Increasing Access to Microfinance Using Information and Communications Technologies

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Microfinance institutions (MFIs) are institutions that provide financial services to poor and low-income households (and their microenterprises), allowing them to better manage their risks, achieve consistent consumption patterns, and develop an economic base. Decades of experience have demonstrated that the poor are not only creative with micro-loans (loans as small as $50), but willing to repay as well. However, according to a recent UNDP press release, "despite the growth of microfinance initiatives, only 3% to 6% of the estimated global potential of 500 million poor households have been reached."[1]

According to Normand Lauzon, Executive Secretary of the UN Capital Development Fund, "The challenge we face is to advance the agenda of increasing access to microfinance services, and to ensure that through it, we attain the goal of poverty reduction and sustainable development…. most of our partner governments recognize microfinance as a key instrument in promoting poverty reduction."[2]

Microfinance loans tend to have quite high interest rates in order to recover the high costs of loan administration. Information and communications technologies (ICT) can allow MFIs to lower the cost of loan administration, and thus, offer more affordable and flexible loan products to clients. In addition, ICT can also help MFIs to expand their service coverage by providing logistical, strategic and analytical support.

Several technologies are highlighted in this paper: management information systems (MIS), Smart Cards and personal digital assistants (PDAs). All three allow for loan officers to more efficiently serve their clients—through reduction of paperwork, access to information and ability to compute complex analyses. Since ICT in microfinance is a relatively new phenomenon, many unknowns still exist. However, what has been learned—and applicable towards ICT in any developmental setting—include: designing approaches tailored to the users' needs (not the other way around), being realistic about what technology can do, ensuring a holistic and flexible implementation scheme, and being wary of unintended consequences.

Organizational Introduction

Chemonics International is an international development consulting firm which, since 1975, has implemented over 600 projects worldwide for clients such as the U.S. Agency for International Development (USAID), the World Bank and the Asian Development Bank. In recent years, both in response to donor interest and to our own positive experiences, we have been increasingly complementing our traditional work with information and communications technologies (ICT)—particularly our work in: public sector modernisation, market linkages, policy, small- and medium-sized enterprise development, and microfinance.

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[1] United Nations Development Programme Newsfront. June 2001. "Global Microfinance Meeting Charts New Directions" www.undp.org/dpa/frontpagearchive/2001/june/1june01/.

[2] United Nations Development Programme Newsfront. June 2001. "Global Microfinance Meeting Charts New Directions" www.undp.org/dpa/frontpagearchive/2001/june/1june01/.

This paper summarizes some of our experiences working with ICT in the area of microfinance.[3]

Technical Assistance to Microfinance Institutions

Chemonics International has been equipping microfinance institutions (MFIs) with better information/communications systems and management/operations strategies to transform them into profitable and self-sustaining institutions that retain their social mandate. We often help MFIs with the following problems:

- Competition from the commercial banking sector due to financial liberalisation and institutional diversification
- Institutional constraints that prevent greater (or targeted) service provision and higher rates of repayment.

The following section describes some of the cutting-edge technologies that are being used by microfinance practitioners.

Applications of New Technologies for Microfinance

1. Management Information Systems (MIS)

Through well-defined MIS, MFIs are able to access/analyze information more efficiently for better decision-making, operations management, and product development. Several potential features include:

- Access control and security (i.e. passwords, audit trails)
- Loan functionality (processing different types of loans with changing repayment schedules and interest rates)
- Deposits functionality (including access for the user to interest rates, fees, and penalty charges)
- Report generation and database query/analysis capacity (i.e. loans profile by gender and risk, credit scoring etc….).

As a caveat, MIS (and other technology, for that matter) is not a substitute for good management. Often, there is an illusion that MIS can solve management issues such as insufficient checks/controls/security, low staff morale, and operational/procedural inefficiencies. In fact, MIS may exacerbate problems by relying on incomplete or false data, requiring staff to adapt to new systems, and further formalising a decision-making system lacking in requisite checks and balances.

2. Smart Cards

[3] Some relevant Chemonics International projects include:

- Philippines: Microenterprise Access to Banking Services in Mindinao (USAID Contract No: 492-C-00-98-00008-00, Project Officer: Robert Barnes)
- Microserve: A worldwide indefinite quantity contract focused on Microenterprise Innovation (USAID Contract No. PCE-I-00-95-00034-00, Project Officer: Roberto Castro)
- West Bank/Gaza: Building a Microenterprise Industry (USAID Contract No. OUT-PCE-I-00-99-0007-00, Technical Officer: Johnny Zeidan)
- Jordan: Access to Microfinance and Implementation of Policy Reform (USAID Contract No. 278-C-00-98-00029-00, Project Officer: Jon Lindborg)

Smart Cards are plastic cards, similar in appearance to debit/credit cards, in which microchips are embedded. The microchip allows for data storage—and allows MFI clients to carry all their related loan and purchase information on a microchip. As a result, smart cards can act as a debit card, an account passbook and even a credit card.

Prodem, a Bolivian MFI,[4] has conducted a pilot project using Smart Cards to replace much of the paperwork previously needed for transactions. The smart card allows for withdrawals, deposits, currency exchanges, money orders and other services. As a security precaution, fingerprint images are stored on the microchip and are compared with those taken by biometric scanners at the time of transaction.

Since Smart Cards hold their information on the cards (in the microchip), transactions do not require a transfer of information from a central source; transactions can be entirely off-line, rendering telephone lines and fibre-optic cable unnecessary. In addition, since smart card transactions can reduce some of the paperwork, transaction times are much shorter, enabling loan officers to service more clients. Information reconciliation/consolidation from the vendor/loan officers to head office can occur through information transfers at regular intervals.

One large advantage Smart Cards have over traditional ATM and credit cards (which are also being used by MFIs) is their ability to store and track purchasing and transactional histories. Over time, as more vendors accept Smart Cards, MFIs can compile profiles of their customers for the purposes of: developing new microfinance products, analyzing client's individual and aggregate credit, highlighting key vendors for alliances and examining social/spatial relationships in communities.

Smart Cards, particularly those with advanced security precautions, require large start-up costs—much higher than those needed for ATM and credit cards; the move to Smart Cards needs to be carefully weighed vis-a-vis market demand, consumer acceptance and the potential utility of the consumer information. In addition, the automation of transactions may lead to weaker loan-officer-client relationships—one of the key factors in repayment—though loan officers may actually have more time with clients as a result of the decrease in paperwork.

3. Personal Digital Assistants (PDAs)

PDAs are small portable handheld computers that can allow loan officers access to his/her institution's MIS from the field. Depending on location, information can be updated by the loan officer to the head office instantaneously or every day (which decreases the need for data entry clerks). For example, Asociación Programa Compartamos—an MFI targeting very low-income women in Mexico[5] —is experimenting with Palm Pilot (a brand of PDA) usage in cases where greater productivity is predicted and integration with MIS is justified.

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[4] We worked with Prodem under the Microserve project. (Microserve: A worldwide indefinite quantity contract focused on Microenterprise Innovation (USAID Contract No. PCE-I-00-95-00034-00, Project Officer: Roberto Castro). This case study and others are well documented in Automating Microfinance: Experience in Latin America, Asia and Africa. (Campion, Anita and Sahra Halpern. 2001. *Automating Microfinance: Experience in Latin America, Asia and Africa*. *MicroFinance Network*, 733 15th Street NW, Suite 700, Washington, DC 20005. www.mfnetwork.org.)

[5] We are working with Compartamos on the Implementation of the USAID/Mexico Microenterprise Strategy project. (Contract No: PCE-I-00-99-00007-00, Technical Officer: Ann McDonald)

The Palm Pilots used by Compartamos are also able to generate reports when connected to a printer, process complex calculations and track employee time allocation for productivity analysis (by tracking machine usage statistics). As with Smart Cards, the Palm Pilots greatly reduce the amount of time needed for transactions between the loan officer and clients.

Lessons Learned from Incorporating ICT into Development Efforts

1. Developing a Demand- and Needs-Driven Approach

ICT is a tool; essentially, the user needs to dictate how the tool is used (based on his/her needs), not the other way around. The point may seem quite obvious, but the push for technology adoption by donors, governments and consultants sometimes exceeds what is in fact practical.

2. Be Realistic About What Technology Can Do

As with any tool, ICT also has limits. ICT is sometimes used as a panacea for deeper social and institutional problems—which it is definitely not. In addition, since ICT procurement often involves a sizable sunk cost, there is a temptation to justify this through unrealistic projections regarding what the technology can do.

3. Ensuring a Holistic and Flexible Implementation Scheme

In keeping with the warning of using ICT as a panacea for all problems, ICT needs to be integrated into a broader holistic framework; "techies" need to work with developmentalists and vice versa. In addition, as much of the work in this area is new—and changing due to fluctuating political, economic and social situations, programs need to be as flexible as possible. (Even the technology itself is always changing.)

4. Beware of Unintended Consequences

ICT does not always yield the desired results. For example, when loan officers use time-saving devices such as Smart Cards and PDAs, they are able to serve a greater number of clients. However, depending on the approach, the loan officer-client relationship may deteriorate due to the decrease in contact—worrisome, as this relationship is often quite influential on repayment rates. (A simple solution may be spending some of the time saved interacting with clients to maintain relationships.) As a result, before and during implementation, potential unintended consequences need to be identified and mitigation strategies should be incorporated.

Conclusion

Microfinance has proven that offering financial services to the poor is extremely successful in encouraging entrepreneurship and building sustainable economic development. Recent ICT developments have allowed microfinance providers to increase the scale and efficiency of their operations—thus, providing more poor households with better financial services.

Smart Cards have cut down loan officer-client transaction times and allowed MFIs to track consumer information to better tailor their services. MIS have streamlined and shortened the decision-making process—and made it possible to perform analyses on clients, operations and products. PDAs allow loan officers to access the MIS from the field and also cut loan officer-client transaction times. Email, cell-phones, webpages—though not mentioned in the paper—

have also transformed MFIs in terms of how MFIs communicate internally, amongst themselves, and to the world.

ICT is an incredible tool for MFIs. However, it is just that—a tool, not a panacea. MFIs also face many other problems—problems not related to and therefore not curable by ICT: lack of internal controls, poor staff morale, poor repayment strategies, external regulations which are too lax or rigid etc.

Implementing ICT in MFIs is not an easy process. Though the potential rewards are great, as with all change, the process is not easy or risk-free (or cheap). Having a rational, yet flexible and broad-minded perspective is the key to working with existing ICT and assessing new ICT for future use.