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Innovative Rural Finance in India: ICICI Bank's Credit Access Points

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Abstract

Providing rural finance can be a challenge for private banks, due to information asymmetries and the high cost of due diligence, low population density of the target clientele, and contract enforcement difficulties. However, the rural population presents a huge untapped market for banks in most developing countries. A recent rural finance innovation in India, the credit franchise or credit access point (CAP) initiative by ICICI Bank, offers many insights and lessons for other banks, policy makers, and academics exploring rural finance options. This paper describes the CAP model, discusses a randomized impact evaluation which aimed to test the model's risk incentives, and analyses the experiment's findings. The paper additionally compares this innovation to models in other countries, and offers suggestions for future bank-academic collaborations.

Keywords: Rural Finance Innovation, Credit Franchise, Randomized Impact Evaluation

The Small Enterprise Finance Centre (SEFC) is a research centre at the Institute for Financial Management and Research (IFMR) in Chennai, India. SEFC's ultimate goal is to improve small business finance access in India. To achieve this mission we conduct research on a broad range of issues affecting small businesses, and we hold regular training for bankers who lend to small businesses. For information on SEFC, see our website at www.ifmr.ac.in/sefc. For information on the collaborations between IFMR and ICICI, see http://www.icicicommunities.org/research.html.

I. Introduction

Across the world, and especially in the developing world, rural access to finance is often very limited and provided at very high costs. Comprehensive and competitive formal access to finance is rare, as in many instances banks' branch coverage in rural areas is very sparse so that many households are located far away from the nearest branch. Often the only banks present are state owned banks with little incentive to provide comprehensive services. Many private banks find moving into rural areas unprofitable for a variety of reasons. First, there are information asymmetries, because banks do not know how to evaluate the credit risk of previously unbanked clients, making the cost of due diligence too high to entice private banks. Second, transaction costs, due to the remote location of villages and communities, inhibit the establishment of bank branches and financial infrastructure. Third, difficulties with loan contract enforcement in the face of low collateral and murky legal/police jurisdiction enhances the moral hazard risks for banks. Fourth, national banks often form the bulk of rural formal finance, and private banks face competition from national banks' subsidized interest rates. (World Bank 2005, *vii*) In the face of these challenges, non-governmental organizations (NGOs), academics, governments, and banks the world over have tried to address perceived financial gaps or irregularities in rural areas. Rural finance innovation presents both a challenge and an exciting opportunity for stakeholders from local government, national government, development organizations, and the for-profit community.

This paper aims to describe one rural finance innovation in the Indian context, and also to describe the bank-academic collaboration that attempted to improve this innovation. In 2005 and 2006, ICICI Bank, India's largest private bank, designed a credit franchise, wherein rural businesspeople functioned as franchisees of ICICI Bank and provided credit under ICICI's name. In order to find the optimal risk incentive for this franchising model, ICICI collaborated with the Small Enterprise Finance Centre (at the Institute for Financial Management and Research, Chennai, India) to conduct a randomized impact evaluation of two different risk incentive packages and determine which package best protected the bank from risk.

The experiment ultimately did not go as planned. However, the survey and performance data gathered illuminates the characteristics of rural businesspeople, and offers insight into who might make reliable rural agents for formal banks. Section II introduces ICICI Bank and the model; Section III discusses the experiment design; Section IV explains the implementation of the experiment and its findings; and Section V offers the final conclusions of the project.

II. Introduction to ICICI and the NWS strategy

Founded in 1994, ICICI is India's second-largest bank with total assets of Rs. 3,400 billion (US$ 79 billion) as of March 31, 2007 and profit after tax of Rs. 31 billion for the fiscal year 2007. In 1999, ICICI became the first Indian company and the first bank or financial institution from non-Japan Asia to be listed on the NYSE. (ICICI, 2007) ICICI has built a reputation for its innovative services and rapid expansion. (Rediff.com, 14 June 2005) One reason for ICICI Bank's impressive growth rate has been the use of alternate channels of finance, rather than simply increasing the number of bank branches. (Times of India, 25 Oct 2006) ICICI's most innovative channels include telephone, internet, and mobile banking, and even Braille- and voice-enabled ATMs for blind or illiterate customers. (The Banker, 3 Sept 2003)

Despite its innovations, ICICI Bank, like most private banks in India, has not been able to penetrate rural markets as deeply as it would like. (ICICI Communities, 2007) While urban India is a relatively saturated market for ICICI services, rural areas offer a huge opportunity for expansion. In 2005, ICICI Rural, Micro Banking and Agri Business Group (RMAG) developed a strategy for a cost-effective expansion into rural India. (Banerjee 2006) Its approach has been labeled the No White Spaces (NWS) strategy. This strategy aims to provide rural population an ICICI Bank customer touch-point within a radius of 10km, leaving "no white space" in those locations. According to ICICI, this strategy aims to serve all the financial needs of rural customers by developing and providing customized products to different customer segments (agri-traders, processors, farmers and entrepreneurs in semi-urban and rural areas). ICICI's strategy also involves

creating customized channels for each of these customer segments. Finally, ICICI is focusing on targeting products for all stages of the agricultural value chain. ICICI plans to have 450 districts covered by 2008. (ICICI 2007)

Direct Sales Agents and the Credit Access Point Agents

ICICI, like many Indian banks and Non Banking Finance Companies (NBFCs), employs the concept of Direct Sales Agents (DSAs), who serve as community sales contacts for ICICI products such as insurance, vehicle loans, and mutual funds. DSAs have been in existence for a decade, helping banks dispense consumer and car loans. (IndianNGO 2004) Banks use DSAs to approach customers for business, rather than expecting all customers to approach the banks. The DSA resolves credit enquiries, helps fill applications, and then sources applications to the local ICICI branch, which decides to approve or deny the loan request. Each approval by ICICI earns a commission for the DSA.

However, DSAs do not provide any type of financial or informational intermediation. They are simply ICICI salesmen; once the customer's initial purchase is finalized, the DSA's role ends, meaning that any unpaid loans do not negatively affect the DSA. The DSA does not have an ongoing relationship with the customers, so the number of products they can sell is limited; many loan products are too risky to be sourced without either a strong knowledge of the customer base or some risk sharing. (The Tribune Nov 2000)

The Credit Access Point agent (CAP) model takes the DSA concept one logical step further. Not only can a local contact be a referral service for ICICI financial products, the contact can review the applications and conduct initial screenings. For this loan-reviewing ability the CAP needs to be even more knowledgeable than the DSA about the local populace. This requirement could be met by contracting with local businesspeople already working with farmers. The CAP also needs to have a financial tie-up, in the form of a joint default liability, with the bank. Whereas the DSA model restricts the transactions and lending that ICICI could offer, outsourcing the first round of rural loan

application screenings to businesspeople with a financial tie to the bank could potentially radically expand ICICI's rural reach while also mitigating the risk in the expansion process.

Thus, the CAP became a critical agent of the No White Spaces strategy. A CAP provides ICICI products and services to his/ her existing business customers. (See *Appendix 1* for a complete list of products.) The CAP sources the products, collects the loan repayments and remits collections to ICICI Bank. The CAP model is innovative in that it addresses two of the most difficult obstacles to rural finance: first, that banks find it unprofitable to establish branches in rural areas where *populations are scattered* (for an analysis of the effects of low population density see Pedrosa and Do, 2006); and second, that due to major information asymmetries and the generally small loan size for rural populations, the required *due diligence is not cost effective*. (World Bank 2005) By partnering with businesspeople who already have offices and, ideally, the necessary office equipment, the bank almost completely eliminates the cost of establishing a branch.[1] By partnering with successful businesspeople who know the local customer base through their existing business(es), and who have an interest in maintaining good customer relations and timely repayments due to their joint default liability with the bank, ICICI substantially lowers the cost of due diligence.

The bank also sees the model as an attractive business opportunity for rural businesspeople. First, the CAP has a new profit-making venture. Second, the CAP can extend loans to his/her current clients to buy their products (for example, a car dealer can extend ICICI vehicle loans to customers). Third, the CAP can expand to new customers who may then use the primary business. Fourth, the CAP can leverage his/her joint default liability to lend a much greater amount of money than they would individually. Finally, CAPs may benefit from their association with ICICI. Thus, it seems at least on the surface that ICICI, the CAP, and rural customers could all benefit from the

[1]In terms of physical infrastructure investment, the main requirement for a businessperson in setting up their Credit Franchise is to use the branded ICICI banner; many CAPs did not have a separate office space for their CAP in the first year of business. Like most other business franchises, any investment they made in their office space would be from their personal investment, not the corporate parent's.

CAP model. (For more discussion of the CAP model in relation to other rural finance innovation, please see *Discussion 1*.)

The model contains a good deal of risk, however. Because ICICI has less intense oversight of the CAP's loan applications, there could be some opportunities for the CAP to lend ICICI Bank's money to personal friends, family members, risky customers or fake applicants with no intention or ability to repay the loan. In order to deter CAPs from this kind of behavior, ICICI designed a risk sharing mechanism, or joint default liability, between the bank and the CAP. This risk sharing agreement requires the CAP to make a fixed deposit with ICICI, which is subject to a First Loss Default Guarantee (FLDG). This means that the first x% of the loan portfolio that defaults will be taken from the CAP's deposit rather than from ICICI's risk mitigation funds. Striking the right balance between *protecting the bank* and *ensuring profitability for the CAP* posed a challenge for ICICI. Thus, the exact percentage of loss to be covered by the FLDG was the basis for the research project with the Small Enterprise Finance Centre. A higher liability would theoretically lead to more cautious but less profitable CAPs (as their lending capacity would be restricted by their initial deposit to ICICI) while a lower liability could lead to large profits both for the CAP and ICICI but a much higher risk of default. (For detailed information on how the FLDG works, see *Appendix 2*.)

Role of Agent

The role of the businessperson conducting the franchise on behalf of ICICI cannot be understated. While the idea of contracting with successful businesspeople is simple enough, the reality of selecting the best agent for the franchise is complicated, and selecting proper agents is vital for the success of the initiative. As the No White Spaces strategy primarily targets farmers, the CAP must be closely connected to the farmers in the immediate local area, for example within the businessperson's taluka.[2]

[2]A taluka (also known as a *tehsil*, *tahsil*, *mandal*, *taluk*, and *taluq*) is an administrative unit which generally consists of one main city/ town and possibly additional towns, and a number of villages, which are organized into smaller clusters known as *hobli*. A taluka is below the district level and above the *hobli* and village level. It exercises certain fiscal and administrative power over the villages and municipalities within its jurisdiction.

Businesspeople that fit this description include input dealers, agricultural traders, vehicle dealers, and financiers. Preferred agents are those who have previous credit exposure, are not too political or anti-social, have strong collection capability, and have a strong reputation in the local market. While these directions may have been helpful initially, the categories are in fact quite broad and of limited use. Section IV will further discuss these traits and which traits proved successful indicators of CAP performance.

III. Proposed Structure of the Experiment

Because the CAP model was new and, to the authors' knowledge unprecedented, designing the risk incentive correctly was bound to be difficult. In particular, how much should a CAP be expected to cover from his/ her own pocket if the customer defaulted? In its pilot phase, ICICI experimented with an FLDG up to 100%, but at that rate the business was not deemed profitable enough by the first batch of CAPs. A 5% and 10% FLDG were tried, but such low risk incentives are quite risky for the bank. Using randomized impact methodology, SEFC and ICICI envisioned an experiment in which two different risk incentives (with correspondingly different profit incentives) would be tested against each other. We created a control and treatment group, with the control group being assigned a 10% FLDG, and the treatment group receiving a 20% FLDG. The treatment group also had a higher profit incentive to compensate for their higher risk liability. We intended to analyze the CAPs through SEFC surveys and ICICI-provided data at the beginning of the model and again in 8 months to one year to see the difference in the two groups. We aimed to compare default rates, profitability, and expansion in the control and treatment groups.

The experiment design aimed to answer the following questions:

- What parameters does a CAP use in approving applicants (soft techniques vs hard techniques, etc)?
- Does a higher risk liability (higher FLDG) lead to more cautious lending than a lower risk liability?

- If so, in what way is the CAP more cautious? Does he/she only source more secure loans (to the higher spectrum applicants) or does he/she become more involved in the repayment collection process?
- Does the higher profit incentive (which correlates to a higher risk liability) actually make the higher liability worthwhile for the CAP? Or, instead, does the higher liability make the package unattractive at that level of profit sharing?
- Can higher liability CAPs still expand as much as the lower liability CAPs, or will they see their chances for expansion as limited because of the higher liability?
- Finally, is there an ideal risk incentive which makes the CAP model sustainable and profitable for both ICICI and the CAPs?

Sample Size and Coverage

ICICI and SEFC decided to evaluate the program nationally rather than within an isolated region of the country. ICICI intended to grow the credit franchise model gradually. By January 2007 there would be not more than 400 or so franchises, and by June 2007, perhaps 1,000. It was thought that the more credit franchises involved in the project the better, and limiting the experiment to a region would cut the sample size so drastically that the results would be inconclusive.

At What Level to Randomize?

ICICI and SEFC considered several options when deciding at what level to randomize. Randomizing at the district level or taluka level seemed the most feasible options. The decision to randomize at the taluka level was driven by three lines of thought. First, the experiment needed to assign enough CAPs to the treatment groups so that the resulting comparative statistics would be meaningful. Second, randomizing at a finer level, instead of the district or state level, promised to give us greater statistical control over individual CAP characteristics. Third, ICICI conceived of the NWS project at the taluka level and thus it seemed a natural level at which to implement the project.

Randomization Method

Originally each region of the country was to have the same percentage of their talukas assigned to the treatment group. For example, 30% of the talukas in each state would be assigned to the treatment group. In practice, different parts of the country had different percentages of their talukas assigned to the treatment group due to SEFC's various negotiations with the respective local ICICI management. SEFC received lists of talukas from ICICI that were to be included in the CAP project. Talukas which already had a CAP in the pipeline were identified and excluded. Then, based on the fraction of treatment groups negotiated for that local area, this fraction of talukas were randomly assigned to the treatment group and the remainder assigned to the control group.[3] This list of treatment and control talukas was given to the appropriate ICICI management to implement and enforce.

IV. Implementation and Findings

The national randomized experiment unfortunately could not be enacted, as the treatment group's FLDG was simply not attractive enough to persuade the potential CAPs who had been assigned the 20% FLDG. There are several reasons for this: first, word spread quickly that 10% FLDG would be the norm, so those CAPs assigned to a 20% FLDG felt that they were being discriminated against or unfairly disadvantaged. Second, the experiment was not communicated thoroughly down the line of command in the bank, and district and rural bank managers did not want to struggle to enforce an unpopular FLDG on their assigned talukas. (For more lessons learned from the experiment, see *Discussion 2*.)

Because the envisioned randomized impact evaluation could not be undertaken, ICICI and SEFC agreed to shift focus from an analysis of the model's *risk incentive* to an analysis of the *agent*. The new aim became to determine which CAPs were most successful in

[3]The randomization was done using a uniform distribution method. Random numbers drawn from a [0-1] uniform distribution were assigned to each taluka. A given cutoff between zero and one was chosen for different states and areas of the country (in consultation with the respective Mumbai-level ICICI managers) resulting in a "random" set of talukas with assigned numbers higher than the cutoff being designated as the treatment group (and thus to receive the 20% FLDG).

their first 2-8 months, analyze the characteristics of these successful CAPs, and predict which businesspeople ICICI could safely select as their agents. Hence SEFC finished the first round of surveys on the control group and analyzed the data in order to characterize successful CAPs. SEFC surveyed 200 CAPs, approximately half of the available CAPs at the time and compared the survey data collected to performance data on those CAPs.

Data Findings

Although the study sample size was smaller than initially planned, and the random assignment of CAPs into high and low FLDG groups did not take place, baseline surveys and ICICI's performance data together provide much insight into the nature of successful Credit Access Points. (To understand how success was measured, see *Appendix 3*. For the complete profile of an "ideal" CAP, see *Appendix 4*, and to see basic summary tables for this data, see *Appendices 5* and 6.)

Perhaps surprisingly, the most important indicator of success (in terms of repayment) was the CAPs' previous credit exposure (*Table 1*). In particular, having formal contracts with suppliers and other customers was the biggest predictor of success and repayment. Next, we consider some of the more significant indicators of success, namely employee composition, office assets, and lending behaviors.

Employee Composition

As *Table 1* shows, the number of CAP employees greatly improved Disbursal Proportion, Sanctioned Amount, and Number of Sanctioned Cases. This is not surprising given that most businesses with many employees enjoy a higher volume of sales. However, there was also a significant positive relationship between the number of employees and both the number of rejected cases and the incidence of late payments. This would be interesting to explore further, as one might expect that having more employees would decrease the presence of late payments by improving the collection ability of the CAP owner. The number of employees also working in the non-CAP (original) business did not significantly affect performance. However, the number of CAP employees *also* working

in the non-CAP business significantly increased the presence of rejected cases and late payments. This suggests that only increasing the number of full-time CAP employees (who will not split their time between businesses) will improve the business.

This may indicate that full-time CAP employees tend to have more specialized training or more time to focus on the CAP business

Table 1: Impact of Basic Dependent Variables on Main Outcome Variables

		Disbursal Proportion	Late Payments	Rejected Cases (#)	Sanctioned Amount
Independent variables		(1)	(2)	(3)	(4)
Office Status	Separate Office	0.063 (0.059)	0.013 (0.069)	1.079 (1.092)	−227699 (615015)
Education level	More Education	0.051 (0.077)	−0.019 (0.090)	2.165 (1.424)	224443.7 (801807.7)
Time in Area	Entire Life	−0.022 (0.076)	−0.094 (0.089)	−1.653 (1.419)	−1567304* (799257.2)
	$\sim 2/3$of Life	0.335** (0.115)	−0.041 (0.135)	−2.911 (2.138)	−763436 (1203872)
Previous Credit Exposure	Formal Contracts	−0.058 (0.063)	−0.010 (0.074)	0.878 (1.177)	−92607.8 (662987.4)
	Informal Contracts	0.228* (0.123)	0.449** (0.144)	3.064 (2.295)	371578.5 (1292463)
Employee Information	Number of CAP Employees	0.003 (0.012)	0.027* (0.015)	−0.042 (0.231)	186390.3* (129918.8)
	% Employees only working at CAP	0.000 (0.001)	0.000 (0.001)	−0.000 (0.013)	4115.0 (7069.5)
R Squared		0.154	0.122	0.070	0.068
N		116	116	116	116

* 5% significance at +/- 1.96 t-stat

** 1% significance at +/- 2.57 t-stat

Office Assets

As *Table 2* demonstrates, the possession of office assets favorably affected performance. Possessing basic and sophisticated equipment most likely saved the CAP owner time and resources, freeing him to focus on selling loans and helping customers. Surprisingly, of all the office assets, ownership of copy machines in the CAP and non-CAP office proved to have the most significant impact on performance. Other assets which significantly

improved performance included number of landline phones, air conditioning, number of computers, presence of internet connections, and presence/ number of motorcycles. Though the presence/ number of high-cost possessions would normally indicate initial wealth, the indicators were regressed against disbursal proportion, which should control for any wealth bias (as opposed to regressing against total sanctioned loans). The success correlated with office assets seems to indicate that investment in a sophisticated office pays off immensely, possibly due to cutting down on usage of other facilities.

Table 2: Impact of Office Assets

		Disbursal Proportion	Late Payments	Rejected Cases (#)	Sanctioned Amt
Independent variables		(1)	(2)	(3)	(4)
	Copy machines (Dummy)	0.152 (0.155)	0.055 (0.168)	0.956 (2.583)	970887.4 (764053.5)
	Internet (Dummy)	0.032 (0.103)	0.208 (0.110)	−1.080 (1.687)	124198.2 (498912.6)
	Fax machine (Dummy)	−0.105 (0.139)	−0.014 (0.150)	−2.102 (2.305)	−289350 681832.1
	Telephones (#)	0.079 (0.061)	−0.033 (0.065)	−1.864 (1.000)	672675.4* (295828.5)
	Air Conditioner (Dummy)	−0.003 (0.144)	0.344* (0.156)	9.655** (2.392)	3066369.7** 707672.8
	Generator (Dummy)	−0.173 (0.096)	−0.122 (0.104)	−0.421 (1.600)	−970925.3* (473277.2)
	R Squared	0.187	0.271	0.289	0.535
	N	64	66	66	66

Controlled for number of months in business and education level
* 5% significance at +/- 1.96 t-stat
** 1% significance at +/- 2.57 t-stat

Lending Behavior

The most successful method of determining an applicant's reputation was by speaking with the applicant's family. Of the factors used to decide whether to lend to the applicant (*Table 3*), those CAPs using the applicant's "character" had the best performance. Of the reasons cited for rejecting applicants (*Table 4*), those CAPs citing past defaults as the reason to reject had the best performance. Of the methods used to determine

an applicant's reputation (*Table 5*), speaking with the family was the most successful; personally verifying the applicant's business had a negative correlation with loan amount, but this could be due to the high time constraints of personal verification. Requiring a strong guarantor was significantly negatively correlated with performance. CAPs who reported that they rejected applicants due to insufficient land holdings, or because the applicants had other loans pending, had negative performance trends.

Table 3: Impact of Primary Selection Criteria

	Disbursal Proportion	Late Payments	Rejected Cases (#)	Sanctioned Amount
Independent Variables	(1)	(2)	(3)	(4)
Past Reputation	0.020 (0.057)	0.082 (0.065)	−0.132 (0.823)	105802.5 (564434.7)
Present income source	0.002 (0.056)	0.109 (0.064)	−1.320 (0.811)	−868399 (556003.2)
Ability to repay	−0.036 (0.056)	0.001 (0.064)	1.142 (0.815)	−828750 (558942.9)
Strong guarantor	−0.156 (0.095)	0.193 (0.111)	−0.585 (1.413)	−605444 (968578.8)
Land holdings	−0.059 (0.108)	−0.168 (0.125)	−0.531 (1.594)	−421609 (1092763)
Character	0.304* (0.138)	−0.136 (0.160)	−0.199 (2.042)	443222 (1400134)
Must be known person	0.000 (0.131)	0.281 (0.153)	1.740 (1.943)	82443.65 1331823
Must have good reason for loan	−0.136 (0.157)	−0.129 (0.183)	2.679 (2.327)	−381915 (1594979)
R Squared	0.181	0.213	0.081	0.089
N	135	141	141	141

Controlled for number of months in business and education level
* 5% significance at +/- 1.96 t-stat
** 1% significance at +/- 2.57 t-stat

Table 4: Impact of Primary Reasons to Reject Loan Applicants				
	Disbursal Proportion	Late Payments	Rejected Cases (#)	Sanctioned Amount
Independent Variables	(1)	(2)	(3)	(4)
Past Defaults	0.088 (0.056)	−0.006 (0.063)	0.299 (0.998)	503709.8 (555757)
Bad reputation/ behaviour	0.038 (0.056)	−0.033 (0.063)	−1.113 (0.985)	−503138 (548749.2)
No collateral	−0.031 (0.085)	0.304** (0.099)	−0.475 (1.557)	−230493 (866821.9)
No repaying capacity	0.028 (0.097)	0.064 (0.112)	−1.178 (1.758)	21319.99 978911.6
R Square	0.135	0.179	0.038	0.041
N	136	142	142	142

Controlled for number of months in business and education level
* 5% significance at +/- 1.96 t-stat
** 1% significance at +/- 2.57 t-stat

Table 5: Impact of Primary Method of Determining Applicant's Reputation		
	Disbursal Proportion	Sanctioned Amount
Independent Variables	(1)	(2)
Speak with Panchayat Leader	−0.018 (0.066)	−523920 (669487)
Speak with Applicant's Neighbours	−0.049 (0.058)	−412753 (591610)
Speak with Applicant's Family	0.203** (0.074)	422447 (754001)
Personal Verification of Business	−0.077 (0.054)	−1446544** (553958)
Speak with Common Friends/ Existing customers	0.002 (0.094)	−950139 (952010)
R Squared	0.173	0.092
N	137	137

Controlled for number of months in business and education level
* 5% significance at +/- 1.96 t-stat
** 1% significance at +/- 2.57 t-stat

Surprising Findings

In our study, education and time in the area affected performance less than expected (*Table 1*). The only education levels positively (but not significantly) correlated with performance were "Graduate Diploma" and "Post Graduate." "Class 10+2" had the most

negative correlation with the number of rejected cases (suggesting that this education group is more cautious in their sourced applications). When "Less Educated" (Up to Class 10+2) and "More Educated" (Graduate, Graduate diploma, and Post Graduate) were compared, the primary difference was that being more educated was positively correlated with the number of rejected cases.

SEFC was particularly interested in analyzing the success of newcomers versus those businesspeople who had lived in one region their entire life. There was no significant correlation here. However, there was an insignificant negative trend for those who had lived in the area their entire life, and a significantly positive trend for those living most ($\sim$2/3 of their life) in the area. One preliminary explanation could be that those who left their town for some time to get professional qualifications or education make good CAPs.

V. Conclusion

Though the experiment did not function as originally planned, this project offers much information concerning the possibilities of rural finance innovation, the characteristics of businesspeople who could be successful implementing agents in this innovation, and the pressing questions for future innovation and research in rural finance. The Credit Access Point model implemented by ICICI Bank can be seen as part of a global trend of improving rural finance through innovative methods. Like other models, the CAP model provides mobile "door-to-door" services through more targeted products and services. The CAP model is unique because it provides a formal, private bank with a low-cost entry point which harnesses the local knowledge of successful businesspeople. This model improves on previous models such as the Direct Sales Agent (DSA) by providing a greater profit opportunity for the CAP, a greater variety of product offerings for rural clients, and a wider access to rural customers for the bank.

The survey and performance data provided us with insightful information on rural lending techniques. For example, many "soft" techniques which would not usually be used by a bank, such as speaking with an applicant's family, can be successful. Also, several practical techniques, such as looking at past records of defaults rather than at

landholdings, should be encouraged. The surprising finding of our project, that education and time in the area could be less important than the office sophistication of the CAP, serves as an important reminder that good equipment and networks may be highly specific to isolated rural areas.

The collaboration between the research centre and the bank exposed both parties to best practices for future collaborations. The disparate interests of the two parties (profits and expansion for banks, and long term academic study for research institutes) can make collaboration challenging. However, through addressing such issues early and finding common goals, collaborations are certainly possible.

The research tried to establish which types of CAPs are the ideal implementing agents for the model. Questions for future research include the following: Which risk incentive protects the bank while also ensuring sustainability and viability for the CAP? Depending on the risk incentive, how would lending behaviors change over time? In a broader sense, how does this model impact communities? Does it offer previously inaccessible services to rural clients, or is it simply a new provider of existing services? How could the CAP model impact current social structures in rural communities? Will the CAP model, through further experimentation and possible regulatory changes, be able to offer more services such as those offered by international counterparts? Could savings accounts, either individually or in groups, evolve at the CAP level? In the absence of local ATMs, can cash points exist at the CAP office?

The CAP model, one of many global innovative models for providing rural finance, can offer much to stakeholders interested in experimenting with rural finance. This research also highlights the extensive future work needed before widespread rural financial coverage becomes a reality. Through illuminating and debating the best practices of models around the world, ideally stakeholders will be able to learn from other countries and implement successful strategies at home.

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Appendix

Appendix 1: Product Basket for the Credit Franchisee:

- Personal Loans
- Crop Loans
- Cattle, Poultry, and Dairy Loans
- Farm Equipment Loans
- Drip Irrigation Loans
- Two Wheeler And Vehicle Loans
- Agri Credit Loans
- Housing Loans
- Commodity Trading
- General and Life Insurance
- Mutual Funds

Discussion 1: How does the CAP model differ from other rural finance initiatives?

Rural finance innovation has taken many forms around the world, but most initiatives address information asymmetries, population disparity, poverty, low profit margins, and agriculture-specific needs such seasonality, weather risks, market risks, and high-cost farm implements. (Ritchie 2007, v; World Bank 2005, 1)

One of the most common trends in rural finance now is mobilizing internal savings at a village level before seeking external funds. This mechanism is missing from the CAP model, as CAPs are currently not able to collect savings from clients.* So far seasonal repayments have not been utilized in the CAP model. Also, the community element of most rural finance initiatives, which utilize social pressure to ensure timely repayments and good use of loans, exists to some degree within the CAP model, but not to the extent that group mechanisms would.

Unlike many rural finance initiatives, the CAP model does not target microfinance clients. The CAP model targets clients seeking crop loans, personal loans, and vehicle loans. The average loan size in our study was approximately Rs.35,000, well above the average micro-loan. However, as ICICI has its own microfinance partners in rural India, this model does not represent a gap in finance but a complement to its existing microfinance work.

A key difference in the CAP model is the element of agent. Many previous models, such as ones in Thailand and Indonesia, used *socially* powerful agents, such as village heads and chiefs (Fuentes 1996, 189). The CAP in our case could be socially powerful, but (s)he was picked because of business connections with the target clientele. Our preliminary analysis suggests that CAPs who are also socially important (long standing in the community, uses social techniques for judging applicants) *may* be more successful. More study would be necessary.

One major advantage of the CAP model over other rural finance initiatives is its utilization of the successful local businesspeople with much greater knowledge of the client base than an outsider would have. This should address information asymmetries and reduce risk for both the CAP and the bank. Whether this will perpetuate any village level patterns of discrimination, however, is not known.

**Nachiket Mor, Former Executive Director of ICICI Bank, indicates that the regulatory framework may not be in place for mobilizing savings without formal bank presence. (2005, 5)*

Appendix 2: How Would Does the FLDG Work in the Experiment?

	FLDG Percentage	**Liability** Initial deposit which the CAP must maintain in case of default	**Lending Capacity**	**Profit Motive:** Commission from Margin and Processing Fees
Control Group	**10% FLDG**	2 Lakh	20 Lakh	75%
Treatment Group	**20% FLDG**	2 Lakh	10 Lakh	85%

While the treatment group has more personal liability and lower lending capacity than the control group, they also have a greater share of the margin and processing fee, which is the primary means of profit in the CAP model.

The liability does not refer to the total portfolio, but rather the first x% of loss. In case of default, the CAP must replenish their FLDG before they can lend again.

For a 10% FLDG:

- Ex. 1: If the loan portfolio built up is 3 lakh (out of 10 lakh possible), and the NPA is 1 lakh; the amount adjusted against the FLDG will be 1 lakh and not .3 lakh
- Ex. 2: If the portfolio built up is 10 lakh, and the NPA is 3 lakh; the amount adjusted against the FLDG will be 2 lakh and not 3 lakh, and ICICI incurs a loss of 1 lakh

For a 20% FLDG:

- Ex. 1: If the loan portfolio built up is 3 lakh (out of 10 lakh possible), and the NPA is 1 lakh; the amount adjusted against the FLDG will be 1 lakh and not .3 lakh
- Ex. 2: If the portfolio built up is 10 lakh, and the NPA is 3 lakh; the amount adjusted against the FLDG will be the entire 3 lakh, and ICICI incurs no loss.

**1 Lakh= 100,000; 10 Lakh = 1 Million.*

Discussion 2: Challenges in Bank-Academia Collaborations and Lessons Learned

The project provides a number of lessons for future partnerships working on randomized impact evaluations. One of the primary lessons learned was that communication between and within organizations would be vital to any collaboration of this nature. Second, the risk incentive in the treatment group was not attractive enough to motivate the potential CAPs, even without the implication that they were more "risky" than their control group counterparts. Though the profit share was higher in the treatment group, it was communicated repeatedly that this profit share would not compensate for the higher risk liability. Third, the experiment might have been more successful had it been done on a smaller scale instead of nationally, or if randomization had taken place at a state-level rather than a district level. However, given the limitations of the project design and scale, little could have been done differently in retrospect.

Another matter worth considering is the different motives of banks and academic institutions. Banks naturally have a distinct profit motive, and often competitive expansion model, which makes long-term studies very difficult to implement. Academic institutions on the other hand have a much greater interest in long-term experiments. Addressing these inherent issues, and compromising on the structure, will lead to a stronger experiment.

Appendix 3: Measures of Success

To measure success, parameters gathered in the survey phase were analyzed against the performance data given by ICICI. SEFC used several indicators of success. [1]

- The proportion of portfolio distributed: this was the primary measure of success, since it controlled for total size of portfolio (which is an indicator of initial wealth)
- The total portfolio size: used to capture big lenders
- Presence of late payments to ICICI: a dummy variable was used to indicate any presence of any late payments
- Number of late payments to ICICI: the absolute number of cases, whether 60 days NPA (late) or 120 days NPA.
- Withdrawn: a dummy variable was used to look at the characteristics of the 30% of surveyed CAPs who withdrew from the program.
- Absolute number of rejected cases[2]: this would indicate how cautiously a CAP approves and documents his clients' applications.
- Average loan size would have been an important variable to use, but due to some inconsistencies in data the figures were too unreliable for use here. However, future studies should carefully consider loan size in their analysis.

[1] All regressions controlled for Time Lag (to measure CAPs who had only operated one month versus those who had operated seven months). Using Disbursal Proportion controlled for wealth.

[2] After personally approving a loan, the CAP sends the application in to ICICI for their final approval. This final approval was supposed to be a cursory mechanism, but ICICI rejections became a major issue for many CAPs. This high rejection rate indicates both CAP inability to approve the "right" applicants and miscommunications between ICICI and the CAPs regarding documentation. It further indicates an enormous amount of caution on ICICI's part in the beginning of this roll-out.

Appendix 4: Ideal Cap Profile

An Ideal CAP will

- Have extensive experience in farming, though those involved in farming tend to have lower portfolios and not large #s/ amts of loans
- Have previous experience in finance
- Have formal credit history with suppliers and customers; CAPs with informal contracts were poor collectors of repayment.
- Buy from more producers instead of middlemen agents
- Give customers large discounts for puchasing in cash
- Be proactive and local in their community; exploiting the full potential of locale rather than depending on outside or repeat customers
- Have several CAP employees who do not work in any other business. Surprisingly, too many CAP employees may result in more rejection and bad collection.
- Have a separate office for the CAP business
- Previous income level does not predict good performance, but level of sophistication of business (office equipment) may influence success
  - Have high-tech equipment in both Non-CAP and CAP offices, especially computers, internet, and copy/ fax machines
- Offer varied loan products, such as Vehicles, Cattles, ACL, and Mutual Funds...
  - ...But depend on Personal Loans, Crop loans, and insurance for the main lending
- Use "Soft/ Social" techniques for lending behavior:
  - Depend on speaking with an applicant's family to determine reputation
  - Will lend to applicant with strong character
  - ...But pragmatic behavior for rejecting loans: "Past defaults" are better reason to reject than "Bad Reputation"
- Education may not be significant to performance:
  - "Less education" (up to Class 10+2) have fewer late payments and rejected cases, indicating they may be more careful as CAPs
  - Post Graduates have higher disbursal proportions
- Sample Size not broad enough to generalize state characteristics:
  - But AP seems to have best performance, with Orissa and West Bengal (which have more dairy loans) lending large amounts, and Rajasthan with bigger loans.

Appendix 5: SEFC CAP Baseline Survey Selected Summary Statistics

Variable	Number (out of 185)	Min	Max	Average
Monthly Revenues	n/a	2,000	77,000,000	1,461,571
# of non-CAP employees	n/a	0	2000	34
# of suppliers for non-CAP business	n/a	1	10,000	165
% of supplies purchased on credit	n/a	0%	100%	20%
Non-CAP business' customers are farmers	114	n/a	n/a	61% of total
# of non-CAP customers per day	n/a	0	200,000	2,814
% of repeat non-CAP customers	n/a	0%	100%	66%
% of outside non-CAP customers	n/a	0%	100%	53%
# of non-CAP customers who pay on credit	n/a	0%	100%	41%
# of telephones in non-CAP business	158 have at least 1	1	20	2
# of computers in non-CAP business	135 have at least 1	1	54	4
# of copy machines in non-CAP business	39 have at least 1	1	5	1
Location of CAP different from non-CAP business	83	n/a	n/a	45% of total
# of hours worked in CAP	n/a	0	15	5
# of CAP employees	n/a	0	25	3
FLDG source: personal savings	94	n/a	n/a	51% of total
FLDG source: non-CAP business capital	77	n/a	n/a	41% of total
CAP running costs: personal savings	70	n/a	n/a	38% of total
CAP running costs: non-CAP business revenue	100	n/a	n/a	54% of total
Easiest Product: Personal Loan	91	n/a	n/a	49% of total
Easiest Product: Crop Loan	38	n/a	n/a	20% of total
Most Profitable Product: Personal Loan	84	n/a	n/a	45% of total
Most Profitable Product: Crop Loan	23	n/a	n/a	12% of total

Appendix 6: ICICI CAP Performance Data Selected Summary Statistics

Variable	Number (out of 141) & % of CAPs	Min	Max	Average
Total Portfolio	n/a	10 lakh	300 lakh	46 lakh
Amount Disbursed	n/a	0 lakh	272 lakh	15 lakh
Proportion of Total Portfolio Disbursed	n/a	0%	98%	33%
Late Payments?	24	n/a	n/a	17% of total
Time Lag between CAP Set-up and First Loan Disbursal	n/a	-4.75 mths (-144 days)	6.9 mths (206 days)	1.8 months (56 days)
Average Interest Rate for Personal Loans	108 77%	11.00%	25.00%	18.36%
Average Interest Rate for Crop Loans	87 62%	7.20%	22.00%	14.19%
Average Interest Rate for Auto Loans	12 8.5%	13.63%	21.00%	17.69%
Average Interest Rate for Dairy Loans	12 8.5%	12.00%	14.50%	13.21%
Personal Loans	108 77%	0	260	17.43
Crop Loans	87 62%	0	265	14.11
Auto Loans	12 8.5%	0	77	0.88
Dairy Loans	12 8.5%	0	601	9.26
Land Development Loans	7 5%	0	54	0.61
CAPs with cases withdrawn	51 36%	0	41	2.04 per CAP
CAPS with cases rejected	49 35%	0	40	2.01 per CAP
Total Number of cases Sanctioned	n/a	0	880	45.18