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Access to Finance:
A Functional Approach to Supply and Demand

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Abstract

This paper provides a comprehensive description of the financial environment for households and small businesses in a defined geographical region. It develops a new, functional approach to financial access surveys, which involves asking detailed questions about how respondents meet their financial needs—from purchasing inventory to paying for large, medical expenses—rather than focus on a narrow set of financial products. This approach identifies innovative financial tools which arise in response to their needs that traditional surveys miss, and is a scalable complement to financial diaries and other more detailed approaches. From here, we survey the providers of finance, ranging from large state and private banks, to moneylenders, shopkeepers and other households, with the aim of developing the first comprehensive approach to mapping an area's financial landscape. The primary contribution of this work is methodological; however, we describe preliminary findings from the pilot regions before concluding with recommendations for additional analysis and scaling up of the methodology. It helps examine in a direct way the challenges of designing policy to improve the way households can manage risk and savings and small firms can respond to investment opportunities. Both the approach itself and the findings that arise are likely to influence not only the way data are gathered in the future but also the way in which policies are designed for inclusion and growth.

1. Introduction

Finance serves a long and often-recited list of goals. It mobilizes savings, allocates funds to their most productive uses, and facilitates exchange. It is central to risk management: allowing firms and farms to manage exchange risk, protect against the loss of productive assets, and insure against productivity shocks such as drought or flood. It allows households to smooth consumption and manage risks such as the death of a primary earner, health shocks, or the loss of housing or livestock. It facilitates investment, be it a poor household investing in their children's education, a farmer purchasing fertilizer or a medium-sized firm upgrading its machinery. With these goals in mind, access to finance is widely considered to be a critical component in the development process based on the accepted belief that it directly improves welfare and encourages growth. A household that cannot manage finance in the place of shocks risks a child dropping out of school or loss of land: crucial issues or inclusion. A small firm or farm that cannot respond to an investment opportunity loses out on rising income and growth.

Yet our measures of access remain rudimentary and incomplete. Individuals are often defined as having access based entirely on whether or not they currently maintain a formal deposit account. In some cases, average distance from households to an ATM serves as a measure of financial access. While access to and use of such formal accounts are indeed one useful dimension in understanding the role of finance in development, they are incomplete. Individuals in less-developed countries use a surprising range of formal and informal products and services to meet their financial needs. Surveys such as FinScope take an important step in fleshing out our understanding by asking a richly detailed set of questions covering the most common formal and informal financial products in each country where the survey is conducted. But even the best surveys of this sort are lacking in three respects.

First, individuals, households, farms and firms in LDCs use a myriad of creative and complex tools to meet the two broad goals of finance: (i) the mobilization of assets and efficient allocation of capital; (ii) moving income streams across time or states of nature. However, most existing research focuses on a pre-specified set of products and services, thereby presenting an incomplete and often misleading picture of how finance truly works.[1] Put another way, if individuals had access to secure savings and flexible loans at reasonable rates through a reliable informal mechanism unknown in Western countries, it is not clear we would care if they had a savings account at a formal bank. Second, surveys have tended to focus on individuals rather than firms, leaving out a key element for economic growth. While there have been some attempts to measure firms' access to finance specifically,[2] it is critical to recognize the often blurry lines between firms, farms and households. A spouse's wage income may be used to purchase inventory for the family business or proceeds from a loan intended to purchase an income-generating asset used to pay school fees. We can only understand how access to finance affects development with data collection methods that recognize and are robust to these indistinct boundaries. Third, research on access to finance

[1] Collins et al's (2009) "Portfolios of the Poor" is a notable exception focusing on the financial lives of poor individuals.

[2] FinScope has begun to expand into small business financial surveys, which, though largely distinct from their individual surveys, may prove of great value. The IFC conducts extensive work on a range of access to finance advisory services to MSMEs including SME banking advisory work, microfinance, leasing, housing finance and credit bureaus.

has largely ignored the supply side of the market. When research has focused on the supply side, it has tended to take a narrow perspective (e.g., focusing on microfinance) and thus has been able to say little about questions of general equilibrium, substitutes and complements, and industry dynamics that span multiple products.

This report describes a pilot study that begins to fill these gaps. First, the core survey instrument targets households and businesses[3] in a defined geographical region using a survey built on the functional uses of finance. For example, rather than ask about a specific product such as trade credit from a supplier or a formal savings account, the survey asks specific questions about how a firm financed its last inventory purchase or how an individual paid for recent medical treatment. Importantly, this allows the researcher to be surprised by creative approaches to finance. Targeted surveys and careful qualitative field work have identified the importance of funeral societies in Ethiopia or flexible credit terms in northern Nigeria (Udry 1990; Dercon, De Weerdt et al. 2006). Third, this survey targets the sources of finance (e.g., moneylenders, two-wheeler leasing agents, and providers of gold loans) to refine the picture of financial access.

The demand-side sample frame for the pilot project comprises all households and businesses in a defined geographical region. The supply-side sample frame covers all firms or individuals providing financial services or products in this region, regardless of whether they are physically located in the region. These firms or individuals have been identified through the demand-side surveys and through competitor/alternative-supplier questions on the supply side. While every effort has been made to identify a typical region for the sample, the survey is not representative. Rather, the aim is to provide as complete of a picture as possible for the chosen region. The survey team completed primary field work in January 2011 and data entry in March 2011.

While the depth of this survey requires a narrow focus, the aim of this pilot project is to determine how to best capture information about financial access that is missed by current methodologies. Unless we accurately see the purposes of finance, how households and firms pursue these aims, and how the supply and demand of finance really interact, policy can easily become disconnected from its goal of advancing development, encouraging growth, and alleviating poverty. It is essential to recognize that the structure of data capture largely determines our ability to produce credible and actionable information. One aim of this study is to reaffirm and strengthen the connection between data gathering and policy goals for financial access.

A key example of the way in which this type of information could, in principle, influence policy lies in financial aspects of the investment climate. Improvements in the investment climate—from a more reliable electricity supply to fewer visits from government officials—can significantly increase investments by small and medium enterprises. Recognizing this, a great deal of policy has focused on improving firms' ability to finance investment opportunities. However, if we do not understand firms' perceived financial needs and how resources are managed on both sides of the market, then policy design will likely miss crucial issues and be much less effective. Both growth and inclusion would suffer.

The remainder of this paper proceeds as follows. Section 2 reviews the current state of work measuring access to finance and describes the methodology of the functional approach.

[3] Some respondents in the pilot survey area engaged in agricultural activities, but these were modest and none could appropriately be considered farms. However, the methodology employed can be easily extended to farms and households engaged primarily in agricultural activities.

While this report focuses on methodology, section 3 describes the pilot sample and, with the qualification that data analysis remains in process, section 4 discusses key observations to date.[4] The final section describes the additional outputs that are expected from this project over the next 12 months, discusses methodological lessons, and recommends next steps to push forward. The key deliverable is a hybrid survey that improves the current standard of quantitative questions and adds a small set of qualitative questions that augment the quantitative results and are robust to different settings. We will then seek to extend the survey to other areas in India and to different countries (e.g., Ghana, Tanzania, Ethiopia, Mexico, and Pakistan) to allow for comparative analysis and to inform diverse future research on access to finance.

2. A functional approach to supply and demand

As Karlan and Morduch note, much hope has been placed on the transformative power of access to finance. This hope is epitomized by the intense interest and microcredit, the provision of small loans to typically poor borrowers in poor countries. But careful, recent work on the impacts of microcredit suggest a more cautious view(Banerjee, Duflo et al. 2010; Karlan and Zinman 2010). More broadly, it is generally accepted that access to finance is closely linked to growth and poverty alleviation. Economic theory regarding the impact of reducing financial frictions and alleviating credit constraints is clear (Stiglitz and Weiss 1981; Besley 1995; Ghatak and Guinnane 1999). Numerous cross-country studies have documented a robust correlation between financial depth and growth.[5] But a causal link from financial development to growth is harder to establish due to well-understood problems of reverse causality and omitted variables. Those studies that attempt to tackle the causal question head-on support the conventional wisdom—financial development appears important for growth.[6] However, a clear, micro-level understanding of the mechanisms is still wanting. For example, Burgess and Pande's (2005) study of India's rural bank branch expansion policy between 1977 and 1990 is often cited as evidence that access to finance reduces poverty. However, the authors themselves caution that the results may be due to the fact that 40% of borrowers in new branches never repaid their loans and hence effectively benefited from a large cash transfer. Even absent this caveat, leveraging these findings into effective policy requires understanding *how* individuals benefited from the presence of banks. Did they utilize more effective savings mechanisms? Substitute away from high-cost informal loans? Benefit from more robust risk sharing and insurance? Find employment in firms founded or expanded with loans from new branches?

On one hand, the policy and research community is approaching these questions through careful evaluations of specific programs. Good progress is being made here. Exemplary studies include Banerjee et al's (2010) evaluation of a traditional, group-based microfinance program in Hyderabad, Karlan and Zinman's evaluations of consumer loans in South Africa (2010) and microenterprise loans in the Philippines (2010), Dupas and Robinson's work on savings in Kenya (2009), and Ashraf et al's study of commitment savings products in the Philippines (2006). On the other hand, there remains a collective need to do a much better job building descriptive data to understand what access to finance really means. This includes documenting contractual terms, costs, frictions, usage patterns and limitations to various financial products.

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[4] Data collection for the pilot was completed in early March 2011.
[5] See Levine (2005) for a summary of this research.
[6] Examples include Rajan and Zingales (1998) and Wurgler (2000).

Supply-side, macro measures such as population per bank branch or mean distance to nearest financial institution allow convenient comparisons across regions or countries, but the picture they provide is at best incomplete.[7] For a stark if somewhat casual example, consider an individual who sleeps in an ATM vestibule. Despite this proximity, he is almost certainly excluded from the financial system. More seriously, consumers in Western Europe are increasingly indifferent to bank placement because of online banking and the near universal acceptance of debit cards. In Kenya, clients of mPesa are not only holding but using less cash because they can rely on mobile banking for a new transaction modality. Access to finance remains of prime importance to these clients, but it is determined by a diverse set of agent points rather than the traditional bank network. Importantly for this study, conventional measures of financial access overlook novel solutions to financial needs. Existing surveys can be updated to include specific questions about new or previously unknown products, but they are necessarily reactive. A key goal of the functional financial access survey is to provide a systematic method to identify and describe emerging and innovative financial products. As such, it can be seen as a complement to broad, demand-side surveys such as FinScope and the World Bank's Global Financial Inclusion Indicators.[8]

These surveys play an important role, but are limited in their ability to identify evidence gaps and inform policy. FinScope, for example, provides excellent data on what percentage of individuals have formal bank accounts. Improving on previous studies, it even provides some information on barriers to financial access such as self-reported reasons for not saving formally. But additional information is necessary to translate this information into either further research or a policy response. When individuals say they do not save because they do not have sufficient funds, is this because minimum balances are too high, because transaction costs are large relative to account balances, or because of some other non-convexity in the returns, real or perceived, to savings? When individuals say they do not borrow because they "don't believe in it", what is it they do not believe? That the returns justify the interest expense, that borrowing is ever a good option, or that potential lenders are trustworthy?

Standard data collection tools tend to focus on a pre-specified set of products and services. This is necessary for short, wide surveys, but it presents an incomplete and potentially misleading picture of how finance truly works. Put another way, if individuals had access to secure savings and flexible loans at reasonable rates through a reliable informal mechanism unknown in western countries, it is not clear we would care if they had a savings account at a formal bank. There are, of course, notable exceptions. Collins et al's (2009) *Portfolios of the Poor* develops a set of year-long financial diaries from villagers and slum dwellers in Bangladesh, India and South Africa that track how households manage basic needs and accumulate assets at the transactional level. Of note, they capture how households actually use finance for specific needs such as putting food on the table each day despite highly variable income, paying lumpy school feels or festival expenses, or coping with illness and old age. Ruthven (2002) takes an anthropological approach to studying the financial services used by inhabitants of a squatter settlement in West Delhi. Similar to both of these, we will begin to document the myriad innovate ways in which households meet their financial needs and, more importantly, to propose a systematic way to gather data about them.

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[7] See, for example, the IMF's Financial Access Survey (http://fas.imf.org/) or CGAP's series of reports on financial access (http://www.cgap.org/p/site/c/financialindicators/).

[8] The World Bank's Development Research Group, supported by a ten-year grant from the Bill & Melinda Gates Foundation, has developed a financial access survey module, which will be included in the Gallup World Poll and addressed to at least 1,000 people per country in 150 countries beginning in 2011.

It is worth reiterating that there is nothing per se good about a formal savings account or any other financial product. Financial services are only valuable to the extent they serve a consumer's needs. That is, they must allocate capital efficiently, allow her to transact, and to optimally move income across time and states of nature. These are the goals of any financial system, and assessing how well they are met should be the ultimate aim of any study of access to finance.

While much of the work on access to finance has centred on specific financial products, e.g., formal savings accounts, it has generally avoided further exploration into the supply side of the market. Exceptions have tended to take a narrow perspective, e.g., focusing on microfinance, and have thus been able to say little about supply-side constraints. The current literature commonly groups consumer answers such as "too high fees" or "difficult to access" as supply-side constraints when discussing barriers to financial access. However, in addition to lacking specificity and context, these responses describe the current market equilibrium, e.g., high transaction fees, and not the specific market or organizational features that give rise to such barriers. At best, they signal the need for additional evidence on which to base policy prescriptions. A narrow, product focus also makes it difficult to address issues of general equilibria, substitutes and complements, and industry dynamics that span multiple products. There is a tendency to think about access to finance in the context of financial services used in the West. Markets are much more creative than this.

Our functional approach to access to finance begins with the recognition that finance exists to either allocate capital to its most productive use or to move flows of income across time or states of the world. Frictions reduce efficiency, but there is no a priori best product to serve these aims. As such, instead of asking about particular products, we ask how individuals address 34 specific needs where finance may serve an enabling role.[9] When was your last large medical expense and how did you pay for it? How do you buy inventory for your business? How do you (or your parents) expect to manage your basic needs in old age? When was your last major festival, how much did you spend, and how did you pay for it? How do you pay for routine expenses such as food between when you are short of funds?

Through this process we identify the range of financial products, formal and informal, that individuals use to meet their needs. We then augment this list by asking about specific financial products that may have been missed, e.g., do you belong to a chit fund? These questions capture few overlooked products—the 34 functional questions cast a broad net—but are used to probe financial histories, demand, and reasons for non-usage.

From these two sets of questions, we build a complete list of the financial products used by the household. We then ask about the specific terms and usage of each of these products. To build our understanding of the supply side, we also ask about alternative providers and other market conditions. These questions are tailored to specific provider/product types: savings; formal loans; self-help groups and microfinance providers; informal lenders; chit funds; credit cards; insurance; shop credit and employers; and individuals. Box 1 shows the questions asked regarding informal lenders, and sections F and G of the household survey in Appendix 4.1 contain the full detail.

[9] See Appendix 4.1 for a complete list of household survey questions.

Box 1: Detailed questions regarding providers of informal loans.

- Do you currently have any loans outstanding with [this individual]?
- What was the loan used for?
- What would you have done if you didn't get this loan?
- How much did you borrow? How much did you ask for?
- If different, why (*Probe: fees, bribe, interest up front, source did not have sufficient funds, source wouldn't allow additional borrowing*)? Follow up for bribes, fees or source wouldn't lend more answers. Why?
- How did you receive the money?
- How much do you currently owe?
- What is the interest rate on the loan (*check time period*)?
- What is the repayment schedule (*how often, size of payments*)?
- If you do not have enough funds to make a scheduled payment, what do you do?
- If you were not able to repay this loan, what would you do? What would happen?
- When will the last payment be made?
- How do you make the payments? Do you have to travel to make the payments? How often? How far?
- Did you have to pay any extra fees to get the loan? What were they for (*processing, bribe, other*)? How much were the fees?
- When did you first borrow from this lender?
- Why did you originally borrow from them? How did you find out about them?
- How much did you borrow originally?
- Describe your borrowing history with this source.
- How many loans have you taken?
- Has the amount changed over time? How?
- Has the interest rate changed over time?
- Has the collateral changed over time?
- Have the repayment terms changed over time?
- Has anything else about the loans changed?
- What could this lender do to serve you better?
- What is the most credit [this individual] would extend to you?
- Are there others that you could use to provide a similar service? If so, why do you use your current provider?

As described above, this approach is a complement not a substitute for short, wide panel surveys. It aims to provide a wide funnel with which to identify market failures, supply and demand constraints, and innovative financial solutions that would be missed by necessarily narrow, fixed-response surveys. The implementation of this approach can best be seen in the actual survey implementation, the topic of the next section.

3. The pilot sample

We conducted the pilot in Ghola, Sodepur, North Twenty Four Parangas, a peri-urban area 16km north of central Kolkata. The area comprises a variety of household income levels, businesses, religions, and castes, providing a diverse sample and facilitating generalizability of the survey methodology. We conducted a census of the area, identifying approximately 600 households and 150 small shops and businesses. Within Ghola, we targeted two neighbourhoods: Musalman Para ("Muslim part") and Khudiram Nagar, a predominantly Hindu area.[10] While every effort was made to identify a typical region for the sample, the survey is not representative. Rather, the aim was to provide as complete of a picture as possible for the chosen region and to test a survey instrument that could be generalized.

For the demand side of the survey, we attempted to reach all households and businesses in these neighbourhoods. The supply side of the survey was defined by a "random walk". For all sources of finance identified by the demand surveys, we gathered precise identifying information from respondents. These included formal sources of finance (such as banks and insurance companies), semi-formal providers (such as MFIs and non-bank finance companies), and informal sources (such as money lenders and other households). The full survey required an average of two hours to complete. Surveyors wrote responses to closed-end questions such as gender or religion, digitally recorded the full audio of the interview,[11] and collected GIS positioning data for all respondents.

Survey teams then interviewed as many of these sources of finance as possible given administrative constraints. They concentrated on products and services offered, prices, costs, clients populations targeted, and the operation details of the enterprise. Particular attention was given to contract terms, payment enforcement, client selection criteria, and products specifically targeted at lower-income populations. In addition, we explored the sources of finance for the providers themselves as well as managers' professional histories.[12]

Substantive field work concluded in January 2011, and we completed quantitative data entry and interview translation in March 2011. In total, the survey covers 156 households and businesses on the demand side. On the supply side, it includes 180 shopkeepers (many of these overlap with those surveyed on the demand side), 7 banks, 12 moneylenders, 15 providers of other semi-formal financial services (including chit funds, microfinance institutions, insurance companies and other non-bank finance companies), and 44 employers.

4. Key lessons to date

The following section summarizes key lessons from our preliminary analysis of the pilot data. Interpretation of these findings requires two cautions. First, results are preliminary and subject to further analytical refinement. Second, these findings are specific to the pilot study region. They identify important areas for further research but should not be generalized. In sum, they point to the value of an integrated, functional approach to assessing access to finance and suggest lessons for extending this approach broadly and systematically.

4.1 Banks see serving BPL customers as a necessity rather than a profit opportunity and do so inefficiently.

Based on responses from household surveys, seven bank branch managers, and a wide range of alternative sources of finance, neither state nor private banks appear to regard below poverty line (BPL) customers as attractive potential clients. The Indian government encourages and in some cases requires opening a no-frills savings account to receive official

[10] Although not the central focus, we also conducted a streamlined business survey in several busy commercial areas to test different data collection designs in environments where longer surveys are difficult.

[11] Translation and transcription were performed simultaneously by bilingual date entry officers due to difficulty of typing Bangla script.

[12] Instead of field survey staff, supervisors and project associates conducted interviews with bank managers and money lenders due to the potentially sensitive nature of the conversations.

payments (e.g., state pensions, NREGS payments, military salaries, etc.) and to participate in government subsidized loan schemes. Such accounts have low or no minimum balances, a different fee structure, and typically relax identification (KYC) requirements. Expansion of such accounts has been widely viewed as a first step towards financial inclusion; however, although 25% of households report having some form of a bank account, not one reported using a no-frills account. This is consistent with RBI reports that the majority of all accounts opened under the current financial inclusion drive remain inactive. Despite perceptions, no-frills accounts carry significant real and perceived costs. While all of the banks in our survey reported that their no-frills accounts had no transaction fees and zero or very low (less than Rs. 100) minimum balances, most households cited insufficient funds as the main reason for not opening a bank deposit account and several reported closing accounts because costs were too high.[13] For example, Punjab National Bank's no-frills account has a zero minimum balance, but households believed at least Rs. 1500 was required to open an account. A few households also reported that opening an account required substantial side payments to branch managers. Managers reported that if they were approach by a BPL customer interested in any financial services outside a government scheme, they would direct them to microfinance institutions. However, as is well documented and heavily debated, microfinance institutions in India are prohibited from offering savings products and hence BPL households may find it difficult to access their optimal set of financial services.

Mangers also report poor experiences with government schemes for lending to traditionally underserved populations. For example, one manager claimed that it was effectively impossible to deny a government approved loan under the unemployed educated youth loan program (PMRY), but default rates are 30% to 50%. We speculate that as a consequence, managers view all such programs as merely a cost of doing business

Our interviews with bank managers and potential customers also raised a number of organizational issues that merit further study. Taxi drivers seeking vehicle finance described nine to twelve month delays for loan document processing after paying a 25% deposit. We were unable to determine if these delays were purely administrative, but they may be related to the banks' desire to improve collateral quality. Some potential borrowers reported that they were able to delay payment on bank vehicle loans by making side payments to collectors. In contrast, NBFCs typically processed vehicle loans in less than one month, charge modestly higher interest, and utilize more stringent remedies in the event of late payment.

4.2 Community clubs, a heretofore undocumented financial institutions, are key sources of both funds and enforcement capacity

Our functional survey identified a series of financial institutions that, to the best of our knowledge, have not been previously described: the community club. Throughout the study area, various community clubs exist that provide loans to both club members and members of the community at large. Examples include unregistered but organized groups of community moneylenders who pool resources and extend loans with the goal of making a profit, communal savings clubs, similar to ROSCAs or self-formed self-help groups (SHGs) that loan out of aggregated savings and religious or other community groups. Interestingly, most of these groups, particularly the latter two types, often intermediate in loan disputes and connect potential borrowers to outside lenders. In several cases, individuals and money lenders report enlisting such groups to serve as screening and enforcement agents for loans.

[13] The State Bank of India is considering imposing a small transaction fee on no-frills accounts to cover infrastructure costs related to initiating operations in rural areas (Business Standard, 24 October 2010).

Before extending a new loan, moneylenders will not only approach a community club for reference checks on potential borrowers but will ask the club to agree to sanction borrowers in the event of non-payment. That is, the clubs serve to reduce information asymmetries and mitigate risk within the financial supply chain. There was no evidence of direct remuneration for this service, but we conjecture that the club derives a local social benefit (screening and enforcement activities not only utilize but enhance a club's social capital) and benefits from links to outside capital sources. In situations where informal credit and insurance is important, such links improve a community's ability to insure aggregate shocks and may be particularly valuable (Townsend, 1992?).[14]

Many households and small businesses reported a preference for community clubs to microfinance loans where available because of the built-in insurance aspect of community club loans—payments are typically rescheduled in response to financial shocks—and because of the clubs' simple rule structure. Potential and existing MFI clients complain of substantial paperwork and several days of "training" before joint-liability groups can request a loan. Community clubs also make exclusively individual-liability loans whereas MFIs in the study region remain focused on joint-liability lending.

4.3 Distinctions between de jure and de facto rules are critical.

There are substantial differences between the terms of financial contracts as written and the terms as implemented. Moreover, potential clients' beliefs about product terms and restrictions tend to be substantially less favourable than posted terms, creating an additional demand-side barrier to financial access. Because banks do not make a profit from low-income customers, they have little incentive to correct these misperceptions.[15] This information gap extends beyond the divergence between posted and perceived fees described above. The starkest example we found was the fact many households reported forfeiting savings deposits at banks when the account had been classified as inactive. The RBI recommends treating an account as inoperative/dormant if there have been no transactions in the account for two years; however, many individuals reported their accounts being so classified after a period of only six months. A recent RBI mandate seeks to reduce the hassle for customers seeking to reactivate dormant accounts;[16] however, it does not stipulate precise procedures for reactivation beyond appropriate KYC due diligence and a prohibition against fees to reactivate. In practice, depositors report substantial difficulty in submitting applications to reopen dormant accounts (many low-income individuals are illiterate or semi-literate), difficult KYC requirements, and substantial charges, generally described as unofficial, to reinstate. As a consequent, most individuals report writing off funds in dormant accounts and express an understandable reluctance to open accounts with any perceived risk of being classified as dormant. This issue is not limited to standard deposit accounts. Households also report abandoning insurance policies rather than cashing them out when they cannot make instalment payments. We were unable to determine if insurance companies

[14] While we are not aware of other research that documents similar institutions, private conversations between the author and Rob Townsend suggest that similar institutions exist and are an important part of the financial landscape in Thailand. We believe they merit further study.

[15] Some of these misperceptions may be the result of the very poor reputation held by financial service providers. Several respondents report being cheated by life insurance companies or savings clubs. Most others have heard of others being cheated. A few individuals reported being asked for bribes from officers at financial institutions well-regarded by outsiders. Most interestingly, the survey team uncovered a large Ponzi scheme operating in the study area. The scheme was reported to the police and RBI and is currently under investigation.

[16] See RBI Master Circular DBOD.No.Leg.BC.9/09.07.005/2009-10 dated 1 July, 2009 (available at http://rbidocs.rbi.org.in/rdocs/Notification/PDFs/78MCC010710_F.pdf).

deliberately obfuscate cash-out provisions or whether households are simply unaware of these terms. Taken as a whole, these findings stress the importance of understanding beliefs about and de facto terms of financial contracts rather than relying exclusively on official terms.

4.4 Individuals learn practical lessons about finance through utilization, but even with experience lack basic financial literacy.

Most households expressed an initial reluctance to access formal financial products, including borrowing from microfinance institutions which were generally perceived as having complicated rules and onerous training and meeting requirements. However, once individuals borrow from a microfinance institution, they appear to rapidly develop as a financial consumer and navigate the competitive landscape. Approximately 38% of our sample had borrowed from a microfinance institution. Of those that had borrowed from an MFI, 40% reported having more than one loan outstanding at the same time. Over 10% of borrowers had more than three loans outstanding, some through different branches or borrowing groups of the same MFI. Interviews with microfinance institutions themselves suggest that even these seemingly high numbers may be below average. One microfinance provider claimed that 85% of applicants have outstanding loans at the time of their initial application, and among those that do the mean number of loans outstanding is four.

Interestingly, we do not find evidence that microfinance provides a first step in the migration towards formal finance. Microfinance borrowers were no more likely than others to have an outstanding deposit or loan account with a formal bank (28%), nor are they more likely to express an interest in opening an account. Neither does experience with formal or semi-formal finance appear associated with higher levels of financial literacy. Fewer than half of respondents could correctly identify the more attractive loan as part of a basic financial literacy test; distressingly, this accuracy rate was independent of whether or not individuals maintained formal bank accounts or borrowed from MFIs.[17]

4.5 Consumption smoothing is the primary financial need for households. Shopkeepers, employers, and informal loans from friends and family serve this role.

As Collins et al (2009) document, consumption smoothing is perhaps the most important use of finance for poor households. Median household income in our sample was approximately $3 per day (Rs. 130); however the most report highly variable income largely due to the uncertainty of obtaining work. Even households with regular employment must cope with lumpy and delayed income. Over 90% of the sample reports smoothing consumption with store credit. Those households that utilize store credit to smooth consumption report borrowing from an average of just over three different shops, with food being the primary use. In our sample, store credit appears to be the primary source of consumption smoothing for households. Households typically repay when feasible and are encouraged to settle their accounts each month, although few report ever fully repaying. Almost all shops report giving products on credit to regular customers. Shopkeepers do not require collateral (or rather, the loan is collateralized by reputation and the future commercial relationship) and frequently

[17] We asked a battery of 12 basic numeracy and financial literacy questions, which appear in section D of the household survey. The referenced question, D.12, was “Suppose you need to borrow Rs. 1000. Two people offer you a loan. On loan requires that you pay back Rs. 1200 in one month. The second loan requires you to pay back in one month Rs. 1000 plus 15% interest. Which loan is the better deal for you?”

restructure repayment in response to economic shocks. Few report taking any action beyond reminders to collect debt, although some hint at becoming more forceful.[18]

4.6 Other

We also identified several items of what for now is primarily theoretical interest. I describe one here as an example of the ancillary benefits from more systematic, open-ended, descriptive research. Informal insurance differs in important ways from the way it is generally understood. A large body of literature describes the functioning of informal insurance networks, which serve as the primary source of smoothing idiosyncratic shocks for many low-income households (Townsend 1994; Morduch 1999; Ligon, Thomas et al. 2002). There is concern that increasing access to formal finance may crowd out these informal relationships and, in the short run, reduce welfare. These networks are generally described as symmetric, bilateral, and reciprocal. Two individuals have similar (or identical) wealth and income processes. When one receives a negative shock, the other provides insurance, not with the expectation of future repayment but with the expectation of reciprocal insurance. That is, a similar transfer will be made if the tables are turned in the future. In our sample, this is not the case. Many transfers are unidirectional—from the relatively wealthy to the relatively poor—and they tend to be explicitly structured as loans, with repayment expected albeit flexibly. This has profound implications for how these mechanisms interact with formal finance and evolve with increased economic and geographic mobility. As such, they merit further study.

5. Discussion

This section recommends next steps to integrate the methodological lessons from this research into a comprehensive strategy for improving our understanding of access to finance and expanding our evidence base for policy. It discusses limitations to the current approach and opportunities for improvement. Finally, it describes anticipated outputs to follow directly from this research over the next 12 to 18 months.

The principal goal of this pilot was to test an improved method for gathering information about access to finance. As described below, analysis of the pilot data will continue through summer 2011; however, we can already draw clear methodological lessons. Context matters. While short, predefined surveys covering access to finance are useful for generating comparative statistics and creating measurable objectives, they are insufficient to identify evidence gaps or to direct research that can inform policy. Individuals, firms, and markets in low-income countries produce creative solutions to financial needs. Both the policy and research communities would benefit greatly from a systematic data collection effort that was capable of identifying both impediments to financial access and innovative solutions as they emerge.

The approach taken by this pilot is not the answer. The open-ended questions necessary for such a flexible survey have not, to our knowledge, been implemented in a scalable fashion. We therefore cast a wide, exploratory net across a range of potential questions designed to ascertain how individuals actually use or fail to use finance. Our survey instruments were not intended to scale. The household module alone generated nearly 3,500 pages of transcribed

[18] Households describe social pressure and the possibility of being unable to shop at a particular store as the primary motivations to repay. In certain circumstances, shopkeepers may use alternative means. One shopkeeper explains: “If a person does not repay their debt money, I am compelled to misbehave with them.”

notes, and completing the full data analysis will take considerable time. However, they can be distilled to develop a functional approach to understanding access to finance that can improve our growth policy and should be scaled. Based on the pilot, we make the following recommendations:

1. Develop a short battery of qualitative questions that can be completed in less than 30 minutes.[19] These questions should include (a) a subset of functional usage questions, (b) identification of alternative sources based on these answers, and (c) a discussion of perceived strengths and weaknesses of identified sources as well as any formal alternatives not mentioned by the respondent (e.g., health insurance or formal bank savings).

2. Preliminary analysis of the pilot interviews suggest that for households, the functional questions should include how the household: (a) financed the purchase of a large consumer durable, e.g., a television in the last one to two years; (b) made a predictable, lumpy expenditure, such as school fees or festival outlays; (c) made an unforeseen, lumpy expenditure, such as large medical expenditures and how it plans to do so in the future; and (d) how the household smooths food consumption.

3. For businesses, the questions should include how the firm: (a) financed its last inventory purchase and how it decided how much inventory to purchase; (b) financed its last large capital expenditure, if any, and how it decided on that particular expenditure; and (c) was initially financed and how it financed growth.

4. The precise set of questions should be determined based on piloting in other locations both within India and in other countries.

5. For both households and firms, once a source or product is identified, surveyors should ask about the contractual terms and the history of the relationship (e.g., how the respondent picked a particular products) before asking how this financial need would have been met if the utilized product had been unavailable.

6. Scale up the survey in representative urban, peri-urban and rural areas in a range of locations. For a first wave, we would recommend three Indian states at different levels of financial development (e.g., Bihar, West Bengal and Tamil Nadu) and at least two African countries (e.g., Ghana and Rwanda).

7. In each area, a viable rollout plan would be: first, implement a revised, full (two-hour) survey with approximately 10 households and 10 businesses. Review translations immediately for any anomalies and make any necessary changes to short survey. Implement short survey in 25 to 50 households in a defined geographical location. The precise number of firms to be interviewed depends on the density of economic activity. Note that clustering is crucial for identifying sources of finance and being able to describe the competitive landscape. The total cost per survey area would be approximately £7,000-£20,000 depending on firm coverage and local economic conditions.

8. Ideally, the short, qualitative survey would be conducted in tandem with one of the large-scale, quantitative surveys such as FinScope or the World Bank/Gallup poll. Any

[19] Thirty minutes represents the first fall off period in respondents' attention. The next generally appears at about 90 minutes.

patterns in the responses would help add depth to the large-scale surveys and link qualitative data back to measurable statistics for comparison across time and locations.[20]

9. Interviews with financial service providers are a critical component, but pilot results suggest they are hard to systematize for three reasons. First, the very nature of this exercise highlights that financial service providers are idiosyncratic. Only a small fraction of relevant data can be easily coded. Second, access can be a challenge. For example, securing interviews with the 12 moneylenders in our sample took repeated visits over two months, with information often provided incrementally. Third, as described above, there are large differences between posted rules and actual practices. The former can be gathered with relative ease, but understanding the latter is necessary if we are to effectively address policy challenges.

10. Based on the insights from this pilot and future surveys, analyse which aspects of financial access are likely to be susceptible to influence by policy, whether it be providing new opportunities or removing obstacles, and where policy is likely to have the greatest impact. This can help focus policy reform efforts on those areas most likely to benefit growth and inclusion.

While providing a basis for more informative data collection was the primary aim of this project, we expect it will generate a number of additional deliverables over the next 12 to 18 months. Chief among these is a detailed descriptive summary of the financial network in the pilot study area. The most similar existing work is Ruthven (2002); however, this output will also include detailed information on the supply-side of the market and a careful description of the relative merits of available financial products. In addition, we will look more closely at shop credit, a heretofore overlooked source of finance, which appears to be the primary mechanism for income smoothing in the study area. Preliminary findings suggest that this generalizes to other low-income populations. Given its importance for household finance and as a use of funds for shopkeepers, the structure of store credit may have important implications for how individuals evaluate the relative merits of alternative financial products and migrate towards formal inclusion. Moreover, the personal nature of these financial arrangements appears to place natural bounds on firm growth and merits further study. Longer term, we identified significant principal-agent problems within financial institutions. Careful documentation of these issues will serve as grist for specialists in organizational economics to turn their attention to financial institutions in low-income countries.[21]

[20] One limitation of the pilot was our inability to implement either of these surveys in our setting. FinMark Trust considers its actual survey instruments proprietary, and we were unable to obtain a copy for our purposes. We considered implementing some sections of the World Bank/NCAER Rural Access to Finance Survey, but determined that he 39-page survey increased the total interview time well beyond respondents' reasonable attention spans. The Gallup financial access module is an appropriate length, but was unavailable at the time filed work began.

[21] The International Growth Centre's finance program has added the organization of financial entities to its core research themes.

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Appendix 4.1: Survey Instrument, Households