Advancing through Technology

Reaching the unbanked in Africa is a hurdle many governments and rural practitioners are trying to eliminate with the use of mobile technology. Mobile technology and other financial innovations promise to transform the rural financial landscape, and increase economic activity and empowerment in the long run.
Introduction

Technological innovations play an important role in facilitating access to financial services in rural areas in Africa. Some innovations were already established in other regions and have been applied in innovative ways in Africa. Examples include the use of psychometric assessments as a low-cost screening tool to identify high-potential rural entrepreneurs, and the use of Facebook to stimulate interest of youth in agribusiness. When considering improvements in access to finance using mobile technology, developments in rural Africa provide important lessons for other regions. This is because the lack of physical banking infrastructure required African financial service providers to innovate in more different ways than their peers in other regions. This Best Practice Guide takes stock of how mobile technology and other technologies facilitated branchless banking in rural Africa and how they can improve farmers’ access to appropriate financial services.

Technological Innovations for Branchless Banking

While technological applications can empower rural finance practitioners to improve rural outreach and service provision, a cautionary note also needs to be made. It is important to consider whether a specific technological innovation can be implemented efficiently and effectively by rural practitioners, and whether it will actually contribute to the organization’s objectives. This is not different for using mobile technologies for branchless banking. Although studying case studies and analysing different business models on mobile technologies for branchless banking offer valuable insights, duplicating best practices from elsewhere without taking local contexts, capacities and needs into account can result in failure.

Branchless banking in rural Africa

During KMP conferences, branchless banking was defined as the delivery of financial services outside conventional bank branches, using information communication technology and non-bank retail agents. As opposed to traditional banking methods, branchless banking can facilitate cost-efficient delivery of rural finance to existing rural clients as it reduces high distribution and monitoring costs for both financial institutions as well as farmers. Branchless banking can also allow rural practitioners to reach out to new clients in farming communities distant from financial institutions and allow them offer new products (Box 1).

Mobile banking takes branchless operations to the next level

Mobile banking (MB) takes branchless banking in rural areas one step further by introducing mobile technology, allowing clients to make use of financial services from mobile devices. Many financial institutions consider using MB to reduce operational costs to better facilitate existing rural clients better. Financial institutions can for example offer mobile payment, loan disbursement, loan repayment and deposit services through MB systems to make transactions more accessible and efficient for farmers.

Building on developments in mobile communications, financial institutions can more effectively distribute their products via agents, and introduce new MB services to reach otherwise unbanked farmer communities (Box 2). This could be achieved by leveraging their own financial service licenses and expertise with the mobile network operators (MNOs) customer base, brand, agent network and technical capacities. This provides them with cash from MNO client accounts, improving their credit portfolio capacity, and allowing them to collect information on client financial behaviour and to reach new customer segments for credit and savings products.

Box 1: Expanding financial opportunities for poor fishing communities of Lake Victoria, Kenya

Access to finance is an important constraint to agricultural production in Kenya. Some approaches have proved successful in deepening financial access in the rural areas. These approaches include accumulative savings and credit associations (ASCAs) and savings and credit cooperative organizations (SACCOs). The Community Resolve Against Hunger (CRAH) is a national non-state rural development organization focusing on improving food security. The organization exploits information communication technology to benefit farmers and catalyse development of agriculture, livestock and fisheries. CRAH works directly with fishermen to provide them with options for raising investment capital in the ‘dagaa’ fisheries sub-sector. Dagaa is a finger-sized species of fish commonly fished in Lake Victoria. CRAH uses technology to influence change in risk perception by banks and MFIs, and to increase profits for fishermen in the dagaa business through value addition and encouraging alternative products.

Fishermen use 100,000 kerosene lamps each night to attract dagaa fish—an expensive and unhealthy practice. These fishermen use between 50–60% of their earnings from fish to purchase kerosene. CRAH is encouraging fishermen to use solar technology to make fishing environmentally friendly. The use of solar energy is estimated to help fishermen save up to USD 15 million annually. It is argued that massive business potential exists in carbon trading through emission reduction. Banks and MFIs have the opportunity to tap into the opportunity for new savings products.

Ben Onyango, The Community Resolve Against Hunger (CRAH), Kenya- KMP Workshop Malawi 2011
Collaborating with MNOs in mobile banking also broadens opportunities for cross-selling additional financial services next to traditional credit and savings services. For example, MB can open up rural communities to more advanced financial services, such as remittances, microinsurance, leasing or warehouse receipt systems.5

Box 2: Facilitating agro-finance using technology in Zambia

In Zambia, 80% of income earners are currently unbanked. As 61% of the Zambian workforce is engaged in informal agriculture, it is an uphill task for financial institutions to reach rural communities. Mobile banking provides a new channel to reach this large, untapped market. Mobile Transactions (MT) Zambia Ltd. connects customers to financial services using mobile technology and a countrywide agent network similar to M-Pesa. Their money transfer system has been approved by the Bank of Zambia and had a monthly turnover of USD 1.8 million in transactions in 2010.

Money transfers help Zambians in rural areas to send money to more places while saving 40–70% in costs compared with traditional financial services. The sender deposits an amount of cash at a local MT agent, for this he pays a small transaction fee. The sender must confirm the destination town and enter a PIN code on the agent’s phone, and receives a receipt with a transaction reference number. The recipient must provide this number and the PIN code to get the cash from his local agent. This system also allows an MT client to make payments into either a bank or a MT account.

MT also offers electronic voucher services. This system provides a cashless payment mechanism to reach unbanked and unconnected beneficiaries.

Financial institutions, however, need to consider whether MB infrastructure exists in their country, in particular its availability in rural areas. If not, building an own service might be expensive and complex. Still, service providers can use mobile solutions to improve customer service, for example, by sending SMS reminders for repayments, communicating policy and interest changes, or advertising additional products. However, more and more countries in Africa already have MB infrastructure and systems in place.

Any MB intervention needs to be preceded by a feasibility study to provide insight into what is required in terms of different products and services, start-up needs, delivery channel and agent network options, internal capacity building requirements, etc. These need to be based on the implementer’s capacities and needs as will be explained below.6,7

Strengths and Weaknesses

Strengths

- The use of mobile technology in branchless banking can reduce transaction and operational costs, thus passing the benefits to rural clients.
- Further outreach of financial service delivery to existing rural clients (i.e. more products) as well as to new clients in farmer communities. Moreover, poverty-reduction strategies in eastern and southern Africa have increasingly paid more attention to agriculture and rural incomes.
- Mobile payment systems can have myriad benefits to agriculture.8
- Cross-selling of financial products, including more complex products, becomes easier through mobile network operators.
- Mobile technology in branchless banking can reduce security and fraud risks for farmers as the use of MB reduces the need to keep large amounts of cash in the house while waiting for a following credit down payment of saving deposit. At the same time, transactions are formalized making it easier for farmers to keep track of their income, expenditures and savings.9
- MB can help in transforming the banking sector to fewer stronger and larger-scale banks.
- MB can help governments develop comprehensive remittance strategies, reducing, for example, the cases of money laundering.
- Mobile banking can assist governments in achieving legal and institutional reforms in the financial sector of the eastern and southern African region.
Weaknesses

- Too often, financial institutions encounter unforeseen difficulties while implementing mobile banking due to the complexity of MB systems. A feasibility study can identify what is required to meet farmer needs in terms of:
  - range of financial products and services
  - financial needs to start up
  - delivery channel and agent network options, that is, how strong is the rural outreach of these networks in designated rural areas
  - internal capacity-building requirements.

- If infrastructure for MB is not yet in place in your country, setting up MB operations will be a costly and highly complicated affair, making it less interesting for both financial institutions and potential rural clients. Often investment needs will be beyond the means of most financial institutions.

- Even when financial institutions have identified MB as a suitable distribution channel to reach many rural clients, many remain hesitant and are not fully committed. This can result in insufficient resource allocation to truly engage with MB. Moreover, service provision remains largely limited to payment services (to support credit and savings products), while other services relevant to farmers and their organizations are not offered.

- With the introduction of mobile technologies in branchless banking, the customer is at further distance from the financial institution while, at the same time, almost everyone can participate in mobile banking. This makes it necessary for financial institutions to put in place expensive monitoring systems that check for security and fraud risks.

Critical Success Factors

Performance management: To successfully implement MB in rural areas, performance management should align commercial efforts towards clients and distribution at the right time and place. This includes developing of a reporting and geographical information system to facilitate effective distribution, and building marketing analytics to support product and service improvement (Box 3 and 4).

- Trust: MB helps to overcome mistrust of rural communities and farmers towards financial services and financial institutions, and builds financial literacy. Building trust is usually easier for transaction services, such as mobile banking, as rural clients can instantly access their accounts to check their current financial status.

- Social network and virality: Interaction with active clients is one of the most important drivers for the success of mobile banking in rural areas. The more active clients are in a specific rural community, the more likely the unbanked in the same rural community will adopt MB. By analysing local spending on telecom services and activity levels on social media, rural finance practitioners can identify early adopters. Programmes to engage them in MB can greatly benefit rural outreach. Box 5 gives example of how to stimulate youth by using Facebook.

Critical Failure Factors

- When critical benchmarks are not met, MB can become a potential failure. Key benchmarks:
  - The number of customers and the number and size of their transactions are vital in determining whether break-even volumes can be achieved.
Acquiring financial backing to make the necessary investments as returns on investments can take a long time.

Full insight into cost structures to determine whether MB suits the purpose in a specific rural area.\textsuperscript{15}

Specific challenges for financial institutions include their difficulties with:

- maintaining sufficient liquidity at agent level to serve withdrawals of rural customers
- low financial and technological literacy, which reduces usage
- network failures.\textsuperscript{16}
- Financial institutions often have difficulties cross-selling products to farmers for several reasons:
  - Many financial products and services are not catered to farmers needs as financial institutions are unfamiliar with the rural sector and have historically considered it as a less relevant investment category.
  - Many farmers distrust financial institutions and their products. The clear and current overviews of personal finances that can be accessed in MB can help build trust.

Conclusion

The case for enabling branchless banking using mobile technology shows that technological innovations can be implemented efficiently and effectively in rural Africa, while at the same time contribute to key objectives of financial institutions. As the required infrastructure becomes available in more and more countries and rural areas, it will make it easier for financial institutions to roll out 21st century technologies in rural communities. This will open up opportunities for financial service providers to provide new products to existing clients in rural communities, but also enable them to cater a new client segment which was previously considered unbankable.

### Box 3: Leveraging on ICT development: Use of cell phones

Microfinance Mobile (MM) is a microfinance methodology and business model that offers ICT-based financial services using mobile technology and electronic money platforms. MM is focusing on microfinance institutions (MFIs). Using the system will help MFIs to spend less time working with groups and have more resources available to work with small and medium enterprises.

MM offers savings and credit services using the Grameen group-based customer service approach. The services can build on the very high mobile access (40% of rural households). MM is a fully automated savings and credit service for mobile phone clients with registered SIM cards and who will access the service as members of a self-selected group. Based on reference data showing low domestic savings and low level of monetizing savings, there is a need to: (i) facilitate increased savings in the banking system, (ii) deliver the resulting credit directly to savers themselves, and (iii) use ICT and mobile technology to increase savings and credit to the masses.

Rural finance cannot be achieved through traditional banking methods alone because it is too expensive and not commercially viable. A paradigm shift towards e-money-based systems to deliver mass market financial services is needed. The MM system can also overcome some of the main challenges of the Grameen methodology by decreasing: (i) time taken up for periodic meetings, which add costs and restrict group membership to the locality, (ii) the need for cash-based transaction system resulting in risks, (iii) the need for repayment accumulation, and (iv) the need for high expansion investments in training and capacity building, and time-consuming loan application and appraisal process.

In the MM model, the front end is the connectivity between the client and the data processing using mobile phones. This MF Mobile data processing system is based on Grameen methodology. The back end is the connectivity between data processing and the bank using SMS banking.

Lascelles Chen, Microfinance Mobile – Tanzania- KMP Workshop 2012
Box 4: The development of mobile and agency banking: M-Pesa and M-shwari

The Commercial Bank of Africa (CBA) and Safaricom introduced mobile and agency banking through M-shwari. The products operate on non-face-to-face platforms that follow the Know-Your-Customer (KYC) principle in the financial sector: reliability, convenience, flexibility, structure and costs. The development of this product was an initiative for a compliant mobile centric-inclusive savings and credit product.

The convenience and efficient cash flow management for customers is the key benefit of this innovation, allowing credit score enhancing dignity in borrowing. It also assures better access to savings and credit for customer, improved financial integrity in the market and credit access. M-shwari accumulated 165 customers in 165 days with over USD 97.6 million savings accumulated and USD 1.3 million worth of credit advanced. The target is to move from financial inclusion to financial empowerment.

The success and rapid growth of the product is supported by intensive marketing through vernacular radio stations, national broadcasting stations, road shows and meeting forums. Critical success factors of the product are the KYC principle and customer protection approaches promoting systematic financial integrity.

AFRACA TCDC International Exposure Visit on Mobile and Agency Banking, In with the Kenya School of Monetary Studies, Nairobi, Kenya, 6–11 May 2013 by Mr. Isaac Awuondo and Mr. Jeremy Nguze, CEO, Commercial Bank of Africa, Kenya

Box 5: Leveraging Facebook to stimulate youth interest in agribusiness—The Youth 4 Youth (Y4Y) Facebook agribusiness extension delivery

Youth unemployment is a serious concern to many African governments. In Kenya, 64% of youth are unemployed. Rural youth leave for cities as they see few opportunities for themselves in rural areas, and in agriculture in particular. At the same time, the agricultural sector needs fresh blood, making it important to stimulate youth to go into agribusiness.

Using a Youth 4 Youth approach, which is based on interest in social media and peer-to-peer responsibility, Facebook traffic is leveraged to trigger discussions on agribusiness among youth.

Facebook is used in this approach as it is hugely popular among Kenyan youth: 62% of Kenyan users are between 18 and 34 years old.

Community Resolve Against Hunger, a local community organization in Kenya, trained 30 young core staff members as trainers. This group was trained in ICT, information management, gender, business development, group building and leadership capacities, and knowledge on agricultural production, post-harvest handling and marketing. These staff members each congregate groups of 10 rural Kenyans and engage them in agribusiness and farming subjects. Group members are remunerated with free internet subscriptions.

The cost of engaging youth using this method is 20 times lower than regular public extension services provided by government extension workers.

Ben O. Onyango – KMP Workshop 2012 Community Resolve Against Hunger (CRAH)
Endnotes

1 KMP Conference Paper (2012), Effective rural finance delivery methodologies for increased productivity, Maputo, Mozambique.


3 KMP Conference Paper (2012), Effective rural finance delivery methodologies for increased productivity, Maputo, Mozambique.


6 KMP Conference Paper (2012), Effective rural finance delivery methodologies for increased productivity, Maputo, Mozambique.


10 KMP Conference Paper (2012), Effective rural finance delivery methodologies for increased productivity, Maputo, Mozambique.


13 KMP Conference Paper (2012), Effective rural finance delivery methodologies for increased productivity, Maputo, Mozambique.


About The Rural Finance Knowledge Management Partnership (KMP)

The Rural Finance Knowledge Management Partnership (KMP), now in its third phase, is an initiative of the International Fund for Agricultural Development (IFAD). The partners are the Alliance for a Green Revolution in Africa (AGRA), the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) and the African Rural and Agricultural Credit Association (AFRACA).

KMP aims to strengthen rural finance delivery in Eastern and Southern Africa through knowledge management and experience sharing, capacity building and providing technical and implementation support. It does this by developing new, innovative ways to provide financial services to the rural poor.

An important focus of KMP is to share and disseminate best practices. The KMP experiences are intended to do just that, by bringing together all information collected by KMP and its partners on specific rural finance subjects, most notably during its Rural Finance Thematic Workshops.

This Guide highlights experiences in using technology to deliver rural financial services, with a particular focus on mobile technology for branchless banking, combining the results of Rural Finance Thematic workshops which were held in Kigali-Rwanda, Lusaka- Zambia and Maputo-Mozambique, with other KMP activities and recent information on this topic.

After detailing the benefits and difficulties of technology for branchless banking, this guide provides a comprehensive analysis of strengths and weaknesses of this technology, and offers practitioners critical success and failure factors they need to consider to improve the affectivity and efficiency of their interventions.