Agent banking in a highly under-developed financial sector: Evidence from Democratic Republic of Congo

Robert Cull [a,*], Xavier Gine [a], Sven Harten [b], Soren Heitmann [c], Anca Bogdana Rusu [c]

[a] World Bank, United States
[b] German Institute for Development Evaluation, Germany
[c] International Finance Corporation, United States

A B S T R A C T

The paper provides evidence on the number and volume of financial transactions undertaken by agents (local businesses that double as more convenient, lower cost alternatives to formal branches) of the largest microfinance institution operating in the Democratic Republic of Congo (DRC). To our knowledge, this is the first econometric study of the activities of agents in a country as underdeveloped as the DRC. More important than agents' personal characteristics, transactions are higher in low income, densely populated areas with high levels of commercial development, suggesting that the agent network has been best at supporting financial transactions among the urban poor. In addition, branding and effective liquidity management are strongly linked to agent activity. The results suggest that agents can be effective providers of basic financial services among the urban poor who lack suitable alternatives. But it remains to be seen how the agent banking model will play out in less densely populated areas of the DRC and other developing countries.

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1. Introduction

A growing body of evidence indicates that financial services provide substantial benefits to users in terms of managing risks, absorbing financial shocks, accumulating savings, and investing in businesses, all of which can contribute to less volatile income and consumption patterns.[1] And as a result, promotion of broader financial inclusion has become an important objective for policy makers across the globe.[2] But transaction costs (e.g., time and expenses associated with travel) and actual costs (e.g., fees for account opening and for conducting financial transactions) associated with using financial services can be prohibitively high for many,

and the available financial products from formal providers such as banks are often poorly suited to the needs of large segments of the population.[3] Those financial institutions that do cater to the poor are still mainly credit driven and do not offer a full set of financial products and services. This is especially true in developing countries where nearly half (46%) of all adults lack a formal banking account.[4]

We therefore study an alternative model for providing financial services to poorer clients, agent banking. Agents, trusted local retailers selling everything from sundries to automotive parts, can also double as less formal, lower-cost alternatives to bank branches that enable customers to more conveniently make deposits, withdrawals, money transfers, and payments on loans (Flamming, McKay, & Pickens, 20011; Lyman, Ivatury, & Staschen, 2006; Mas & Kumar, 2008; Siedek, 2008). Because of their lower costs and closer proximity (both physical and social) to typically underserved market segments, agents hold the promise of reaching poorer customers living further from formal bank branches, and thus could more cost-effectively expand financial inclusion than traditional banking and microfinance approaches.

We rely on data on the number and volume of transactions from the agents of FINCA DRC, a microfinance institution that has

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* Corresponding author.
    E-mail address: rcull@worldbank.org (R. Cull).
[1] See e.g. World Bank (2014) for an overview of that literature.
[2] Two-thirds of bank regulators surveyed in 143 jurisdictions report that they have a mandate to promote financial inclusion (World Bank, 2014). And more than 50 countries have set formal goals and targets for financial inclusion (Demirgüç-Kunt, Klapper, Singer, & Van Oudheusden, 2015; Maya Declaration Commitments, Alliance for Financial Inclusion, http://www.afi-global.org/maya-declaration-commitments).
[3] See Collins, Morduch, Rutherford, and Ruthven (2009) for detailed evidence from financial diaries on the vast array of financial arrangements (both formal and informal) used by the poor in developing countries to manage their economic lives, and the lack of fit between many formal products and their needs.

[4] Demirgüç-Kunt, et al. (2015).

achieved rapid growth in the number of clients that it serves within a short time span despite facing a challenging context in which to deliver financial services. In general, agents are small-scale business owners who offer FINCA banking services in addition to operating an already established retail business.[5] At an agent, a FINCA client can make transfers to other FINCA accounts, receive a loan payout or do other withdrawals, repay loans or make deposits into an account. While there was no fee for cash-in transactions initially, there has always been a fee for withdrawals. Still, customers use the service for withdrawals since agents are often located closer to their own businesses and queues are generally shorter than at bank branches.[6] During the first 3 months of their activity as agents, FINCA agents receive a monthly subsistence stipend of $100. From inception onwards, agents are compensated in relation to the number and value of transactions they facilitate and receive coaching on how to increase foot traffic in their locations. In total, it costs FINCA around $1400 to set up an agent, of which the largest expense ($1200) is for the Point of Sale (POS) device.

In our regressions, we assume that variables describing local market characteristics (average income levels, level of commercial development) are exogenous in that they are not likely to be affected by agent activities. There is, of course, some nonrandom selection into being an agent, but because the agents had established businesses prior to the opportunity to become an agent, their locations were pre-determined. In other words, none of the owners relocated their main business to become agents. Moreover, in our analysis we compare agent transactions only with those of other agents, so our full data set is comprised of retailers that selected into this activity.[7] At the time of data collection, FINCA's was the largest agent banking network in DRC, which makes our results, if not necessarily fully generalizable to other contexts, at least highly relevant for the DRC banking sector.[8]

Specifically, we regress the number and volume of agents' cash-in, cash-out transactions on variables describing their personal and business characteristics that are taken from their applications to become agents, and on variables describing income levels, population, population density, commercial development, and financial development for the localized markets in which these agents operate. These are taken from official sources or were created by a local economic consulting firm that we retained. Our key market variables are aggregated at the level of twenty-three municipalities in and around Kinshasa. Our main findings are that market characteristics explain substantially more variation in transaction activity than do characteristics of the agent or his/her business. In addition, and perhaps more importantly, the number and volume of transactions is highest in low income, densely populated markets with high levels of established commercial development. This suggests to us that FINCA DRC's agent network has been best at generating financial transactions among the poor in the most densely populated areas.[9]

There has been little research on the impact of agent banking in developing countries. An exception is Mwando (2013), who surveyed senior managers of Kenyan commercial banks and found

that the expansion of agent banking networks improved their financial performance by expanding market shares and lowering transaction costs. The survey results speak to the financial viability of the agent banking model in one African context, and hint at its potential for promoting financial inclusion among previously unserved individuals. In addition, Buri, Cull, Giné, Harten, and Heitmann (2018) provides experimental evidence on the effects of offering agent banking services to clients in Senegal. The results indicate that those encouraged to open an account with an agent became more active managers of their financial lives (i.e., they performed significantly more cash-in/cash-out transactions than those encouraged to open accounts at a branch, or those in a control group who were not encouraged to open an account), and show a modest (but significant) increase in account balances. The results suggest that agents can make it easier for clients to be financially active, and provide ancillary benefits in terms of facilitating saving.

To our knowledge, ours is therefore one of the first empirical studies of the activities of agents of a microfinance institution in a developing country, certainly the first in a country as poor and financially underdeveloped as the DRC. Conducting such a study in a country that most often lacks reliable data and where local research capacity is limited was challenging, but this also marks our study as an early contribution to better understanding the economy in DRC.

Our work is closely related to a recent literature that explores how lowering the transaction costs of transferring funds within social networks improves household financial management. Jack and Suri (2014) have shown how mobile telephony has reduced the costs of such within-network transfers in Kenya and find that mobile money has helped households to smooth consumption in the face of economic shocks. Specifically, they find that shocks reduce the consumption of non-users of a widely adopted mobile money service called M-PESA by 7 percent, while shocks have no significant effect on the consumption of households with an M-PESA user. Similarly, Yang and Choi (2007) find that shocks to the incomes of Philippine households are associated with significant increases in the international remittances that they receive, an indication that those remittances could be used to smooth consumption.

Both the volume and diversity of remittance senders increase after a shock and the average distance from senders to receivers of remittances also increases substantially (Jack & Suri, 2014), suggesting that M-PESA has enabled households to expand or make fuller use of their social networks at lower cost. Relatedly, Aycinena, Martinez, and Yang (2010) show that reductions in remittance fees increase the frequency with which Salvadorian migrants receive them. Jack, Ray, and Suri (2013) also find that the purposes of remittances differ between users and non-users of M-PESA. Users are more likely to receive remittances via M-PESA for credit or in response to an emergency, while the fraction of total M-PESA transactions for regular support declines. The patterns suggest that M-PESA enables households to more easily draw on their social networks for support in trying circumstances.[10]

Our work is also therefore related to a body of research showing that monetary transfers within networks of family members and friends are pervasive and crucial for household risk mitigation in developing countries. A number of papers have shown that informal financial arrangements provide insurance for households that experience illness (De Weerdt & Dercon, 2006; Genoni, 2012;

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[5] FINCA agents cannot also be agents of banks or other microfinance institutions but can be agents for providers of mobile money services such as Tigo, Airtel, and Orange.

[6] Other financial services providers also charge fees on transactions.

[7] Agents were almost all existing clients, so data on account usage helped FINCA to identify business owners who could be viable agents.

[8] FINCA's is largest agent network for a bank/microfinance institution in the DRC, but mobile money providers have larger networks, mostly because the requirements for the two types of agents differ. Banking agents generally must meet higher standards, especially in terms of security and liquidity.

[9] FINCA only operates in urban and peri-urban environments in our sample. It is conceivable that FINCA would have greater impact on rural customers, but their expansion beyond urban areas is just beginning and thus the topic is left for future research.

[10] Relatedly, Blumenstock, Eagle, and Fafchamps (2016) show that Rwandan households affected by earthquake received increased amounts of cellular "airtime" (a simple precursor to mobile money) from members of their social network, especially those with whom they had already established reciprocal relationships.