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ABSTRACT

Digitising how financial services are accessed in the microfinance industry is considered a magical pathway to increasing financial inclusion. This paper argues that beyond the numerous advantages digitisation is supposed to bring, it may also hinder financial inclusion if it completely replaces the loan officer-client relationship that has been a hallmark of microfinance. Based on questionnaires and on 21 semi-structured interviews with managers and loan officers of four microfinance institutions in Zambia, our research highlights the trade-offs that need to be considered when digitising the lending process. The study argues for a blended approach between digital technologies and flexibility through human touch if microfinance institutions are to retain the competitive advantage, as well as enhance the production and quality of soft information for financial inclusion in less mature markets.

KEYWORDS
Microfinance; digitisation; loan officer; financial inclusion; soft information; trade-offs

Introduction

The shift towards digitisation has assumed centre stage within the financial inclusion narrative. In microfinance, digitisation is viewed by many as an essential tool for fostering financial inclusion (Agarwal, Qian, & Tan, 2020; Suri, 2017). Digitisation can take various forms in microfinance. This may involve equipping loan officers with tablets and mobile phones for speeding up the lending process, use of mobile banking and agent network aimed at reducing transaction costs, or even credit scoring that facilitates loan decision-making (Ashta, 2018). It is argued that digitisation is an inevitable global pursuit and promises great efficiencies for how financial services are accessed (Harigaya, 2016; Ray, Miglani, & Paul, 2019), as well as offering poor people an opportunity to benefit from financial services that are affordable and more tailored to their needs (Disse & Sommer, 2020).

Digitisation is inevitably bringing transformative change to the way financial services are accessed in the financial sector and, particularly, in the microfinance industry. Central to this transformation in microfinance is the lending process that has traditionally involved face-to-face interactions between loan officers (LOs) and clients. These relational ties matter for microfinance because microloans have traditionally not worked with collateral. Rather, it is the relationships amongst clients and with the LO that act as collateral. The constructed relational ties are embedded in social ties of trust, empathy and reciprocity that facilitate a relational contract outside of the organisation's transactional approach (Canales, 2014; Siwale & Ritchie, 2012). Based on these ties, LOs are positioned to informally collect soft information about their clients for better credit decisions, educate clients on relational expectations of microloans, offer personalised assessment of needs to loyal and longstanding clients when circumstances call for flexibility and not a standardised response. MFIs thus face a trade-off between full digitisation that eschews relational

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ties and flexibility of the human touch. The implications of ensuing tensions are not thoroughly explored, especially in less mature markets. Extant literature, however, tends to overemphasize mobile banking and cases where digitisation has recorded great successes in facilitating basic payments and P2P transfer payments as is the case with the M-Pesa in Kenya (Kingiri & Fu, 2020). But for MFIs that support microenterprise lending, embracing full digitisation might mean less relational ties between clients and LOs, with unintended consequences for financial inclusion (Mader, 2017; Ozili, 2020; Visconti, 2019).

Exploring how digitisation may be changing the relational model and the associated tensions is important because in microfinance, the lending process has been dependent on the relationships loan officers build with clients (Behr, Drexler, Gropp, & Guettler, 2020). This paper therefore asks the following question: In what ways has digitisation transformed LO's role within microfinance? To answer this question, we adopted a qualitative approach to have a deep insight of how the role played by microfinance LOs in the lending process may evolve with digitisation and the effect this may have in terms of financial inclusion and work place roles. Such an approach is particularly appropriate, since if field actors' voices are not heard and taken into account, there is a danger of undervaluing the bottom-up views in explaining why caution needs exercising when it comes to indiscriminate digitisation of MFI lending processes.

By examining the case of Zambia, a country where digitisation of microfinance is still evolving, this study highlights the importance of a hybrid model that combines technology and a human touch to the lending process. We argue that the automation of credit decisions that excludes LOs may run against the very nature of microfinance and further marginalise the poor. Findings also point to LOs progressively being cast more in the role of marketers of products as digitisation entrenches the commercial logics that MFIs have to work with. This paper thus contributes to the critique of the development and microfinance literatures that tend to present digitisation as unproblematic and generally biased towards success stories of mature markets, by analysing the trade-offs between efficiency and relational dimensions within the lending process. Furthermore, while prior studies have examined several aspects of digitisation in relation to financial inclusion (Arner, Buckley, Zetzsche, & Veidt, 2020; Badruddin, 2017), investigating digitisation in relation to the stages of the lending process and how that might reconfigure the way LOs perform their intermediary role yields interesting, nuanced and contextual insights into the pace and effects of digitisation. More precisely, this research lays out tensions between digitisation and the relational model, by bringing in a critical perspective to an overlooked dimension in microfinance: the role of LOs. In so doing, it adds support to the view that in certain socio-cultural contexts, a blended approach mixing digital technologies and human touch to manage the lending process may retain the competitive advantage of MFIs as well as enhance the production and quality of soft information, particularly in less mature markets. Additionally, to our knowledge, this is one of the few papers to focus on how the work of LOs is likely to change in light of the digital applications in the field.

Relationship lending and microfinance

Microfinance as a version of small business finance (Canales, 2014) has thrived on relational ties and 'soft' information (Berger & Udell, 2002. One of the main important factors that has largely contributed to the success of the microfinance industry is the use of relational models embedded in social ties that MFIs create through their LOs. This 'human touch' element translates in its business model to relationship lending. Relationship lending is defined as 'a long-term implicit contract between a bank and its clients' (Berg & Schrader, 2012, p. 551) and involves the use of soft information (Cotugno, Monferrà, & Sampagnaro, 2013), namely the borrower-specific private information collected through the multiple interactions with borrowers over time (Filomeni, Udell, & Zazzaro, 2016; Petersen & Rajan, 1995). By exhibiting less standardisation than transaction-based lending, relationship lending can offer flexibility in lending to clients without collateral

and where there is a high degree of informational opacity, as is often the case in microfinance (Serrano-Cinca, Gutiérrez-Nieto, & Reyes, 2016). Therefore, digitising the lending process in microfinance should standardise and automate lending decisions, with potential benefits in terms of efficiency, while at the same time, reducing the flexibility that the relationship lending model offers.

When examining relationship lending and the collection of soft information, the role of LOs should not be neglected (Berger & Udell, 2002; Trönnberg & Hemlin, 2014). Existing microfinance literature shows that strong relationships between MFIs and borrowers help deal with informational asymmetries and decrease loan defaults (Tchuigoua, 2018). In microfinance, LOs play a dominant role, and the close and trustworthy relationship that they develop with their clients is critical to the success of this industry (Drexler & Schoar, 2014; Siwale & Ritchie, 2012). More concretely, in microfinance, LOs as soft information holders (Tchuigoua, 2018) are involved in gleaning informal knowledge that can be crucial in five main activities of the lending process: loan prospecting, client training/advising, client screening, loan monitoring and ensuring repayment (Behr et al., 2020; Labie, Méon, Mersland, & Szafarz, 2015). Digitising the lending process fully or partially inevitably reconfigures the role played by LOs in these different activities and their relational ties with clients. Drawing upon the concept of street-level bureaucrats (Lipsky, 1980), which is applied to organisations where considerable discretion in the enactment of rules is vested in its front-line workers, loan officers can work like street bureaucrats. This is because they mediate the distribution of loans and, to an extent, exercise unusual levels of discretion over who accesses financial services (Canales & Greenberg, 2016). With the advent of digitisation, microfinance institutions may thus be subject to tensions between standardisation that digitisation may offer and flexibility which is at the core of the relationship lending. How the ensuing trade-offs created between flexibility and standardisation are managed could pose challenges for MFIs or give them a distinctive advantage to address financial exclusion of the poor.

Digitisation and the microfinance lending process

Digitisation can take multiple forms within microfinance institutions. The most basic type of digitisation is the use by LOs of digital field applications such as mobile phones or tablets, with the main benefits being accelerated decision-making and reduced time between loan application and loan disbursement (Ashta, 2018). This speedy process is facilitated by the digitisation of microfinance products and services that enable clients to apply for and repay loans via their smartphone (Ozili, 2020; Visconti, 2019). Mobile banking, with its main focus on transfers and payments, should improve LOs' productivity and reduce their workload by limiting money collection activities and visits on the field (physical loan monitoring activities) (Amran et al., 2019; Ashta, 2018). It is further argued that mobile banking lessens delinquency (Mora & Prior, 2018), reducing the need for monitoring activities, and preventing fraud (Hossain & Sarker, 2015) since transactions are made visible in real time (Ray et al., 2019).

Other ways MFIs are digitising their products and services consist in developing an agent network or partnering with mobile network operators (Metre, 2011; Milana & Ashta, 2020; Mora & Prior, 2018). Through these systems, clients can, instead of travelling far away to an MFI branch, visit agents in their area to deposit, withdraw or transfer money and repay their loan. These changes may have implications on the role LOs assume going forward. As in the case of mobile banking, LOs see their money collection activities being made easier or reduced, thereby increasing efficiency in the process.

Through the potential digitisation offers in terms of increasing the customer base and of giving poor people from isolated areas access to credit (Sapovadia, 2018; Suri & Jack, 2016), both mobile banking and the use of agent network may be beneficial for financial inclusion. However, the effect of digitising the different stages of the lending process and the consequent impact on relational ties and collection of soft information remains unclear. While soft information can still be collected for

example by phone, instead of physical visits, Sahar's and Anis's study (2016) on access to loans by Tunisian small businesses shows that the accumulation of soft information is bigger when a LO visits the client. There is, however, a lack of consensus on whether it is the quality rather than the quantity of soft information collected that may be impacted by digitisation. The loss of quality and quantity of soft information may be particularly the case with group lending compared to individual lending if physical visits are substituted with phones. For example, Harigaya (2016) notes that in the Philippines, digitisation disrupted borrowers' attendance to group meetings as well as weakened the existing social capital where mobile banking was delivered in a group setting.

Microfinance institutions may also digitise credit decisions through credit scoring, a technique that employs algorithms (Kellogg, Valentine, & Christin, 2020) developed to identify potentially bad borrowers (Bumacov, Ashta, & Singh, 2014) as well as to facilitate efficient loan decision-making. This technique, by resorting to hard instead of soft information, helps mitigate LOs' subjective judgments (flexibility) and cognitive biases (Jakšič & Marinč, 2019) in their loan screening activities. Diminishing the probability to offer bad loans is laudable from a financial perspective (Martinez Sánchez & Pérez Lechuga, 2016), but algorithm-based credit scoring runs the risk of denying poorer people access to credit and other related financial services (Visconti, 2019). This is because it goes against the very nature of microfinance which relied on group lending, joint liability and frequent monitoring as substitutes for traditional indicators of creditworthiness.

At all the various stages of the lending process, digitisation promises to increase LOs' efficiency through standardisation, as well as enable MFIs to serve a larger customer base and remain cost efficient. However, there are concerns that digitisation, especially the use of digital credit through mobile phones, may in some places lead to overborrowing (Economist, 2018; Ray et al., 2019). Several scholars identify the tensions and risks of disintermediation between microfinance clients and LOs (Chen & Faz, 2015; Malik et al., 2020; Ndungu & Moturi, 2020; Ray et al., 2019). Others maintain that despite the rapid growth of digital financial services the industry, especially in developing countries, still relies on face-to-face transactions (Malik et al., 2020). The ongoing discourse on the seemingly wholesale acceptance that digital tools are superior to a relational model pays less attention to field workers' views and tensions that MFIs face in different contexts. Much more, it lays bare the uncritical view of digitisation in furthering financial inclusion.

Study context: brief overview of microfinance in Zambia

This study examines the case of Zambia. The Zambian microfinance sector lags behind its counterparts in East Africa based on participating MFIs, client numbers, or even geographical spread (Wakunuma, Siwale, & Beck, 2019). Moreover, it has not benefited from the boost of big institutional investors, thereby affecting investments and scalability (Siwale & Kimmitt, 2019). As of October 2020, there were 32[1] MFIs (down from 34 in 2018) licensed by the Bank of Zambia (Bank of Zambia, 2020). Under the current regulatory framework, the commercial/financial paradigm is perceived as the priority while the social mission is only taking a secondary place or is outrightly marginalised (Siwale & Okoye, 2017). The for-profit focus has led to a shift in lending methodologies primarily from group to individual-based lending of high-value loans as well as tapping into salary-based lending. Overall, the industry has limited rural presence and is still playing a relatively small role in the push for national financial inclusion.

Zambia appears to be particularly interesting when analysing digitisation for several reasons. First, MFIs in Zambia have had scalability challenges due to high cost of delivery, perceived inefficiencies and low population density (Brouwers, Chongo, Millinga, & Fraser, 2014; Siwale & Kimmitt, 2019), making use of technology key to their sustainability. Because of the challenges of extending client outreach and MFIs' institutional sustainability, mobile-based technologies do present a huge opportunity for MFIs in Zambia to drive down transaction costs and extend outreach that hitherto has eluded them. Although uptake of technology by MFIs in Zambia has been slower compared to that in East Africa (Wakunuma et al., 2019), MFIs are taking progressive

steps to embrace digital finance, starting with the digitisation of existing products, services and operations, by using mobile devices, agency banking and partnering with mobile network operators (Bank of Zambia, 2017). Additionally, mobile money services are utilised for basic payment and transfer services. Finally, at the time of the study, most MFIs were not in any partnership with Fintech companies for technology solutions. They relied more on partnerships with mobile network operators like Airtel and their own internal technology infrastructure. Compared to Kenya, this country is therefore particularly interesting as a case study for understanding how MFIs are implementing digitisation.

Methodology

The study is based on data collected from Zambian microfinance institutions in July 2018. An exploratory qualitative approach was adopted involving a survey questionnaire, semi-structured interviews and on-site informal conversations with LOs and managers. The sample of the selected MFIs reflects a purposeful sampling approach (Sturgis, 2008) and is composed of four MFIs that are all headquartered in Lusaka. It is purposeful because the four MFIs served as best local exemplars of digitisation in microfinance with the front-end activities. All four MFIs, to varied degrees, shared similar lending methodologies of 'joint liability groups' and individual lending. They had all recently fully digitised loan disbursement but with a partial digitisation in loan collection. At the time of the study, three MFIs were into mobile banking, one MFI combined mobile banking with agency banking and all four used agents of mobile network operators that customers can visit to perform transactions, such as cash-in/cash-out. The use of tablets on the field was an expectation for the future, except for one rural focused MFI that had already equipped LOs with tablets. Given that the majority of MFIs in Zambia are located in urban cities/areas, including a MFI that only operates in rural areas of Zambia in our sample provided an opportunity to solicit contrasting views of how digitisation would modify the client-LO relationship.

One of the authors used their personal networks to gain access to the four MFIs, with further negotiations involving branch managers in order to contact LOs. Data collection was made in two stages. The first stage of the interviews started with six senior managers and four branch managers drawn from the four MFIs. The aim was to solicit institutional as well as sectorial views on what digitisation was about, why digitisation and how each institution was responding to the phenomenon. After gaining top-level insights into digitisation of the front-end processes, a questionnaire was sent to LOs in three MFIs to get their insights on the changes that digitisation may bring to field level activities and to their intermediary role. The questionnaire was distributed to LOs based in Lusaka branches only due to time constraint and inability to use an electronic copy for those outside Lusaka. Interestingly, even those based in Lusaka declined to complete the questionnaire electronically for fear that management might access their personal views on the subject matter. To address these concerns, 80 hard copies were distributed instead and one of the authors made personal follow-ups to collect them. In total, 55[2] questionnaires were collected, among which two were rejected because the responses were incomplete. At the time of the survey, all LOs had worked for their organisations for at least 6 months and a majority for more than 2 years, such that they were familiar with the working environment and business lending models.

In the second stage of the interviews, eleven LOs drawn from three MFIs[3] were interviewed face-to-face to triangulate questionnaire results. This triangulation of data enabled exploration of questions from varied perspectives (Denzin & Lincoln, 2000), and enhanced the validation of LOs' insights. Only five out of eleven interviews with LOs were audio-recorded[4] with participants' prior permission while others objected strongly for fear that recorded audios may fall into the hands of their superiors. In these cases, the researcher took notes by hand and, after each interview, comprehensive field notes were made to ensure accurate recollection and analysis of the responses.

Interviews with managers and LOs ranged in length from 20 to 90 minutes. An interview guide was used to provide structure, but probes were extensively used to encourage participants to elaborate on specific responses (Saunders et al., 2018). In total, 21 interviews were conducted for this study (see Table 1) and each participant was allocated an identification code. All the interviews were conducted in English. Appropriate ethical research procedures were followed and participants were assured of anonymity and asked for consent after being informed about the research objectives, information uses and their right to refuse. Names of interviewees, institutions and quotations have thus been anonymised.

Data analysis

Following completion of interviews and transcribing, all data transcripts and field notes were subjected to thematic coding (Gibbs, 2008). First, data were analysed and coded independently by each of the authors to develop themes, subthemes and categories that related to the research question (Neuman, 2000). Then, discussions between authors followed to review their data coding processes, differences discussed, and most important themes agreed on. The coding process was based primarily on a set of deductive codes derived from the research question. In addition, iterations of inductive coding were run during the analysis. At this stage, exploratory coding was used to reveal initial patterns and insights, which led to the development of first-order codes such as 'concentrate on selling loans,' 'extra work educating clients,' 'digital touch only is poor substitute' and 'manual work minimised.' These codes are also referred as '1st order concepts' by Gioia, Corley and Hamilton (2013, p. 20). Through the identification of similarities among the initial codes, number of codes were reduced to six conceptual themes which were then grouped into three aggregate dimensions (Gioia et al., 2013). The data structure is presented in Figure 1.

Table 1. Description of interview participants.

Participating Microfinance Institution	Job position	Participant identifier	Gender	No. of years in employment	Location of interview (RC = Researcher's car, BO = Branch office, HO = Head office)
MFI 1	Senior manager	SM1-MFI 1	M	1	HO
	Senior manager (IT)	SM2-MFI 1	M	3	HO
	Branch manager	BM1-MFI 1	M	6	BO
	Branch manager	BM2-MFI 1	M	2	BO
	Loan officer	LO1-MFI 1	F	4	RC
	Loan officer	LO2-MFI 1	F	3	BO
	Loan officer	LO3-MFI 1	M	2	RC
	Loan officer	LO4-MFI 1	M	1	BO
	Loan officer	LO5-MFI 1	M	6	BO
MFI 2	Senior manager	SM3-MFI 2	M	2	HO
	Senior manager	SM4-MFI 2	M	4	HO
	Branch manager	BM3-MFI 2	M	3	BO
	Loan officer	LO6-MFI 2	F	2	BO
	Loan officer	LO7-MFI 2	M	1	BO
	Loan officer	LO8-MFI 2	M	3	B0
MFI 3	Senior manager	SM5-MFI 3	F	3	HO
	Branch manager	BM4-MFI 3	M	6	RC
	Loan officer	LO9-MFI 3	F	3	BO
	Loan officer	LO10-MFI 3	M	2	BO
	Loan officer	LO11-MFI 3	M	4	RC
MFI 4	Senior manager	SM6 MFI 4	M	3	HO

Findings

A deeper analysis of both the survey questions and qualitative interview data identified three common themes (see Figure 1). These are: (i) role change expectations, (ii) workload implications, and (iii) social connections. Thus, how digitisation has transformed and continues to restructure the roles that LOs assume in the lending process is now discussed with reference to the survey and interview data.

Data from the questionnaire suggests that LOs were both appreciative as well as apprehensive of digitisation (signifying tensions) based on their experience of the lending process. Interviews nonetheless provided an opportunity to further seek LOs' perspectives on some of the survey responses as well as triangulate their views with those of managers. Therefore, we now take the three themes into account and explicate perspectives as presented by both LOs and their managers on how digitisation was transforming the lending process and repositioning LOs within the relational business model.

Role change expectations

As in other sectors where technology has revolutionised how business is done, managers of the sampled MFIs, when asked to reflect on how digitisation might affect LOs' intermediary role, quickly pointed out that LOs would not lose jobs. However, they stated that LOs' work role would inevitably change. The reason is that, with digitisation, less effort is required by LOs in the loan recovery task, where new technologies automate the screening of clients, send out SMS alerts and limit the necessity of visiting clients. Consequently, some managers explained that LOs were expected to move more and more towards marketing activities and further build their portfolio. This means that a major part of their time will now be devoted to activities related to attracting new clients and selling new loans, namely to their loan prospecting task. This role change appears particularly interesting to managers since marketing activities are the ones that generate the most income in the lending process. One interviewee describes:

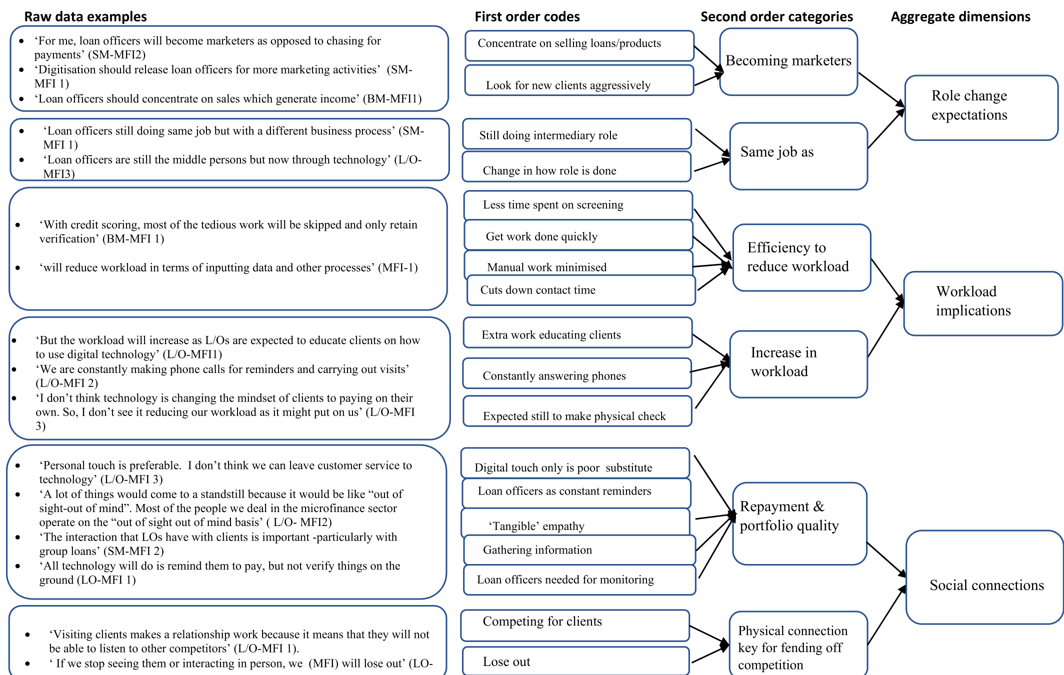

Figure 1. Data structure.

> For me, I see that LOs will now pay more attention to selling the products instead of chasing clients for payments. They will become marketers and explain the product better as opposed to chasing and making sure the money has reached the bank or loans disbursed. (SM3- MFI 2).

In contrast, some LOs saw no significant change to their duties, symbolising a mismatch of expectations between those in the field and senior managers. Yet, they noted the efficiencies added to their same old intermediary role, signifying a co-existence of relational and digital touch. According to them, digitising client screening, loan disbursement and collection was still evolving, meaning that in some MFIs, LOs continued doing most of the tasks as before. As an example, a LO noted that they would still play their intermediary role through their phones instead of being physically present:

> LOs are still the middle persons as currently, we are only using tech [mobile phones] in paying back loans. (LO 9, MFI 3)

Impact of digitisation on workload

Whereas both the LOs and their managers reported positivity towards reduction in LOs' workload following digitisation of loan disbursement, they did not share similar commonality with regard to loan collection. Indeed, some noted that their work remained heavy especially at the repayment stage because even if loan collection was digitised, they still had to physically make follow-ups on clients in loan repayment arrears. In support of this concern regarding workload implications, a branch manager noted:

> Though repayments can now be made from the comfort of the client business premises, thereby reducing cost of travel on their part, we still need LOs to make follow ups because the Zambian culture on loan repayment is still problematic. (BM4- MFI 3)

Furthermore, when asked why they thought workloads may not significantly reduce, LOs noted that, with the prevailing poor credit culture in Zambia, only relying on SMS alerts may not be effective in achieving high repayment rates. They further mentioned that they are still expected to carry out physical checks on clients' businesses, their homes, and household goods and those of their guarantors. LOs run these checks on behalf of MFIs in order to physically verify loan collateral which, in some cases, can mean using soft information collected from neighbours to see if the prospective client owns the house and other household goods. Pictures taken by clients cannot be trusted as representative of the goods they have, LOs added. LOs further claimed that, in addition to constantly dealing with client queries on phones, they were also expected to train the less technologically literate clients regarding the use of new technologies. As most clients in microfinance are poorly educated, this may become a new added task for LOs.

> The workload will increase as we are expected to educate clients on how to use mobile banking, in addition to us making phone calls for reminders and carry out visits. (LO-1, MFI 1)

> It will only quicken the process in terms of savings and reduce travel costs for clients, but I don't see digitisation reducing our workload as much as it might put on us. (LO, 7 -MFI 2)

For the majority of managers, digitisation would inevitably reduce LOs' workload because of less physical contacts with clients at two stages of the loan making process: client screening and monitoring. Managers' views contradicted LOs who believed that even with algorithm-based credit scoring, effective client screening and monitoring require complementing with soft information that they collect through physical interactions. Across all interviews with managers, there was no mention of potential risks to loan quality as a result of cutting back on relational interactions. And interestingly, most of them did not even consider the training of the majority of their group-based clients in using new technologies as an added workload on LOs.

Digitisation and social connections

The digital transformation of microfinance services is resulting in MFIs being pulled away from the flexible relational business model. This may have both positive and negative performance implications for LOs and ultimately for MFIs. Therefore, when it came to establishing how digitisation was impacting on interactions between clients and LOs, the wider data including interviews with senior and branch managers pointed to diverging perspectives. For LOs, the discussion centred more on the screening and loan repayment stages of the lending process. Implied in these conversations were the issues of portfolio at risk, industry competition, gathering information and meeting incentivised targets. From LOs' perspective, all these factors are intertwined as reflected in their narratives below.

In interviews, LOs not only extolled the benefits of digitisation in facilitating quick approval, processing and disbursement of loans, but also emphasised the need to retain flexibility and physical interactions with clients. One senior LO explained that they considered their close physical interactions with clients pertinent to helping them in loan collection and keeping their portfolio at risk low. He thus warned:

> If you are not going there, it becomes a problem. The "emotional touch" or connection is important. We can't do away with interacting with clients as their loan repayment will suffer [. . .] So, for me, monitoring loans still requires physical interaction. (LO 6, MFI 2)

Another added:

> [we] loan officers are a constant reminder to them that they have an obligation to fulfil. (LO 3, MFI 2)

LOs working with group loans were particularly more pessimistic about completely relying on mobile phones in repayments than those servicing individual loans.

> . . . clients-especially those in group loans don't see the need for group meetings anymore. But we need them to meet because these loans are given based on group guarantees and, on that basis, meetings are necessary to keep reinforcing relationships and monitoring them. (LO 3, MFI 1)

The quotes above seem to suggest that LOs (and not managers) were mindful of the clear trade-off between the potential of digitisation to reduce their workload especially with the loan monitoring stage and the danger of losing control on timely repayments. Exploring this further, it became clear why good relationships with clients were important to achieving timely repayments. The MFI benefits from a healthy loan book but so do the LOs. As literature suggests (Behr et al., 2020; Beisland, D'Espallier, & Mersland, 2019; De Pril & Godfroid, 2020; Malik et al., 2020), LOs' job is target based and attaining high repayment rates results in added financial incentives. What we get here are insights into why LOs may resist complete digitisation of some of their tasks that allow them to earn incentives.

There was an added perspective as to why LOs felt that going for a hybrid between digital and relational/human touch rather than just digitised interactions was important and therefore worth retaining. Unlike their managers, they noted that maintaining personal interactions with clients gave the MFI a competitive advantage over their rivals. From LOs' perspective, personal visits result in building social capital (Drexler & Schoar, 2014), which in turn helps with retaining clients and fending off competitors.

> It's very important to visit your clients at least once in a month [. . .]. That makes a relationship work because it means that your clients will not listen to other competitors. (LO 5, MFI 1)

Furthermore, data from interviews point to an even more forceful approach by LOs of two MFIs that had a commitment to pursuing social goals. Their view was that full automation of decision-making would implicitly take away the flexibility and discretion LOs had to support clients with potential but who technically failed to tick every box. This 'bending of rules' (Canales, 2014; Cieslik, Hudon, & Verwimp, 2019) was only possible with their local knowledge and close

interactions with clients. Accordingly, from a pro-social conviction, they felt that implementing digitisation should be selective and where possible, not replace the direct relationships with their clients.

> I fear that some clients may be left out because of too much digitalisation. This is because our MFI, for instance, is thinking of having a call centre where someone will contact a client and discuss their loan requirements but again this may not reflect reality on the ground. (LO 3, MFI 1)

This, however, does not suggest that managers did not consider the importance of human touch with clients, they rather dwelt on the emerging shift towards a digital imitating touch -that is technology mediated interactions through phone calls and SMS messages.

> I think it [digitisation] will enhance the relationship as we will have automated messages to wish them birthdays or whatever. We will be in constant touch all the time and distance will not be a barrier. Time will not be a barrier either as we can communicate with them anytime. (BM2- MFI 1)

Overall, the issue of social connections seems central to LOs' assessment of technology for various reasons. Key among them is the view that the production and quality of soft information would be negatively impacted if digitisation is indiscriminately used across the lending process. Clients, they argued, are more inclined to reveal private information when physically meeting their LO.

> Loan processing can be digitised but there will still be an element of interaction with clients. This is because interaction with clients gives access to soft information about a client, that technology won't collect. (LO 10, MFI 3)

There is therefore an implied tension here between field-level staff and managers when it comes to fully appreciating the differences that physical social connections make to most MFIs clients, particularly the informationally opaque ones. LOs' contention is that even if some information can be collected digitally without human interaction, MFIs and their LOs may be distanced from the impact of their services on clients' businesses. Accordingly, some argued that, even with the hyped FinTech and mobile digital technologies, there should be room to do 'social' with clients and keep an eye on impact.

Discussion and conclusion

This study has focused on the changing role of LOs as digitisation takes hold across MFIs primarily for efficiency reasons and scale. We focused on the case of Zambia, representing a less mature and challenging empirical context for digitisation of the microfinance sector. Through a qualitative analysis of a survey with LOs and semi-structured interviews with managers and LOs of four MFIs, we emphasize the importance of paying attention to how the role played by LOs is changing in light of digital applications in the field and across the lending process, and examine further implications for the relational lending business model.

Our findings indicate that despite many notable successes of digitisation, there is still a strong case for a 'human touch' model given the heterogeneous country contexts within which MFIs operate and levels of digital infrastructure. Our data-driven Figure 2 emphasizes the different steps of the lending process where, according to our findings, LOs' inputs (as represented by the arrows in Figure 2) are still highly important even with the rapid growth of digitisation, thereby suggesting that for most MFIs, this is not a choice between two business models, but a hybrid approach as a way forward.

For example, LOs' narratives suggest that, for clients' orientation, digitisation was not perceived to be more effective than LOs' key input at the start of the lending process. LOs are particularly needed to financially educate new and inexperienced clients in order to ensure that they clearly understand what a credit implies before applying for a loan, which later facilitates the LOs' contribution to the screening task. This stage can be particularly critical for clients under group

lending since most of them tend to be women, semi-illiterate and more comfortable with the relational model than the digital one. Furthermore, LOs' inputs in client orientation should also enable them support promising clients who only have limited hard data, and who would be excluded if MFIs heavily relied on credit scoring tools (Malik et al., 2020). As illustrated in Figure 2, client screening, loan monitoring, and collection are tasks in most need of embedded relationships with clients. Established relationships help LOs gather customer tailored soft credit information and thus reduce the risk of default. Nevertheless, the steps of loan approval, processing and disbursement could, according to LOs, be fully digitalised with minimum risks to clients and MFIs.

Thus, this paper makes two key contributions to the microfinance development and financial inclusion literature that we outline in the following. Firstly, we contribute to the microfinance literature on the role of LOs within the traditional human-touch-based model (Canales & Greenberg, 2016; Tchuigoua, 2018). By examining the perceptions of field actors, we add to the emerging literature on hybrid organisations and on how the automation of decisions that excludes LOs may run against the very nature of microfinance and further marginalise the poor. Just like in many service sectors, there is no doubt that a technological paradigm shift will result in varied consequences for relationship banking (Cotugno et al., 2013). For example, findings point to LOs progressively being more considered as marketers of products than anything else as digitisation entrenches the commercial logics MFIs have to work with. Transforming LOs into marketers makes business sense as this could result in clients not only getting a broader overview of all possible products on offer, such as microinsurance, but also products better tailored to their needs. However, there is also a danger that this role change could lead to over-borrowing as LOs aggressively push 'not needed' products and expensive loans onto vulnerable borrowers with the ultimate aim of meeting loan portfolio targets. This may have implications for how the microfinance industry is perceived in the context of recent criticisms around its failure to curb over-indebtedness of vulnerable clients (Mader, 2017; Ndungu & Moturi, 2020).

Secondly, the study brings to the fore the inevitable trade-offs following digitisation of the microlending process in microfinance. To recap, the following are identified: cost efficiency versus reduced relational dimensions that substitute for traditional collateral; process standardisation versus limited LOs' flexibility towards clients; and reduced LO's workload versus increased risk of losing control over timely repayments. However, how these trade-offs are perceived by managers and LOs differs. The mismatch of views was most evident in activities 1, 2, 6 and 7 (see Figure 2). This could suggest that LOs, more than managers, have come to realise that arms' length' type of interaction alone doesn't work for most of the MFIs clients, especially if high loan repayments are to

Figure 2. A hybrid approach to the lending process.

be achieved. Most clients not only borrow from MFIs, but also from informal lenders (Siwale & Ritchie, 2012), and based on relational ties, LOs know that clients tend to prioritise repayment for those who physically connect or pay frequent visits. This may account for why social connections mattered for these LOs and therefore favouring a hybrid approach to client screening and loan repayment as depicted in Figure 2.

Our study thus contributes to the ongoing debate, particularly for hybrid MFIs, on whether personal contact as a distinctive feature and special unique selling proposition of MFIs should be replaced by digital touch (Malik et al., 2020; Ozili, 2020). Addressing this dilemma is important considering the real need to increase the efficiency of MFI processes through digitisation. However, the nature of microfinance is such that human interaction may still be required especially in cases or contexts where LOs' discretion may make a difference to a client between access to or exclusion from accessing credit. This finding is in support of other studies claiming that in certain cases, LOs bend lending rules to help good clients who do not meet all the requirements (Canales, 2010; Cieslik et al., 2019). This is particularly important in more informationally opaque contexts, where LOs' personal skills tend to draw clients to the MFI rather than the prevalence of digital tools. As noted by Canales (2014), for microfinance and MFIs, this dilemma has implications that go beyond their own self-sustainability; it may also impact on the goal to fight financial exclusion. Thus, in light of the identified trade-offs, our study argues for a hybrid approach to benefit both clients and MFIs. This contribution to the discourse on digitisation and microfinance is illustrated in Figure 2. Such a hybrid approach retains some flexibility that allows LOs to both keep relational ties and to promote deep outreach where digital infrastructure is underdeveloped. LOs' narratives in this study suggest that while automation of most of their tasks may result in efficiencies, a more productive approach might be one that goes for partial automation of specific tasks, resulting in division of labour between LOs and technology particularly in the screening, loan monitoring and loan collection activities.

Therefore, our study in contrast to previous studies importantly highlights the mismatches between the perspectives of managers and loan officers with regards to digitisation and financial inclusion. It further casts light on a less mature market where opportunities avail themselves to examine trade-offs as digital tools are incorporated in the lending business model that hitherto has been driven by LOs. With this study, we strengthen the call for a blended approach to microloan lending that ensures that illiterate and informationally opaque clients are not again excluded as evidenced by concerns over mission drift (Parekh & Ashta, 2018). Indeed, taking into account client heterogeneity, we posit that what has worked in established markets and organisations may not entirely replicate in less mature ones where sharing of hard data/information is not commonplace. Emphasising the importance of nuanced local context-based studies can open spaces for ongoing learning. In this way, we add to the emerging literature which contests the popular view that digitisation is intrinsically inclusive and works in all contexts and for all MFIs (Malik et al., 2020; Ozili, 2020).

This study, though not generalisable, gives managers of MFIs food for thought in considering the practical trade-offs in digitising the lending process. However, the extent to which front-end interactions are devoid of human touch and yet manage to keep the social focus should still be seen as a real challenge for the sector. Conducting cross-country research in less mature markets and comparing them with more mature ones can provide opportunities for continued scholarly interrogation of how digitisation is reshaping the microfinance business model and its effectiveness in delivery of credit and other financial services to majority poor.

Notes

1. Zambia's population stood at 17.4 Million as at 2019, out of which 43% was urban based (ZSA, 2020). So, 32 MFIs is a lot especially that most of these are concentrated in urban areas, and with outreach of less than 40,000 clients each on average. Given the adult population of almost 9 million, numbers per capita would approximate, 291,449.

2. The 55 responses are made up of 31 male and 24 female LOs ranging in ages from 23 to 40, the majority of whom were between the age of 25 and 34. No real differences have been found in the respondents' opinion according to their age or gender.
3. Although this research was conducted in four MFIs (see Table 1), it was impossible to interview LOs from MFI 4. MFI 4 is only active in rural areas, therefore the time and financial resources to reach their LOs were too limited.
4. On the contrary, all 10 managers consented to have their interviews audio-recorded.

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References

Agarwal, S., Qian, W., & Tan, R. (2020). Financial inclusion and financial technology. In S. Agarwal, W. Quian, & R. Tan (Eds.), *Household finance* (pp. 307–346). Singapore: Palgrave Macmillan.

Amran, A. M., Mohamed, I. S., Yusuf, S. N. S., & Rozzani, N. (2019). Streamlining mobile banking into loan repayment system for microfinance institutions. *Management & Accounting Review*, *18*(3), 191–214.

Arner, D. W., Buckley, R. P., Zetzsche, D. A., & Veidt, R. (2020). Sustainability, FinTech and financial inclusion. *European Business Organization Law Review*, *21*(1), 7–35.

Ashta, A. (2018). News and trends in Fintech and digital microfinance: Why are European MFIs invisible? *FIIB Business Review*, *7*(4), 232–243.

Badruddin, A. (2017). Conceptualization of the effectiveness of Fintech in financial inclusion. *International Journal of Engineering Technology Science and Research*, *4*(7), 960–965.

Bank of Zambia. (2017). *National financial inclusion strategy 2017–2022*. Republic of Zambia. Retrieved from https://www.boz.zm

Bank of Zambia. (2020). *List of registered non-bank financial institutions*. Retrieved from https://www.boz.zm/ListofNBFIsasat30October2020.pdf

Behr, P., Drexler, A., Gropp, R., & Guettler, A. (2020). Financial incentives and loan officer behavior: Multitasking and allocation of effort under an incomplete contract. *Journal of Financial & Quantitative Analysis*, *55*(4), 1243–1267.

Beisland, L. A., D'Espallier, B., & Mersland, R. (2019). The commercialization of the microfinance industry: Is there a 'personal mission drift' among credit officers? *Journal of Business Ethics*, *158*(1), 119–134.

Berg, G., & Schrader, J. (2012). Access to credit, natural disasters, and relationship lending. *Journal of Financial Intermediation*, *21*(4), 549–568.

Berger, A. N., & Udell, G. F. (2002). Small business credit availability and relationship lending: The importance of bank organisational structure. *The Economic Journal*, *112*(477), F32–F53.

Brouwers, D., Chongo, B., Millinga, A., & Fraser, F. (2014). *Microfinance regulatory and policy assessment in SADC – Case study of Namibia, Tanzania and Zambia*. Prepared for FinMark Trust and GIZ. Retrieved from www.finmark.org.za
Bumacov, V., Ashta, A., & Singh, P. (2014). The use of credit scoring in microfinance institutions and their outreach. *Strategic Change*, *23*(7–8), 401–413.
Canales, R. (2010). Rule bending, sociological citizenship, and organizational contestation in microfinance. *Regulation and Governance*, *5*((1)), 90–117.
Canales, R. (2014). Weaving straw into gold: Managing organizational tensions between standardization and flexibility in microfinance. *Organization Science*, *25*(1), 1–28.
Canales, R., & Greenberg, J. (2016). A matter of (relational) style: Loan officer consistency and exchange continuity in microfinance. *Management Science*, *62*(4), 1202–1224.
Chen, G., & Faz, X. (2015). *The potential of digital data: How far can it advance financial inclusion?* (Focus Note No. 100). Washington, DC: CGAP.
Cieslik, K., Hudon, M., & Verwimp, P. (2019). Unruly entrepreneurs-investigating value creation by microfinance clients in rural Burundi. *Oxford Development Studies*, *47*(4), 373–390.
Cotugno, M., Monferrà, S., & Sampagnaro, G. (2013). Relationship lending, hierarchical distance and credit tightening: Evidence from the financial crisis. *Journal of Banking & Finance*, *37*(5), 1372–1385.
De Pril, J., & Godfroid, C. (2020). Avoiding the crowding-out of prosocial motivation in microfinance. *The Quarterly Review of Economics and Finance*, *77*, 108–117.
Denzin, N. K., & Lincoln, Y. S. (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage Publications.
Disse, S., & Sommer, C. (2020). *Digitalisation and its impact on SME finance in Sub-Saharan Africa: Reviewing the hype and actual developments* (Discussion Paper No. 4/2020). Retrieved from https://ideas.repec.org/p/zbw/diedps/42020.html
Drexler, A., & Schoar, A. (2014). Do relationships matter? Evidence from loan officer turnover. *Management Science*, *60*(11), 2722–2736.
Economist. (2018). Borrowing by mobile phone gets some poor people into trouble. Retrieved from https://www.economist.com/finance-and-economics/2018/11/17/borrowing-by-mobile-phone-gets-some-poor-people-into-trouble?frsc=dg%7ce
Filomeni, S., Udell, G. F., & Zazzaro, A. (2016). *Hardening soft information: How far has technology taken us?* (Unpublished Working Paper).
Gibbs, G. (2008). Thematic coding and categorizing. In G. Gibbs (Ed.), *Analyzing qualitative data* (pp. 38–55). Thousand Oaks: Sage Publications Ltd.
Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, *16*(1), 15–31.
Harigaya, T. (2016). *Effects of digitization on financial behaviors: Experimental evidence from the Philippines* (Working Paper). Cambridge, MA: Harvard University.
Hossain, S., & Sarker, D. (2015). Benefits and constraints of using mobile banking in microfinance in developing countries. *International Journal of Management and Economics Invention*, *1*(1), 1–14.
Jakšič, M., & Marinč, M. (2019). Relationship banking and information technology: The role of artificial intelligence and FinTech. *Risk Management*, *21*(1), 1–18.
Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of Management Annals*, *14*(1), 366–410.
Kingiri, A. N., & Fu, X. (2020). Understanding the diffusion and adoption of digital finance innovation in emerging economies: M-Pesa money mobile transfer service in Kenya. *Innovation and Development*, *10*(1), 67–87.
Labie, M., Méon, P. G., Mersland, R., & Szafarz, A. (2015). Discrimination by microcredit officers: Theory and evidence on disability in Uganda. *The Quarterly Review of Economics and Finance*, *58*, 44–55.
Lipsky, M. (1980). *Street-level bureaucracy: Dilemmas of the individual in public services*. New York, NY: Russell Sage Foundation.
Mader, P. (2017). Contesting financial inclusion. *Development and Change*, *49*(2), 461–483.
Malik, K., Meki, M., Morduch, J., Ogden, T., Quinn, S., & Said, F. (2020). COVID-19 and the future of microfinance: Evidence and insights from Pakistan. *Oxford Review of Economic Policy*, *36*(1), S138–S168.
Martinez Sánchez, J. F., & Lechuga, G. P. (2016). Assessment of a credit scoring system for popular bank savings and credit. *Contaduría y Administración*, *61*(2), 391–417.
Metre, K. (2011). Using mobile banking services to improve financial access for the poor: Lessons from Kenya, the Philippines, the United States, Haiti, and India. *Policy Perspectives*, *18*(1), 6–24.
Milana, C., & Ashta, A. (2020). Microfinance and financial inclusion: Challenges and opportunities. *Strategic Change*, *29*(3), 257–266.
Mora, T., & Prior, F. (2018). The impact of mobile financial services' usage on microfinance delinquency. *Applied Economics*, *50*(50), 5354–5365.

Ndungu, J. M., & Moturi, C. A. (2020). Determinants of mobile Fintech uptake in Kenyan microfinance sector. *Current Journal of Applied Science and Technology*, *39*(28), 102–114.

Neuman, W. L. (2000). *The meanings of methodology. In social research methods* (7th ed.). New York: Allyn Bacon.

Ozili, P. K. (2020). Contesting digital finance for the poor. *Digital Policy, Regulation and Governance*, *22*(2), 135–151.

Parekh, N., & Ashta, A. (2018). An institutional logics perspective to evolution of Indian microcredit business models. *Strategic Change*, *27*(4), 313–327.

Petersen, M. A., & Rajan, R. G. (1995). The effect of credit market competition on lending relationships. *The Quarterly Journal of Economics*, *110*(2), 407–443.

Ray, S., Miglani, S., & Paul, S. (2019). *The probability of getting a loan: Evidence from Indian cities*. Indian Council for Research on International Economic Relations. http://hdl.handle.net/11540/9811

Sahar, L., & Anis, J. (2016). Loan officers and soft information production. *Cogent Business & Management*, *3*(1), 1–11.

Sapovadia, V. (2018). Financial inclusion, digital currency, and mobile technology. In D. Lee & K. Chen (Eds.), *Handbook of blockchain, digital finance, and inclusion* (Vol. 2, pp. 361–385). Singapore: Academic Press.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., . . . Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity*, *52*(4), 1893–1907.

Serrano-Cinca, C., Gutiérrez-Nieto, B., & Reyes, N. M. (2016). A social and environmental approach to microfinance credit scoring. *Journal of Cleaner Production*, *112*, 3504–3513.

Siwale, J., & Kimmitt, J. (2019). The discourse of institutional change in the Zambian microfinance sector. *Africa Journal of Management*, *5*(1), 1–32.

Siwale, J., & Okoye, N. (2017). Microfinance regulation and social sustainability of microfinance institutions: The case of Nigeria and Zambia. *Annals of Public and Cooperative Economics*, *88*(4), 611–632.

Siwale, J., & Ritchie, J. (2012). Disclosing the loan officer's role in microfinance development. *International Small Business Journal*, *30*(4), 432–450.

Sturgis, P. (2008). Designing samples. In N. Gilbert (Ed.), *Researching social life* (3rd ed.). London: Sage Publications. 161-181.

Suri, T. (2017). Mobile Money. *Annual Review of Economics*, *9*(1), 497–520.

Suri, T., & Jack, W. (2016). The long-run poverty and gender impacts of mobile money. *Science*, *354*(6317), 1288–1292.

Tchuigoua, H. T. (2018). Which types of microfinance institutions decentralize the loan approval process? *The Quarterly Review of Economics and Finance*, *67*, 237–244.

Trönnberg, C. C., & Hemlin, S. (2014). Lending decision making in banks: A critical incident study of loan officers. *European Management Journal*, *32*(2), 362–372.

Visconti, R. M. (2019). Microfintech: Outreaching financial inclusion with cost-cutting innovation. *SSRN*. Retrieved from https://ssrn.com/abstract=3533873

Wakunuma, K., Siwale, J., & Beck, R. (2019). Computing for social good: Supporting microfinance institutions. *Electronic Journal of Information Systems in Developing Countries*, *85*(3), 1–16.

Zambia Statistics Agency. (2020). 2019 labour force survey report. Retrieved from https://www.zamstats.gov.zm/phocadownload/Labour/2019%20Labour%20Fource%20Survey.pdf