

Case Study

**An assessment of Pradan's 'Computer Munshi' intervention to improve microfinance accounting operations<sup>1</sup>**

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## Executive Summary

- The Self-Help Group (SHG)-Bank linkage programme in India is one of the largest microfinance programmes in the world, reaching out to over 33 million member households.
- However, the **quality of these SHGs is highly nebulous** at present, as there is no systematic and standardised aggregated record of their financial health and operations. SHGs have been promoted by more than 3000 different supporting institutions across the country (NGOs, state governments, religious institutions, etc.), each with its own system of SHG promotion.
- Pradan, an NGO promoting and working through more than 7500 SHGs in rural areas of northern and eastern India, faced a number of problems in its everyday operations including: (1) major errors in SHG financial accounts, (2) arduous annual auditing and dividend distribution procedures, (3) wastage of SHG members' time in complex accounting tasks every week, (4) dependency behaviour of groups – not fully 'self-help', (5) wastage of Pradan staff time in correcting SHG accounts, and (6) lack of reliable, up-to-date records of SHG financial performance to give partners.
- To address these issues, Pradan introduced the 'Computer Munshi' (CM) programme to improve the bookkeeping quality of SHGs by connecting these groups with trained accountants ('munshis') who use a PC with accounting software to maintain an electronic database of SHG financial records and transactions.
- The CM works as a paid service provider (Rs. 3 per SHG member per month) and serves between 100 and 200 SHGs in an area.
- His tasks include weekly data entry of the handwritten SHG transaction records, checking calculations and tallying figures, updating the electronic records for each SHG, running calculations of new dues/ balances, and facilitating the transmission of a hard copy of this information to each SHG before their next meeting.
- The SHG weekly Meeting Transaction paper records as well as print-outs of updated dues and balances for the next week are transported between the CM's urban/ semi-urban location and the SHGs through a Peon/ Postman, who is paid a nominal fee by the CM for the data transport service (Rs. 4 per SHG per week).
- The CM also supplies aggregated financial information on his client SHGs to the promoting agency (Pradan) as well as to external stakeholders for a fee (Rs. 20 per SHG per month).
- The CM system has resulted in many major operational gains, such as (1) improved quality and transparency of SHG financial records, (2) time/ cost savings for SHGs from outsourcing weekly accounting, (3) time/ cost savings for SHGs in annual auditing and dividend distribution, and (4) ability of Pradan to focus on its 'real' development work of livelihood promotion.
- Conceptually, these gains of the CM system can be attributed to three major factors:
  - Honing in on the **true value of the computer** in a particular context, i.e. identifying the particular 'capability' fulfilled by a PC (sheer 'computing' power and data storage in this case) that no other mechanism/ tool can provide to a given set of people for a lower price.
  - Using **hybrid cost-aware technologies and large scales of operation**. The task to be achieved has been broken down into manual and electronic components, with a clear emphasis on which option is lower-cost and more reliable for which sub-task (e.g. manual transport vs. electronic data storage/ calculation).
  - **Balancing business constraints and development goals** by internalising and putting a price on the secondary demand for such high-quality microfinance data from third-party agencies such as Pradan itself, in addition to the revenue expected from the primary clients – the SHGs.
- A number of problem areas remain in the present CM set-up that are keeping the system from running as intended in some locations, including (1) the high costs associated with double data entry and the correction of resulting errors, for which SHG members need to personally visit the CM to make the necessary clarification, (2) the problem of attracting and retaining appropriate talent as CMs in these less developed (even if semi-urban) areas, (3) the paltry gains received by most Peons in carrying out the manual transport activity of paper forms integral to the functioning of the system each week, particularly in areas with low population densities and long distances between SHGs, (4) sensitivity of SHG demand to the CM's fees, (5) the implicit subsidisation (hidden costs) of many CMs' enterprises causing new dependencies on Pradan, and, (6) unclear mechanisms for protecting the privacy and security of the SHG members' financial records.
- Resolving these operational difficulties over time through **even more cost-effective communication channels** between rural SHGs and the urban/ semi-urban CM (e.g. possibly through mobile telephony/ cellular phone-based data transfer), **even greater scales of operation per CM**, and **clear data protection/ security features** will make for a more efficient and sustainable system.

## I Introduction

Several commentaries and reports have been in circulation regarding the Indian NGO Pradan's 'Computer Munshi' (CM) intervention to improve the bookkeeping quality of microfinance collectives (Self-Help Groups – SHGs) by connecting these groups with trained accountants ('munshis') who use a PC with accounting software to maintain an electronic database of SHG financial records and transactions. In this report, we analyse qualitative data collected from site visits to three CM locations – one in West Bengal state (Purulia) and two in the state of Orissa (Keonjhar and Karanjia) in August 2006, and overlay the operational details of the CM system on the designed 'model' to highlight where the two are aligned and where they diverge. A few core insights are drawn from the overall design and functioning of the project, which are relevant to any number of planned and implemented projects in the use of Information Technology (IT) for rural development.

## II IT in SHG-style microfinance

The set-up of an SHG is very close to how the age-old Indian chit fund (Rotating Savings and Credit Association – ROSCA) works. A group of usually between 10 and 20 adults get together and make small (Rs. 5-20), regular (usually weekly) contributions towards a common savings pool, whose money is then continually re-lent to one or more of the group's own members at a set interest rate (almost always calculated on reducing balance). Central to the path to long-run sustainability is the linkage of the SHG with a commercial bank over a period of time, from which the group can borrow larger amounts collectively (at a low interest rate) for on-lending to individual members (removing the capital constraint faced by the SHG due to its own limited resources). Most SHGs earn on the spread between the external group rate (~9% p.a.) and the internal individual interest rate they charge (12-24% p.a. depending on the maturity of the SHG).

This presents a win-win opportunity for all parties involved: it is one big loan instead of 12 mini-loans for the bank to service, it is a cheaper loan for the women borrowing than the external rates they individually face with private financiers (>36% annual), and with the added benefits of **flexible principal repayment** as long as they make their regular interest payments on-time as well as being **co-owners of the high dividends earned on this pooled capital**<sup>3</sup>. This SHG-Bank linkage programme in India is one of the largest microfinance programmes in the world, with an outreach to more than 33 million member households<sup>4</sup>. However, **the quality of these groups is highly nebulous at present**, as there is no systematic and aggregated record of their financial health and operations. Though supported by nodal government agencies like NABARD and SIDBI<sup>5</sup>, SHGs have been promoted by more than 3000 different supporting institutions across the country (NGOs, state governments, religious institutions, etc.), each with its own system of SHG promotion.

IT is used in financial systems to enable both back-end infrastructure (the Management Information Systems - MIS) and front-end delivery channels for both cash and information (ATM, Point-of-Sale device, Agent with handheld device, etc.). Since the major costs in microfinance come from transactions/ delivery costs, the latter problem is the focus of this report. Given the nature of SHG operations, almost all cash transactions are internal since the lenders and borrowers are within the same group. Only in the case of linkage with a bank, the group makes a monthly external payment of its bank loan instalment. This feature makes it

<sup>3</sup> This is the key factor that differentiates SHG-style microfinance from regular banks and Grameen-bank style Joint-Liability-Group microfinance, i.e. there is no third-party lender, the capital loaned and the returns on it remain within this group of low-income women.

<sup>4</sup> C.J. Punnathara. "Accredited Loan Providers – A Placebo for Rural India." The Hindu, Aug 4, 2007. [url:http://www.thehindubusinessline.com/2007/08/04/stories/2007080450120800.htm](http://www.thehindubusinessline.com/2007/08/04/stories/2007080450120800.htm)

<sup>5</sup> The National Bank for Agricultural and Rural Development (NABARD) and the Small Industries Development Bank of India (SIDBI), both government re-financing institutions.

possible for SHG accounting and data transmission channels to be conceived independent of physical cash-transfer channels.

### III Problems with SHG bookkeeping – the case of Pradan

Pradan is one of these 3000 SHG-promoting and supporting institutions in India. It is an NGO with operations in rural areas of northern and eastern India. **It has an outreach of over 7500 SHGs across more than 3000 villages in 27 districts of 7 states, translating to more than 86,240 member households (2007).** Pradan has been focusing on promoting viable livelihoods for the rural poor over the past 15 years, primarily through improving agricultural productivity and business development (including irrigation and watershed management interventions), and supporting other income-generating rural industries like dairy and animal husbandry.

Its professional staff members coordinate groups of rural women to form SHGs for microfinance as a first step in organising rural communities for development activities. A group of 10-12 SHGs in an area form a ‘Cluster’ and 10-20 Clusters form a ‘Federation’ of SHGs. Pradan then uses this network of SHGs to plan and conduct interventions in livelihood support and promotion. Pradan-promoted SHGs have a **reputation for lasting longer, having good peer-monitoring and support, building sizeable group assets, easily linking with banks, and running transparent internal financial operations** compared to the SHGs promoted by other institutions.

However, a number of issues were repeatedly faced by Pradan staff in their day-to-day operations:

- 1. Major errors in accounts.** The weekly financial records of SHGs were often incomplete and regularly had major errors in calculation and tallying. Even if literate, the SHG Group Accountants (GAs), whether internal or external, dreaded their accounting task, since the amounts transacted in an SHG are not standard and vary from meeting to meeting. The required tasks included calculating weekly interest dues for each member on varying loan amounts (some at higher penalty interest rates), aggregation of voluntary savings, tracking overdue loans, and readying balances for the next week’s meeting.
- 2. Arduous annual auditing and dividend distribution procedure.** Annual dividends in an SHG are distributed proportional to individual member savings, and so the computations are intensive. Pradan staff devoted an entire month each year (March-April) just for auditing the account books of the SHGs they promoted. The mistakes in weekly entries by the GAs showed up at this time, and reconciling the SHG accounts with bank records and member beliefs/ statements about their repayment was very difficult, requiring professional auditors’ help.
- 3. Wastage of SHG members’ time** in the 2-2.5 (sometimes upto 4) hour meetings each week, mostly spent in doing the calculations/ accounting. When aggregated, this has an opportunity cost of losing 8-10 hours or one full day of work each month, i.e. around Rs. 360 in lost wages for a group of 12 members in a month (@Rs. 30 daily wage).
- 4. Dependency behaviour – not fully ‘self-help’.** In the absence of the skill to handle these complex book-keeping tasks, the SHGs then became dependent on Pradan’s professional educated staff to manage/ check their accounts, clearly taking away from the vision that they would be fully independent community organisations.
- 5. Wastage of Pradan staff time in correcting SHG accounts.** Pradan’s professional field staff ended up spending much of their time checking and correcting the accounting books of the SHGs, even when their real objective was to run projects around livelihood promotion in these areas through the promoted SHG.
- 6. No reliable, up-to-date record of SHG financial performance to give partners** (NABARD, linked banks, etc.) to evaluate the success/ viability of these micro-finance collectives, since neither were the internal accounts of each SHG maintained accurately nor were they aggregated at any level. This also prevented Pradan from identifying weak SHGs (in terms of poor meeting attendance,

irregular repayment, low savings contributions, etc.) early on, to prioritize how best to intervene and strengthen such groups.

#### IV The ‘Computer Munshi’ intervention to improve SHG quality

To respond to these constraints, Pradan came up with the idea of outsourcing the weekly accounting tasks of the SHGs they promoted, to a third party professional accountant. This would reduce their (Pradan and the SHGs’) accounting burden and improve the quality of SHG accounts. The accountant or ‘Munshi’ had to have a monetary incentive to provide this service regularly, yet each SHG would not be able to afford a costly Munshi ‘service fee’. The pricing problem was addressed by designing an optimal scale for operations, so one Munshi would service a large number of SHGs (100-200), charging each a nominal fee to maintain their records: Rs. 3 per member per month or Rs. 45 per SHG of 15 members per month (2007).

**Table 1: Revenues earned by Sumanto – CM entrepreneur in Balrampur taluk<sup>6</sup>**

Item	Cost (per month, Rs.)	Revenue (per month, Rs.)
Accounting service fees from 99 SHGs @ Rs. 2 per member <sup>1</sup>		2766
Fees from Pradan – Purchase of 79 SHGs’ monthly data and trial/ member balance sheets @ Rs. 15 per SHG <sup>2</sup>		1185
Stationery	470	
Rent, Electricity & AMC	225	
Peon Salary (for 6 Peons)	948	
Computer EMI (to SHG Federation)	500	
Total	2143	3951
Net profit from SHG accounting services		<b>1808</b>
Other income – Xerox and STD/ISD services		2500

<sup>1</sup>Accounting service fees were Rs. 2 per SHG member per month in 2005; these have been raised to Rs. 3 per month in 2007.

<sup>2</sup>Rates of purchase of SHG monthly summary sheets from the CM were Rs. 15 per SHG in 2005; these have been raised to Rs. 20 per SHG in 2007.

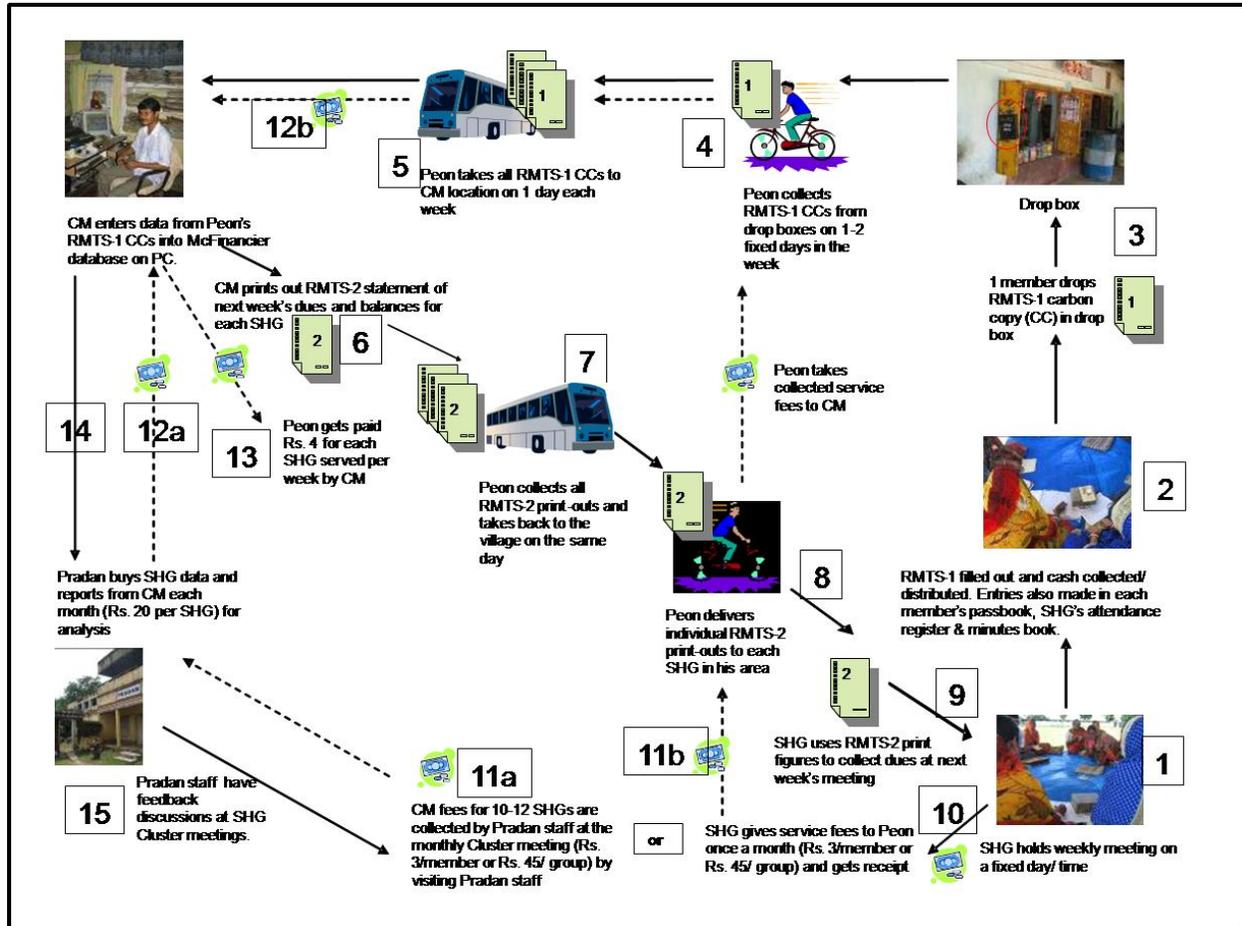
So that the Munshi could handle such a large number of weekly transactions efficiently, he would have access to a PC on which the electronic records of the SHGs would be stored (hence the name ‘Computer Munshi’ or CM). This necessitated that the CM be located in an urban or semi-urban area, with some electricity infrastructure. The CM’s responsibilities would therefore include **weekly data entry of the handwritten SHG transaction records, checking calculations and tallying figures, updating the electronic records for each SHG, calculations of new dues/ balances, and transmission of a hard copy of this information to each SHG before their next meeting.** He would also supply aggregated financial information on his client SHGs to the promoting agency (Pradan) as well as to external stakeholders for a fee.

To transmit this information between the SHGs in the villages and the CM’s location every week through a reliable yet low-cost channel, the CM hires a set of Peons who are residents of the villages served. Each Peon collects copies of the Regular Meeting Transaction Statement - 1 (RMTS-1) forms of between 30 and 50 SHGs each week (these are dropped off in particular drop boxes by the SHGs once their weekly meeting is done). The Peon then delivers these RMTS-1 copies to the CM, and returns the processed RMTS-2 print

<sup>6</sup> Source: Kanitkar, Ajit. “Computer Munshi Project of Pradan.” November 2005 report

outs reflecting updated balances and dues for the next week, back to the individual SHGs in his area before their next weekly meeting. The CM pays each Peon Rs. 4 per SHG per week for this data transport work (2007). Figure 1 describes the task and schedule of the various players in the CM system.

Figure 1: The Computer Munshi model of weekly SHG accounting<sup>7</sup>



The software for this SHG accounting system (named 'McFinancier') was developed by Sharada solutions, a Delhi-based service provider, in 2002. It runs on Windows 98 and XP. Pradan's 'Computer Munshi - CM' project was initially funded by CARE, NABARD and SIDBI, who provided the existing set of computers as grants. There are 45 CMs serving Pradan SHGs at present.

## 5. An assessment of the CM system of operations

Has the CM systems been successful in addressing the problems it set out to solve? The assessment is a mixed bag at this stage, with many clear gains, but also many grey areas where various new types of costs have arisen from the CM system. We discuss some of these below.

<sup>7</sup> 2007 rates/ figures

**a) Improved quality of SHG financial records – YES**

The financial records of most Pradan-promoted SHGs in a block are now all **standardized and stored on a single database that is updated weekly**. A number of important ratios on the financial health of individual SHGs and their members are generated each month (trial and member balance sheets) and given to the groups and to Pradan for a fee. In Karanjia, Pradan staff use these numbers to create summary reports on the health/ vital statistics of each Cluster of SHGs on MS Excel to compare performance across the member groups easily.

Whether good or bad, the numbers for all SHGs using the CM system are now available for inspection at a central location, by Pradan and the SHGs' external partners. For instance, it took all of five minutes to note the high percentage of loans overdue by at least a week in the past quarter (830 out of a total 3500 loans in one location, 1127 of the outstanding 1741 loans to members of 124 SHGs in another), likely due to this being the monsoon season when loans drawn are high and repayment of principal is low. Similarly, the Portfolio at Risk ratio was seen to have fallen from 9% in 2004 to around 7% in 2006 in one location. Until now, making such **accurate instant evaluations of a large number of SHGs** spread across distant rural areas, over time, was impossible.

For the records to be accurate and useful though, the respective Pradan staff spent significant effort on the **initialisation** process. As soon as an SHG's handwritten records were audited/ verified, the RMTS-1 drop-off and RMTS-2 delivery systems were operationalised so that there was not even a single week's lag between the updating of the manual and electronic databases then onwards. However, there is likely some **self-selection bias** around which SHGs end up using the CM system. The better quality SHGs are usually the ones more diligent about following the regular schedule of manual RMTS-1 entries, weekly drop-off of forms, and CM service fee payment, and likely the ones to reap the most gains from this intervention.

**b) Time/ cost savings for SHGs from outsourcing weekly accounting – partially YES**

Compared to the Rs. 360 costs of collective time spent at SHG meetings each month in the earlier system, **each group's regular meetings under the CM system take half as much time**, i.e. an hour each week or 4-5 hours each month (so associated cost of around Rs. 180 in lost wages).

However, **error correction** in the CM system has taken on a new set of costs. Given that the data is entered by hand in the RMTS-1 form, whose carbon copy is sent to the CM for electronic data entry, there are now some time costs associated with this **double data entry process** (illegibility from bad handwriting, movement of the carbon sheet so the copy doesn't register the entry, forgetting to enter values in required columns/ rows, etc.). When there are such irreconcilable errors, the CM sends a chit/ letter through the Peon to the particular SHG asking them to visit him the same week, to clarify what is on their RMTS-1 form.

One CM estimates this share of irreconcilable errors to be between **10 and 30%** of all accounts processed each week. For each such mistake, it costs an SHG Rs. 80-100 (travel + food) to send 1-2 of their members (the women do not usually travel alone) to the CM's location to get the error clarified. This means that the average SHG gets an error correction call once in five weeks. The cost of this is ~Rs. 64 in time spent on error correction each month by a single SHG. Those SHGs who systematically have such errors each week face higher costs. Additionally, each SHG pays on average Rs. 30 to the CM for the services provided. In sum, the time/ cost savings of Rs. 180 from outsourcing weekly accounting tasks has to be balanced with the average Rs. 100 in new costs of error correction and service charges in the CM system, to calculate net benefit.

c) **Time/ cost savings for SHGs in annual auditing and dividend distribution– partially YES**

Previously, the annual auditing of SHG accounts were conducted in ‘camps’ held in the villages, where Pradan staff and a professional auditor checked the account books of 10 or so SHGs on a single day, spending 6 hours or so in the process. Though this meant that the average group would spend around 30-40 minutes on this exercise, most of the SHGs ended up spending the entire day waiting for their turn to audit in serial order. Now, it takes 15 minutes for the CM to give each SHG a print-out of their annual financial statements. Each SHG is given an appointment with the CM on a set date/ time in March/ April, when they come to the CM’s office and have their accounts audited and dividend distribution calculated. The actual time savings between the two systems is questionable, since 1-2 members would need to spend an entire day on this in either case, either waiting in line in the first case or travelling to the CM location in the latter. But, **the quality, ease and transparency of accounting are significantly higher in the CM system**, even if the associated time costs are about the same.

d) **Creation of a sustainable linkage with a service provider – uncertain**

The attractiveness of the CM role in terms of running a profitable enterprise is not as clear as the model would predict. **Finding and retaining a ‘good’ Computer Munshi has been extremely difficult**, and where the programme is not running well, it is primarily because of the **high turnover rate among CMs**. The problem is **systemic**, as those areas where SHGs need the most accounting help (poor areas with high illiteracy and few services) are also the ones where it is very hard to incentivise talented/ educated people to stay. There are invariably some “hidden costs” to the present CMs’ businesses. In three of the four locations visited, the CMs were running operations out of the local Pradan office (no rent costs). The computers across all the visited locations were received as grants through Pradan, and even where EMIs were being paid by the CM to the SHG Federation (in whose names the PCs are registered), these were merely token amounts. Even with these subsidies, the one independent CM visited only earned around Rs. 2000 in net profit each month (see Table 1 for example), which is lower than profits from other unaided ‘side’ businesses run by the same entrepreneurs (Xerox, STD/PCO booth, etc.).

The Peons across locations are clearly performing the physical RMTS form delivery job at **marginal gain or at a financial loss**. Particularly in low density, hilly and forested areas, the manual collection and transport of the records between the SHG and CM locations each week is very time-consuming and expensive (not covered by a Rs. 4 fee per group per week). For example, a Peon serving 37 SHGs in a 12 km radius, spent 2 days in collecting/ delivering the RMTS forms locally by cycle and 1 day taking the forms to the CM location in town and back (by bus) each week, earning an average revenue of Rs. 444 each month (at the 2006 rate of R. 3/ SHG), with just his bus travel + town food costs coming to around Rs. 90. It appears that this task is performed by the Peons at present only as an add-on to other ongoing tasks/ work in their local and urban areas, partially driven by the social value the Peons see in such ‘service’ work. Finding such ‘service-minded’ workers at this price then becomes very difficult as the remoteness (and therefore travel costs) of the rural location in question increases.

There seems to be an **optimal time** to introduce the CM system to an SHG as a paid service. Groups that are very old are too set in their own manual record-keeping ways to change, while groups that are younger than 6 months do not have enough money accumulated to be able to spend such amounts on just accounting. So transitioning the SHGs to the paid service after they are 6 months old has been found to be optimal. However, **willingness to pay seems to be extremely sensitive to the price**. SHG members clearly refused the idea to pay more than Rs. 3 to the CM per person per month, even when rising input costs (stationary, toner, etc.) were explained.

**e) Greater focus on the ‘real’ development work – YES**

At an organisational level, the most acute constraint targeted and consequently the greatest gain has been for the Pradan staff, who are now able to spend time doing their ‘real’ work, i.e. promoting and implementing their social and livelihood programmes with the SHGs and not correcting the RMTS-1 forms for the groups they work with. This extra time spent with the groups is in mobilising group action for a particular social problem (e.g. protests around the malfunctioning of a tube-well in the village) or in training members in a particular livelihood promotion programme (rice intensification techniques to increase paddy yields).

**f) Security and privacy of financial data – NO**

The question of ‘who owns and controls the SHG’s financial data’ is important and is as yet unresolved in the CM system. The electronic records of all SHGs sit on the hard drive of the PCs used by the CMs. The only back-ups are the monthly CDs of the updated records sold to Pradan. It is interesting to note that PCs used to store and process SHG financial data are not connected to the Internet or any other network, partly due to concerns around them being infected by viruses. Still, the present system needs to fully think through financial information security and privacy considerations of this consolidated data if the system is to be scaled and formalised.

**6. Three conceptual comments on the use of IT in development projects**

**(i) The value of the computer**

The CM intervention has involved the adoption of the PC in the way industry adopts a particular technology – using efficiency and quality considerations. This has implicitly involved an assessment of the ‘value’ of a computer, which ironically very few projects in the Information and Communications Technology for Development (ICT4D) space have undertaken. Even in successful ICT4D projects such as ITC’s e-chaupal, it is the crop procurement service and the higher price offered at the ITC centre that primarily attracts farmers to the centre, much less the ability to check price information for the crop at CBOT using the PC. Very rarely have we asked the question, *“So what is the ‘capability’ provided by the PC that no other mechanism/ tool can provide to this set of people for a lower price?”* In the case of E-chaupal, the price information can in fact be accessed cheaper via TV, or mobile phone networks, and so the value of the PC as the device of choice for such information retrieval and dissemination is questionable. However, the CM intervention has a straightforward answer to this question – the value of the computer here is its ‘computing’ power. For this reason, the computers enabling the Munshis are used only to store and process the SHGs’ financial data. This ‘capability’ cannot be afforded by an alternate mechanism at this scale for the same price, and is independent of all the other ‘capabilities’ – communication, networking, information search and retrieval, etc. that are complementary to the basic PC and that are the more problematic components of running rural telecentres/ computer kiosks. The CM system therefore provides a reliable offline service that is PC- and task-specific and therefore, of measurable value-addition.

**(ii) Hybrid cost-aware technologies and scales of operation**

While this theme has recurred time and again in several contexts, ranging all the way from the Digital Study Hall project using PostmanNet to transport educational DVDs via the Indian postal system (Randy Wang), to ATMs being mounted on trucks and taken from village to village, the importance of *appropriate hybrid technological solutions* is critical in developing country contexts. The CM system has not installed wireless towers dedicated to providing internet connectivity (costing a few lakhs each and requiring a large number of towers/ users per tower to be viable), nor have they pursued expensive PDAs and handheld devices as necessary communication infrastructure to have electronic data transmitted from the SHGs to the CMs directly, which would theoretically automate the entire SHG accounting process (and attract good press).

*The task to be achieved has been broken down into manual and electronic components, with a clear emphasis on which option is lower-cost and more reliable for which sub-task.* Internet connectivity is still expensive and highly unreliable in rural India, but manual transport of aggregated data on paper is very cheap. On the other hand, manual accounting has minimal increasing returns to scale, while the use of computing devices clearly display a growing cost advantage as the size of data to be processed increases.

### (iii) **Balancing business constraints and development goals**

Several recent studies point to the tension between running ICT-based interventions in rural areas for ‘development’ purposes (involving subsidies of some type) vs. for purely commercial benefit<sup>8</sup>. The final test of need is indeed willingness to pay. We see Pradan struggling with the same pressure in trying to make the CM system viable. A business survives when it meets some demand of a set of clients and recovers costs plus some profit from them. However, should the demand flag or the price offered by the service provider be unacceptable to the clients, the business will face the possibility of closing down. This ‘closing down’ is not an acceptable option in ‘development enterprise’ projects where there are influential stakeholders to the functioning of the system apart from the direct clients, i.e. those who see a public good/ positive externality being generated by this programme. In such a scenario, subsidisation by the third party becomes highly likely and in fact may even affect client behaviour around willingness to pay and their expectations around price. The CM intervention partially *internalises these two separate sources of demand*, by having the external stakeholder (Pradan itself) pay for the data generated through this system (Pradan charged Rs. 20 by CM for summary sheets and data of each SHG to be supplied each month). This is part of the reason why the CM system has a greater likelihood of running as a revenue-generating business than most other ‘development enterprise’ ventures, where the demand of the third party promoters (apart from the direct buyers and sellers of the service) is never internalised in the service’s price. Yet, this creates a new dependency of the ‘development enterprise’ or the CM system in this case, on the demand of and revenues from the third party agency, i.e. Pradan.

## 7. **Conclusion**

The CM system has been very successful in addressing some key problems in SHG microfinance promotion and sustainability, including (1) having higher quality, up-to-date, standardised and aggregated electronic financial records of SHGs, (2) having weekly and annual accurate accounting of SHG records performed by a professional, relieving the SHG members of this arduous task, and (3) Pradan staff being able to focus on their ‘real’ work of rural livelihood promotion. At the same time, a number of problem areas remain in the present CM set-up that are keeping the system from running as intended in some locations, including (1) the high costs associated with irreconcilable errors resulting from the double data-entry process, for which SHG members need to personally visit the CM to make the necessary clarification, (2) the problem of attracting and retaining appropriate talent as CMs in these remote areas, (3) the paltry gains received by most Peons in carrying out the manual transport activity integral to the functioning of the system, particularly in areas with low population densities, (4) sensitivity of SHG demand to the CM’s fees, (5) the implicit subsidisation (hidden costs) of many CMs’ enterprises causing new dependencies on Pradan, and (6) unclear mechanisms for protecting the privacy and security of the SHG members’ financial records. Resolving these operational difficulties through **even more cost-effective communication channels** between rural SHGs and the urban/semi-urban CM (e.g. through mobile telephony/ cellular phone network-based data transfer), **even greater scales of operation per CM**, and **clear data protection/ security features** will make for a more efficient and sustainable system.

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<sup>8</sup> Kuriyan, R., Ray, I. and Toyama, K. (2006) “Integrating Social Development and Financial Sustainability: The Challenges of Rural Kiosks in Kerala” in *Proceedings of the International Conference on ICT and Development*, Berkeley, California, May 25-26 2006.