce the psychological distance with respect to the future and strengthen identification with the predefined goal. Since future investment goals tend to remain outside the "cognitive tunnel" generated by the *scarcity trap*, these interventions represent a form of *soft commitment*, capable of strengthening memory and self-control thanks to the emotional and psychological boost they give to the decision-making process[28] (Kremer et al., 2019). In parallel, visual progress tracking (of both individual and community progress) represents a tool that further increases salience, providing tangible and motivating feedback.

[27] The same kind of strategic reasoning was put in place by Blumenstock et al. (2018), who achieved surprising results in Afghanistan, after introducing an opt-in default on savings among workers whose salary was linked to the use of mobile money.

[28] In support of this, the example of the field study conducted by Karlan et al. (2016) on the impact of emotionally salinet reminders implemented in three different banks in Bolivia, Peru and the Philippines can be cited. In fact, from each of the three it emerged how this type of reminder improved savings by activating memory and self-control mechanisms.

3. **SOCIAL:** Since *present-biased* individuals tend to postpone the action of saving, incorporating digital communities into commitment savings mechanisms enhances their *social* effectiveness. Indeed, joining networks that share progress and goals fosters emulation and *social proof* [29], helping to transform individual behaviour into a consolidated social norm. Furthermore, if a user only activates the community component, exposure to others' results can motivate them to then also activate the personal goal tracking. This combined effect of individual leverage and social pressure amplifies the impact of this *nudge*, as confirmed by Mwanambali Mungongo (2024) in his study on Tanzanian VSLAs. The integration of mobile technology and digital tools (e.g., M-Koba, developed jointly by the Tanzania Commercial Bank and Vodacom Tanzania) with community practices has increased access to savings and is gradually establishing it as a shared norm.
4. **TIMELY:** The introduction of digital reminders within commitment savings devices makes the intervention particularly *timely*, as it provides targeted behavioural stimuli synchronised with moments of greatest economic availability (such as immediately before receiving a salary or during the harvest season) and with times of heightened cognitive and emotional salience. These stimuli are reinforced by emotionally framed notifications (via SMS, email, or MFI/VSLA app), which increase the cognitive relevance of the target and counteract the limits of attention and memory[30] (Helmer, 2015). Additionally, regular weekly check-ins and visible milestones support habit formation and improve follow-through with the savings plan.

An illustration of the concepts discussed above can be found in Table 3 below, which provides a description of the *EAST Framework* applied to the nudge proposed.

[29] See § 3.2

[30] According to Karlan et al. (2016), digital reminders significantly increase deposit rates in escrow accounts, especially among those who tend to forget or underestimate their savings due to daily stress. In line with these findings, Komba & Komba (2024) highlight that the integration of digital payment systems and mobile banking improves the efficiency of repayments, reduces transaction costs and facilitates more accessible payment methods for borrowers.

**Table 3: EAST Framework applied to Commitment Savings Mechanism**

| INTERVENTION | COMMITMENT SAVINGS MECHANISM |
|---|---|
| 1. EASY | "Easy" because adherence to the savings plan takes place automatically when the contract is signed, taking advantage of the *default bias* (*opt-out* is possible but rarely used). Interaction is simple and integrated into the digital journey. |
| 2. ATTRACTIVE | "Attractive" thanks to the use of emotionally salient messages (e.g., *Your child's future is in your hands. Act now!*) and visual tools to track progress (both personal and community-wide), which increase the salience of the goal. |
| 3. SOCIAL | "Social" for joining a digital community that shows the progress of other members. The mutual comparison generates *social proof*, emulation and incentivizes even those who have activated only one of the two options. |
| 4. TIMELY | "Timely" thanks to digital reminders synchronized with relevant moments (salary, harvest), and regular milestones that reinforce action and counteract forgetfulness and cognitive overload. |

*Source: The EAST Framework – The BIT, personal elaboration*

### 3.2.3 COM-B Analysis

The proposed commitment savings device solution for Tanzanian MFIs and VSLAs can also be behaviourally evaluated using the analytical framework provided by the *COM-B model* (Michie et al., 2011), which highlights how characteristics relating to Capability, Opportunity, and Motivation can be important drivers of Behaviour when implementing the proposed nudge.

1. **CAPABILITY:** The nudge under scrutiny augments *psychological capability* by fostering self-regulation and goal-oriented planning. To sustain long-term saving behaviours, it is crucial that borrowers have a clear sense of the commitment they have undertaken (both in terms of time and quantity) and are able to resist short-term temptations. To this end, the personalisation of objectives is proposed alongside measures that favour a balance between commitment and flexibility[31]:

[31] An experiment conducted by Dupas and Robinson (2013) shows that, between two commitment devices of different rigidity, only the most flexible one (a safe with direct access for participants) actually increased spending on preventive care, highlighting the importance of balancing constraint and adaptability.

a constraint that is too weak does not counteract *present bias*, while a constraint that is too rigid can discourage its adoption in uncertain contexts (Amador et al., 2006; Laibson, 2015). This balance is particularly critical in cases of *partial naïveté*, where borrowers underestimate the level of strength required to uphold the commitment (Kremer et al., 2019). In parallel, *physical capability* must also be supported. Although the intervention is technically accessible thanks to the widespread use of mobile phones in Tanzania (Mwanambali Mungongo, 2024), digital literacy remains limited. As highlighted by Rozzani et al. (2015), customers appreciate mobile loan disbursement, but often face difficulties in managing technological repayments independently. To overcome these obstacles, simple and inclusive tools are proposed: charts and digital dashboards continuously updated on the MFI/VSLA app, short training sessions, and the support of community agents. Combining all these elements has the potential to facilitate the correct use of available digital tools and reinforce both individual efforts and a sense of belonging to a peer network.

2. **OPPORTUNITY:** The proposed intervention enhances both *physical* and *social opportunities*, combining the peer-based structures of VSLAs with the potential of digitalization in the Tanzanian territory. In terms of *physical opportunities*, the wide diffusion of mobile telephony in Tanzania (from the responses to the 2017 FinScope Survey, it emerged that 93% of adults had access to a mobile phone and 63% owned one) makes commitment savings mechanisms technically accessible. As a matter of fact, digital solutions such as M-Pesa and M-Koba have already proven effective in addressing infrastructural barriers in underdeveloped areas, thereby enhancing financial inclusion within them (Mwanambali Mungongo, 2024). In addition, the growing popularity of social media and messaging apps (e.g., WhatsApp) has the potential to significantly reduce reliance on physical spaces, encourage remote engagement, and enhance peer support. Therefore, given this optimistic outlook for Tanzania, it is deemed possible to integrate digital apps into traditional microcredit models in order to provide easy access to deposit channels. On the other hand, on the *social* level, the inclusion of these instruments into the VSLA groups already in existence allows for the utilisation of existing networks of trust, standardising savings as a collective and supported practice at

the community level. Indeed, the VSLA model, unlike that of the majority of MFIs, offers a pre-existing structure that is ideal for the implementation of this intervention. The objective here would, thus, be that of adapting this process design to traditional MFIs in order to transform savings into a collective norm supported by the community.

3. **MOTIVATION:** The proposed intervention, *Commitment Savings Mechanism with Default Enrolment, Emotional Goal Framing, and Social Feedback Loop,* addresses both *automatic* and *reflective* motivation in a targeted manner, thereby stimulating long-term savings behaviours, even under conditions of financial stress. As for *automatic motivation*, digital messages with goal completion and intermediate feedback (e.g. "*Just 3 more deposits to reach your savings target. You've got this!*" or "*Halfway there: your child's school uniform is within reach!*") increase the salience of personal goals, boost confidence in progress, and make the savings journey more tangible. This motivates individuals to remain committed over time (Karlan et al., 2016). *Reflective motivation*, by contrast, is driven by two interconnected levers: social exposure and the strategic relevance of savings. In this context, social exposure is extremely important, as the public awareness of personal progress being notified within the community stimulates sensitivity to *social status*. This, in turn, creates a positive reputational pressure, which encourages continued engagement and reinforces the strategic relevance of saving. In fact, adherence to regular savings practices can be interpreted by borrowers as a reputational investment to access future benefits, such as better credit terms or increased borrowing capacity in the future. This process reflects Morduch's (1999) concept of *dynamic incentives*, according to which, in contexts where credit is provided repeatedly, awareness that current behaviours influence access to future credit can transform savings and repayment from simple obligations into strategic choices aimed at improving one's financial situation.

To summarize, the most immediate result of these three components of the *COM-B Model* on the *Behaviour* of Tanzanian borrowers of MFIs and VSLAs is an increased likelihood of adopting regular savings practices and punctual repayment methods, even in the event of temporary financial difficulties. Therefore, if this nudging strategy were scaled up and adapted effectively and contextually, it could help to consolidate savings as a social norm,

break chronic debt cycles, and orient individuals to behave in ways that support sustainable economic development. A visual summary of what has just been discussed is thus presented in Table 4.

**Table 4: COM-B Analysis applied to Commitment Savings Mechanism**

| BEHAVIOUR | CAPABILITY | OPPORTUNITY | MOTIVATION |
|---|---|---|---|
| Activate your savings plan | *Psychological:* Awareness of one's own savings goals and long-term self-regulation skills.<br>*Physical:* Access to the app and digital support tools (e.g. reminders, visual boards). | *Physical:* Widespread access to mobile phones and the presence of automated savings tools (e.g., M-Koba).<br>*Social:* Pre-existing community structures (VSLAs) that facilitate membership and emulation. | *Automatic:* The default option reduces the initial friction and takes advantage of inertia.<br>*Reflective:* Confidence in the attainability of the goal and understanding of the future benefits, through emotional framing. |
| Focus on goals (though goal tracking) and access the community | *Psychological:* Ability to focus on the goal and awareness of progress.<br>*Physical:* Immediate feedback provided by mobile interfaces and a strengthened sense of community through the participation in a peer network. | *Physical:* Availability of simple and immediate deposit channels via mobile, as well as goal tracking notifications.<br>*Social:* Visibility of the actions of other members in the group stimulates action (emulation and social proof); comparison with the successes of others can act as a stimulus to activate individual engagement. | *Automatic:* Visual and emotional notifications increase salience and stimulate action, by reducing the cognitive load.<br>*Reflective:* Perception of progress in saving (personal or others') as a concrete and achievable goal (exemplified by notifications such as "*Halfway there!*") |
| Maintain consistency in deposits | *Psychological*: Developing habits and strengthening the ability to resist temptations in the short term.<br>*Physical*: Voluntary increase in contributions into the loan deposit, due to the stimuli received. | *Social:* Regular feedback from the community and visibility of group progress reinforces the social normalization of the savings process. | *Automatic:* Positive loop generated by the receipt of notifications, milestones and visual updates.<br>*Reflective:* Motivation strengthened by visible advancement and rewards related to personal goals (e.g., school uniform), and social recognition (e.g., savings successes related to status/reputational sensitivity). |

*Sources: The COM-B Model for Behaviour Change - The Decision Lab, personal elaboration*

In conclusion, by leveraging the inertia, emotional identification, and social capital already present in Tanzanian communities, the proposed nudge has the potential to trigger a microfinancial transformation in which saving becomes a shared, socially reinforced, and culturally rooted habit.

## 3.3 Experimental Design to Assess the Nudging Interventions

In the previous section (see § 3.2), the possibility of introducing the nudge *Commitment Savings Mechanism with Default Enrolment, Emotional Goal Framing, and Social Feedback Loop* in the context of Tanzanian MFIs and VSLAs was presented. It is believed, in fact, that it could represent a promising strategy to encourage savings and counteract chronic debt cycles. However, it is still possible to note that, although these strategies are very promising on a theoretical level, they may not be applicable to every organisation or individual who uses them. This is due to the fact that, as has been emphasised on multiple occasions throughout this thesis, the result of any behavioural intervention is contingent on the particular circumstances in which it is implemented. For this reason, it is essential to validate the proposed intervention through a structured experiment before proceeding with a large-scale implementation.

Therefore, this section will articulate a rigorous (even if still hypothetical) experimental design, based on the approach of behavioural diagnosis and field experimentation, with the aim of producing solid empirical evidence on the efficacy of the proposed *nudge*. In § 3.4.1, the central hypothesis of the study will be formulated, followed in § 3.4.2 by the description of the sample, the treatment methodology, and the timeline of the intervention. In § 3.4.3, the tools and indicators for data collection, both quantitative and qualitative, will be detailed, while § 3.4.4 will conclude with the presentation of the expected outcomes and potential implications for microfinance policies in Tanzania.

### 3.3.1 Hypothesis

The main hypothesis of this study is the following:

*"Participants subjected to the previously devised nudge (Commitment Savings with Default Enrolment, Emotional Framing and Social Feedback Loop) will show an increase in voluntary savings rates, greater punctuality in loan repayments and a reduction in financial stress compared to participants in the Control Group adhering to the standard procedures of MFIs and VSLAs."*

### 3.3.2 Research Methodology

- **SAMPLE AND RECRUITMENT:** 600 participants will be selected from a sample of various MFIs and VSLAs, located in rural and peri-urban areas of Tanzania (e.g., Arusha, Dodoma, Mbeya, and other coastal zones). This will be achieved using the method of *stratified random sampling*, which has been chosen specifically to ensure the participation of individuals from all socioeconomic backgrounds. Four demographic stratification factors will be used:
    - Age (youth under 30 vs. adults over 30)
    - Gender (equal distribution between men – 50% - and women - 50%)
    - Socioeconomic status (very low vs. low-to-moderate income)
    - Geographical location (Urban vs. rural)

In addition, the effective recruitment of participants will be ensured via collaboration with local organisations and other partner bodies involved in the field in key domains for this investigation, such as monetary inclusion and socio-economic mobilization (e.g., CARE, BRAC Tanzania).

- **TREATMENT GROUPS:** Once the participants have been recruited for this field-based experiment, three groups will be selected through the random procedure mentioned above:
    - Control Group (N=200): Standard VSLA and MFI procedures will be followed by the participants; no behavioural intervention will be applied.
    - Treatment Group 1 (N=200): Participants will be nudged only through *commitment savings with default enrolment and emotional framing.*
    - Treatment Group 2 (N=200): Participants will be nudged through the complete intervention, including access to the digital community (*social feedback loop*).

1. **INTERVENTION IMPLEMENTATION:** The duration of the intervention is expected to be 12 months. Month 0 will be dedicated to the collection of baseline data; three quarterly surveys will follow (months 4, 8, 12). Local facilitators will

receive specific training to introduce digital tools, guide onboarding moments, and monitor user participation.

- **EXPERIMENTAL TIMELINE:**
    - Month 0: Baseline Data Collection
    - Month 1: Implementation of Behavioural Nudges
    - Months 4, 8, 12: Quarterly Data Collection and Monitoring

### 3.3.3 Data Collection Metrics

- **QUANTITATIVE METRICS:**

**Table 5: Quantitative Data Collection Metrics**

| Metric | Indicator |
|---|---|
| Loan Repayment | Rates of on-time payments and defaults during the 12-month period |
| Savings Rates | Frequency and size of deposits; numbers of withdrawals |
| Spending Allocation | % of loan revenues allocated to productive assets vs consumption |
| Psychological Outcomes | Perceived Stress Scale (PSS); Financial Control Index |
| Engagement | Interacting with one's own digital community; opt-out rates; frequency of dashboard/notification usage |

- **QUALITATIVE METRICS:**
    - Participant Interviews: Semi-structured interviews will be conducted at the beginning and end of the experimental period, with the aim of gathering in-depth information on individual experiences, initial expectations, difficulties encountered, and subjective perceptions of the usefulness of the *nudges* received.
    - Focus Groups: Midway through the trial, focus groups will be carried out so that the reception of behavioural interventions could be monitored, any critical issues or resistance that may have emerged over time could be identified, the social dynamics among group members could be analysed,

and the extent to which these influence individual financial behaviour could be understood.

- **DATA ANALYSIS:**
    - Quantitative data: Rigorous statistical techniques, such as *logistic regression analyses*, will be used to find noteworthy variations between treatment conditions. In addition, *Bayesian logistic regressions* will improve the interpretability and robustness of the results.
    - Qualitative data: Using *NVivo software*[32], the data collected from the focus groups and interviews will be subjected to a thematic content analysis to obtain subtle and detailed information on the participants' perspectives, taking into account all variables that could have influenced them.

### 3.3.4 Expected Results and Policy Implications

- **VISUAL REPRESENTATION OF ANTICIPATED RESULTS:**

**Table 6: Hypothetical Results After 12 Months**

| GROUP | Loan repayment (%) | Average Monthly Savings | Investment Spending (%) | Stress Level (PSS, Average) |
|---|---|---|---|---|
| Control | 65% | 8.000 TZS | 40% | 24 |
| Treatment 1 | 80% | 15.000 TZS | 55% | 18 |
| Treatment 2 | 90% | 20.000 TZS | 65% | 14 |

- **HYPOTHETICAL EXPECTED OUTCOME:** Based on previous behavioural studies, the following results, graphically represented in Table 6, are expected, clearly illustrating the potential efficacy of behavioural stimuli applied to the MFIs and VSLAs groups.

[32] NVivo software was created in 1981 by Tom and Lyn Richards, of Trobe University in Australia, and promoted by QSR (Qualitative Software Research). An acronym for NudIstVivo (Non-numerical Unstructured Data*Indexing, Searching and Theorising Vivo: non-numerical and unstructured data categorising, exploring and theorising in vivo), it is a programme aimed at analysing texts, images, multimedia documentation, and is part of the so-called CAQDAS (Computer Assisted Qualitative Data Analysis) (Lippolis, 2021).

- *Savings rates*: In response to the main research questions stated at the outset of this study, it is expected that the participants in the Control Group will achieve average monthly savings of around 8,000 TZS. Conversely, due to the expected change in perspective in fulfilling one's commitments, it is estimated that there will be an increase to 15,000 TZS for Treatment 1 (*default + emotional goal framing*) and to 20,000 TZS for Treatment 2 (addition of the *social feedback loop*), the latter confirming the incremental effectiveness of the integration of the social component.
- *Loan allocation*: The Treatment Groups should theoretically show a higher propensity to allocate the funds received towards long-term productive investments (55% Treatment 1; 65% Treatment 2), compared to the Control Group (40%).
- *Psychological well-being*: Participants in Treatment Groups, especially in Treatment 2, are expected to exhibit a significant reduction in perceived stress levels between baseline and endline, due to increased financial control and community support.
- *Behavioural sustainability*: Treatment group 2 is expected to be the most likely to maintain savings practices even after the end of the trial, as the social component favours the formation of shared norms and widespread accountability mechanisms.

- **CONCLUSIONS:** The proposed experimental design represents a solid and applicable methodological basis to evaluate the effectiveness of the nudge *Commitment Savings with Default Enrolment, Emotional Goal Framing, and Social Feedback Loop* in a context of high financial vulnerability, such as that of Tanzanian MFIs and VSLAs. The objective is to ascertain whether nudged participants exhibit a diminished susceptibility to cognitive biases that hinder financial planning, thereby choosing to adopt more sustainable behaviours in the long run. In fact, it is believed that, if validated, this approach could have the potential to concretely contribute to breaking chronic debt cycles and building widespread financial resilience. This would, consequently, provide a useful model for policymakers, development operators, NGOs, and other actors committed to

reducing economic vulnerability. Moreover, the originality of this study lies in its focus on the scalability of the intervention: unlike many *una tantum* behavioural experiments, this nudge is designed to be replicable, low-cost, and potentially also adaptable to other African contexts, thus providing a transferable model for future research in the field of financial decision-making in developing contexts.

# CONCLUSION

The present thesis has developed a critical and systemic analysis of the effectiveness of Microfinance Institutions (MFIs) and Village Savings and Loans Associations (VSLAs) in Tanzania, with the aim of proposing an alternative to the traditional economic approaches adopted in development contexts to address chronic debt. The starting point for doing so has been the theoretical and historical overview outlined in Chapter 1, which highlighted how, in Tanzania, microfinance evolution has been influenced by deep structural factors, such as colonial legacies, externally imposed reforms, and institutional weakness. These factors have led MFIs and VSLAs to replicate *top-down* and *debt-driven* models, leaving them unable to respond to the real needs of borrowers. As a result, there is a strong need to rethink microfinance interventions through *bottom-up* solutions that activate empowerment dynamics based on the resources already present in local communities.

Moving in this direction, the work conducted employed a behavioural perspective rooted in the Tanzanian context, going beyond merely structural explanations of microfinance failures and re-reading the phenomenon of indebtedness from a 360° perspective, attentive to its cognitive, environmental, and social roots. Specifically, Chapter 2 adopted this behavioural lens, showing that the three recurring biases of the *scarcity trap*, *present bias*, and *social pressures* actually limit the operational effectiveness of MFIs and VSLAs.

In response to this, Chapter 3 proposed an original behavioural intervention, called *Commitment Savings Mechanism with Default Enrolment, Emotional Goal Framing, and Social Feedback Loop*, assessed via the *COM-B* and *EAST* models, and accompanied by a replicable experimental design. This nudge, unlike many short-term, *una tantum* behavioural solutions, was designed with the aim of generating positive *feedback loops* and promoting sustainable savings habits in the long run. It is believed that this would contribute to the creation of a microfinance ecosystem that could be more effective in meeting the real needs of Tanzanian communities.

However, for such action to be truly effective and legitimate, it must recognise the profound asymmetries between developed and developing countries. Ignoring these differences would mean risking, once again, the imposition of external models perceived

as forms of *cultural imperialism* (Davis, 2012), which would hinder local adaptation efforts. Precisely in order to avoid these drifts, it is necessary to promote "low-cost" approaches that respect the self-determination of the beneficiaries and concretely improve their well-being. The intervention proposed here represents an example consistent with these principles: fair, transparent, respectful of autonomy, oriented towards shared goals, sensitive to the cultural context, and free of conflicts of interest. For these reasons, the intervention fits coherently into the ethical framework of *FORGOOD nudging* (Lades & Delaney, 2020), since, unlike *dark nudges* and *sludges*, it safeguards the freedom of choice of the beneficiaries and excludes any form of coercion or opacity in the way behavioural influence is exerted.

Precisely by virtue of this theoretical and value system, and in order to transform this proposal into an applicable and measurable intervention, it is necessary to also recognize some of the methodological limitations encountered in the present research. Firstly, the absence of longitudinal data prevents an assessment of the long-term effects of the proposed *nudge* on the financial resilience of Tanzanian borrowers. Furthermore, as the intervention elaborated here has only been hypothesised and not effectively tested in the field, the entire analysis is based on secondary data and qualitative sources, without direct observations or empirical testing, for obvious practical and logistical reasons. Finally, some of the literature used, although authoritative, tends to offer an overly optimistic view of microfinance, sometimes underestimating its regressive effects. In consideration of these limitations, it is hoped that future research on this topic will be oriented along these three complementary lines: (1) testing the nudge in the field in Tanzania, directly involving the beneficiaries of MFIs and VSLAs; (2) carrying out a cost-benefit and scalability assessment, that would enable a comparison between the proposed behavioural intervention and alternative public policies; and (3) verifying the nudge effectiveness in similar sociocultural contexts, through multi-country comparative analyses, above all with other African countries, so as to assess its transferability and adaptability.

Further limitations, of a social nature, concern the compatibility of the intervention with the socio-cultural context in which it is implemented. In fact, in some population segments, the reluctance to participate publicly in peer groups or to receive emotionally framed messages could result in a high *opt-out rate* already in the initial phases. This phenomenon risks compromising the overall effectiveness of the intervention, excluding

precisely those most vulnerable beneficiaries that the nudge *intends* to support. To respond to these critical issues, it will therefore be essential to develop more inclusive strategies, capable of reducing the exclusion rate and adapting the modalities of adherence to different cultural preferences and sensitivities (e.g., by offering more discrete, neutral, or further customisable alternatives).

Moreover, precisely because of all these barriers, future research is urged to avoid a *nudge-only* approach: however promising, *nudges* cannot replace structural interventions *in toto*, but rather, should complement them. Indeed, building a more equitable and sustainable microfinance ecosystem requires *hybrid* approaches that integrate institutional reforms, culturally sensitive financial literacy, and rules of thumb developed from direct observation of behavioural practices and everyday decisions in local contexts.

Finally, upon the analysis conducted and the proposed intervention, this dissertation arrives at a central conclusion: a transformative shift is needed that goes beyond mere access to credit and focuses on enhancing welfare. This would entail a radical change to build a fairer, more effective, and culturally rooted microfinance. Indeed, it is only by giving Tanzanian communities, in addition to basic economic resources, the ability to determine their own financial destinies that microfinance can truly become a source of lasting resilience.

## BIBLIOGRAPHY


1. Acemoglu, D., & Robinson, J. A. (2012). *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. Profile Books.
2. Adbi, A., Lee, M., & Singh, J. (2023). Community influence on microfinance loan defaults under crisis conditions: Evidence from Indian demonetization. *Strategic Management Journal*, *45*(3), 535–563. https://doi.org/10.1002/smj.3558
3. Alia, H., Mateu, G., & Sutan, A. (2015). Behavioral Microfinance: Evidence from a Field Experiment in Cairo. *Strategic Change*, *24*(1), 85–97. https://doi.org/10.1002/jsc.1999
4. Allen, H., & Hobane, P. (2004). *Trip Report Impact Evaluation of Kupfuma Ishungu*. https://www.findevgateway.org/sites/default/files/publications/files/mfg-en-case-study-impact-evaluation-of-kupfuma-ishungu-2004.pdf
5. Amador, M., Werning, I., & Angeletos, G.-M. (2006). Commitment vs. flexibility. *Econometrica*, *74*(2), 365–396. https://economics.mit.edu/sites/default/files/publications/Amador%20Wening%20Angeletos%20%28Ecma%202006%29.pdf
6. Amine, L. S., & Staub, K. M. (2009). Women entrepreneurs in sub-Saharan Africa: An institutional theory analysis from a social marketing point of view. *Entrepreneurship & Regional Development*, *21*(2), 183–211. https://doi.org/10.1080/08985620802182144
7. Anderson, S., & Baland, J.-M. (2002). The Economics of Roscas and Intrahousehold Resource Allocation. *The Quarterly Journal of Economics*, *117*(3), 963–995. https://doi.org/10.1162/003355302760193931
8. Angeletos, G.-M., Laibson, D., Repetto, A., Tobacman, J., & Weinberg, S. (2001). The Hyperbolic Consumption Model: Calibration, Simulation, and Empirical Evaluation. *Journal of Economic Perspectives*, *15*(3), 47–68. https://doi.org/10.1257/jep.15.3.47

9. Anyango, E., Esipisu, E., Opoku, L., Johnson, S., Malkamaki, M., & Musoke, C. (2007). Village Savings and Loan Associations: experience from Zanzibar. *Small Enterprise Development*, *18*(1), 11–24. https://doi.org/10.3362/0957-1329.2007.004

10. Aram Ziai. (2007). *Exploring Post-Development*. Routledge.

11. Armendáriz, B., & Morduch, J. (2010). *The Economics of Microfinance*. Mit Press.

12. Ashraf, N., Karlan, D., & Yin, W. (2006). Tying Odysseus to the Mast: Evidence From a Commitment Savings Product in the Philippines. *The Quarterly Journal of Economics*, *121*(2), 635–672. https://doi.org/10.1162/qjec.2006.121.2.635

13. Ashraf, N., Karlan, D., & Yin, W. (2010). Female Empowerment: Impact of a Commitment Savings Product in the Philippines. *World Development*, *38*(3), 333–344. https://doi.org/10.1016/j.worlddev.2009.05.010

14. Augenblick, N., & Rabin, M. (2019). Belief Movement, Uncertainty Reduction, and Rational Updating. *The Quarterly Journal of Economics*, *136*(2), 933–985. https://doi.org/10.1093/qje/qjaa043

15. Banerjee, A. V., & Duflo, E. (2011). *Poor Economics*. Penguin Books.

16. Banerjee, A., Duflo, E., Glennerster, R., & Kinnan, C. (2015). The Miracle of Microfinance? Evidence from a Randomized Evaluation. *American Economic Journal: Applied Economics*, *7*(1), 22–53.

17. Bank of Tanzania. (2018). *Microfinance Act of 2018*. Www.bot.go.tz. https://www.bot.go.tz/Publications/Acts

18. Bank of Tanzania. (2024). *Bank of Tanzania Annual Report 2023/24*. https://www.bot.go.tz/Publications/Regular/Annual%20Report/en/2024123015411243.pdf

19. Banks, N., Brockington, D., Hulme, D., & Maitrot, M. (2019). Interrogating Microfinance Performance Beyond Products, Clients and the Environment: Insights From the Work of BRAC in Tanzania. *The European Journal of Development Research*, *31*(3), 339–363. https://doi.org/10.1057/s41287-018-0155-2

20. Bateman, M. (2010). *Why Doesn't Microfinance Work?* Zed Books. https://doi.org/10.5040/9781350223974

21. Battilana, J., & Dorado, S. (2010). Building Sustainable Hybrid Organizations: The Case of Commercial Microfinance Organizations. *Academy of Management Journal*, *53*(6), 1419–1440. https://doi.org/10.5465/amj.2010.57318391

22. Bauer, M., Chytilová, J., & Morduch, J. (2008). Behavioral Foundations of Microcredit: Experimental and Survey Evidence from Rural India. *American Economic Review*, *102*(2), 1118–1139. https://doi.org/10.1257/aer.102.2.1118

23. Berndt, C. (2019). *Behavioral economics and development policy*. ResearchGate. https://www.researchgate.net/publication/334989272_Behavioral_economics_and_development_policy

24. Besley, T. J., Coate, S., & Loury, G. C. (1993). The Economics of Rotating Savings and Credit Associations. *American Economic Review*, *83*(4), 792–810. https://www.researchgate.net/publication/4980605_The_Economics_of_Rotating_Savings_and_Credit_Associations

25. Bhatt, N., & Tang, S.-Y. (1998). The problem of transaction costs in group-based microlending: An institutional perspective. *World Development*, *26*(4), 623–637. https://doi.org/10.1016/s0305-750x(98)00007-2

26. Bicchieri, C. (2017). *Norms in the wild: how to diagnose, measure, and change social norms*. Oxford University Press.

27. Blumenstock, J., Callen, M., & Ghani, T. (2018). Why Do Defaults Affect Behavior? Experimental Evidence from Afghanistan. *American Economic Review*, *108*(10), 2868–2901. https://doi.org/10.1257/aer.20171676

28. Brannen, C., & Sheehan-Connor, D. (2016). Evaluation of the impact of Village Savings and Loan Associations using a novel survey instrument. *Development Southern Africa*, *33*(4), 502–517. https://doi.org/10.1080/0376835x.2016.1179097

29. Bryan, G., Karlan, D., & Nelson, S. (2010). Commitment Devices. *Annual Review of Economics*, *2*(1), 671–698. https://doi.org/10.1146/annurev.economics.102308.124324

30. Cai, J., Meki, M., & Quinn, S. (2025). *What have we learned about microfinance?* VoxDev. https://voxdev.org/topic/finance/what-have-we-learned-about-microfinance

31. Chetty, R., Friedman, J. N., Leth-Petersen, S., Nielsen, T. H., & Olsen, T. (2014). Active vs. Passive Decisions and Crowd-Out in Retirement Savings Accounts: Evidence from Denmark *. *The Quarterly Journal of Economics*, *129*(3), 1141–1219. https://doi.org/10.1093/qje/qju013

32. Coleman, J. S. (1990). *Foundations of Social Theory*. Philpapers.org. https://philpapers.org/rec/COLFOS-3

33. Dagnelie, O., & Lemay-Boucher, P. (2008). Rosca Participation in Benin: A Commitment Issue. *Oxford Bulletin of Economics and Statistics*, *74*(2), 235–252. https://doi.org/10.1111/j.1468-0084.2011.00641.x

34. Daley-Harris, S. (2006). Building on Accomplishment: the Microcredit Summit Campaign's Future Challenges for Global Poverty and Economic Empowerment. *Global Urban Development*, *2*(1). https://www.globalurban.org/GUDMag06Vol2Iss1/Daley-Harris%20PDF.pdf

35. Datta, S., & Mullainathan, S. (2014). Behavioral Design: A New Approach to Development Policy. *Review of Income and Wealth*, *60*(1), 7–35. https://doi.org/10.1111/roiw.12093

36. Davis, J. B. (2012). Economics Imperialism Under the Impact of Psychology: The Case of Behavioral Development Economics. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2153090

37. Della Vigna, S., & Malmendier, U. (2006). Paying Not to Go to the Gym. *American Economic Review*, *96*(3), 694–719. https://doi.org/10.1257/aer.96.3.694

38. Desai, V., Potter, R. B., & Dauncey, E. (2002). *The Companion to Development Studies*. ResearchGate. https://www.researchgate.net/publication/41572290_The_Companion_to_Development_Studies

39. Duflo, E., Kremer, M., & Robinson, J. (2011). Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya. *American Economic Review*, *101*(6), 2350–2390. https://doi.org/10.1257/aer.101.6.2350

40. Dupas, P., & Robinson, J. (2013). Why Don't the Poor Save More? Evidence from Health Savings Experiments. *American Economic Review*, *103*(4), 1138–1171. https://doi.org/10.1257/aer.103.4.1138

41. Dzisi, S. (2008). Entrepreneurial activities of indigenous African women: a case of Ghana. *Journal of Enterprising Communities: People and Places in the Global Economy*, *2*(3), 254–264. https://doi.org/10.1108/17506200810897231

42. Fadikpe, A. A. A., Danquah, R., Aidoo, M., Chomen, D. A., Yankey, R., & Dongmei, X. (2022). Linkages between social and financial performance: Evidence from Sub-Saharan Africa microfinance institutions. *PLOS ONE*, *17*(3), e0261326. https://doi.org/10.1371/journal.pone.0261326

43. Fehr, D., Fink, G., & Jack, B. K. (2022). Poor and Rational: Decision-Making under Scarcity. *Journal of Political Economy*. https://doi.org/10.1086/720466

44. FinScope Tanzania 2017. (2017). *FinScope Tanzania: Insights that Drive Innovation*. https://www.fsdt.or.tz/wp-content/uploads/2017/09/FinScope-Tanzania-2017-Insights-that-Drive-Innovation.pdf

45. Fouillet, C., Hudon, M., Harriss-White, B., & Copestake, J. (2013). Microfinance Studies: Introduction and Overview. *Oxford Development Studies*, *41*(sup1), S1–S16. https://doi.org/10.1080/13600818.2013.790360

46. Frank, A. G. (1978). *Dependent accumulation and underdevelopment.* Macmillan Press.

47. Ghatak, M., & Guinnane, T. W. (1999). The economics of lending with joint liability: theory and practice. *Journal of Development Economics*, *69*(1), 305–306. https://doi.org/10.1016/s0304-3878(02)00064-0

48. Giné, X., Karlan, D., & Zinman, J. (2010). Put Your Money Where Your Butt Is: A Commitment Contract for Smoking Cessation. *American Economic Journal: Applied Economics*, *2*(4), 213–235. https://doi.org/10.1257/app.2.4.213

49. Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, *91*(3), 481–510. https://www.jstor.org/stable/2780199?seq=1

50. Gugerty, M. (2007). You Can't Save Alone: Commitment in Rotating Savings and Credit Associations in Kenya. *Economic Development and Cultural Change*, *55*(2), 251–282. https://doi.org/10.1086/508716

51. Guinnane, T. W. (2011). The Early German Credit Cooperatives and Microfinance Organizations Today: Similarities and Differences. *WORLD SCIENTIFIC EBooks*, 77–100. https://doi.org/10.1142/9789814295666_0004

52. Guiso, L., Sapienza, P., & Zingales, L. (2006). Does Culture Affect Economic Outcomes? *SSRN Electronic Journal*, *20*(2). https://doi.org/10.2139/ssrn.876601

53. Harris, C. W., & Laibson, D. (2001). Dynamic Choices of Hyperbolic Consumers. *Econometrica*, *69*(4), 935–957. JSTOR. https://doi.org/10.2307/2692249

54. Helmer, M. (2015). *How Poverty and Cognitive Biases Can Impact Decisions and Actions: Using Research from Behavioral Economics and Psychology to Improve Workforce Development Services*. https://www.whatcomabc.org/wp-content/uploads/How_Poverty_And_Cognitive_Bias_Impact_Decisions_And_Actions-1.pdf

55. Jamborow LTD. (2021). *What You Need To Know About Traditional Savings Groups in Africa*. Linkedin.com. https://www.linkedin.com/pulse/what-you-need-know-traditional-savings-groups-africa-jamborow-ltd/

56. John, A. (2019). When Commitment Fails: Evidence from a Field Experiment. *Management Science*. https://doi.org/10.1287/mnsc.2018.3236

57. Johnson, S. (2013). From Microfinance to Inclusive Financial Markets: The Challenge of Social Regulation. *Oxford Development Studies*, *41*(sup1), S35–S52. https://doi.org/10.1080/13600818.2012.734799

58. Johnson, S., Malkamaki, M., & Wanjau, K. (2006). Tackling the “frontiers” of microfinance in Kenya: the role for decentralized services. *Small Enterprise Development*, *17*(3), 41–53. https://doi.org/10.3362/0957-1329.2006.030

59. Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux. https://dn790002.ca.archive.org/0/items/DanielKahnemanThinkingFastAndSlow/Daniel%20Kahneman-Thinking%2C%20Fast%20and%20Slow%20%20.pdf

60. Karlan, D. S., & Zinman, J. (2009). Expanding Microenterprise Credit Access: Using Randomized Supply Decisions to Estimate the Impacts in Manila. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1444990

61. Karlan, D., McConnell, M., Mullainathan, S., & Zinman, J. (2016). Getting to the Top of Mind: How Reminders Increase Saving. *Management Science*, *62*(12), 3393–3411. https://www.jstor.org/stable/44166531

62. Kinyondo, A. A., & Okurut, F. N. (2009). *Determinants of Loan Repayment Performance in Microcredit Institutions: Evidence from Tanzania*. ResearchGate. https://www.researchgate.net/publication/333044799_DETERMINANTS_OF_LOAN_REPAYMENT_PERFORMANCE_IN_MICRO_CREDIT_INSTITUTIONS_Evidence_from_Tanzania

63. Komba, G. V., & Komba, M. M. (2024). Examining Microfinance Loan Repayment Challenges and Procedures by Small Business Owners: The Case of Vikenge Village, Morogoro, Tanzania. *Science Mundi*, *4*(2), 107–116. https://doi.org/10.51867/scimundi.4.2.10

64. Kremer, M., Rao, G., & Schilbach, F. (2019). Behavioral development economics. *Handbook of Behavioral Economics - Foundations and Applications 2*, *2*, 345–458. https://doi.org/10.1016/bs.hesbe.2018.12.002

65. Lades, L. K., & Delaney, L. (2020). Nudge FORGOOD. *Behavioural Public Policy*, *6*(1), 1–20. https://doi.org/10.1017/bpp.2019.53

66. Laibson, D. (1997). Golden Eggs and Hyperbolic Discounting. *The Quarterly Journal of Economics*, *112*(2), 443–478. https://doi.org/10.1162/003355397555253

67. Laibson, D. (2015). Why Don't Present-Biased Agents Make Commitments? *American Economic Review*, *105*(5), 267–272. https://doi.org/10.1257/aer.p20151084

68. Le Yaouanq, Y., & Schwardmann, P. (2022). Learning About One's Self. *Journal of the European Economic Association*, *20*(5). https://doi.org/10.1093/jeea/jvac012

69. Lindvert, M., Patel, P. C., Smith, C., & Wincent, J. (2018). Microfinance Traps and Relational Exchange Norms: A Field Study of Women Entrepreneurs in Tanzania. *Journal of Small Business Management*, *57*(1), 230–254. https://doi.org/10.1111/jsbm.12407

70. Lippolis, M. (2021). *Materiale della lezione per il Master interateneo II livello in Metodologia e Tecniche Avanzate di Ricerca Sociale -MeTARS*. https://web.uniroma1.it/metars/sites/default/files/download/Glossario%20NVivo.pdf

71. López-Sánchez, P., Urquía-Grande, E., del Campo, C., & Cancer, A. L. (2022). Delving into the Determinants of Default Risk in Savings Groups: Empirical Evidence from Ecuador. *The European Journal of Development Research*, *34*(6), 2625–2650. https://doi.org/10.1057/s41287-021-00480-3

72. Mabele, R. B., Lyakurwa, W. M., Ndulu, B. J., & Wangwe, S. M. (1980). The Economic Development of Tanzania. *Scientific American*, *243*(3), 182–191. JSTOR. https://doi.org/10.2307/24966417

73. Macneil, I. R. (1980). *The New Social Contract: an Inquiry Into Modern Contractual Relations*. Yale University Press.

74. MacNeil, I. R., Feinman, J. M., & Vincent-Jones, P. (2000). *The Relational Theory of Contract: Challenges and Queries*. Northwestern University Law Review.

75. Madrian, B. C., & Shea, D. F. (2001). The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior. *The Quarterly Journal of Economics*, *116*(4), 1149–1187. https://doi.org/10.1162/003355301753265543

76. Makorere, R. (2014). Factors affecting loan repayment behaviour in Tanzania: Empirical evidence from Dar es Salaam and Morogoro regions. *International Journal of Development and Sustainability*, *3*(3), 481–492. https://www.isdsnet.com/ijds-v3n3-6.pdf

77. Mamboya, S., Mosha, E., & Mwaseba, S. (2017). Determinants of Loan Defaults in Microfinance Institutions in Tanzania: A case of two Selected Microfinance Institutions in Dodoma Municipality. *Irdp.ac.tz*, *19*(1). https://repository.irdp.ac.tz/handle/123456789/310

78. Marr, A., & Petridis, M. (2010). *The Importance of Being Owned: Microfinance Institutions in Tanzania | Publication | FinDev Gateway*. Findevgateway.org. https://www.findevgateway.org/case-study/2010/02/importance-being-owned-microfinance-institutions-tanzania

79. Michie, S., van Stralen, M. M., & West, R. (2011). The Behaviour Change wheel: a New Method for Characterising and Designing Behaviour Change Interventions. *Implementation Science*, *6*(42). https://doi.org/10.1186/1748-5908-6-42

80. Mndeme, R., & Sinde, M. (2022). *Motives and Determinants of Savings in Sub-Urban Tanzania*. ResearchGate. https://www.researchgate.net/publication/384066369_Motives_and_Determinants_of_Savings_in_Sub-Urban_Tanzania

81. Morduch, J. (1999). The role of subsidies in microfinance: evidence from the Grameen Bank. *Journal of Development Economics*, *60*(1), 229–248. https://doi.org/10.1016/s0304-3878(99)00042-5

82. Mori, N. (2019). Determinants of individual savings among Tanzanians. *Review of Behavioral Finance*, *11*(3), 352–370. https://doi.org/10.1108/rbf-05-2018-0045

83. Mori, N., Shauri, L., & Richard, E. (2024). Determinants of Loan Repayment Behavior of Tanzanian Microfinance Borrowers. *Journal of African Business*, 1–25. https://doi.org/10.1080/15228916.2024.2423984

84. Mrindoko, A. E. (2022). Impact of Village Community Bank Loans on Smallholder Farmers' Household Income in Kiteto District, Tanzania. *AFRICAN JOURNAL of APPLIED RESEARCH*, *8*(1). https://doi.org/10.26437.ajar.03.2022.19

85. Muchnick, J., & Kollamparambil, U. (2015). Determinants of micro-finance repayment performance: a study of South African MFIs. *Journal of Economic and Financial Sciences*, *8*(2), 584–603. https://doi.org/10.4102/jef.v8i2.110

86. Mullainathan, S., & Shafir, E. (2013). *Scarcity: why having too little means so much*. Times Books, Henry Holt And Company.

87. Mwanambali Mungongo, E. (2024). *Benefits and Risks of Bank and Savings Group Partnerships in Tanzania*. Carnegie Endowment for International Peace. https://carnegieendowment.org/research/2024/01/benefits-and-risks-of-bank-and-savings-group-partnerships-in-tanzania?lang=en

88. Mwombeki, F., & Magwana, I. (2023). Influence of Financial Literacy on Micro-Credit Accessibility Among Rural Households in Tanzania. *Journal of Accounting Finance and Auditing Studies (JAFAS)*. https://doi.org/10.32602/jafas.2023.004

89. Nunn, N. (2012). Culture and the Historical Process. *Economic History of Developing Regions*, *27*(sup1), S108–S126. https://doi.org/10.1080/20780389.2012.664864

90. Nunn, N., & Wantchekon, L. (2011). The Slave Trade and the Origins of Mistrust in Africa. *American Economic Review*, *101*(7), 3221–3252. https://doi.org/10.1257/aer.101.7.3221

91. Nustad, K. G. (2001). Development: The Devil We Know? *Third World Quarterly*, *22*(4), 479–489. JSTOR. https://doi.org/10.2307/3993352

92. Rabin, M. (1998). Psychology and Economics. *Journal of Economic Literature*, *36*(1), 11–46. JSTOR. https://doi.org/10.2307/2564950

93. Rahim, A., Tanggamani, V., Bani, H., & Alias, N. A. (2024). Microcredit Clients' Financial Literacy Towards Financial Inclusion and Sustainability. *Information Management and Business Review*, *16*(1(I)), 274–278. https://doi.org/10.22610/imbr.v16i1(i).3717

94. Rahnema, M., & Bawtree, V. (1997). *The Post-development Reader*. London: Zed Books; Halifax, N.S.: Fernwood.

95. Rosenzweig, M. R., & Udry, C. (2014). Rainfall Forecasts, Weather, and Wages over the Agricultural Production Cycle. *The American Economic Review*, *104*(5), 278–283. JSTOR. https://doi.org/10.2307/42920950

96. Rozzani, N., Rahman, R. A., Mohamed, I. S., & Yusuf, S. N. S. (2015). Development of Community Currency for Islamic Microfinance. *Procedia Economics and Finance*, *31*, 803–812. https://doi.org/10.1016/s2212-5671(15)01170-3

97. Thaler, R. H., & Sunstein, C. (2008a). *Nudge: Improving decisions about health, wealth, and happiness.* Psycnet.apa.org. https://psycnet.apa.org/record/2008-03730-000

98. Thaler, R. H., & Sunstein, C. R. (2008b). *Nudge: Improving Decisions about Health, Wealth, and Happiness*. Yale University Press. https://yalebooks.yale.edu/book/9780300262285/nudge/

99. The Behavioural Insights Team. (2014). *EAST: Four Simple Ways to Apply Behavioural Insights*. Bi.team. https://www.bi.team/publications/east-four-simple-ways-to-apply-behavioural-insights/

100. Uddin, H., Akhter, S., Mollah, S., & Mahi, M. (2022). Differences in bank and microfinance business models: An analysis of the loan monitoring systems and funding

sources. *Journal of International Financial Markets, Institutions and Money*, *80*, 101644–101644. https://doi.org/10.1016/j.intfin.2022.101644

101. Uddin, M. H., Akter, S., Mahi, M. A., & Mollah, S. (2024). Why do microfinance institutions charge higher interest rates than banks? The role of operating costs. *Finance Research Letters*, *70*, 106319. https://doi.org/10.1016/j.frl.2024.106319

102. Ullah, I., & Khan, M. (2017). Microfinance as a tool for developing resilience in vulnerable communities. *Journal of Enterprising Communities: People and Places in the Global Economy*, *11*(2), 237–257. https://doi.org/10.1108/jec-06-2015-0033

103. UNCDF. (2023). *UNCDF Policy Accelerator*. UNCDF Policy Accelerator. https://policyaccelerator.uncdf.org/whats-new/tanzania-new-national-financial-inclusion-framework

104. Wallerstein, I. (1974). *The Modern World-System*. Academic Press.

105. World Bank. (2002). *Tanzania at the Turn of the Century: Background Papers and Statistics*. https://documents1.worldbank.org/curated/en/364061468778487238/pdf/multi0page.pdf

106. World Bank. (2009). *Tanzania - Country Brief*. World Bank. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/668001468341084237/tanzania-country-brief

107. World Bank. (2015). *World Development Report 2015: Mind, Society, and Behavior*. Worldbank.org. https://www.worldbank.org/en/publication/wdr2015