Mobile Money, Social Capital, and Financial Behavior of Women's Cooperatives in Rural Nigeria

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Abstract

The objective of this study was to determine what happens to social-driven structures like cooperatives when they interface with mobile money technologies. Although mobile money holds a number of promises for financial inclusion and rural development, its adoption in rural areas could upset existing habits, group dynamics, and non-cash/traditional modes of storing, saving, and transferring value in the informal markets. In cooperative contexts, mobile money adoption could alter the trust and group bonding process upon which a group lending scheme is built. It could change meeting procedures, methods of receipting and recording, as well as the framework for monitoring members' financial habits, rendering joint liability schemes in cooperatives ineffective. This study is significant because it will ensure that mobile money innovations do not work against other financial inclusion schemes, and also that policymakers/industry developers should know possible roadblocks to adoption of mobile money and devise mechanisms to address them. Five hundred and twelve members of women's cooperatives who live on less than US$2 per day were selected from thirty-two cooperatives in rural southeast Nigeria. Questionnaires, interviews, and focus group discussions were used to elicit information on the effects of mobile money adoption on their financial habits and cooperative activities. Findings revealed that deities, title taking, marriage, household utensils, and apprenticeship were major non-cash modes of storing and transferring wealth. Although mobile money adoption may not have significant effects on the savings, borrowing, and capital accumulation behaviors of rural dwellers, it can significantly affect money transfer, level of involvement in making household decisions, and in dealing with emergencies. Adoption of mobile money in rural cooperatives can affect financial recording, increase information asymmetry, and make peer monitoring difficult, thereby rendering joint liability schemes weak. It is therefore recommended that awareness should be intensified to ensure that a majority of members adopt the innovation and use it for other purposes apart from money transfer. Also, financial recording and peer monitoring mechanisms should be modified to take care of the new challenges that result from mobile money adoption in cooperatives.

Key Words: Cooperative, mobile money, joint liability, social money, rural Nigeria

Introduction

Mobile money holds a number of transformative potentials for developing economies. It is relevant in achieving financial inclusion, in empowering vulnerable groups, and in linking the informal sector to the formal economy. However, mobile money can also be a disruptive innovation (Kaffenberger and Butt, 2013). Its acceptance into rural communities can upset existing habits, traditional financial practices of individuals and groups, social relationships, public expectations, and group dynamics for better or for worse. In rural cooperative contexts, adoption of mobile money can alter the physical closeness, group bonding and other aspects of social capital which periodic meetings, visiting and feasting bring. It could affect the level of trust and peer monitoring needed for group lending schemes since mobile money users have the autonomy and privacy to transfer, make payments, and store value without being scrutinized by peers. Mobile money uptake can eliminate social pressure exerted through face-to-face meetings, which is essential for high rates of loan repayment. Equally, introduction of mobile money can alter the financial accountability of cooperatives, financial recording, receipt-making, and credit scoring. This is because a mobile money user can conduct a number of transactions via mobile phone undermining prior practices and protocols. These scenarios can reduce the trust that cooperative members have in one another and weaken joint liability schemes, which are key to microfinance activities.

Mobile money adoption among rural dwellers can also alter the uses of other non-cash modes of storing, saving, and transferring value in the informal markets. It is a common practice in rural Nigeria to see people contribute to ceremonies, give titles to people, give gifts during festivities, and exchange bride wealth with hopes that the recipients would repay the value given in the near future. A number of people see membership in certain groups as means of storing value for future uses especially during 'rainy days'. Membership of a group such as the Ozo title group and Isusu groups are seen by many as means of storing and saving wealth. However, adoption of mobile money, which has made remittances easier and faster, ought to alter people's dependence on these "social monies." There is a need to determine whether cooperatives that circulate mobile money with minimum face-to-face contact can maintain necessary trust and achieve effective peer-monitoring. It is also critical to analyze how mobile money adoption has affected traditional financial practices of individuals and social driven structures like cooperatives. The study attempted to provide answers to these questions:

1. What are the traditional ways of storing and transferring wealth and how has/would mobile money adoption alter their usage?
2. How has/would mobile money adoption change the financial behavior of rural women?
3. How has/would mobile money adoption alter the joint liability schemes and practices of rural cooperative societies?

Brief Literature Review

Cooperatives are self-help associations formed for members' socio-economic welfare and managed democratically by the members. ICA (1995) defined a cooperative as an organization of people who pooled themselves and their resources together to achieve their socio-economic and cultural needs through a jointly owned and democratically controlled enterprise. Cooperatives operate on the principle of user-owned, user controlled, and proportional distribution of benefits. The organization is owned and controlled by members who patronize it, and benefits are distributed in proportion to each member's contribution.

Informal cooperatives are immensely popular in Nigeria. Virtually every ethno-linguistic group has its own institution and proper name (Marx and Seibel, 2012). These forms of cooperatives are either faith-based or kinship-based with less formality in terms of registration, documentation, and operation. *Isusu*, a rotating savings and credit association, has existed in Nigeria since the 16th century. It started as a form of social capital and self-help group where labor, a scarce commodity, was accumulated and allotted to one member at a time. With the spread of commercial transactions, labor was replaced by money. Formal cooperatives were "imported" into Nigeria in 1935 when C.F. Strictland submitted his feasibility report to the colonial government for the establishment of cooperatives in Nigeria. The Cooperative Ordinance of 1935 was modeled after British-Indian cooperative philosophy. At present, informal (Indigenous) and formal (Imported) cooperatives exist side by side, and more than 80% of Nigerians belong to cooperatives (Onyima and Okoro, 2010)

Marx and Seibel (2012) observed that cooperative thrift and credit societies (CTCS) were the most prominent type of cooperative in Nigeria. One out of every six Nigerians save and borrow from CTCS. CTCS, especially in rural areas, are based on simple financial intermediation model. Membership rights are granted upon admission as a member and purchase of prescribed share capital, which obliged a member to make regular savings. The cooperative then grants loans to members on a demand basis, observing maximum credit limits. Meetings are conducted at the residences of chairpersons and involve a lot of social activities, especially for women's CTCS. In rural areas, simple bookkeeping is used to record financial transactions, and because members are familiar with one another, word of mouth as form of witnessing is needed to verify claims. Receipts are not usually provided, and custody of funds is entrusted to the treasurer. Literacy levels are usually low, as only a few members can read and write. As Padzinski and Odoemenam (2012) observed, members meet monthly, and also attend social functions such as weddings, funerals, and naming ceremonies for their members.

With the advent of formal microfinance institutions popularized by the Bangledeshi Grameen Bank, these cooperatives have become popular as loan groups. They perform a number of financial services such as savings, lending, advisory services, bulk purchase of common commodity, guarantee services, and capacity building of members (Marx and Seibel, 2012). Because a majority of these cooperatives operate in rural areas, they are characterized by strong social ties, trust, convenience, proximity, and familiarities, which are ingredients of social capital. Many of these cooperatives were able to obtain loans from microfinance institutions, despite that they do not possess the conventional tangible collateral. Character, social capital, and joint liability arrangements were accepted in place of tangible collateral. Loans are provided in these cooperatives on the condition of joint liability.

Joint liability lending schemes involve the provision of access to credit services using social capital as collateral. The basis of this methodology is the mutual trust among the group members since members are jointly liable for each others' loan (Dallien, Burmeh, Gincherman and Lynch 2005). A majority of borrowers often join cooperative groups because they have no other way to access credit from microfinance institutions. They benefit from the support of other members beyond the material guarantee of the loan. From the lenders' perspectives, joint liability lending enables a transfer of default risks from financial institutions to the borrowers, and can reduce the transaction costs of providing a larger number of small loans (by concentrating clientele in groups, at regular village based meetings; rather than dealing with individual borrowers at different times). Group meetings can also reinforce the sense of solidarity among participants, be platforms for financial education, and emulate good business practices. They reduce the lender's costs by maximizing the use of insider information and relying on peer borrower screening. Social and economic links also give group members the option of applying sanctions to pressure their peers to perform. Thus, group members perform loan monitoring and loan repayment functions as well (Chaterjee and Saveangi, 2004; Gine and Karlan, 2006).

Group-based lending minimizes asymmetrical information, i.e. when lenders know little about borrowers, since group members know each other well. Moreover, they have the ability to impose non-pecuniary punishments on fellow group members that the lending institution is incapable of doing (Chatterjee and Sarangi, 2004). Group lending also has a disciplining effect, it may deter borrowers from using loans for non-investment purposes. As Cassa et.al (2005) observe, it offers human resource development for highly disadvantaged members. In their study of women's informal associations they found that women form groups for economic and political purposes as well as for support (such as child rearing). Such groups help women find work, spread information, offer training, and provide access to resources in societies where women are excluded from more formal networks (Dallien et.al., 2005). However, "group lending has its limitations, both practical and psychological. Group loans are typically small, and the standardization of size, interest rate, and maturity might not be ideal for all members. The dark side of the group dynamic is the social pressure it puts on its members, which can vary widely depending on individual characters and local cultures" (Jean-Luc, 2006).

Sustainability of group lending schemes has dominated discourses in recent times owing to a number of innovations in the financial sector such as mobile money. According to Kaffenberger and Butt (2013), mobile money adoption among cooperatives might upset existing habits and structures of group lending schemes since there will be difficulty in peer monitoring and screening. Mobile money consists of an electronic money account that can be accessed via mobile phone (Egwuatu, 2013). It is the transfer of monetary values via mobile money networks. The mobile money system in Nigeria consists of the financial institutions who secure the licenses, the telecommunication companies that provide the network, and the merchants/agents who perform the cash in/cash out functions.

The Nigerian mobile money space is full of paradox and irony; it has the largest number of mobile money operators in Africa and biggest potential for mobile money adoption (Over 60 million people are financially excluded), but it is crawling behind in mobile money adoption. Out of 102 million mobile phone subscribers, only 3 million are mobile money users (Abayomi, 2010). Major reasons adduced for slow uptake include the choice of a bank-led model instead of an operator-led model, low awareness, especially in rural areas, conflicting regulatory frameworks between the Central Bank of Nigeria and the Nigerian Communication Commission, scanty numbers of mobile money agents, obstacles to interoperability, and the general distrust that citizens have in novel ideas, in the government, and in business organizations. Mobile money was officially introduced in Nigeria in 2011 when the Central Bank of Nigeria granted licenses to ten mobile money operators: Paga, GTB/MTN mobile money, eazymoney, firstmoni, Ecobank mobile money, fortis, Stanbic-IBTC, airtelmoney, Vcash, and FETS. The regulatory agency preferred a bank-led model because of fears of terrorism financing, need for adequate control due to a systemic banking crisis, fears of foreign owned telecommunication companies and the need to secure depositors' funds (Andagalu, 2012). This arrangement requires that only financial institutions can carry mobile money licenses, and it is they who can enlist telecommunication companies and other third parties. However, this is in contrast to what many industry analysts believed was good for the innovation. Alade (2012) observed that the telecommunication companies have bigger capacities to drive mobile money than banks do (102 million mobile phone subscribers against 36 million bank account holders). Indeed, the telecommunication companies possess the network, sit on large databases, have distributors and agents in all nooks and crannies, and are more willing to invest in awareness creation. Most banks in Nigeria see mobile money as simply an additional business package for existing customers, and not necessarily as a business line with potential to stand on its own sustainably.

Methodology

The area of study consisted of rural areas in Southeast Nigeria. The region which consists of five states--Anambra, Imo Abia, Enugu and Ebonyi states---is inhabited by the Igbo tribe, which is known for commerce and industry. The population of the entire region is 15,292,435, of whom over 65% reside in rural areas (NBS, 2012). The incidence of poverty in the region is mild compared to other regions in the country. 18% of the entire population lives below the poverty line of US$1 per day, the majority of whom are women who do menial jobs and work at farms in rural areas. Although the literacy level is over 35%, over 48% of the populace operates in the informal sector. Financial exclusion is still an issue in the region, as 36% of the people do not have access to conventional financial institutions. There are also a number of socio-cultural constraints against women fuelled by ignorance, repugnant customs, chauvinistic attitudes to women, and a patrilineal mode of succession. Women in traditional Igbo society lack property rights and access to productive resources. As a result, the incidence of poverty among women is usually higher than among men (Onyima and Okoro, 2010).

Thirty-two women's cooperatives from twenty-three rural communities were selected for the study. Structured questionnaires were administered to 512 women who were members of cooperatives that operate in the communities. Focus group discussions (FGDs) were conducted in each of the five states in order to understand societal and contextual meanings to responses generated, and also to confirm answers generated from the questionnaires. The questionnaires were administered during cooperative group meetings and at members' homes with the aid of tour guides in the community and research assistants. Since many of the respondents were not literate, the researchers read and explained the questions to them in the form of an interview and recorded their responses. Participants in the FGDs were community leaders, selected users of mobile money, cooperative leaders, and prominent members of the communities.

Characteristics of the Respondents

Over 42% of the respondents were young women (between 20 and 35 years old) while 38% were adults over age 55. 21% live on less than US$1 per day, while 79% live on more than US$1 but less than US$2 daily. Their major sources of income include smallholder farming, petty trading, and artisanal jobs. Others are apprentices and casual workers. 38% of them had no formal education, 41% had only primary education, while 21% had attempted secondary education. Only a few of them (4%) had completed secondary education, and none attended higher educational institution. 99% of the respondents own and operate mobile phones, but only 2% have opened account with commercial banks.5% have accounts with regulated microfinance banks, while 93% do not have any bank account. All of the respondents were members of cooperative societies, and their major motives for joining cooperatives were to access credit, for socio-cultural reasons, to access government aids, and to improve their income.

Findings

Mobile money architecture in Nigeria

The pilot study we conducted prior to the study revealed that mobile money is not popular in rural areas, and more especially among households who are in abject poverty. As a result, we adjusted the study to have some features of a perceptive study. Only 8% and 3% of our respondents have heard about and used mobile money respectively. This statistic contrasts with the 56% and 16% of people who have heard about and used mobile money in urban areas (Andagalu, 2012). The attitude of the respondents to mobile money reflects the state of mobile money in rural Nigeria. Mama Nneka, a 46-year-old user of mobile money who returned to the rural area last year after the death of her husband explained, “I can use it to transfer money, pay bills, and for air time top up, but not to save money. Who will I report to if my money disappears the way my airtime used to disappear….?” She is among the opinion leaders in the community and a leader in the church cooperative, having used mobile money many times in urban areas, she lamented, “It was easier to use mobile money in cities than here. Agents use to be within walking distance in cities, but here I can’t trek to the market square where the mobile money agent is. Even the last time I checked on the agent, I was told she has relocated to where her husband lives” Admittedly, distance to mobile money agents is another challenge to adoption. 75% of the respondents live more than five kilometers away from the nearest mobile money agent.

On the other hand, for Ngozika, an uneducated artisan who has lived in the village all her life, mobile money is a scam from the government and telecommunication companies to defraud poor people “If it’s that useful” she said, “how come many women in our community do not use it?” Uloma, a 19- year--old single mother who admitted that she did not subscribe to mobile money because of fear of trying new ideas, opined, “Mobile money might be useful but I cannot subscribe based on what they said during adverts on radio. I can only believe if someone I trust like our priest or my son’s teacher convinces me”. Other concerns raised about using mobile money by respondents included loss of phone, security of savings, grievance--reporting framework, unstable network, and distrust in network providers and financial institutions. However, the general attitude to mobile money is positive and commendable. 92% of those who had not used mobile money before said that they would subscribe if more information was provided. 73% of existing users said that they would continue to use it as well as recommend it to their friends and families.

Traditional non-cash modes of storing wealth (social monies)

The study revealed that popular traditional modes of storing, accumulating, and transferring wealth used in the area included: use of deities, title taking, jewelries, household utensils, membership in prestigious groups, girl child/marriage, apprenticeship, livestock, leasing of seedlings, and storage of palm oil and tubers. Deities are major sources of borrowing and saving wealth in the area we studied. The words of chief priests are sacrosanct in financial matters. They have helped to shape the financial behavior of adherents. Deities through their priests safeguard the valuables deposited at the shrine and also lend money to borrowers. The awe and reverence the deities enjoy among their adherents made it possible for them to perform some financial intermediation roles. These deities through their priests perform debt recovery functions, insurance, financial negotiation, factoring, verification of claims, advisory and guaranteeing services. In recent times, some priests have taken it upon themselves to scale their operations by imbibing some formal banking practices such as advertising and proper documentation.

Adanna, a 22 year-old apprentice, affirmed, “I do not have any money now, although I work. Since as an apprentice I would be settled with a new shop and a large sum of money in few years to come, my toil for four years is not in vain. I have stored a fortune for myself”.

Ngozika, a 54 year-old mother of four noted, “No one here doubts the financial benefits of having a girl-child. My in-laws take care of my monthly upkeep and training of my two younger sons. My *omugwo* (post-natal visit) is fast approaching in two months time, and I am sure my wardrobe will change. I pity women who do not have girl children.” An explanation from Mmasi, a 34 year-old single mother, was very insightful: “Emeka, the shopkeeper in the village square, is my bank. I keep the proceeds of my palm business every fortnight with him. This is how I grew the capital I used to buy assets. I trust him because he is reliable and his shop is big and well stocked------ Even if he uses my money, he can conveniently pay it back.”

“Our family’s three years of savings and income were put into my husband’s title taking” Mama Nneka revealed. “It is an important achievement for the family. Apart from social relevance, it is a dependable residual income. He is paid to take part in ceremonies and in dispute resolution. His share of money is kept for him even in his absence by various community associations. The title will be transferred to my son when he dies. It has lifted us above poverty and lack.”

Items that have only economic values can be conveniently stored and transferred by cash. However, items that have both social and economic values cannot be stored in cash; that is the relevance of social monies. They are the mechanism for storing and transferring both economic and social values simultaneously, as seen in apprenticeship, marriage, and title taking. Introduction of financial innovations like mobile money would not alter their usage. Instead, it would strengthen it. For example, the marriage relationship, although social in nature, has economic offshoots. As a result, economic terms alone cannot capture the essence. Mobile money can only store and transfer economic values, and as a result; communities will keep searching for mechanisms to store and transfer both economic and social values. The major weakness of social monies is illiquidity and lack of general acceptability. They are not easily convertible to cash and can only function where trust and prior relationships exist. This understanding is critical for designing financial products, as it will assist operators in knowing what people in rural areas would use mobile money for, and what they would not use it for.

Financial Practices of Rural Women and Effects of Mobile Money Adoption

Adoption of mobile money has effects on most of the financial practices of rural women, especially on the mode of money transfer. Table 1. contains different financial practices of rural women and the possible effects that mobile money adoption could have on them.

Table 1. Effects of Mobile Money Adoption on Financial Practices of Rural Women

Financial behaviour	Financial practices of rural women	Effects of mobile money adoption
Saving	Home, informal saving groups, thrift collectors, shop-owners, and cooperatives	No effect because many people were not disposed to saving money through mobile money platform
Money transfer	Friends, family members, taxi drivers. **Frequency**: occasionally, monthly **Purpose:** for health reasons, to pay for membership dues, to deal with emergencies, pay school fees	Effect will be significant because many people are willing to send/receive money through mobile money. Majority are unhappy with traditional mechanisms for money transfer because they are unreliable, slow, and lack privacy
Capital accumulation	Advance payment for goods, lending to people in time of abundance to get paid later, with shop-owners, with cooperative groups	No effect because majority do not want to keep money for long in their mobile money accounts
Sources of borrowing	Cooperatives, deities, local money lenders, church members, village associations, thrift collectors, and informal savings institutions	No effect because majority lack trust in using mobile money for credit mobilization
Dealing with emergencies	Call on in-laws, kindred, religious institutions, cooperatives, groups which the person belongs to.	Significant effect because it would be easier and faster to remit money from in-laws and relatives during emergencies. Could also increase privacy and value of remittances
Percentage of income spent on major expenditure items	53% on food, 10% on maintaining membership, 17% on savings, 15% on children and relatives, 5% on miscellaneous	No effect because this has been their way of life, and they have preconditioned their minds about what and what not to do with mobile money innovations
Mode of payment	Credit, advance payment, barter, cash	Reasonable effect because despite the fact that awareness has not been created and agents are still scanty, many people are willing to use mobile money to make payments instead of travelling great distances.
Level of involvement in household decision making	Capital decision: 60% Domestic decision/family upkeep: 84%. This is because majority of households sampled were headed by women	Significant effect because of greater control over their money and privacy to make financial decisions

Effects of Mobile Money Adoption on Joint Liability Scheme and Cooperative Practices

Adoption of mobile money by members of women's cooperatives may not affect attendance in cooperative activities. However, as the study has revealed in Table 2, it would affect financial recording, peer screening and monitoring, information asymmetry, and timely repayment of loans.

Table 2. Effects of Mobile Money Adoption on Cooperative Practices

Cooperative Practices	Type of effect	Reasons
Attendance to cooperative	No Effect	There are other socio-economic reasons for attending cooperative

activities		activities, such as socialization, getting informed, and having fun
Financial recording and receipting	Significant effect	There should be a new platform for verifying and recording payments and withdrawals, and it could generate arguments between adopters and non-adopters
Accountability and security of cooperative funds	Reasonable effect	Majority of the members are not educated, and records are poorly kept. Mobile money adoption would complicate the problem
Peer screening among members	Significant effect	Mobile money adoption because of increase in privacy and autonomy to make financial decisions could make peer assessment and credit scoring difficult
Peer monitoring	Significant effect	Members' financial transactions and economic affairs would be difficult to monitor since transactions could be conducted privately
Mutual trust among cooperative members	Significant effect	There would be high tendency to pick quarrels and to misunderstand motives and actions of individual members, especially between adopters and non-adopters
Information asymmetry	Significant effect	There would be complexities in synchronizing cash and mobile money transactions
Timely repayment of loans	Reasonable effect	When social capital which is built on trust and understanding is affected, loan repayment would also be affected.

Conclusion

Mobile money innovation is full of promises for developing economies not only because it reduces financial exclusion, but also because of its varied uses, scale, impacts, and novelty. It is more than a technology, cutting across sectors of the economy and involving a wide range of stakeholders. Mobile money has the potential to add value, especially to those constrained by the cost of opening and maintaining conventional bank accounts or by large distances between their households and the closest savings establishments. However, its adoption could also upset social capital in cooperatives; weakening group lending schemes. Efforts should be made to ensure that the innovation does not work against other rural development strategies like microfinance. Sustainability and acceptance of every innovation lies in the extent to which it could be integrated with existing cultural practices.

Policy Recommendations

- Lack of awareness and general distrust remain the major challenges to mobile money adoption, especially in rural communities. Institutional advertisement and awareness campaigns could prove more effective in encouraging adoption. Many people, especially in rural areas, would adopt the innovation if the people they look up to are using the technology.

- There is general skepticism about saving money through the mobile money. This can be attributed to scanty information on grievance reporting, and lack of insurance for deposits. Mobile money care centers need to be made functional and brought closer to the people. Also, more agents need to be trained, deployed, and incentivized. Higher commission for agents would do the trick because they are grass-roots mobilizers.

- A situation where only a handful of cooperative members adopt the innovation would cause more disruption and mistrust. A majority of members should be adopters before the technology is allowed into the cooperative in order to avoid arguments and upsets. Even though new checks and balances to confirm and verify mobile money transactions and to link mobile money accounts to lenders' monitoring platforms need to be developed, mobile money agents need to be part of cooperative activities in order to educate them further.

Suggestions for Further Research

- How sacrosanct are the words of community leaders in money judgment, and how could they be used to instill trust in mobile money among women?
- What platforms and arrangements could drive mobile money uptake among rural girls?
- What are the roles of community based organizations in mobile money uptake and sustainability?
- How would mobile money adoption strengthen the joint liability schemes of cooperatives?

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