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The Men from Kabul and the Eunuchs of India: The (Not So) Simple Economics of Lending to the Poor

The sight of countless fruit and vegetable sellers standing side by side on street corners is common to cities in most developing countries. Each of the sellers (usually a woman) has a small cart or just a sheet of tarp on the pavement on which she has piled tomatoes, onions, or whatever she happens to be selling. The vendors buy their stock in the morning from a wholesaler, usually on credit, and sell it during the day, reimbursing the wholesaler at night. Sometimes, the cart that they use to carry and display the vegetables is also rented for the day.

This is the way many businesses in rich countries operate, too: They get a working capital loan to produce and purchase goods and then repay the loans out of their revenues. What is striking is how much the poor repay, compared to the rich. In Chennai, India, when the typical fruit seller reimburses the wholesaler at night for the 1,000 rupees' ($51 USD PPP) worth of vegetables she got in the morning, she gives him 1,046.9 rupees on average. This interest payment is 4.69 percent *per day*.[1] To see what this means, try the following calculation: If you borrowed 100 rupees ($5.10 USD PPP) today and kept it until tomorrow, you would need to repay 104.69 rupees. If you kept this amount a further twenty-four hours and repaid it the following day, you would need to repay 109.6 rupees. After thirty days, you would owe almost 400 rupees, and after a year, 1,842,459,409 rupees ($93.5 million USD PPP). So the equivalent of a $5 loan, if it goes unrepaid for a year, leaves a debt of nearly $100 million.

These very high interest rates were the call to action for the founders of microfinance. For instance, Padmaja Reddy, the CEO of Spandana, one of the largest microfinance institutions (MFI) in India, told us that she got the inspiration for starting Spandana after striking up a conversation with a ragpicker in the city of Guntur, in Andhra Pradesh. She realized that if only the ragpicker could come up with the funds to buy one cart, she could be in a position to buy "scores of carts" in just a few weeks with the money saved from not having to pay the daily rental fee. But the ragpicker did not have enough money to buy a cart. *Why,* Padmaja asked herself, *is no one lending her the money to buy one cart?* According to Padmaja, the ragpicker explained that the bank would not lend to someone like her. She could have gotten a loan from a moneylender, but the rates would have been so high that it would not have been worth it. In the end, Padmaja decided to give her a loan. The ragpicker reimbursed it faithfully and flourished. Soon after, people were lining up at Padmaja's doorstep for loans, and she decided to quit her job to start Spandana. Thirteen years later, in July 2010, Spandana had 4.2 million loan clients, with an outstanding portfolio of 42 billion rupees.

The story Padmaja tells is not very different from that told by Muhammad Yunus, hailed as the father of modern microfinance: Banks are unwilling to touch the poor. Into this banking void step exploitative moneylenders and traders who charge outrageously high interest rates. Microfinance, in this narrative, is a wonderfully simple idea. Someone who is not out to make money off the poor can enter the market, charging the poor enough in interest to be financially sustainable, and perhaps make a modest profit, but no more. By the power of compounding, a small decrease in the interest rate can transform the clients' lives. Consider the fruit sellers: Imagine they can get a 1,000-rupee ($51 USD PPP) loan, even at a relatively hefty rate of, say, 10 percent monthly. They can now buy the vegetables in cash, rather than on credit. In one month, they would each already have saved 4,000 rupees ($203 USD PPP) in interest paid to the wholesaler, more than enough to repay the microfinance agency. They could grow their businesses and escape poverty in a matter of months, at least in theory.

Yet even this simple story raises questions. There are many fruit wholesalers in Chennai. Why didn't one of them, or an enterprising moneylender, decide to slightly drop the interest rate charged to the women? That individual should have been able to capture the entire market, still keeping a reasonable margin. Why did the fruit sellers have to wait for people like Muhammad Yunus or Padmaja Reddy?

In this sense, the advocates of microfinance are being too modest: They must be doing something more than introducing competition where there was a monopoly. On the other hand, they may also be too sanguine about the potential of small loans to lift people out of poverty. For all the individual anecdotes of fruit sellers turning into fruit magnates that can be found on the various Web sites of microfinance institutions, there are still many poor fruit sellers in Chennai. Many of them do not borrow from microfinance institutions, even though there are several in their town. Are they forgoing their tickets out of poverty, or is microfinance less of a miracle than we have been told?

LENDING TO THE POOR

Very few poor households get loans from a proper lending institution like a commercial bank or a cooperative. In the survey we conducted in Udaipur, in rural India, about two-thirds of the poor had a loan. Of these, 23 percent were from a relative, 18 percent from a moneylender, 37 percent from a shopkeeper, and only 6.4 percent from a formal source. The low share of bank credit is not due to the lack of physical access to banks, because a similar pattern occurs in urban Hyderabad, where households living below $2 a day primarily borrow from moneylenders (52 percent), friends or neighbors (24 percent), and family members (13 percent). Only 5 percent of their loans are with commercial banks. In all the countries we have in our eighteen-country data set, less than 7 percent of the rural poor have a loan from a bank, and less than 10 percent of the urban poor do.

Credit from informal sources tends to be expensive. In the Udaipur survey, those living on less than 99 cents a day pay on average 3.84 percent per month (which is equivalent to an annual rate of 57 percent) for the credit they receive from informal sources. Even credit card debt in the United States, which is notoriously expensive, pales in comparison. Bank of America's standard credit card has an interest rate of about 20 percent per year. Those who spend between 99 cents and $2 a day per capita pay a little less: 3.13 percent per month. There are two reasons for this difference in interest rates. First, the slightly less poor rely less on informal sources of credit and more on formal sources than the extremely poor, and the formal sources are cheaper. But second, the interest rates charged by informal sources tend to be higher for the poor than for the less poor. The average interest rate from an informal source drops by 0.4 percent per month for each additional hectare of land owned by the person taking out the loan.

Interest rates vary across sectors and countries, but the bottom line is always the same: Yearly interest rates in the 40 to 200 percent range (or even higher) are the norm, and the poor pay more than the rich. The implications of the fact that many people do borrow at these rates are quite staggering. There are millions of people willing to borrow at a rate that the average U.S. saver would dearly love to be paid. Why aren't investors rushing to them with bags of money?

This is not for lack of trying. From the 1960s until the late 1980s, many developing countries had government-sponsored credit programs, usually with subsidized interest rates, targeted at the rural poor. For example, in India starting in 1977, for every branch that a bank opened in a city, the bank had to open four additional branches in rural locations that did not have a bank. Moreover, banks were directed to lend 40 percent of their portfolios to the "priority sector": small firms, agriculture, cooperatives, and the like. Robin Burgess and Rohini Pande showed that where more bank branches were opened as a result of this policy, poverty decreased faster.[2]

The problem was that these forced lending programs didn't work very well as lending programs. Default rates were staggeringly high (40 percent during the 1980s). Lending was often driven more by political priorities than by economic need (a lot of loans were made to farmers just before elections in districts where the contest was expected to be tight).[3] And the money had a tendency to end up in the hands of the local elites. Even Burgess and Pande's generally favorable study concluded that it costs much more than 1 rupee to increase the incomes of the poor by 1 rupee through opening bank branches. Moreover, further work suggested that in the longer term, regions that got more branches may in fact have become poorer.[4] In 1992, in the wave of reforms that liberalized India, the requirement to start branches in rural areas was dropped and a similar trend of eroding government support for public lending programs can be seen in most other developing countries.

Perhaps the social banking experiment was a failure because the government should not be in the business of subsidized lending. Politicians find it too attractive to use the loans as giveaways, and there is no better giveaway than a loan one does not need to repay. But why don't private bankers want to lend to small entrepreneurs? Given that they are willing to pay up to 4 percent a month, which is many times what a bank makes on its average loan, wouldn't it make sense to try to lend to them? Some Web sites in the United States now enable potential lenders in rich countries to lend to entrepreneurs in poor countries. Could it be that they have finally understood something that everyone else missed?

Or alternatively, perhaps there is something that informal moneylenders can do that banks cannot. What could that be? And why is it cheaper to lend to richer people?

The (Not So) Simple Economics of Lending to the Poor

One standard explanation for why some people might have to pay high interest rates is that they are more likely to default. This is simple arithmetic: If a moneylender must get back on average 110 rupees for every 100 rupees he lends just to stay in business (for instance, because this is his cost of funds), without default, he could charge a 10 percent interest rate. But if half of his borrowers default, then he must get back at least 220 rupees from the half that actually do repay and hence charge a 120 percent interest rate overall. However, rates of default on informal loans, unlike those on government-sponsored bank lending, are not very high. Such loans are often repaid with some delay, but not repaying at all is actually rare. A study of rural moneylenders in Pakistan found that the median rate of default across moneylenders is just 2 percent, even though the average interest they charge is 78 percent.[5]

The problem is that these low default rates are anything but automatic; they require hard work on the lender's part. Enforcing credit contracts is never easy. If the borrower is allowed to misspend the loan proceeds, or somehow has bad luck and has no available cash, there will be nothing to collect. At that point, there is precious little the lender can do to collect on the loan. Given this, it is tempting for the borrower to contrive to appear to have no money even when she does, which makes matters worse for the lender. If this is allowed to go unchecked, the lender will never be repaid, even if the borrower's project actually succeeds.

The way lenders all over the world protect themselves against the different forms of willful default is by asking for a down payment, some collateral, or what is sometimes called the promoter's contribution, which is the part of the firm's capital that comes from the entrepreneur's pocket. If the borrower defaults on the loan, the lender can punish her by seizing the collateral. The more the borrower has at stake, the less tempting it is to take off with the borrowed money. But this means that the more the borrower can pledge, the larger the lender can make the loan. And thus we have the familiar (at least before the go-go days of no-down-payment mortgages) rule that ties the size of the loan to the amount of money the borrower already has. As the French put it, *"On ne prête qu'aux riches"* ("One lends only to the rich").

This means that poorer borrowers will be able to borrow less but it does not, by itself, explain why the poor should pay such high interest rates or why banks would refuse to lend to them. But there is something else that kicks in. In order to be able to collect on the loan, the lender needs to know many things about the borrower. Some are things the lender would like to find out before deciding to lend, such as whether the borrower is trustworthy. Others, such as the borrower's whereabouts and nature of the borrower's business, help in collecting on the loan should there be a problem. The lender may also want to keep an eye on the borrower, visiting her from time to time to make sure the money is being used as promised and nudging the business in the desired direction if need be. All of these efforts take time, and time is money. The interest rate has to go up to cover them.

Moreover, many of these expenses do not scale with loan size. There is no way to avoid collecting some basic information about the borrower, even if the loan is very small. As a result, the smaller the loan, the larger the monitoring and screening costs will be as a fraction of loan size, and because these costs have to be covered by the interest collected, the higher the interest rate will be.

To make matters worse, this creates what economists call a *multiplier effect*. When the interest rate goes up, the borrower has more reason to try to find a way not to repay the loan. That means the borrower needs to be monitored and screened more carefully, which adds to the cost of lending. This pushes the interest rate up even further, which necessitates more scrutiny, and so on. The upward pressure feeds on itself, and interest rates can skyrocket. Or, as often happens in practice, the lender may decide that it is not viable to lend to the poor: Their loans would be too small to make it worthwhile.

Once we understand this, many things fall into place. Because the main constraint on lending to the poor is the cost of gathering information about them, it makes sense that they would mostly borrow from people who already know them, such as their neighbors, their employers, the people they trade with, or one of the local moneylenders, and that is exactly what happens. Strange as it might seem, this emphasis on contract enforcement could also drive the poor to borrow from those who have the power to really hurt them if they were to default, since such lenders would not need to spend as much time monitoring (their borrowers wouldn't dare to stray) and the loans would be cheaper. In Calcutta in the 1960s and 1970s, a lot of the moneylenders were Kabuliwalas (men from Kabul)—tall men in Afghan clothes with a cloth bag slung across their shoulders who would go from door to door, ostensibly selling dried fruits and nuts, but actually mostly using that as a cover to carry out their lending operations. But why couldn't someone more local do the lending? The most likely answer is that these men had a reputation for being fierce and implacable, a stereotype sealed by a story that all Bengali schoolchildren have in their textbooks, in which a good-hearted but violent Kabuliwala kills someone who was trying to cheat him. The same logic also explains why the Mob in the United States was for many people the "lender of last resort."

A more baroque illustration of the power of threat can be seen in a story from London's *Sunday Telegraph*, dated August 22, 1999, titled "Pay Up—or We Will Send the Eunuchs to See You."[6] The report describes debt collectors in India making use of the old social prejudice against eunuchs to collect from long-standing defaulters. Because people believe that seeing a eunuch's genitals brings bad luck, the eunuchs were instructed to show up at the defaulter's house and threaten a "showing" if they continued to be uncooperative.

The high costs of collecting information on a borrower also help explain why even when there are several moneylenders in each village, competition does not drive the price of credit down. Once a lender has paid the cost of vetting a borrower, and the borrower has established a good reputation with him, leaving is difficult. If the borrower did go elsewhere for credit, the new lender would have to do the due diligence all over again, which would be expensive and would drive interest rates even higher. Moreover, the lenders would be suspicious of such a new client: Why did someone feel the need to abandon an existing relationship, when it is obviously costly to do so? The moneylender would then be doubly careful, which could further raise interest rates. Thus, despite the apparent choice of lenders, borrowers are somewhat bound to the one they know already. And moneylenders can exploit this advantage to raise interest rates.

This also explains why banks do not lend to the poor. Bank officers are not very well placed to do all the necessary due diligence: They don't stay in the village, they don't know the people, and they rotate frequently. Respectable banks are not in a position to compete with Kabuliwalas. They cannot easily threaten to break people's kneecaps or even send them eunuchs. The Indian branch of Citibank got into serious trouble when it was discovered that it was using *"goondas"* (local hooligans) to threaten borrowers who did not repay vehicle loans. And the courts are not really an option, either. In 1988, the Law Commission of India reported that 40 percent of the cases for asset liquidation (of bankrupt borrowers) were more than eight years pending.[7] Think of what this means from the lenders' point of view: They know that even if they are sure to win their case against a defaulting firm, they will only be able to claim the pledged assets in several years' time (with plenty of opportunities for the borrower to divert the assets). Of course, this means that from the point of view of the lenders, the value of the borrower's assets at the time the loan begins will be all that much lower. Nachiket Mor, who was then one of the vice presidents of ICICI Bank, once described to us what he had thought was an absolutely brilliant way to get farmers to repay their agricultural loan. Before disbursing each loan, he would ask them for a postdated check for the same amount. The great insight was that if the farmer did not repay, the bank would then be able to send the police to collect on the check, because not honoring a check is a criminal offense. This worked for a while, but then it began to unravel. When the police realized that they had hundreds of bounced checks to track, they politely told the bank that, really, this was not their job.

Even when the bank manages to get its money back, things can backfire: Banks do not like headlines associating them with "farmer suicides." And to cap it all off, when elections are around the corner, governments love to write off outstanding loans. Given all this, it is no surprise that banks find it easier to stay away from lending to the poor altogether, leaving the field to moneylenders. However, although the moneylenders have an advantage in getting their money back, they have to pay a lot more for the money they lend out than the banks. This is because we are happy to give our savings to the bank for safekeeping even if it pays us little or nothing in interest, but few people would think of depositing their savings with a moneylender. This, combined with the multiplier effect and the monopoly power that moneylenders often enjoy, explains why the poor face such high interest rates.

The innovation of people like Muhammad Yunus and Padmaja Reddy, then, was not just the idea of lending to the poor at more reasonable rates. It was figuring out *how* to do it.

MICRO INSIGHTS FOR A MACRO PROGRAM

From its modest beginnings with the Bangladesh Rehabilitation Assistance Committee (universally known as BRAC) and the Grameen Bank in the mid-1970s in Bangladesh, microcredit is now a global phenomenon. It has reached anywhere between 150 and 200 million borrowers, mainly women, and is available to many more. It is sometimes described, almost like a character in a Greek myth, as a beast with two teats—a profit mission and a social mission—and by all accounts it has known impressive successes on both fronts. On the one hand, the Nobel Prize for Peace, which was awarded to Muhammad Yunus and the Grameen Bank, crowned a series of public accolades; on the other hand, the Initial Public Offering (IPO) of Compartamos, a large Mexican MFI, in spring 2007 was a (controversial) triumph of the commercial side. The offering raised $467 million for Compartamos, although it also drew attention to the 100-percent-plus interest rates it charges. (Yunus publicly expressed his discontent, calling the CEOs of Compartamos the new usurers, but other MFIs are already following in their footsteps: In July 2010, the IPO of SKS Microfinance, India's largest microfinance institution, raised $354 million.)

One can see why Yunus may not like the association with usury, but in a (good) sense microcredit *is* moneylending reinvented for a social purpose. Like traditional moneylenders, MFIs rely on their ability to keep a close check on the customer, but they do so in part by involving other borrowers who happen to know the customer. The typical MFI contract involves loans to a group of borrowers, who are liable for each other's loans and hence have a reason to try to make sure that the others repay. Some organizations expect the borrowers to know each other when they come to borrow, whereas others bring them together by making them come to weekly meetings. The very act of meeting together every week helps clients know each other better and become more willing to help out a group member who faces a temporary difficulty.[8]

Like the moneylender, MFIs threaten to cut off all future lending to anyone who defaults outright and do not hesitate to use their connections within village social networks to put pressure on recalcitrant borrowers. Unlike moneylenders, their official policy is never to use actual physical threats.[9] However, the power of shame seems to be sufficient. A borrower we met in Hyderabad was struggling to repay loans from several MFIs. But she said she never missed a payment, even if it meant borrowing money from her children or going without a meal for a day: She loathed the idea of having the credit officer come to her doorstep and "make a nuisance" in front of the whole neighborhood.

Where MFIs clearly diverge from traditional moneylending is in removing almost all flexibility. Moneylenders will allow their borrowers to choose how they borrow and the way they repay—some repay once a week, but others repay whenever they have money in hand. Some repay only the interest until they are ready to repay the entire principal. An MFI client, by contrast, typically has to repay a fixed amount every week, starting one week after the loan is given out, and, at least for first loans, everyone usually receives the same amount. Moreover, the borrower has to make the payment at the weekly meeting, which is always at a fixed time for each group. The advantage of this is that keeping track of repayments is very easy: The loan officer just counts to see if he has the total amount he was supposed to get from that group and if he does, which is almost always the case, he is finished and can start on the next group. This allows a loan officer to collect repayment from 100 to 200 people every day, whereas a moneylender has to wait around not knowing when the money is coming in. Moreover, since the transaction is so simple, the loan officer does not need to be particularly well educated or trained, which also keeps costs down. In addition, loan officers are paid on steep incentive contracts, based on recruiting new clients and making sure that everyone repays.

All of these innovations contribute to reducing the administrative costs of lending, which, as we argued above, get blown up by the multiplier effect and make lending to the poor so very expensive. This is how most MFIs in South Asia manage to make money by lending to the poor at interest rates of around 25 percent per year, whereas the local moneylenders typically charge two to four times as much. Interest rates are higher in other parts of the world (one likely explanation is that loan officer salaries are higher), sometimes even higher than 100 percent per year, but remain much lower than the other alternatives for poor people. In urban Brazil, for example, MFIs offer microcredit at the rate of about 4 percent a month (60 percent a year), and the easiest alternative, which is credit-card-debt refinancing, costs between 12 percent and 20 percent per month (289 percent to almost 800 percent per year). Defaults, famously, are extremely rare, at least outside politically motivated crisis. The "portfolio at risk" (loans that *may* default, but not all will) was less than 4 percent in South Asia and no more than 7 percent in most Latin American and African countries in 2009.[10] And so microfinance, with its 150 to 200 million clients, has earned its place as one of the most visible anti-poverty policies. But does it work?

DOES MICROCREDIT WORK?

The answer obviously depends on what you mean by "work." According to the more enthusiastic backers of microfinance, it means transformation of people's lives. The Consultative Group to Assist the Poor (CGAP), an organization housed at the World Bank and dedicated to promoting microcredit, reported at some point in the FAQ section of its Web site that "there is mounting evidence to show that the availability of financial services for poor households—microfinance—can help achieve the MDGs"[11] (including universal primary education, lower child mortality, and maternal health, for example). The basic idea is that it puts economic power in the hands of women, and women care about these things more than men do.

Unfortunately, contrary to CGAP's claims, until very recently, there was in fact very little evidence either way on these questions. What CGAP called evidence turned out to be case studies, often produced by the MFIs themselves. For many supporters of microcredit, this appears to be enough. We met a prominent Silicon Valley venture capitalist and investor, and supporter of microcredit (he was an early backer of SKS), who told us that he needed no more evidence. He had seen enough "anecdotal data" to know the truth. But anecdotal data do not help with the skeptics out there, including large sections of governments everywhere that worry that microcredit might be the "new usury." In October 2010, just two months after SKS's successful IPO, the Andhra Pradesh government blamed SKS for the suicide of fifty-seven farmers, who allegedly were put under unbearable pressure by the loan officers' coercive recovery practices. A few loan officers from SKS and Spandana were arrested, and the government passed a law making the weekly collection of loans difficult—among other things, by requiring repayment to take place in the presence of an elected official—thereby sending the clear signal that borrowers did not need to repay. By early December, all credit officers of the major MFI (SKS, Spanda, Share) were still sitting idle and losses were mounting. The anecdotes, and the assurance by Vikram Akula, the CEO of SKS, that the fifty-seven farmers who committed suicide were not in default so they could not possibly have been driven to death by SKS loan officers, did little to help them out.

One reason the MFIs were lacking a powerful argument in their defense is that they had been reluctant to gather rigorous evidence to prove their impact. When we approached MFIs (starting around 2002) to propose to work together on an evaluation, their usual reaction was, "Why do we need to be evaluated any more than an apple seller does?" By which they meant that as long as the clients came back for more, microcredit had to be beneficial to them. And because MFIs are financially sustainable, and do not depend on the generosity of donors, evaluating exactly *how* beneficial they are is unnecessary. This is a bit disingenuous. Most MFIs are subsidized by the generosity of donors and the enthusiastic efforts of their staff, largely based on the belief that microcredit is *better than other ways to help the poor.* Sometimes they are also subsidized by policy. In India, microfinance qualifies as a "priority sector," which gives banks powerful financial incentives to lend to them at concessional rates, which is a massive implicit subsidy.

Furthermore, it is not obvious that people are entirely rational when they make long-term decisions like taking out a loan—the U.S. press is full of stories about people who got themselves into trouble by overusing their credit cards. Perhaps people do need protection from lenders, as many regulators seem to believe. The government's position in Andhra Pradesh was precisely that the borrowers did not know what they were getting into when they took loans that they could not repay.

Partly as a result of such criticism, and partly because many leaders of MFIs genuinely want to know whether they are helping the poor, several MFIs have started evaluating their own programs. We were involved in one such evaluation, Spandana's program in Hyderabad. Spandana is believed to be one of the most profitable organizations in the industry and has been one of the main targets of government activism in Andhra Pradesh. Padmaja Reddy, Spandana's founder and CEO, is a small, vibrant, and ferociously intelligent woman. She was born into a prosperous farming family from the Guntur area. Her brother was the first person in the village to complete high school, and he went on to become a very successful doctor. He persuaded his parents to let Padmaja go to college and then to do an MBA. She wanted to help the poor, so she started working with an NGO. This was when she met the ragpicker we described earlier, who prompted her to start a microcredit operation. When the NGO she worked for refused, she opened Spandana. Despite her success and her commitment to microfinance, Padmaja Reddy describes the potential benefits modestly. For her, access to microfinance is important because it gives the poor a way to map out the future in a way that was not possible for them before, and this is the first step toward a better life. Whether they are buying machines, utensils, or a television for their home, the important difference is that they are working toward a vision of a life that they want, by saving and scrounging and working extra hard when needed, rather than simply drifting along.

It was perhaps because she had always been careful not to overpromise that she agreed to work with us on an evaluation of the Spandana program. The evaluation took advantage of Spandana's expansion into some areas of the city of Hyderabad.[12] Out of 104 neighborhoods, fifty-two were chosen at random for Spandana to enter. The rest were left as a comparison group.

When we compared the households in these two sets of neighborhoods, some fifteen to eighteen months after Spandana started lending, there was clear evidence that microfinance was working. People in the Spandana neighborhoods were more likely to have started a business and more likely to have purchased large durable goods, such as bicycles, refrigerators, or televisions. Households that did not start a new business were consuming more in these neighborhoods, but those who had started a new business were actually consuming less, tightening their belts to make the most of the new opportunity. There was no clear evidence of the reckless spending that some observers feared would happen. In fact, we saw exactly the opposite; households started spending less money on what they themselves saw as small "wasteful" expenditures such as tea and snacks, perhaps a sign that, as Padmaja has predicted, they now had a better sense of where they were heading.

On the other hand, there was no sign of a radical transformation. We found no evidence that women were feeling more empowered, at least along measurable dimensions. They were not, for example, exercising greater control over how the household spent its money. Nor did we see any differences in spending on education or health, or in the probability that kids would be enrolled in private schools. And even when there was detectable impact, such as in the case of new businesses, the effect was not dramatic. The fraction of families that started a new business over the fifteen-month period went up from about 5 percent to just over 7 percent—not nothing, but hardly a revolution.

As economists, we were quite pleased with these results: The main objective of microfinance seemed to have been achieved. It was not miraculous, but it was working. There needed to be more studies to make sure that this was not some fluke, and it would be important to see how things panned out in the long run, but so far, so good. In our minds, microcredit has earned its rightful place as *one* of the key instruments in the fight against poverty.

Interestingly, this is not how the main results played out in the media and the blogosphere. The results were mainly quoted for the negative findings and as proof that microfinance was not what it was made out to be. And though some MFIs accepted the results for what they were (chief among them, Padmaja Reddy, who said this was exactly what she had expected, and financed a second wave of the work to study the longer-term impacts), the big international players in microfinance decided to go on the offensive.

The representatives of the "big six" (Unitus, ACCION International, Foundation for International Community Assistance [FINCA], Grameen Foundation, Opportunity International, and Women's World Banking), the largest MFIs worldwide, held a meeting in Washington, DC, shortly after our study was made public. They invited us to participate, and our colleague Iqbal Dhaliwal went, thinking that there would be some conversation on what the results meant. Instead, it turned out that all the big six wanted was to know when the results from other randomized impact studies were expected, so they could put together a SWAT team that would be in a position to respond (they were apparently convinced all the studies would be negative). A few weeks later, the SWAT team produced its first attempt at damage control. The MFIs responded to the evidence from the two studies (ours, and another by Dean Karlan and Jonathan Zinman, with even more lukewarm results)[13] with six anecdotes on successful borrowers. This was followed by an op-ed in the *Seattle Times* by Brigit Helms, CEO of Unitus, that simply declared, "These studies are giving the inaccurate impression that increasing access to basic financial services has no real benefit."[14] It was somewhat surprising to read, since our evidence shows, quite to the contrary, that microfinance is a useful financial product. But that apparently is not enough. Trapped by decades of overpromising, many of the leading players in the microfinance world have apparently decided they would rather rely on the power of denial than take stock, regroup, and admit that microfinance is only one of the possible arrows in the fight against poverty.

Fortunately, this is not the way the rest of the industry seems to be going. At a conference in New York City in fall 2010, where similar results were presented, all the attendees agreed that microcredit as we know it has its strengths and its limits, and that the next order of business was to see what microfinance organizations could do to deliver more to their clients.

THE LIMITS OF MICROCREDIT

Why didn't microcredit deliver more than it did? Why didn't more families start new businesses, given that they now had access to capital at affordable rates? In part, the answer is that many poor people are not willing, or able, to start a business, even when they can borrow (why this is the case is one of the central themes of Chapter 9, on entrepreneurship). What is much more puzzling is that even though three or more MFIs were offering credit in the slums of Hyderabad, only about one-fourth of the families borrowed from them, whereas more than one-half borrowed from moneylenders at much higher rates and that fraction was more or less unaffected by the introduction of microcredit. We don't claim to be able to explain in full why microcredit is not more popular, but it probably has something to do with precisely what makes it able to lend relatively cheaply and effectively—namely, its rigid rules and the time costs it imposes on its clients.

The rigidity and specificity of the standard microcredit model mean, for one thing, that since group members are responsible for each other, women who don't enjoy poking into other people's business don't want to join. Group members may be reluctant to include those they don't know well in their groups, which must discriminate against newcomers. Joint liability works against those who want to take risks: As a group member you always want all other group members to play it as safe as possible.

Weekly repayments starting a week after the loan is disbursed are also not ideal for people who need money urgently but aren't exactly sure when they will be able to start repaying. MFIs do recognize this and sometimes make exceptions for emergency health-care expenses, but that is just one of the many possible reasons one might need an emergency loan. What happens, for example, when your son is suddenly offered a chance to take a course that would really help with his career, but the course fee is 1 million rupiah ($179 USD PPP), to be paid by next Sunday? Presumably, you borrow from the local moneylender, pay up, and then start looking for an extra job that will allow you to pay for the loan. Microcredit would not offer you this flexibility.

The same requirement must also discourage taking on projects that only pay off after some time, since there needs to be enough cash flow every week to make the scheduled payments. Rohini Pande and Erica Field persuaded an Indian MFI, the Kolkata-based Village Welfare Society, to allow a randomly chosen set of clients to start their prescribed repayments two months after they got the loan, instead of one week. When they compared the clients who got to repay later to those who stayed on the standard repayment schedule, they found that the former were more likely to start riskier and larger businesses, for example, buying a sewing machine instead of just buying some saris to resell.[15] This presumably means that, down the line, they would be able to make more money. However, despite a clear increase in client satisfaction, the MFI decided to go back to its traditional model because the default rates in the new groups, though still very low, were 8 percentage points higher than under the original plan.

One way to summarize all these results is to observe that, in many ways, the focus on "zero default" that characterizes most MFIs is too stringent for many potential borrowers. In particular, there is a clear tension between the spirit of microcredit and true entrepreneurship, which is usually associated with taking risks and, no doubt, occasionally failing. It has been argued, for example, that the American model, where bankruptcy is (or at least was) relatively easy and does not carry much of a stigma (in contrast with the European model, in particular), has a lot to do with the vitality of its entrepreneurial culture. By contrast, the MFI rules are set up not to tolerate any failure.

Are MFIs right to insist on zero default? Could they do better, both socially and commercially, by setting up rules that leave scope for some default? Most leaders of the MFI community firmly believe that this is not the case, and that relaxing their guard on defaults could have disastrous consequences. And they may well be exactly right. After all, they are still operating in environments where they have very little recourse if a client decides not to reimburse them, which means that exactly like the banks, they would have to rely on the slow and creaky court system. In many ways, their success comes from making repayment an implicit social compact, in which the community ensures that loans will be repaid and the MFI continues to provide further loans. This gradual building of trust may be one reason many MFIs have gradually moved away from the formal requirement of joint liability. And indeed, a study found no difference in repayment whether clients are formally under joint liability contracts or not, as long as they continue to meet regularly (when they don't meet weekly, but instead monthly, another study found that social connections within the group do not build up as fast, and eventually default rates do creep up).[16]

But a social equilibrium based on the combination of collective responsibility and an ongoing relationship is necessarily somewhat fragile. If the two reasons I repay are that everyone is repaying and that I will get a new loan in the future, then whether I repay or not gets tied to what I believe about what everyone else is doing and the future of the organization. Indeed, if I were convinced that everyone else was about to default, I would assume that the organization was about to go under and would therefore give up on getting any further funds from it. As a result, the situation can quickly unravel when there is a shift in beliefs.

This is what happened to Spandana in the Krishna District of Andhra Pradesh, the epicenter of India's microfinance movement. Some bureaucrats and politicians in the district were keen to promote their own brand of microfinance and decided that they needed to get rid of the competition. Suddenly, sometime in 2005, the local-language newspapers (or by some accounts, fake newspapers made to look like the real thing) filled with stories about Padmaja Reddy. In some, she was reported to have fled to America; in others, to have killed her husband. The implication was that Spandana had no future and hence there was no point in repaying a loan the company might have given. We saw one "newspaper" page claiming that Padmaja herself had suggested that they default, since she had made enough money and was quitting.

It was a masterful effort to shift beliefs in exactly the way that could totally undermine the organization: Convincing people that an MFI has no future is the easiest way to make sure that it in fact does not have one—since it becomes in everyone's best interest to default. Padmaja was distraught (though she laughed at the idea that she would flee to America to avoid facing her obligations—after all, it was the borrowers who had her money, not the other way around), but she was determined to fight. She drove across the state, appearing at meetings in every little town and large village, saying, "I am still here, I am not going anywhere."

This particular crisis was thus averted. But a few months later, in March 2006, a new "scandal" broke out which exposed a different dimension of fragility. This time, Spandana and Share, one of its competitors, were accused of being the reason a number of farmers had committed suicide. According to a new series of articles in the press, loan officers had pushed the clients to overborrow, then put unfair pressure on them to repay. The MFIs obviously denied the charges, but before anything could be resolved, the district commissioner of Krishna (the administrative head of the district) decreed that repaying one's loan to Spandana or Share was . . . *illegal*. Within days, almost *all* the clients in Krishna had stopped repaying. At the time of the crisis, Spandana had approximately 590 million rupees ($34.5 million USD PPP) of principal outstanding in the Krishna District, which represented 15 percent of Spandana's gross loan portfolio across India in 2006.

The heads of the various MFIs went to the commissioner's superiors and got the order rescinded quickly, but the damage was done. People repay because other people repay, so once people stop, it is hard to get them to restart. One year later, 70 percent of the outstanding loans had yet to be repaid. Since then, Spandana loan officers have gone back to each of the affected villages and offered their customers new loans if they would only pay back the old ones (with no extra interest). These offers do work in some villages, and they have now managed to recover half of the outstanding loans, but the pressure to act as others do is evident.[17] In some villages, everyone repays. In others, everyone refuses, even those who were only a couple of payments away from getting a new loan. Even among those who had just one more repayment to make to get a fresh loan (so that a payment of about 150 rupees would get them an extra 8,000 rupees, which they could either repay or even pocket, by defaulting again), one-fourth of loans with only one payment remaining have not been repaid. These defaulters tend to be members of groups in which no one else was repaying.

The Krishna repayment crisis was repeated, though without obvious political interference, in Karnataka and in Orissa respectively in 2008 and 2009, provoking the bankruptcy of KAS, another large microfinance institution. Everyone stopped repaying after KAS lost access to liquidity and could not disburse new loans. The crisis of fall 2010 in Andhra Pradesh was almost a repeat, on a grander scale, of the 2006 crisis. Once again, farmer suicides were used as an argument for politicians to attack the MFIs, and once again, repayments entirely stopped once the government stepped in. It brought some of the biggest microfinance institutions (SKS, Spandana, and Share) to the brink of bankruptcy. Such episodes suggest that MFIs might be right to focus on managing beliefs, and therefore it might make sense for them to insist on prioritizing repayment discipline over everything else. Opening the door to defaults, even as a way to encourage necessary risk taking, may lead to an unraveling of the social contract that allows them to keep repayment rates high and interest rates relatively low.

The necessary focus on repayment discipline implies that microfinance is not the natural or best way to finance entrepreneurs who want to go beyond micro-enterprises. For each successful entrepreneur in the Silicon Valley or elsewhere, many have had to fail. The microfinance model, as we saw, is simply not well designed to put large sums of money in the hands of people who might fail. This is not an accident, nor is this due to some shortcoming in the microcredit vision. It is the necessary by-product of the rules that have allowed microcredit to lend to a large number of poor people at low interest rates.

Moreover, microcredit may not even be an effective way to discover entrepreneurs who will then go on to set up large businesses. Microfinance gives its clients every incentive to play it safe, so it is not well suited to discover who has an appetite for risk taking. Of course, there are always counterexamples—every microfinance agency boasts on its Web site about corner shops turning into retail chains, but the instances are few and far between. The average loan that Spandana gives out increases only from 7,000 rupees ($320 USD PPP) in the first cycle to 10,000 rupees ($460 USD PPP) after three years, and there are almost no loans greater than 15,000 rupees ($686 USD PPP). After more than thirty years of operation, Grameen Bank's loans remain, for the most part, very small.

HOW CAN LARGER FIRMS BE FINANCED?

But maybe it does not matter that microcredit is not designed to lend to larger borrowers. As we saw, credit constraints are likely to be much tighter for very poor borrowers than for somewhat richer ones. Perhaps there is a natural graduation process—start by borrowing from an MFI, grow your business, and then move on to a bank.

Unfortunately, it does not seem that more established businesses find it that much easier to get credit. In particular, they run the risk of being too large for the traditional moneylenders and microfinance agencies, but too small for the banks. In summer 2010, Miao Lei was a prosperous businessman in the city of Hangzhou, China. An engineer by training, he had gone into the business of setting up computer systems at various local firms. The problem was that he had to buy the hardware and software first and only after he set up the system would he get paid. No one would give him a loan. Once, he got a chance to bid on a particularly lucrative contract but it was clear that it would take more cash than he had on hand. However, the temptation was strong and he went ahead and bid. He remembers the days after his firm won the contract, running everywhere to try to raise the money, but nothing seemed to work. Defaulting on the contract would be the end of his career. In desperation, he decided to try to pull off an even bigger gamble. There was another contract up for bid, from a state-owned company, and he knew that if he won the contract he would get an advance, which he could use to finance the first contract. Then, perhaps, he could use the money from the first to pay for the second. He decided to put in a very aggressive bid—he was happy to lose some money to win it. He still remembers the evening when he was waiting to hear if his bid had been accepted. He sent the staff home early and spent hours pacing the empty office. In the end, his bid won, and somehow it all worked out. Money flowed in, and bankers with loans followed (once his revenues crossed 20 million yuan, bankers started coming to his door). By the time we met him, he was running four separate businesses.

Miao Lei, with a good degree and a reasonable business model, had to gamble to survive. Narayan Murthy and Nandan Nilekani, despite their degrees from the ultra-prestigious Indian Institute of Technology, could not get a loan to start the firm Infosys because the banker objected that the bank could see no inventory to lend against. Infosys today is one of the largest software firms in the world. It is hard not to assume that there are a lot more people like these three, but who just couldn't make it because they didn't get the right financing at the right time.

Even those businesses that do manage to get started, survive, and grow to a certain size don't seem able to escape from being constrained in their access to capital. The town of Tirupur, South India, is India's T-shirt capital (70 percent of India's knitted garments are produced there). The firms operating in the region have a worldwide reputation: Buyers the world over go there to place large orders for their collections. Naturally, the town has attracted talented textile entrepreneurs from all over India. It also has many local entrepreneurs, the scions of wealthy farming families (from the Gounder caste). The outsiders are, not surprisingly, the experts in this line of business. The firms they run are much more efficient than those started by Gounders. For any level of capital, they produce and export more. What is more surprising, though, is that the average firm owned by a Gounder starts out with about three times more capital than those started by outsiders.[18] Instead of lending money to the outsiders who were the experts in this line of business, wealthy Gounders started their own firms, despite the fact that they had no experience at all. Why did they do that? Or for that matter, why didn't banks jump in and help the outsiders set up larger businesses? The answer is that even largish firms like these (the average firm owned by an outsider had a capital stock of 2.9 million rupees, or $347,000 USD PPP) are subject to the problems we described earlier. The Gounders started their own firms because they trusted their own community, and they were not sure the outsiders would repay them.

Recognizing this problem, developing countries have tried to use regulations to get banks to lend to these somewhat larger enterprises. India has a "priority sector" regulation, which constrains banks to lending 40 percent of their portfolios to the priority sector, consisting of agriculture, microfinance, and small and medium enterprises, which can include quite large firms (the largest eligible firms are larger than 95 percent of Indians' firms). And firms were clearly able to invest some of these funds productively. When the priority sector was expanded in 1998 to include somewhat larger firms, the firms that were newly eligible invested the extra loans they got by virtue of being in the priority sector and made a lot of money. A 10 percent increase in loans led to an increase in profits of 9 percent, *after repaying the loan*.[19] This is a fantastic rate of return. However, the fashion nowadays is very much to eliminate this kind of mandatory lending, in part because banks complain that lending to these firms is expensive and too risky.

There exist some people who are trying to identify promising new businesses and fund them. Miao Lei, the businessman from China, does precisely that, perhaps because of his own experience. He buys equity in promising young businesses. But we are far from seeing the equivalent of the microfinance revolution for small and medium firms; nobody has yet figured out how to do it profitably on a large scale. Changes in the business environment, such as improvements in the functioning of courts, may well make a difference. In India, the introduction of faster court action led to much faster loan recovery, larger loans, and lower interest rates. However, this is not a magic bullet, either. When the debt recovery tribunals were introduced, lending to the largest firms increased, but lending to the smaller firms actually went down.[20] This appears to be because the bank officer found it relatively more profitable to lend to the largest firms now that the bank could be sure it could collect on the asset the firm had pledged.

Ultimately, this problem stems from the structure of banks. Because they are, by nature, large organizations, it is hard for them to provide incentives to their employees to screen the firms, monitor projects, and make worthwhile investments. For example, if they decide to punish loan officers for default (which, to a point, they must), loan officers start looking for the absolutely safest projects, which are unlikely to be small, unknown firms. A *future* Miao Lei or Narayan Murthy may well go unfinanced.

The microfinance movement has demonstrated that, despite the difficulties, it is possible to lend to the poor. Although one may debate the extent to which MFI loans transform the lives of the poor, the simple fact that MFI lending has reached its current scale is a remarkable achievement. There are very few other programs targeted at the poor that have managed to reach so many people. However, the structure of the program, which is the source of its success in lending to the poor, is such that we cannot count on it to be a stepping-stone for larger businesses to be created and financed. Finding ways to finance medium-scale enterprises is the next big challenge for finance in developing countries.