

Nothing to lose: the rationales of grassroots financial innovations in contexts of extreme scarcity

Grassroots
financial
innovations

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Abstract

Purpose – Highly deprived urban contexts, such as informal settlements in the global south, can turn into niches of extreme innovation and sparkle ingenuity out of necessity. But what are the rationales behind the participation of disadvantaged communities in social innovations? Why do they engage in grassroots innovations? What is it that makes these grassroots try novelties and continue experimenting with them, even when the perceived benefits are not clear yet? This paper aims to examine and conceptualize the rationales for engaging in grassroots financial innovations in the context of extremely deprived urban settings.

Design/methodology/approach – This paper is based on the case of grassroots organizations which have started experimenting with the development of a community currency in Kisumu, Kenya. This paper is informed by in-depth interviews with members of three grassroots organizations involved in the community currency, together with observations and meeting participation since 2019.

Findings – The rationales argued by the participants for engaging in this grassroots innovation are framed in various ways: as a means for seeking poverty alleviation (the development framing); as a challenge to conventional imaginaries of innovations (the digital framing); and as an innovation embedded in community

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and trust relations (the community framing). These framings have a mobilizing effect that initially draws participants into the innovation. Yet, what explains persistent participation despite the decreasing influence of these framings over time is the organizational space and strategies of incompleteness accommodating these experiments.

Originality/value – This paper contributes to the emerging body of grassroots innovations movements literature. While research has progressed in its understandings of the challenges of scaling up innovative practices, the examination of the grassroots initiatives stemming from extremely deprived settings, and the rationales and framings behind, have been under examined. This paper comes to bridge this gap.

Keywords Community currencies, Grassroots financial innovations, Resource-scarce environments
Paper type Research paper

Introduction

As every Thursday the Manyatta Resident Association met for their table bank activities. It was a hot day in Kisumu, and protected by the shade of the trees the Association was trying out a community currency for their trading activities. The market day went on; negotiations blended with laughter until everyone of them had sold their goods. Waiting for their opportunity to participate were Ester, Maria and Juan, members of the research team introducing MTCr, a mutual credit system. That afternoon, they had been explaining how the system worked, their benefits, clarifying doubts, and with the help of Sylvester, a MTCr local user, explaining how the MTCr could be used with their mobile phones. Having finalized the training activities, the Association prepared to receive another guest. Looking upset, the training team was packing up when Maria arrived from conducting some interviews with the Obunga fish market women.

After long hours of training and interviews Maria, Ester and Juan decided to walk back to the hotel to stretch legs. That decision raised some eyebrows among our colleagues, but they were determined: Enough of car sitting! While we walked our way back to the hotel through streets full of shops and people eager to sell, we shared the insights of the day. Malin had high expectations about Manyatta picking the idea, as this is a community group that managed to incorporate several of the innovations, like a water point, with the savings of their table bank. Ester and Juan seemed frustrated: “People are not picking up the token, it seems they don’t even understand how the mutual credit works!” However, and despite not fully picking up the token and not benefitting from it, these and other groups, attended the trainings, were attentive and willing to participate. This puzzled the researchers. “Is this just a representation, but for what and for whom? We are not donors and they know it”. While struggling in these thoughts, Ester shared her outrage regarding an event they witnessed during the meeting. A micro-credit company representative trying to sell their loans and credits at monthly interest rate of 20% which seemed to be usury to us. “These people are exposed to any kind of financial abuses” exclaimed Ester. Following the discussion and reflecting over her several years of work in the setting Maria added: “It seems like the RA meetings are propitious for receiving visitors, like this microcredit company or researchers like us, coming here like a salesman, showing the many different products and services they can acquire” and extended her arm in a gesture of opening up a coat with her right arm. These people living in less affluent neighborhoods are tremendously porous and receptive to any kind of ideas, but why? The researchers wondered. With no immediate answers and distracted by some beautiful paintings sold in some stalls along the street the researchers continued their walk.

The vignette above, although unique to Manyatta RA a grassroots organization for informal community in Kisumu (see also [Plate 1](#)), describes some realities of how highly deprived urban contexts, such as informal settlements in the global south, can turn into extreme niches of innovation and sparkle ingenuity out of necessity ([Zapata Campos et al., 2023](#)). But what are the rationales behind the participation of disadvantaged communities in social innovations? Why do they engage in grassroots innovations? What is it that makes these grassroots try novelties and continue experimenting with them, even when the perceived benefits are not clear yet?



Source: Juan Ocampo

As a response to economic and financial hardship in global south cities, a variety of citizen groups are experimenting with a wealth of grassroots financial innovations. These initiatives focus on mobilizing local resources, designing governance structures and developing local investment capacity that empower the community. Community currencies have emerged as a grassroots innovation for economic growth. Developed bottom-up by grassroots entrepreneurs in collaboration with community and cooperative groups, community currencies are inclusive economic tools to expand local markets in informal settlements, create networks to provide critical services and build bridges between the community and local government. In this doing, community currencies contribute to retain resources locally while incentivizing community investment.

Grassroots innovations, such as those of community currencies and credit schemes, usually develop through networks of practitioners, activists and organizations generating pioneering, bottom-up solutions responding to local problems and needs and involving the knowledge, resources, interests and values of local communities (Seyfang and Smith, 2007; Smith *et al.*, 2014). Examples of such innovations include those emerging from alternative energy communities (Magnusson and Palm, 2019), the repair movement (Zapata Campos and Zapata, 2017; Zapata Campos, 2020), food networks (Kirwan *et al.*, 2013; Smith, 2006), eco-housing (Seyfang, 2009), community currencies (Seyfang and Longhurst, 2013) and the transition town movement (Seyfang and Haxeltine, 2012). These movements and communities are characterized by the multiple organizational forms in which they manifest themselves – for example, as cooperatives, voluntary associations, community organizations and companies – supported by different resource bases, motivations and contexts (Hargreaves *et al.*, 2013).

Research on urban social movements has acknowledged that contexts of extreme scarcity, such as Brazilian favelas (Holston, 2009), Indian shanty towns (Appadurai, 2001) and African slums (Wambui, 2020; Odendaal, 2018) can host creative grassroots initiatives (Appadurai, 2001). New forms of urbanism and critical services are developed that provide self-solutions to specific problems, for example, via the self-construction of housing or the provision of water, waste management and sanitation services (Roelvink *et al.*, 2009; Campos *et al.*, 2022). Holston (2009) suggested that, with their livelihood practices, self-knowledge and creativity, the innovators of these solutions “propose a city with a different order of citizenship” (p. 246) that “cannot be readily assimilated into established conceptual frameworks” (p. 249). Paradoxically, while these urban settings have been cut off from public service delivery and formal economic dynamics, their relative isolation and exclusion have “enabled an off-work and out-of-sight freedom” (Holston, 2009: 257) favorable to social innovation.

Increasingly, grassroots innovations are attracting attention from scholars interested in environmental governance driven from below (Seyfang and Smith, 2007). Related theoretical development builds on a combination of transition management and social movement theories, with a focus on how community-led innovations are disseminated and trigger wider societal transformations. Still, while grassroots innovation movement theory has progressed in its understanding of the challenges of scaling up innovative practices, the examination of the grassroots initiatives stemming from these extremely deprived settings, and the rationales and framings behind, has been underexamined.

This paper examines and conceptualizes the rationales for engaging in grassroots financial innovations in the context of extremely deprived urban settings. The paper is situated in, and contributes to, the grassroots innovations literature. It is based on the case of grassroots organizations which have started experimenting with the development of a community currency in Kisumu, Kenya.

In the following section we present our theoretical framework of grassroots innovation movements. We then describe our methodology followed by the Mandaleo Trading Credit in Kisumu, as the case informing this paper. Thereafter, we present and discuss our findings and show how the rationales argued by the participants for engaging in this grassroots innovation are framed as a means for seeking poverty alleviation (the development framing); as a challenge to conventional imaginaries of innovations (the digital framing); and as an innovation embedded in community and trust relations (the community framing). We discuss how these framings have a mobilizing effect that initially draws participants into the innovation. Yet, we conclude that what explains persistent participation despite the decreasing influence of these framings over time is the space for experimentation and strategies of incompleteness that characterize organizational life in contexts of extreme scarcity.

Grassroots innovation movements

The grassroots innovation movements literature (Hossain, 2018; Seyfang and Haxeltine, 2012; Seyfang and Smith, 2007; Seyfang and Longhurst, 2013; Smith *et al.*, 2017; Zapata Campos *et al.*, 2022) highlight three important dimensions for understanding grassroots innovation movements: contexts and antecedents; motivations and rationales; and spaces and strategies for diffusing innovations.

The first dimension that stands out in grassroots innovations is the contexts of scarcity that give way to extreme niches of innovation. Grassroots innovations emerge and often operate in extremely deprived urban settings characterized by high unemployment, extreme poverty and economic informality (Zapata Campos *et al.*, 2023). These environments of extreme scarcity typically suffer from chronic shortages of financial, human and infrastructural resources as well as from uncondusive political and legal environments (Linna, 2013). This leaves grassroots entrepreneurs and innovators with limited resources. Despite this, some have argued that environments of extreme scarcity can act as “extreme” niches that can trigger entrepreneurship and innovation (Holston, 2009; Moulaert *et al.*, 2010). In these settings, informal, uneducated and stigmatized innovators develop the ability to tinker with locally available resources to solve neighborhood problems, often involving social activities or spontaneous collective action to respond rapidly to social or environmental problems (Zahra *et al.*, 2009).

In the contexts of extreme scarcity characteristic of many low-income neighborhoods, these resourcing activities are deeply embedded in social, territorial and commercial relations of reciprocity and trust (Linna, 2013; Grabs *et al.*, 2016), making use of social capital (Holt and Littlewood, 2017) and drawing on scarce resources from poor relatives, friends and

neighbors to gather enough capital to initiate activities. That is, entrepreneurship and innovation in these contexts rest on social rather than economic factors. This recalls Hyden's (1983) "economy of affection," referring to the social relations and economies of reciprocity among relatives, friends and neighbors – relations based on kinship, community, religion, or other affinities – that provide mutual protection in times of need. Activating these economies of affection, resource-constrained communities ensure survival as well as develop extreme-niche entrepreneurial activities and grassroots innovations. In such deprived urban contexts, radical and cumulative crises and events hindering residents' livelihoods can paradoxically also spark ingenuity out of necessity and the consequent transformation of these settings into extreme niches of innovation (Zapata Campos *et al.*, 2022).

Similarly, the formation of networks linking grassroots initiatives with supportive intermediaries like development aid organizations, local and foreign universities, or non-for-profit organizations becomes another fundamental resilience strategy by which grassroots organizations can navigate contested environments and insert their extreme-niche innovations in governmental structures. Their resilience is also fueled by the capability of "doing meanwhile" (Carenzo, 2017), that is conducting several activities simultaneously, and concurrently adopting a broad repertoire of strategies of insertion, contention and mobilization (Mitlin, 2018; Zapata Campos *et al.*, 2022) to make-do in highly constrained environments.

The second dimension of grassroots innovation movements relate to variety of rationales and framings through which they develop

Framing implies meaning production that facilitates these grassroots movements to recognize and articulate their experiences and, by so doing, connecting them to powerful narratives, inspiring and legitimating "the activities and campaigns of a social movement organization" (Benford and Snow, 2000, p. 614). Framing contributes to identity formation and shape how situations and contexts are perceived (Tarrow, 2004).

In the grassroots innovation movement literature, Smith *et al.* (2017) use the concept of framing "empirically to uncover what specifically motivated the movement's origin, how movements problematize mainstream models for innovation and development, what alternative visions and aims they develop and promote and how these change over time" (pp. 23–24). In other words, here frames are the contextualized and changing rationales embraced by the members of grassroots innovation movements, functioning as drivers of initiatives; frames, rationales and innovation are thus closely connected. Innovation is often the result of putting multiple frames together (Bijker, 1995; Hess, 2005; Leach *et al.*, 2005; Leach and Scoones, 2007).

Because grassroots innovations typically involve diverse actors, the adoption of different frames can result in tensions, contestation and debate. Smith *et al.* (2017) suggest that such frames can also be used to foster "flexibility and pragmatism in coalition building" (p. 24) by framing innovation in different ways. Operating in exceptionally resource-poor and turbulent environments, grassroots organizations develop social and environmental innovations practically out of nothing. They do so by blending economic and environmental rationales (Gutberlet *et al.*, 2016), expanding their audiences to gain necessary support (Zapata Campos and Zapata, 2017).

The third and last dimension key to understand grassroots innovation movements is the multiplexity of spaces and nonlinear strategies followed to diffuse and grow

While institutional contexts shape the development of grassroots innovations, at the local or micro level the concept of spaces and niches of experimentation helps us improve our

understanding of how grassroots innovations can proactively enact, create new arenas, platforms and alternative practices (Kemp *et al.*, 1998). In other words, while institutional contexts imply structural arrangements enabling and challenging innovation in practices; spaces provide an opening for introducing agency and change. These spaces of experimentation can range from cognitive to physical, political and institutional spaces “where it is possible to develop and experiment with tools and forms of organization” (Smith *et al.*, 2017, p. 27). The suspension of rules (e.g. market, governance and cultural norms) facilitates the creation of protective spaces where innovators tinker with novel practices and technologies (Barinaga, 2018); for example, where social values can prevail over market qualities.

To make these innovations grow beyond these spaces and niches of experimentation, various strategies are adopted in complex, discontinuous, simultaneous and nonlinear ways, ranging from insertion to mobilization. First, strategies of insertion involve linking with, e.g. governmental spaces (Norbäck and Zapata Campos, 2022). Second, strategies of mobilization entail transforming mainstream institutions (Álvarez de Andrés *et al.*, 2015). A common dilemma of such scaling strategies is the need to balance context sensitivity against ambitions for structural change. While certain innovations are easily aligned with mainstream institutions that quickly adopt the innovative practices but fail to advance structural transformation (Smith *et al.*, 2014), other innovations associated with more disruptive pathways suggest more relevant solutions that are however left behind due to the perceived risk of their transformative potential (Leach *et al.*, 2005; Smith, 2005).

A third strategy grassroots innovations follow to adapt and grow is organizational incompleteness. This strategy has been observed particularly in contexts of extreme scarcity (Zapata Campos *et al.*, 2023). Recent research has argued organizational incompleteness is not necessarily a negative feature nor a threat, but can instead be beneficial (Simone, 2014; Guma, 2020): a quality that describes social innovations in informal settlements as emergent, shifting, open and in the making. Incompleteness can thus turn into a powerful strategy to adapt to resource-poor environments by facilitating the inflow of elements into the organization. For example, creating nested organizational structures, like umbrella organizations that are however porous, and therefore incomplete. These “incomplete” organizations are the entry point for innovations and other ideas travelling to the community in the form of, e.g. temporary development projects; once the associated resources dry out can turn projects, and even people, into dormant structures that are nonetheless visible to external actors (and by so doing creating a façade of being complete and true organizations), and that can be quickly reactivated to exploit sudden opportunities (Zapata Campos *et al.*, 2023). It is the continuous flow of intermittent ideas, projects and innovations which are infiltrated in these communities through organizational incompleteness, that enable the diffusion of grassroots innovations.

Methodology

The paper looks at grassroots organizations which have started experimenting with the development of a community currency in Kisumu, Kenya. The community-currency has been developed as a result of a collaborative action-research project between two Universities in Sweden and Denmark, in collaboration with a local Kenyan university, and local community organizations.

The project aimed to investigate the governance practices, impacts and diffusion of these grassroots financial innovations, in urban informal settlements in the informal settlements of Kenya’s three major cities (Mombasa, Nairobi and Kisumu). Kenyan communities have been leading the creation of alternative monetary schemes in Africa since 2011. Therefore,

they offered significant historical experiences (in the cities of Mombasa and Nairobi by the time we started our project) from which to conduct research on this field. Furthermore, the declared intentions of resident associations, community-based organizations, the Kisumu County Council, universities and local business networks to start new community currency experiences in Kisumu, reported in our previous research, created a favorable environment for running experimental research and learn from the challenges and opportunities faced by grassroots financial innovations in practice.

Action research consists of the co-production of knowledge by practitioners, community members and researchers in cycles of research, action and reflection. The relationship between researcher and researched is a subject–subject relationship (Charmaz, 2014; Fals-Borda, 1991). The assumption is that participants in such research are engaged as competent and capable partners who explore their social worlds and realize change. In the present case, by adopting an action research approach, we benefit from access to internal decision-making processes and data (by participating as members of these initiatives), using them to advance the discussion of our findings. Accordingly, adopting an action research approach facilitated a progressive discussion of our early results with the constellation of actors participating in the community initiatives such as meetings and workshops. These interactions provided an opportunity to validate the more descriptive aspects of our analysis, to test our findings and refine our conclusions.

Intuitively the researchers have created and adopted different roles in this process: one as a foreign activist with expertise in community currencies; one as a foreign researcher shadowing and observing the research team and the community; one as a foreign researcher focusing on the impacts and perceptions of the community members; one as a local action-researcher conducting both interventions and research; and three other research members (who are not authoring this paper) fully involved in capacity building and project management. This separation of roles has allowed us a high degree of reflexivity about our actions both as activists and researchers and how they these actions affect our research.

The research project started its activities in April 2019 by supporting meetings between local communities already working with community currencies in Mombasa and Nairobi with representatives of grassroots organizations in Kisumu. After a collaborative mapping of the community economic activities in Kisumu, it was decided to create the first community currency in Kibuye market. Being traders, and having previous mutual trading relations, it was expected that the choice of a community-based organization at the Kibuye market would facilitate the initial implementation of the complementary currency in Kisumu. The Maendelo Trading Credit (MTCr) was designed as a complementary currency that operates on a mutual credit model, following the community's desires. Later, other grassroots organizations joined the MTCr: the Manyata Resident Association in the informal settlement of Manyatta in Kisumu; a women self-help group and a traders group in the semi-rural setting of Kombewa (2021); and a community group in the rural area of Aboke (2022).

The discussion here presented is informed by 30 in-depth interviews with members of three grassroots organizations involved in the community currency (Winam Warriors in Kibuye, Kombewa groups and Manyatta Resident Association), one group interview with ten members of the Aboke community group, together with observations, and meeting participation since the project started.

The interviews were conducted in November 2021 by the two “researchers,” the local and the foreign one. The foreign researcher conducted the interviews in English, while the local researcher did in Lwo, one of the local languages. A local member of the team was also present in the interviews conducted in English, in case any translation, contextualization or

explanation was necessary, to reduce the risk of misinterpretations due to language, culture or context, and to improve the validity of the information collected through the interview. The selection of the interviewees aimed to balance the voices between members who had a leadership role and those who were users, men and women, old and new members. We interviewed ten members in each of the three groups (Winam Warriors, Kombewa, Manyatta). The interviews took place taking advantage of their table banking days, when members meet to pay their share and to trade. The setting for the interview was thus familiar to them and facilitated the conversation. During the interviews MTCr members were asked about the initiatives' history, underlying rationales for engaging in the MTCr, the challenges and opportunities of engaging in a digital currency, the role of the carriers of the idea, their previous knowledge in digital finances, the role of leadership, fears associated with the innovation, ownership, perceived effects, main activities and achievements, organizational structure of their group, general challenges and future plans. We also asked if the perceived economic benefit was low, why they persisted and what were their worries. We ended with questions about how previous ideas, innovations or projects have arrived to their communities and how receptive they have been to them. The interviews lasted 30–90 min, most were recorded, translated into English those who were in Lwo and transcribed verbatim for analysis.

Thereafter, a content analysis was conducted informed by the transcriptions. Our analysis strategy has been abductive, inspired by iterative moves between collecting, sorting, coding, probing the data and discussing our preliminary findings with the participants until we reconstructed the multi-layered rationales to participate in this innovation (Charmaz, 2016). The first round of coding resulted in the emergence of multiple themes explaining the adoption and participation in the innovation: alluring but complex ideas, curiosity and novelty; material benefits and ambitions to scale; learning, knowledge and practice; community, leadership and trust; perceived risks and fears; myths of modernity and innovativeness; and time and space to experiment. At that point, we conducted a second round of coding, sorting most of themes into fewer larger categories and dropping other themes which did not fit into them. These final categories resembled theoretical concepts and frameworks, with which we were already familiar (Smith *et al.*, 2017 for framings and Zapata Campos *et al.*, 2023 for organizational incompleteness). The categories consisted of three large framings (development, community and digital); and the space and strategy of organizational incompleteness, as we develop in the findings section. But first, we present the story of the Mandaleo Trading Credit in Kisumu.

Mandaleo Trading Credit, grassroots financial innovation in Kisumu

MTCr is a complementary currency that operates on a mutual credit model supported by the Cyclos ledger system. Mutual credit systems are constituted by networks of traders that record the exchange of their goods and services as credits on the seller's account and debits on the buyer's account. Records in the ledger constitute a relational form of local money that helps to promote local trade and economic development. Mutual credit systems have proven beneficial to a local community's economy in times of scarcity of money (Vallet, 2016; Stodder, 2009; Lucarelli and Gobbi, 2016), and in spaces where people have difficulties to access critical basic goods and services, such as in low-income communities like the informal settlements of Kisumu. The local currency is operated by traders or community groups that trust each other and have relationships of trade, i.e. accept to both buy and sell goods and services among themselves in the local currency.

An important factor for the success of a community currency is based on the supply and demand of good and services that members can acquire inside the network. With this in

mind, the research team partnered up initially with two community-based organizations of merchants that were based in Kibuye market, at the time (2019) the largest open-air market in Easter Africa. Together, members of the community groups added up to around 200 members that offered products of basic interest such food and clothes. Following local practices, the two community-based organizations merged into “Winam Warriors,” as this group of organized merchants was formally named. Later other community groups joined in Manyatta, Kombewa and Aboke.

MTCr was launched initially by Winam Warriors in May 2020, at the beginning of the COVID19 pandemic. It was designed as a digital mutual credit used by registered users to facilitate exchange of goods and services among them. The digital platform is designed and supported by Cyclos payment software and provides a ledger that records transactions between users and keeps record of their account balances. Members use a Cyclos mobile App or a USSD Code for transactions among themselves. Registered traders from different groups can also trade with each other. To date, to the best of the authors’ knowledge, there are over 250 traders who have registered to use MTCr. These traders are organized into five different self-sustaining grassroots financial organizations, who mostly operate table-banks (locally these organizations are called *chamas* – see [Barinaga, 2020](#)). Upon registration participants are allowed a credit line (overdraft) of an agreed amount (usually 500 KES or approximately €5). They can therefore buy from and sell to each other goods and services, where payment in MTCr is accepted.

Although a total of 307,476 MTCr have circulated since the launch of the local currency in mid-June 2020, adoption by the local organization was not as straight forward as expected. Similar to other mutual credit currency schemes, MTCr has the potential of shielding users from the limitations that accompany a scarcity of conventional money and therefore of facilitating access to basic goods and services. However, a variety of challenges resulted in a rather slow onboarding to the MTCr local currency as well as in its small use in daily transactions. These challenges relate to concerns for the limited use of MTCr, the financial nature of *chamas*, the nature of the traded goods and the small size of the typical daily transaction.

First, the use of MTCr is limited to the confines of MTCr community. This is a concern for merchants and potential members in the currency scheme for they worry acceptance of MTCr in payment for their goods will not secure them enough national currency (Kenyan Shillings KES) to restock their businesses – a particularly intense challenge for MTCr members who purchase goods and services from non-members. While this problem fades away as more people join the MTCr community and the network of merchants grows, initial members are at greater risk. Members address this challenge by accepting only a small portion of payment in MTCr, the rest in KES. Second, reliance on *chamas* has been to some extent misleading as *chamas* are constituted by relationships of finance rather than trade. While an individual joins a *chama* because of the access to finance that the pooling of members’ savings gives members ([Barinaga, 2020](#)), members may not necessarily buy goods and services from each other. And yet, it is relationships of trade that facilitate the circulation of a local currency based on mutual credit. Third, the uptake of MTCr has been hampered by the different pace at which the goods and services merchants trade move. Fast moving goods and services often require less money to buy, those merchants finding it easy to sell their goods and services in MTCr. On the other hand, for merchants selling slow moving goods – typically bulky, expensive and a one-time purchase such as furniture –, find more difficulties to earn MTCr at the same rhythm as they spend them. A fourth and final challenge relates to the small – though daily – benefits MTCr bring to its users. Buying in MTCr saves the buyer the equivalent in KES. Data from the MTCr platform show that the

average individual transaction is less than 80MTCr per day. This amounts to savings of 80KES per day, too small an economic incentive for some members to continue using MTCr. While small savings are allowed to accumulate over a longer period of time, in the short run, they offer very little incentive for enough individuals to actively embrace MTCr as a means of payment.

There were also technological limitations to the implementation of MTCr, including poor connectivity and lack of technical competency to make transactions over the phone. The later was particularly challenging for the elder. While most members were accustomed to smart phones, the use of the payment platform had a learning curve which not all participants found easy. This required support from other members and continued training (Ocampo, forthcoming). A final set of challenges consisted of the time it took to administrate the currency such as time to register new members, supervise accounts and identify potential business synergies that could boost the trading network. While these activities are in line with regular traders' activities, the implementation of MTCr required of hard work and time, resources that were limited as the merchants had to deal with their own businesses.

And yet, despite the many challenges, all groups continue meeting week after week and training after training. Why that, and what are the rationales that lead them to keep on engaging in this grassroots financial innovation, particularly in contexts of extreme scarcity where time and other resources are precious?

Findings and discussion

The rationales espoused by participants to engage in this grassroots financial innovation such as a local currency are framed along three lines: as a means for seeking poverty alleviation (the development framing); as a challenge to conventional imaginaries of innovations (the digital framing); and as an innovation embedded in communal relations of trust (the community framing). These framings had a mobilizing effect (Hielscher and Smith, 2014) that initially drew participants into the MTCr. Yet, they do not explain the persistent participation of members. The latter is explained by the organizational space and strategies of incompleteness that accommodate grassroots experiments (Zapata Campos *et al.*, 2023).

Development framing: striving for development change and poverty alleviation

In the context of extreme scarcity of informal settlements, community leaders argue that “you cannot say no” (Lisette) to new ideas. Community leaders are thus receptive to listen to and adopt solutions and innovations that may contribute to radically change the situation of extreme poverty in which they live, led by a perception that “there is nothing to lose” (Dickens):

We are looking for something to change the face of the community, anything that comes that can change the entire community, that empowers it and improves it, we cannot deny it (Donald).

My first impression was it was a good idea because when compared with Kibuye market, it was like we were consumers and not producers. And it's like each and every coin that we toiled to make in Kibuye was going outside the county/At some point we will not be giving out all the money. Some money will remain in the market, here. (Vanessa)

New innovation attracts people, and we wanted to give it an eye to see how it works. We wanted to see how best it could assist us. If it is something that can uplift the economy of people, people could easily accept it [...] We have less to lose (Allan).

We are a poor community don't have enough money. That is why we joined in a sacco [table bank], and now the credit [MTCr] expands our ability to buy (Samuel, Aboke focus group).

Particularly, triggering events (Hoffman, 1999) such as the COVID-19 pandemic and the subsequent curfew, opened up windows of opportunity for creative solutions to be developed and adopted. There is simply "less to lose." The launch of the MTCr in the first group in Kibuye market was accelerated by the onset of the pandemic and the parallel closure and demolition of the market. Taking advantage of the curfew and under cover of night, the local government demolished the Kibuye market arguing renewal purposes planned beforehand (Kiaka *et al.*, 2021). Deprived from their places to sell and their livelihoods, MTCr members decided creatively to start market days in which they could meet in smaller groups (meeting the legal requirements of maximum number of people in public meetings), carry their table-banking activities and trade their goods:

[. . .] And if I may ask the board members, If this situation continues like this, you think we can be able to still have our market days and have the transactions the way we have been doing without necessarily having a central place like Kibuye? Do you think such a process can continue without a central place like Kibuye? (local researcher Miguel).

I think we have been doing it and we shall continue doing it because that is the only source of income we have. And we also know each other, we have our own contacts, we know those who we do business with. So, I think we shall continue doing what we have been doing, Yeah (Vanessa).

I think what is also interesting to see is that the traders are not also just laying hopelessly. There is a lot of creativity; "life has to go" on as Simon [trader] puts it (local researcher Raimond).

Once the idea of a local currency was introduced and the community started experimenting with MTCr, participants argued to perceive some material benefits, e.g. freeing Kenyan shillings and saving them, as well as freeing time for doing other things, as they would not need to go the market to do certain purchases (Auyo interview):

With MTCr, I can bring food to my table on difficult nights (Valentine).

I would get credit that would make my budget, like If I wanted to buy something let's say for fifty shillings, then again I have the capability of paying ten shillings in credit and now paying forty shillings for the same commodity. That kind interested me (Dionara).

These benefits were however considered to be small. On one hand, considering the financial deprivation and precarious nature of the economies they live in, these little benefits go a long way in helping them meet basic needs of their lives. On the other hand, the small size of the contribution hindered to engage new participants in the MTCr network. In other words, although use of the local currency contributes slightly to their squalid household economies, it does not solve dramatically nor immediately their meagre purchasing power.

MTCr also undergoes added difficulties to grow in urban settings, where trading is one of the main economic activities and wholesalers are not part of the system. Still some members continued participating and trading in MTCr because, they argued, they hoped this community money could turn into a new norm, a new institution, like M-pesa did in Kenya, eventually revolutionizing economic transactions in the country and radically changing the situation of poverty in which they lived:

It is a very complicated idea [. . .] that's why when I come here everyday I pray that if it can go to the whole country, the whole Kenya so everybody has it like M-Pesa. You know I can go to Kisii or to another county (Martin).

The hope for new ideas contributing to structurally change the situation of poverty among many communities throughout the country is a powerful frame behind the adoption of this grassroots financial innovation, even after the perceived benefits had become less clear.

Digital framing: challenging conventional imaginaries

Challenging conventional imaginaries of who can be an innovator, what an innovation is and where it comes from, were also active rationales behind the engagement in the local currency (for other examples, see [Holston, 2009](#); [Moulaert et al., 2010](#)). The digital character of the token offered poor slum dwellers the opportunity to participate in the global world of digital monies. Hence, there was a clear and strong line of argument among community members “to move forward with modernity” (Laura). Further, adopting digital technologies contributed both to transform their identity from slum dwellers to innovators and to build up a façade of a modern community, that complies with the imaginaries of modernity and development typically embraced, and expected, by non-governmental organizations, governments and donors ([Zapata Campos et al., 2023](#)).

Despite dominant imaginaries of innovativeness associated to western technologies, participants started questioning orthodox and colonial definitions of innovation. One respondent was for example arguing with pride that there were also African innovations, even if they were unexpected and unknown in Europe, and even for many Kenyans:

For example, when you say that M-pesa comes from Kenya, none would believe you, people do not believe these innovations come from Africa, they believe they come from abroad. (Allan)

Beyond the power of conventional imaginaries, the digital character of the credit system was also noted to reduce the risks of insecurity common in informal settlements, as it has been reported with M-pesa ([Guma, 2020](#)). In this line, it is argued that the technology enables the transparency of the trading activities, thereby reducing the risk of robbery and fraud, this being an important reason given for engaging in this innovation:

The balance is there, you cannot fraud (Valentine).

Being digital was the best method because with currency, it can be stolen. When you carry cash, it can be stolen but this is something which is on the phone. It is credit which you alone can access/ So in the digital side, I can say that is the best. (Vanessa)

For example, the m-pesa platform, how can safaricom [one of Kenya’s largest teleoperators and behind M-pesa] tell us that you can send money if you have not seen it before? That is the confidence that has been built into the [digital money] system. Now we are believing because we see the m-pesa working, even now with corona people were paying with m-pesa because there is less of transmitting the virus, we are cashless, we already come to this. (Above focus group)

Alongside preventing transmission of COVID-19, the digital nature of the local currency was also argued to prevent transmission of curses:

[MTCr] cannot be witched as it is not touched (Above focus group).

Further, participants argued the transparency built into the Cyclos technical platform supporting MTCr could facilitate trading (by creating trust) between people involved in different groups, who did not know each other, and therefore did not originally trust each other:

We don’t know their houses but we trust them, because they are with us in the digital market, and it is transparent, you click and you see that you have sent or received. (Joseph)

Community framing: embeddedness in community institutions and trust

The knowledge developed as a result of previous financial practices such as table banks or M-Pesa eased members' understanding of the novel idea. Even if the MTCr was perceived as something different, it was still familiar. Also, resemblance to existing practices, such as Safaricom's bonga-points, or imaginaries of ancestors' practices of barter trade, was helpful to understand MTCr:

[...] the only resemblance to this was the Safaricom bonga points, which you could use to buy an item in the supermarket or in the shop; whatever you wanted using the bonga-points (Vanessa).

[...] a long time ago it was the barter trade, we read it in the books of history, an African institution, some people see it as a barter trade. (Samuel)

Grassroots financial innovations build up cumulatively over existing knowledge and practices embedded in the communities. The embeddedness of the grassroots financial innovation in socio-economic local communal institutions such as table banking (Barinaga, 2020) and barter circles facilitates its adoption, as ideas need to be in people's minds for a while before they are adopted (Czarniawska and Joerges, 1996).

Yet, many fears and perceived risks deeply rooted in the community had to be overcome before the idea could be anchored, such as being victim of frauds, the fear of involuntarily committing money forgery or the fear of the money being related to sects with hidden intentions:

At the beginning we feared. Is it money? Is it fake?/At my age, first I didn't believe it. Then afterwards when I tried to use it, starting using it, I believed it (Mama Alison).

Our fear was that we were not seeing the money, how are we going to buy with something we are not seeing?/But afterwards we are now used to it (Mama Alison).

Some people were asking: "is this real money or cult money?" [Cult money] is just normal money but you pay for it dearly, or you pay for it painfully.

Introducing another currency that is not a Kenyan currency, that was also my worry as some members of Mombasa were arrested, because of the history, I was worried about being some fraud (Donald).

Some of the fears were the government. This issue of challenging the government in using the currency. People were thinking: oh they want to change the currency system, so maybe the police could arrest us [...] if information is not well articulated, propaganda, misconceptions spread. It is important that people understand, so you understand first and explain (Allan).

A fundamental rationale behind the adoption of the innovation and the perseverance in participating in the MTCr currency scheme relates to relations of trust forged within these communities. It is this trust relations that contribute to overcome many of the initial fears. Trust in the ambassadors and carriers of the idea (other communities experimenting with the trading credit system), trust in the leaders championing the introduction of the idea in the group, trust among participants and among buyers and sellers – trust, in sum, because trading is founded more on trust than formal contracts:

Yeah I heard about this idea before the (Nairobi) meeting [when representatives from community currencies met to present their experiences]. In that meeting, the other people were explaining from Kilifi county. And it is how I came to know how it is being done and how it is being used (Vanessa).

It was helpful to have the Kibuye people here to see how it works (Laura, Manyatta).

If I go to a shop and I buy on credit, I only buy on credit if the shop owner knows me. So you only buy from people you know. In Cyclos you pay a little, on cash and part in credit, not everything is paid immediately, so it involves some trust. It is a question of trust. I stay here but I do not buy in these shops because I don't live here, I don't know them, they do not know me.

Ideas like MTC travel to grassroots organizations by the hand of local and external actors. Yet, in the case at hand, it was particularly important that the project was carried by the local university (JOOUST) and researchers who had known the community for a long time:

You now, always you can't come and start something without knowing anybody (Mama Alice).

Recruiting members personally, based on kinship, friendship and solidarity groups is a typical mechanism to reduce risks of default in collective saving schemes, micro-credits, etc. It was also the for the MTCr local currency scheme:

We know each other well, no fear of fraud, we know where we live! (Dionara)

For grassroots members, initial trust was built upon the leadership carrying the idea into their community organizations: "We trust Dickens and Aiyo, what they bring to us we usually trust because they have been here for long."

Social, territorial and commercial relations of reciprocity and trust (Linna, 2013; Grabs *et al.*, 2016; Holt and Littlewood, 2017) are fundamental building stones to embrace the idea of a grassroots currency.

Space and strategies: intermittence and embeddedness as features of organizational incompleteness

These development, digital and community framings were initially effective in mobilizing participants into the MTCr network. However, the mobilizing power of these framings debilitated with time, as participants found it hard to fully understand it, make it work, expand the recruitment and increase the economic benefit. Instead, what explains perseverant participation in these grassroots innovations over time is the space for experimentation and strategies of incompleteness that characterize organizational life in contexts of extreme scarcity (Zapata Campos *et al.*, 2023).

a. Space for experimentation. Table-banks constituted space and time that lock participants to the meetings. Members have the obligation to attend weekly meetings to pay their share for savings or to return their loans. Missing a meeting often entails payment of a penalty. Connecting MTCr trading and training to the spaces created by table-banking activity facilitated members continued participation in the activities of the currency scheme. Even newly formed groups explicitly created to the sole purpose of participating in MTCr – as the case of Winam Warriors in Kibuye market – those members who had lost interest in trading did not however leave the platform, as they were still part of the table-bank:

Most of us have savings together, in the same groups. So they cannot leave the group. Maybe they might not be trading on MTCr but they are in the group [...] (they) continue participating in the group activities, but maybe are not trading, but participate in e.g. merry-go-rounds. (Valentine)

Me: Why don't they leave (the members who do not use the token any more)? Mama Alice: We have some things they are doing/We have merry-go-round. We have table banking.

We keep on coming because we have on Wednesdays our table bank, they come here, continue training us, and little by little, we understand (Laura, Manyatta).

Table-banks create a suspended space and time to test and experiment with new ideas (Smith *et al.*, 2017), a resource that is tremendously precious in a context of extreme scarcity such as the informal settlements, allowing to “buy time to waste” or doing things “meanwhile” (Carenzo, 2017). It is a time that can be used to listen to external visitors presenting new ideas, and even testing them. Ideas that later can become, or not, a more permanent part of the organization. Community finances such as table banks have been previously addressed in the literature as “grassroots infrastructures” (Zapata Campos *et al.*, 2022), “infrastructure of infrastructure” (Peck and Whiteside, 2016) or “pervasive infrastructure” (Amin and Thrift, 2017, 55). Meaning that beyond their capacity to facilitate savings, they also enable social cohesion and continuity to other community activities (Haug, 2013), including the facilitation of experimentation with social innovations. In a context of extreme scarcity and structural poverty, these infrastructures of infrastructures introduce small margins of agency at the micro-level and glimpses of hope for changing the system.

b. Nestedness of grassroots organizations. The grassroots organizations participating in the MTCr were all embedded in other organizations and structures, with units nested in layers in other larger groups. Grassroots organizations such as Resident Associations or community groups act thus as entry points into these communities, a channel for external actors and their novel ideas, such as the MTCr:

In the market we do have visitors, they come but maybe we don't agree on their terms or something like that. You know you can bring a project, but maybe the in kind or the cost is too high that the traders cannot meet. So, you will have to let the project go (Vanessa).

The nestedness of these grassroots organizations constitute an organizational device to help the grassroots gain visibility, legitimacy and access to new ideas, projects, social networks and associated resources. Grassroots organizations need to build up and maintain external credibility and trust by improving their project portfolio as individuals and as a group. This accumulated knowledge generates experience as well as legitimacy to continue with new future projects:

You know that when a project comes, that project might end because projects do end. But another project might come in. So, you may benefit from that which is coming in because you were in other project up to the end and maybe something like MTCr, we might use it and the project might end, but we will own it. So, next time when another project comes, Kiaka will say we had a mama called Violet somewhere. We were with her in a project and maybe she participated well, let us incorporate her in this other project. So, on my side, I've never thought of quitting. I've never. No. How? (Vanessa)

These temporary/intermittent projects provide, one after another, with a continuous flow of activities that guarantees organizational continuity. Projects end but others come. It is the continuity what matters, the flow. The rationale of keeping with MTCr, even when benefits remain unclear, is also in expectation for the next project to come. Some of these ideas, innovations and projects, very probably MTCr as well when the support ends, turn into dormant structures (Zapata Campos *et al.*, 2020) within these organizations. Dormant structures have the ability to remain latent with a minimum or non-existing resources to survive after external resources dry up as well as under times of crisis, e.g. curfew, corona, evictions. But they can quickly be articulated when sudden opportunities emerge, as part of the knowledge is still accumulated in the “façade” or portfolio of these organizations and in

their organizational members. These are transitory organizational forms of incompleteness that facilitate adaptation (Guma, 2020) to resource-scarce contexts like Kisumu’s informal settlements.

Conclusions: nothing to lose?

While one would expect that in contexts of scarcity every idea with a potential to alleviate poverty would stick, they do not. Even in these contexts there are still valuable resources (legitimacy and scarce money) to lose when experimenting with grassroots innovations. Communities have their own practices, beliefs and structures that facilitate (or not) the adoption of innovations.

Table 1 provides an explanation to the rationales behind the participation of grassroots communities in innovations produced in contexts of extreme scarcity. Hopes of structural change (development framing), community embeddedness and the associated trust and social relations behind (community framing), are contextual to these communities and result in fundamental rationales for the adoption of grassroots innovations in contexts of extreme scarcity. Participating in an intensive associational life is fundamental for survival in contexts of scarcity. These findings are consistent with previous studies showing how grassroots innovations can bloom in marginalized and excluded communities, first by enabling an off-work and out-of-sight freedom (Roelvink *et al.*, 2009; Holston, 2009; Moulaert *et al.*, 2010) in “extreme niches” of innovation (Zapata Campos *et al.*, 2023); second by embedding the innovations in relations of reciprocity and trust (Linna, 2013; Grabs *et al.*, 2016) and social capital (Holt and Littlewood, 2017).

Yet, our study shows how these development and community framings alone are insufficient to explain the persistence of participation in the face of uncertain benefits. The digital quality of this grassroots innovation (digital framing) seemingly contributes as well to stimulate its adoption, challenging colonial imaginaries of modernity (Graham and Marvin, 2002) and innovation (Carenzo, 2017) and transforming the identity of urban poor communities as of innovators (Zapata Campos *et al.*, 2023). Kenya has been leading the creation of alternative monetary schemes and digital start-ups in Africa since 2011 (Bijker, 1995). Take M-Pesa as an example (Guma, 2020). The country therefore showcases a favorable environment for developing and adopting digital innovations. A context advancing a digital framing is therefore crucial for the replication of these grassroots financial innovations (Diniz *et al.*, 2021).

The paper thus contributes to the grassroots innovation movement literature, and more particularly, to the understanding of the role of framing in inspiring, legitimating and mobilizing community actions leading to the production of innovations. It confirms how the meanings of the frames evolve as part of the mobilization process. The findings also resonate with the need to draw a plurality of framings together to produce the innovations (Hess, 2005; Leach *et al.*, 2005; Leach and Scoones, 2007). They also show how framing involves questioning colonial and conventional imaginaries of mainstream innovation (Bijker, 1995).

Table 1.
Rationales for
grassroots financial
innovations in
resource-scarce
environments

	Digital framing		Quality of the innovation
	Development framing	Community framing	
	Organizational incompleteness		Organization of the innovation

Finally, the study originally shows, how what determines the persistence of grassroots innovations, despite the decreasing influence of these framings over time, is the availability of space for experimentation and strategies of incompleteness (Guma, 2020; Zapata Campos *et al.*, 2023) that characterize organizational life in contexts of extreme scarcity. In a context of extreme scarcity and structural poverty, these spaces introduce small margins of agency among excluded and neglected communities to produce grassroots innovations.

Grassroots innovations in resource-scarce environments emerge in an institutional void where state and mainstream market actors are typically absent. And when they are present, it is often to fear them for, e.g. state evictions or for risks of fraud. That is particularly the case of Kenyan grassroots innovations, compared to other contexts in the Global South, such as Brazil or Argentina, where supportive policies to social innovations such as community currencies, universal income, or environmental service cooperatives have developed in the past decades (Zapata Campos *et al.*, 2020). A favorable political climate can thus support the persistence of grassroots innovations after their creation, through financial support, capacity building or legal frameworks. Hence, the rationales for grassroots innovations to thrive in the case at hand, can be carefully generalized to other communities operating in similar contexts of institutional void. This does not preclude the generalization of our findings merely to global south contexts. Grassroots initiatives thriving in contexts of scarcity in global north settings, e.g. deprived urban suburbs with low-income residents, can also benefit from the understanding of the development, community and digital framings in mobilizing collective action to produce social innovations. Understanding how the continuity of these innovations can be supported by spaces for experimentation and strategies of incompleteness, which provide with the time and space for communities to innovate, is an important lesson that can be transferred from south to north.

Despite the resilience and adaptation capacity of incomplete grassroots organizations and their innovations, if we want them to flourish and contribute to expand their social, economic and environmental benefits to wider communities, supportive policies and intermediary organizations are necessary to facilitate experimentation, beyond the intermittency of punctual innovations, as the Latin American experience shows (Diniz *et al.*, 2021).

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