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The unbearable lightness of digital money

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Abstract

This paper examines the factors that make cash 'sticky' in the increasingly digitised Kenyan financial landscapes. On the one hand, it discusses the mismatch between assumptions implicit in the financial inclusion discourse and ideas of saving, accumulation and money enshrined in local financial practices, and provides an overview of the current digital payment situation in Kenya, in terms of strategies and data. On the other hand, it draws insights from industry efforts in which industry expectations are tested against a background shaped by the dominance of cash and traditional financial institutions. The overall goal is to further the understanding of potential drivers and challenges of 'cash-lite' approaches to financial inclusion, as well as the convergence and divergence of theory and evidence. This study uses qualitative methods of data collection to understand the social, cultural and economic drivers of payment behaviours, and the opportunities and constraints for adoption and acceptance of technology. It argues that the enduring reliance on cash suggests that a rational calculative approach is not adequate to understand people's decision making when considering different options in a repertoire of financial alternatives. Most importantly, the materiality of cash affects its pragmatics within a broader repertoire of financial practices revolving around different means of payment and storages of value. It thus recommends that an approach to the design of e-payment systems should not only be largely 'open-source' for ease of interoperability with other payment systems, but also localised, to converge with local contexts.

Keywords cash-lite, financial inclusion, Kenya, social networks, mobile money, digital payments

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PURPOSE OF THE SUBMISSION

The purpose of this submission is to examine the factors that make cash 'sticky' in the increasingly digitised Kenyan financial landscape. While the country is one of the most dynamic markets in Africa for electronic payments, cash remains king. Why so? Indeed, paper money has both costs and benefits for households, firms and governments.[1] Costs even higher are expected for developing countries, given the structural weaknesses and barriers inherent in the local economies. Data from the World Bank Financial Index suggest a correlation between cash dependence and formal financial exclusion.[2] It is for this reason that a section of the financial inclusion community has been at the forefront of pushing for cashless systems, in the hope that the convergence of technology and financial services should make formal financial services more accessible, especially for the world's two billion unbanked people.[3] But cash has its own benefits: it is fast and universally accepted. Further, cash is the most interoperable means of payment: it can be used as a token to invest in social capital and helps prop the psychological pain of spending, more so in settings in which a substantial portion of the population live below the poverty line.

The Kenyan government, for instance, has been pushing for cashless payments in the transport sector, but there is endemic resistance. Of course, the transport sector only represents a small, though essential, part of the economy. The retail sector, which helps to fulfil the place utility of consumer goods and services, is even bigger. Generally, though, there have been various well-orchestrated initiatives for going cash-lite in Kenya: the industry players, through a range of financial products; the government, by creating an enabling policy environment, eg the Kenya Vision 2030 economic blueprint; and the research community, by continuously enquiring into the various impact pathways of all these initiatives. Despite these efforts, over 90 per cent of economic transactions in Kenya are still done in cash.[4,5]

The authors' argument is that, to understand people's decision making as they consider different options in a repertoire of financial alternatives, one should take into account how the materiality of cash affects its pragmatics. To express it better, one should look at the reasoning through which people associate a particular means of payment to a specific social interaction. Cost and benefits are indeed accounted for by the actors, but they are seen through a prism in which ideas of sociality and temporality (and the evolution of sociality across time and space) converge. As such, it is also conjectured that people do not just use payment instruments, but they also see them as appropriate to particular circumstances.

This paper is divided into two parts: the first examines the mismatch between assumptions implicit in the financial inclusion discourse and ideas of saving, accumulation and money enshrined in local financial practices, and provides an overview of the current situation of digital payments in Kenya, in terms of strategies and data. The second part draws insights in which industry expectations are tested against a background shaped by the dominance of cash and traditional financial institutions.

The overall goal is to further the understanding of potential drivers and challenges of cash-lite approaches to financial inclusion, as well as the convergence and divergence of theory and evidence.

CASH-LITE NARRATIVES AND STRATEGIES IN KENYA

In recent years, the debate on 'how to bank the unbanked', namely the two billion people in the world who have no

access to financial services,[6] has gained central stage in the global development agenda, underpinned by the view that access to financial services is a prerequisite for development. Digital money has become central in this debate. The financial inclusion community upholds the belief that constraints to financial inclusion can better be addressed at scale through leveraging digital technologies, which also leads to greater efficiencies in economic transactions. This is based, on the one hand, on the idea that bundling e-payments information and software creates opportunities for businesses to streamline and automate processes relating to procurement, dispatch, inventory management and payment collections;[7] on the other, that with an economy less reliant on cash — or cash-lite — the bottom of the pyramid will be able to manage, negotiate and, in some case, move better between different currencies, on a daily basis. In addition, at institutional level, the greater traceability of digital money might improve the government's capacity to fight economic crimes and corruption.

In light of the momentous diffusion of mobile telephony across the Global South, mobile money, defined as 'a network infrastructure for storing and moving money that facilitates the exchange of cash and electronic value between various actors',[8] is considered a strategic innovation to cut the cost and enhance the reach of financial services.[9] This idea stems largely from the success of the mobile money service M-PESA in Kenya. Supported by DFID and launched by Safaricom in Kenya in 2007, M-PESA has drawn considerable attention from academics, development practitioners and business analysts interested in assessing its transformative impact and the possibility of exporting such a profitable experience to other African contexts.[10] Initially developed to facilitate local and national remittances of urban migrants, M-PESA has gradually evolved into a platform for making payments, storing value and paying for utilities. Therefore, studies on M-PESA have highlighted the fact that the popularity of this mobile money service depends on a set of conditions that pertain to the Kenyan context: from research on mobile money in Kenya, it emerges that M-PESA has been appropriated according to existing transactional patterns.[11] Particularly relevant to this argument are studies shedding light on the use of mobile money to (re-)create sociality by facilitating the circulation of gifts and social payment across networks of kin and friends.[12] Although the importance of social networks in Kenya in household income elasticity, consumption patterns and risk sharing have been noticed increasingly,[13] the relational aspect of digital money is often neglected by financial inclusion practitioners, whose approach is mostly informed by the assumption that 'money, after all, is "just" information about who owes what to whom'.[14] Yet, a growing anthropological literature is building up on the notion that, as Maurer explains, 'information is money, and power, and everything else that goes with them. At the same time, recognising that money is only information, mere words or sign, allows us to seize it and make it in our own image, to do good and re-create community and trust'.[15] For this reason, an approach is needed to 'shift(s) questions about what money is towards questions of what money does'.[16] Exploring the reasons for cash stickiness requires tackling the mutual shaping of practices revolving around the materiality of money and a social reality that makes both use and sense of diverse forms of money, and choosing between them according to the circumstances.

Picking up on these considerations may help in understanding why efforts to go cashless have globally encountered a myriad problems. Even in western countries, it is estimated that cash still accounts

for between 35 and 70 per cent of economic transactions,[17] depending on country context. In a quickly digitising society such as Kenya, at least 90 per cent of all economic transactions are still being carried out in cash.[18,19] As corroborated by the recently launched Kenya Financial Diaries 2014 report[20] as well as the 2013 Kenya FinAccess survey,[21] Kenya is a very cash-intensive society. While this can be partly attributed to a high incidence of formal financial exclusion in the better part of her post-independence history, there must be some fundamental reasons and salient features of cash, ensuring that it is the most ubiquitous payment instrument.

First, cash is tangible, unlike digital money, and, as such, one might contend that this physicality helps the mental accounting of the cash bearers, who get constant feedback about their running balances, more so if the balances are infinitesimal, as one would expect the case to be in Kenya, where 46 per cent of the population live below US$1.5 a day.[22] Second, since cash transactions are instantaneous, one can picture a universe in which the remaining cash balances are noticeably diminished in each of the 'mental sub-wallets', thus giving the spender a sense of control over spending, and visibility over how much of a budget has been depleted. Third, cash is anonymous and disintermediated, as it keeps no record of the user's identity, unlike cashless instruments that require intermediaries such as banks and mobile network operators, and therefore caters to the need for anonymity of users who do not wish to leave a traceable record of their personal transactions.

The strong reliance on cash informs household consumption, savings, investment and other expenditure behaviours, narrowing households' budgeting decisions. Also, unlike cashless instruments that exhibit broken transaction chain loops, cash has an end-to-end closed loop transaction chain, right from the household consumers through the middlemen, to the firms, and to the government. Furthermore, there are switching costs from use of cash, which dissuade users from adopting cashless instruments, and network externalities are also working round-the-clock in bequeathing cash with value. According to Mas and Ng'weno,[23] formal businesses seem to be rigid about their payment habits, preferring to stick to cheques as the supplier payments, and accepting e-payments typically as a collection method.

In a recent study by Financial Sector Deepening (FSD) Kenya[24] on enhancing the growth of plastic money in Kenya, it was found that, while the uptake of debit cards remains higher than that of credit cards, the use of cards is generally associated with high value transactions (the average card transaction is 3,500–4,500 KSh). The main reason for the slow uptake, according to the report, is that consumers find card use cumbersome. Zollmann and Cojocaru,[25] using the diaries approach, found that the bulk payer shift, in which relatively few large payers make payments to many recipients (eg employees and social programme beneficiaries), is not yet complete in Kenya, with remittances over distance being captured largely by mobile money, though there is still a very large share of inter-household exchange being done in cash. Bankable Frontier Associates (BFA)[26] proposes four stages to going cash-lite in any society: stage 0 is a cash-heavy society; stage 1 is characterised by bulk payments; stage 2 involves increasing use of e-payments; and, finally stage 3 is the cash-lite economy.

THE EMPIRICAL SETTING

In mid-2013, FSD commissioned a series of research on cash-lite in the Naivasha area. The research started with a landscap-

ing study, then a quantitative baseline survey, followed by an endline survey, then finally a qualitative study using ethnographic methods of data collection.

Flower farming is Naivasha district's economic engine, outranking other sectors such as small-scale farming, fishing and tourism, with 57 flower farms employing over 70,000 workers, mostly internal migrants from all across Kenya. The basic salary there is 300 KSh (US$3.35) per day, paid twice a month (an advance on the 15th, the rest at the end of the month) into the workers' bank accounts. All flower farm workers have debit cards, which they can use to withdraw cash from ATMs and bank agents, and make payments at outlets with a point of sale (POS) device. Many workers live in Karagita, a settlement inhabited by around 30,000 people, located around 20 minutes away by public transport from Naivasha town. Local consumption patterns are dominated by basic needs, such as food, water (both drinkable and to wash) and charcoal to cook. Because of the limited access to the electric grid, most purchases in shops are for non-perishable items: fruit and vegetables are bought on a day-to-day basis. The only leisure venues are bars, where men hang out to drink and play pool. The main extraordinary expenses are school fees and are paid mostly drawing from *chamas*, or local rotating credit and saving associations (ROSCAs).[27] While M-PESA agencies are ubiquitous across the area, banks and ATMs are concentrated in Naivasha's downtown. The withdrawing fee at the banks' ATMs is 30 KSh for the bank customers, who may also withdraw at other banks' ATMs, but with higher fees. As an alternative to the ATMs, a network of bank agencies (often located within retail shops) enables card holders to withdraw, but at a considerably higher but graduated fee. Upon receiving the salary in their bank accounts in the middle and the end of the month, flower farm workers have thus two options for withdrawing, either travelling to the bank ATM in Naivasha town, or withdrawing at one of the bank agencies in the settlement. The use of the card for both withdrawing and retail payments reaches its peak particularly at the end of the month, when people flock to the local shops to restock and settle previous debts.

DATA COLLECTION METHODS AND RESEARCH QUESTIONS

The cash-lite research, from which many of the insights used in this paper have been sourced, used both quantitative and qualitative research methods. A baseline survey conducted in June 2014 provided quantitative data that served as a basis for the qualitative investigation at the centre of this paper. The researchers stayed and interacted with the consumers and merchants at the research site for a period of two weeks, to examine the local context through a theoretical prism drawing on the anthropology of money. During this time they conducted in-depth merchant interviews and participant observation at the merchant stores. The primary aim of the qualitative investigation was to provide insights into the social, cultural and economic drivers of payment behaviours and the opportunities and constraints to technology adoption and acceptance, in a scenario of intensive digitalisation. It was, therefore, targeted at unearthing behavioural drivers influencing the outcomes observed during the quantitative baseline and endline surveys.

This triangulation of qualitative and quantitative data enabled any weaknesses inherent in either methodology to be overcome. Further, the qualitative research helped to explain the missing links and gaps observed in the quantitative survey, while at the same time the quantitative

component helped to quantify the insights gleaned from the qualitative research.

The research was driven by the following questions:

- Why is cash dominant?
- In which circumstances does cash still command more trust over digital circuits of payment?
- What practices are enacted, and how are technological devices used to bridge different social and technological networks?

ROLE AND DOMINANCE OF CASH

The local financial landscape is increasingly shaped by the interplay of digital means of payment and systems based on paper, such as cash and cheques, or on interpersonal trust, such as credit. Indeed, cash is still, and by far, the most common means of payment in person-to-business transactions. Digital infrastructures for saving and transferring value interweave with social networks based on trust and through which value circulates. Cash thus has a pivotal role in articulating the relationship, on the one hand, between pre-digital and digital payment spaces and, on the other, between banking circuits and mobile money. Indeed, since interoperability between the bank and Safaricom is possible but expensive, and therefore little practised, there is a broken loop between the savings deposited in a bank account and those in one's mobile wallet. Acting as a bridge between heterogeneous financial circuits, cash plays a critical function by enabling people to adopt different payment devices. Some people hold both M-PESA and bank accounts, but demand that their employers pay them in cash in order to pool part of the money into a *chama*, transfer part to the bank account, settle debts and pay for standing costs (such as rent) and deposit the rest in an M-PESA account for daily expenses. The unchallenged appeal of cash lies primarily in its perceived flexibility: first, being accepted by merchants of any size, it broadens the range of offers available to the consumer. Second, it is the only means of payment for small expenses (such as water, cooking charcoal or transportation), which could not be otherwise covered by digital systems. The ethnographic study found that farm workers in Karagita usually withdraw the total amount of the salary, either at the ATMs in Naivasha or at one of the local bank agencies. The cash is used immediately for bulky expenses at the supermarkets in town or in Karagita or to settle outstanding debts. The money is then partly deposited in mobile money wallets, returned to the bank, remitted to relatives at home or deposited in *chamas*. Many respondents expressed a predilection for the classic box at the bottom of a drawer. A lady offered an interesting perspective:, she pointed out — switching from ki-Swahili to a vernacular language that she shared with a research assistant — that, considering that the entire Naivasha area was swept by the post-electoral violence in 2008, she still lives in fear of being driven out of her home at any moment. Therefore, she regularly transfers her savings to her family in Western Kenya and keeps at home enough money to cope with an eventual flight.

The choice of the means of payment looks often as the outcome of a negotiation, in which the parties involved in the transaction further the options that best fits their interests or needs. Suppliers are major drivers of adoption: merchants engaged in frequent transactions with farmers in the countryside tend to use mostly cash, or cash out on the spot from their mobile wallets, or use cheques when paying large wholesale companies. The case of a cigarette supplier at Naivasha town bus station well illustrates the com-

plex interplay of different devices. He purchases the packages directly at the factory and accepts cash for amounts below 40,000 KSh, otherwise he demands to be paid through mobile money transfers (MMT). Since the cigarette manufacturer prefers cheques, he needs always to keep a positive balance in his bank account, but he draws from his pocket money and his mobile wallet for daily expenses.

RATIONALITIES AND TEMPORALITIES FOR THE ADOPTION OF SPECIFIC MEANS OF PAYMENT

The decision of many merchants to embrace a means of payment while turning down another stems out of an evaluation in which different factors are taken into account. This is related, for instance, to the fact that agents and merchants often coincide. But, while as an M-PESA/Equity bank agent, one earns on commissions on each withdrawal, as a merchant using Lipa Na M-PESA or a POS, he is charged each time a customer pays digitally. There is a gulf between how the issue is regarded by Lipa Na M-PESA and Equity Bank on one side and merchants, on the other: in fact, the formers draw a clear-cut line between agents, who are viewed as sellers of cash and e-float, and therefore earn on fees that cover the costs of the inventory, and merchants, who pay for a service that facilitates the payments for the goods and services they sell. This distinction, however, is lost on the ground: merchants who operate also as agents suggest that their customers withdraw first and then pay with cash. In addition, soft costs, such as efforts and time to instruct customers on digital payments, are also accounted for. Cash is therefore perceived as the most straightforward and flexible payment instrument: it is accepted everywhere, even by hawkers and street-sellers; it bridges bank savings and mobile money; it is critical for cultivating social relations built on the regular attendance of spaces, such as *chama* meetings and religious gatherings, in which the importance of cash lies not only in its nominal value, but also in its materiality as an object to be manipulated and displayed. This is not to say that materiality is irrelevant in the case of digital money. As a matter of fact, the usage patterns of bank accounts and MMT are contingent on the way people relate to their plastic cards and mobile phones, and the way people attach assumptions and expectations (in terms of ease of use, risk and security) to them. A few snapshots may help to clarify this point.

G is a young fisherman in Kamere beach. He is a member of a fishing crew. He lives on the money he earns day by day and does not feel the need to open a bank account.

> 'When we have a good catch, we don't think to save money because we feel that tomorrow it will be the same. We go to a bar and celebrate. So we always prefer cash.'[28]

J, a more seasoned colleague, understands his view, but his priorities are elsewhere. He is married with two kids, has a bank account, but never carries his card, because he is afraid of losing it. But he also likes to drink in moderation, and he feels that M-PESA is the proper instrument to balance ease of use and management of savings.

> 'If you go drinking it's better to use M-PESA because it's safer. Maybe you get drunk and you lose your money. If you find yourself unable to dial the number, it means that it's time for you to go home.'[29]

M-PESA provides greater control over one's finance compared with cash, but, at

the same time, the service is so widespread that P2P (in contrast to Lipa Na M-PESA) payments are accepted almost everywhere. A commonly held view, however, is that banks are better for family men. A local flower farmer underlines that, with a bank account,

> 'You control the money you withdraw much better than with M-PESA, which you would use too often [...] Putting the money in the bank helps resist the temptation to spend. People otherwise would say "I've eaten spinach every day, now I want to eat roasted goat".'[30]

The subtext of this statement is that a bank account is a more stable way of storing value, because, on the one hand, there are not many ATMs or agents for withdrawing; on the other, swipe cards are household financial devices, on which both spouses exert control. There seems to be a paradox: a more pervasive network of POS might reduce the perceived advantage of a bank account for many.

Cash, however, flexible and ascribed to a short-term temporality, acquires a greater capacity to hedge against volatility. According to the findings of the qualitative study, many admit resorting to MMT only in exceptional situations, underlying instead the importance of 'showing up' at meetings in which cash is pooled together. Being there in person to pool cash into the *chama* fund is critical not only to weave and strengthen social ties but, since the full-cycle pay-out is often earmarked for special uses (such as education fees or expansion of business), also to burnish one's credentials as a reliable family-devoted, hard-working member of the community. Tellingly, from the interviews collected in the field, views often emerged suggesting that women, although associated with petty cash to cater to the daily needs of the family, are considered, at the same time, the natural repository of a '*chama* mindset', based on gendered assumptions of their predisposition to share and their prowess in interweaving social relations (and thus re-creating society).

Many interviewees in Karagita also suggested a correlation between long-term business aspirations and the use of a broader range of financial products. Forward-looking entrepreneurs were particularly supportive of digital means of payment. According to the owner of an electronic shop in Karagita, also operating as a bank and Lipa na M-PESA merchant, handling cash indeed has higher costs, such as security, and bank transfers, compared with swipe cards and MMT, which have scope for growth, provide an improvement in the level of the local population's financial literacy. His customers are mostly youth purchasing electronic items and familiar with M-PESA, but he expresses the belief that the older population is more reluctant to embrace digital payments. But such is his confidence in the fact that digital payment will soon gain momentum that he is set to open a furniture shop in Karagita in the near future, which will do without cash. He is thus planning to allow payments only with cards and MMT, a decision based on the preferences of his wholesalers of electronics and computer spare parts, and thus finalised to ease the management of his cash flow. Digital payments and, in particular chip cards, convey to many users a sense not only of greater control over one's finances, but also of entrepreneurial advancement. E, the young owner of a shop selling sports items and DVDs, never parts from his chip card because, as he said: 'I'm a businessman and I may come across a business opportunity. Therefore, I need to be ready to get money in any moment.'[31]

Businesspeople planning to expand their activities tend to be more familiar

with bank policies, entertaining closer relations with bank representatives and therefore getting clearer and more thorough information on access to financial services and fees. The adoption of digital financial instruments is in general associated with a longer time horizon: people envisaging an improvement in their life conditions — or aiming for socially recognised achievements such as having a family — are keener to explore the potentials of diverse means of payment. Conversely, low earners with limited spending options often consider cash the device that best fits their constant need for liquidity, and which, despite the large use of MMT for remittances,[32] can be more easily invested in social relations through little gifts or loans, and thus feed that reciprocity that is the ultimate safety net for the poorest among the poor.

UPTAKE OF FINANCIAL INNOVATIONS AND SOCIAL NETWORKS

Social relations appear to be a major factor in the choice of using one financial device instead of another. This holds true for both merchants and customers. Many merchants opted for turning down a specific means of payment so as not to damage their neighbour's business. Sensitive to the impact that Lipa Na M-PESA could have on neighbouring M-PESA agents, a local supermarket's keeper decided to opt out of Lipa Na M-PESA. Although she is not an M-PESA agent, her shop is located across from two M-PESA kiosks, and she believes that Lipa Na M-PESA would eventually erode their profits.

> 'There are so many M-PESA around. People don't really need Lipa Na M-PESA. They can simply cash out and pay cash. Let them [neighbouring M-PESA agents] also have a profit.'[33]

Although she admits that Lipa Na M-PESA facilitates the managing of cash flows, she suggests that adopting the system may have repercussions on her social relations. The concern to cultivate neighbourly relations thus plays out in the decision to refuse to adopt a specific means of payment. We also noticed that merchants with a personal relationship with the bank (because they personally know the executives or the local agents) tend to push their customers to make use of their card. The owner of a convenience store in Karagita has had over thirty transactions in less than three months since she was provided with the bank POS. She has been proactive in explaining to her customers that, instead of going to the bank, they can use their cards. She claims to be a very good friend of one of the managers of the cash-lite pilot at the bank, and she believes that 'keeping the bank happy' (even if this entails a 1 per cent fee on each transaction) would yield advantages in the future.

THE SOCIAL EMBEDDEDNESS OF FINANCIAL DEVICES

Consistently with the academic literature arguing that technological innovation are socially embedded, meaning that technological artefacts and social organisations shape each other,[34] the present research also found that the use and the 'interpretation' of different means of payment depend on the context in which they are deployed. How cash, payment cards and mobile money are used and what they 'stand for' are entwined issues. Cash is widely perceived as a token to access social events in which financial capital is displayed to underpin the cultivation of social capital. This is particularly evident in *chama* gatherings in rural areas, in which most people cling to paper money, with implications for cash-hungry merchants

regularly trading with farmers. This need stems mainly from the entrenched significance of *chamas* in rural areas, where formal financial institutions have a very limited reach. Liquid money is in great demand, particularly among those engaged in multiple *chamas*. The owner of a beauty products shop in Karagita, for instance, allows payments through card and M-PESA, but she makes sure always to have enough cash to contribute to three *chamas* of which she is a member. She considers the gatherings as public relations events through which she can reach out to her female customers. *Chamas* also play a critical role in supporting the long-term aspirations of many flower-farm workers, who also have the possibility of joining one of the savings and credit cooperative societies in their workplaces.

Similarly, cash features prominently in church fundraising. A major wholesaler at the Naivasha town market and a devoted Christian, points out that, at each gathering, people have to carry along enough cash to fulfil the repeated donation requests. In the alms collections, the faithful were often invited to put their offering in an envelope and hand them in after writing their names on them. In such a context, carrying the object 'money', duly saved and not wasted on booze and other 'sinful indulgences', signifies a repeated commitment to the community and is testimony to a life style in adherence to Christian values.

CONCLUSIONS AND RECOMMENDATIONS

It is apparent that people interact with and react to emergent forms of money in various ways, with people not only using, but also making sense of currency, at times with religious purposes and charged with meaning. This finding, to a great extent hinged on the interweaving eventualities of digital and traditional forms of money, is an invaluable prism through which we now recognise the practicalities that people face in adopting digital money. Further, the study has unearthed diverse social and economic contexts in managing, negotiating and converting different monies in people's daily lives. For instance, the choice of means of payment stems from a negotiation in which the parties involved in the transaction further the options that best fit their interests and needs.

Given the sheer scale of the task implied by the total elimination of cash, it seems more likely that cash-lite could be a more beneficial objective for industry and policy makers than reaching a purely cashless economy. It is manifest, however, that while the cash-lite agenda is imperative, some reflections and discounts need to be considered and/or conceded. Specifically, while cashless systems can facilitate payments, the supply-side participants need to make available a broad array of different monies that people can negotiate and convert, as they exchange, store and measure value, since different contexts call for different types of money to be used.

There are signals of a normative approach to financial inclusion rather than a positivist one, which would allow people to exploit appropriately various forms of money as financial tokens to invest in different social groups, eg *chamas*, religious groups. As such, flexibility in the availability of different monies will facilitate and complement a variety of social groupings, in the process nourishing the very soul of these social entities, as financial and social capital reinforce and sustain each other. In fact, social relations appear to be a major factor in the choice of using one financial device instead of another, and the interpretation of different means of payment is inscribed within social networks.

Regarding cash, the study found that paper money projects its materiality on social relations built around established temporalities such as *chama* meetings and payout schedules, religious gatherings and fundraisings, physical spaces such as public halls and churches, as well as artefacts such as the box of the *chama*'s contributions, the pouch and the envelope for the alms. To leverage the potential of cash-lite services and advance a digital financial inclusion agenda in the Global South, practitioners should take into account the role that cash plays in the reproduction of social life in specific contexts and envisage locally tailored solutions (in terms of both technology and business models) to meet the diverse needs of the population.

Moreover, e-payment systems should not only be largely 'open-source' for ease of interoperability with other payment systems, but also localised to converge with local contexts. The decision of many merchants to embrace a means of payment while turning down another stems from an evaluation in which different factors are taken into account: hard costs and losses, soft costs and repercussions for social relations. In addition, expressed in multiple scales and forms, money is associated with expectations and ideas for the future, with forward-looking entrepreneurs, for instance, being particularly supportive of emergent digital means of payment.

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(1) For instance, the European Central Bank estimates that the social costs to cash transactions amount to at least 1 per cent of European countries' GDP, half of which are borne by banks and infrastructures and the other half by retailers. Earlier studies had even put this figure as high as 3 per cent of GDP. See also Humphrey, J., Mansell, R., Pare, D. and Schmitz, H. (2003) 'The Reality of E-commerce with Developing Countries', available at: http://eprints.lse.ac.uk/3710/1/The_reality_of_e-commerce_with_developing_countries.pdf (accessed 10th February, 2015).

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