Introduction

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Daily income of 80% of the world population is estimated to be less than $10.00. Self employment encompasses more than half of the labor force in developing countries. Even with more than 2 billion people still lacking access to formal financial services a lot of time and energy is being spent on just the right or wrong way to go about assisting poor with no access to formal financial services (Brix 2009). Traditional banking and financial service practices with brick-and-mortar branches are inherent with high operational expenses (Kunigahalli, 2008). Although the total revenue from servicing one hundred loans worth $100 does not differ greatly from the revenue that result from delivering one loan of $10,000 the fixed cost of processing a loan of any size is considerable. Regardless of the loan size banks and financial services organizations have to perform several activities related to assessment of potential borrowers, their repayment prospects, administration of outstanding loans and collection from delinquent borrowers. Therefore, traditional approaches to banking and financial services could lose money on high-volume low-value financial services thus severely restricting opportunities to offer Microfinance services to assist poor with no access to formal financial services. Due to limited options available, poor people in developing countries rely on relatives or a local money lender whose interest rates can be extremely high. A majority of Informal Money Lending rates in Asia, Latin America and Africa exceed 10% per month.

However, in light of the global financial crisis, even large banks and financial institutions world-wide are examining several opportunities for cutting the operational costs of brick-and-mortar branches and tapping new revenue opportunities from unbanked population (Kunigahalli 2009). Information Technology combined with innovative techniques in the area of Microfinance offer significant potential to drive profitable business with high-volume low-value banking and financial service offerings in developing countries. However, adoption of innovative techniques in Microfinance that utilize advances in Information Technology and Communications in developing countries requires careful analysis of several factors such as adequacy of technology and communications infrastructure, availability of computing devices and skill levels of consumers. A formal stakeholder analysis framework to identify the right solution, while taking into account aforementioned factors, can add significant value in promoting innovative techniques that adapt Information Technology to drive profitable business with high-volume low-value financial service offerings. A formal Microfinance stakeholder analysis framework facilitates Microfinance institutions to identify, prioritize and quantify the requirements of technology solutions to ensure that the business objectives are clearly met.

Total Cost of Ownership (TCO) of any Information Technology initiative to support or enable Microfinance activities must be extremely low to help lower the fixed cost of processing loans and maintaining accounts. Lowered TCO can be achieved by optimizing hardware, software licensing and support costs. Hardware cost optimization can be accomplished by adapting virtualization or utilizing shared on-demand hosting services.
whereas software cost is dependent on software products. Open Source software, on the other hand, can substantially reduce the software licensing cost to Microfinance institutions. However, organizations must understand the implications in terms of support and maintenance of Open Source solutions before embarking on full-fledged implementation. There are several Open Source solutions available at various different levels to address the needs of Web Servers, Application Servers and Database Servers. In addition to Open Source software available to develop Microfinance business applications, there are specialized Open Source Software solutions tailored to Microfinance business transactions. As an example, Mifo, an Open Source Microfinance Software solution has been implemented successfully in a Microfinance institution in Assam, India. It is extremely important for Microfinance institutions to review lessons-learned from such case studies and understand the analysis and resources required for deployment and operations of Open Source Software solutions like Mifos.

Even with promising growth and advances in Information Technology and Communications area, it is extremely important to realize that the Information Technology is just an enabler to improve the efficiency and lower the operational costs of banking and financial services. The process-oriented approach to examine the maturity of a Microfinance institution in terms of its preparedness to adapt Information Technology and automation without any major impact or interruptions to the existing business is crucial to the success of Information Technology and automation initiatives. It is extremely critical to demonstrate the Return on Investment (ROI) and ensure buy-in from the senior management and business stakeholders before embarking on a major Information Technology initiative. Adoption of Information Technology for microfinance services can help establish accountability and governance while ascertaining transparency to the stakeholders. Improvement in stakeholder relationship, operational cost reduction and socio economic benefits of target clients have been reported from early adapters of small scale MFIs in Asia.

Emerging Technology approaches such as on-demand services, cloud computing and Software as a Service (SaaS) can reduce time to market as Microfinance institutions do not have to set up and operate the Information Technology services essential for network, infrastructure and security stack. Agile development methodologies with iterative approaches can help organizations to evolve towards next-generation financial service offerings using innovative techniques that adapt advancement in Information Technology and Communications in developing countries.

In Chapter 1 titled “Stakeholder Analysis of IT Applications for Microfinance”, Krishna Nyapati presents stakeholders analysis from the context of Microfinance institutions. High-level requirements of Microfinance stakeholders are broken down into elementary attributes to facilitate quantification and measurement. Key IT system level requirements and their decomposition and representational aspects are clearly outlined to facilitate stakeholder analysis of Microfinance applications.

In Chapter 2 titled “Free & Open Source Software for Microfinance: Increasing Efficiency and Extending Benefits to the Poor”, Britta Augsburg, Jan Philipp Schmidt & Karuna Krishnaswamy examine the potential of Free Open Source Software (FOSS) to address the Information Technology application needs of small to medium sized Microfinance institutions. Key components of a FOSS ecosystem and challenges phased by Open Systems initiative from an esteemed Microfinance institution are highlighted. Contemporary opportunities such as Software as a Service (SaaS) to lower the capital and operational costs of MFIs are presented.

In Chapter 3 titled “IT and MIS in Microfinance Institution: Effectiveness and Sustainability issues”, S.Mohd. Najmullah Quadri, Vikas Kumar Singh & Kishen Parthasarathy Iyengar outline a Framework for appropriate governance of Information Technology initiatives of MFIs. Some of the current challenges associated with rural areas are elaborated using real-world case studies.
In Chapter 4 titled “Automating MFIs: How far Should We Go?” Saleh Khan scrutinizes basic business process of lending operations of MFIs and presents an impact analysis of automating MFI business processes. The chapter examines the landscape of MFI investors and examines the high borrowing costs of MFIs and the need for automation to do more with less capital while expanding the outreach. The chapter highlights the fact that one size does not fit all and outlines various levels of automation that MFIs can adapt to facilitate proper alignment with the business objectives while taking into account practical constraints.

In Chapter 5 titled “A Case Study of Mifos Implementation at Asomi”, Puspadhar Das provides an overview of a specific implementation of open source IT application to improve the productivity of a renowned MFI in India. The chapter describes various layers of the MFI open source application and elaborates on the technology components at Web, Application and Data tiers using Model View Controller (MVC) paradigm.

In Chapter 6 titled “Implementing Point of Sale Technology in Microfinance: An Evaluation of Come To Save (CTS) Cooperatives, Bangladesh” Abu Saleh Mohammad Musa & Mostafa Saidur Rahim Khan outline operational cost savings realized by adaptation of Point of Sale (POS) devices used in Field Force operating in remote areas. The chapter analyzes effectiveness of POS in terms of staff productivity and efficiency gains, error reduction and lowered cost with high return on investment for POS devices.

REFERENCES


ENDNOTES

2 Discussion Topic on “Role of Microcredit and Microfinance in the Eradication of Poverty”, UN General Assembly 2: Economic and Financial Forum