



If Finance Works, Microfinance Works: Contextual Evaluation and the Irrelevance of Randomized Controlled Trials*

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Abstract: The choice to highlight microfinance as a primary means of poverty alleviation in the Millennium Development Goals should have brought clarity to the role and functioning of this widely used instrument. Instead, it seems to have generated a fog. It is time to take a fresh look and start from first principles to clear the air. Microfinance is *micro* finance—it is finance writ small. If finance works, microfinance works. Much of the confusion surrounding microfinance is due to it being treated as a new economic phenomenon. With the Bangladeshi case in mind, this article poses a series of specific questions about the research field. It argues that many interesting and constructive questions have been missing from the agenda. And rather than bringing clarity, the current focus on randomized controlled trials is merely serving to distract.

Keywords: Microfinance, Microcredit, Grameen Bank, Poverty, Randomized Controlled Trials, RCT, Bangladesh

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While modern microfinance (MF) began in the 1970s, it has blossomed into a global movement since the 1990s. Today, some \$25 billion in microloans go to 125 million borrowers in 130 countries.¹ The astounding success of microfinance in a span of about thirty years has attracted the attention of policymakers, development economists and social thinkers all over the world.

The choice to highlight MF as a primary means of poverty alleviation in the Millennium Development Goals (MDGs) should have brought clarity to the role and functioning of this widely used instrument. Instead, it seems to have generated a fog. It is time to take a fresh look and start from first principles to clear the air.²

To begin with, microfinance is *micro* finance—it is finance writ small. If finance works, microfinance works. If finance does not work, perhaps we should begin with dismantling the banks for the rich, not those for the poor? Much of the difficulty has been created by scholars treating MF as though it is some new economic phenomenon.³ I will suggest, with a series of specific questions and with the Bangladeshi case in mind, that most of the interesting and constructive questions have not been on the research agenda.

The first and most important question is the productivity of microenterprise. As long as small-scale activities have rates of return

¹ These figures are a rough extrapolation from those provided by Christen, Rosenberg & Jayadeva (2004).

² A casual search will show that of the more than 10,000 entries on MF on the web, about one-third are skeptical. I am most struck by the fact that most educated youth I talked to in Bangladesh were skeptical of MF, but could not give me any cogent reason why. Typically, they just refer to interest rates, donor influence, or circulation of loans in a pyramid scheme—all without a substantive basis for their views.

³ There is a peculiar disconnect in that the prerequisites for finance are lucidly described in several articles. For example see Guttman (2006), who in turn draws on Ghatak and Guinnanae (1999). However, this does not seem to have extended to the evaluations of MF.

above 25–35 percent—the range of interest rates charged by most microfinance institutions (or MFIs)—microfinance can do undoubted good. Moreover, keeping in mind that we are dealing with a form of finance allows us to make more productive comparisons. For example, with small business success in the USA and with MFIs that are conducted for profit. It also allows us to examine such aspects as the integration of MFIs with commercial banking.

Second, MF may contribute even when there is no change in GDP and even if there are negligible changes in poverty and unemployment. If changes in market structure are desirable and need to be fostered, then MF is beneficial since it can change market structure by empowering the poor.

Third, MF is linked with interesting and worthwhile ancillary issues, such as female empowerment, but these do nothing to contradict the fundamental economic logic. Many of these purported benefits are social changes and inter-temporal effects, and putting numbers on these effects is hard. There is something to be said for the position that poverty is not just an economic condition but also a self-reinforcing psychological state (e.g. Ferro-Luzzi, Flückiger & Weber 2006). As such, one has to tackle the culture of poverty. Persuading people to change is hard and often thankless.

Fourth, since all the estimates performed hitherto use MFI data, they are really estimates of the effect of MFIs and not of MF per se. This may be too fine a point for policy makers but it can be an important caveat for evaluations of MF, since MFIs can change their roles even while their names stay the same.

Fifth, these estimates assume that the practical details of MF, of the practice of the MFIs, and of the context in which they operate, have all remained substantially static. In Bangladesh, the only country for which I can speak with some confidence, these changes are potentially of the first order of importance. Instead of paying more attention to context, randomized controlled trials (or RCTs for short), have come to the fore in the analysis of poverty, and hence of MF. If the argument presented here

is correct, this is a mistake. There really are important issues to consider and so much focus upon tertiary issues serves to distract.

Finally, it is necessary to get a point about personalities out of the way. MF today is inextricably linked with Bangladesh and with the name Muhammad Yunus. The reputation of modern MF has a best friend and a worst enemy—and they are both the same person—Nobel Peace Prize laureate Yunus. Only those who have seen or lived through the devastation of the early 1970s in Bangladesh will be able to feel how important it was to have hope—and the Grameen Bank gave hope. He has also had a profound influence on questions of development and poverty.⁴ With the greatest of admiration for the achievements of Yunus and Grameen, I must gasp when he speaks of putting poverty “in the museum” through MF, and of credit as being a “right.” While I firmly believe that MF is beneficial, I even more firmly believe that MF is a method of poverty alleviation, and, by itself, not the means of economic growth.

The first section below lays out the root economic questions faced in evaluating MF, dealing with the first and second issues noted above (i.e. with short-run profitability and entrepreneurship). This is followed by a discussion of the third issue above by noting the considerable difficulties involved in embedding MF evaluations within a multi-period general equilibrium framework. Next, the article considers the fourth issue above and points out the importance of distinguishing MFI evaluation from MF effects. The final section then criticizes the use of randomized trials through a close reading of the two most quoted papers of this genre. Generally speaking, a randomized trial attempts to insulate the agents of interest from all irrelevant social effects and then subjects them to the desired experiment. Whether this can be plausibly done at all

⁴ Two students, one from Peru and the other from South Korea, have walked into my office and said they wanted to study development economics. When I asked why, each said “I heard a speech of Dr. Yunus.” It is safe to say that Yunus has inspired countless others.

depends on the experiment in question and the society. Abhijit Banerjee and Angus Deaton have debated the use of RCTs recently. Fortuitously, Banerjee chose MF as his example for the value of RCTs, thereby making this critique more topical.⁵

Profitability and Entrepreneurship

The general shortcoming of the current wave of criticism is that it proves too much. To put it simply, if MF does not work, neither does finance, which is clearly not the case. For finance to be beneficial there have to be viable business opportunities. We need to begin by asking, are there productive small enterprises? I conducted a study asking this in Bangladesh together with Toriqul Bashar from the Institute of Microfinance in Daka.⁶ Table 1 shows the figures coming out of this study for the estimated profits of various MF-supported small enterprises in urban areas. If the data are even partially credible, it is clear that small amounts of money can be very profitably used.

Since the data are central to my claim they are worth discussing in more detail. The data was prospective, i.e. showing expected profits. Getting it right was so important that the profit rates were re-checked by asking other established enterprises if the data were realistic. The respondents said that, in general, the capital was lower than needed and so were the estimated profits. The profit rates remained almost unchanged. This exercise was repeated a year later, in 2011. Again, the first results were verified with minor changes. Finally, a former entrepreneur who had changed to wage work was asked about the general reliability of the data shown in the table. He found some profit rates too high and others too low. The role of unpaid family labor can, and should,

⁵ See NYUDRI (2013). I will have repeated occasion to illustrate the point made by Deaton in his debate with Banerjee, “Context is everything.”

⁶ Rashid and Bashar (2010). For a shorter and more accessible version, see Rashid and Bashar (2012).

also be raised. In calculating “profits,” the respondents did not evaluate the shadow cost of their time. If Bangladesh is considered a surplus labor economy, this shadow wage should be quite low, both for the owner and for family helpers. For several of the enterprises indicated, subtracting a shadow wage cost for helpers and owners made little difference to the calculation. So even after such adjustments, every “profit” rate—meaning return on capital invested—exceeded 100 percent, and profits after imputing some value to the owners’ labor exceeded 50 percent. This is all that is needed for the case to be made. I have also closely studied the rickshaw industry for many years. If one buys an old rickshaw for 7000 Bangladeshi Taka (Tk), it can be rented out for 70 per day. So the yearly rental earnings amount to at least 24,500, with total earnings of 73,500 over the three-year life of the rickshaw. Even after discounting at 10%, this provides a present value return of 66,000 on an investment of 7000.⁷

While I have spoken only of Bangladesh above, that there are many profitable MFIs elsewhere, particularly in Latin America, shows much the same fact.⁸ How can one therefore doubt the productivity of small loans?⁹ Why do the critics not admit that the existence of so many sustainable MFIs clearly shows that there is a market that the profit motive overlooked? Is the MFI self-sustaining? If so, then our concern should be minimal. It is “just another” private enterprise. Do we demand of furniture makers that their chairs or beds are good for our necks or our

⁷ My experience began in 1978 when I did a study of the Rickshaw industry for BIDS, and I have kept up a continuing interest. In 2009 I wrote an article for the Bangladeshi daily, *New Age*, which encapsulates all my principal arguments and I will borrow heavily from it below.

⁸ Berger (2006: 5, 17) notes that the MF industry had been growing at about 30 percent per year and that profitability was at par with that of major international banks.

⁹ Jonathan Swift ran a viable MFI in Ireland in the 1720s and Dugald Stewart noted the high productivity of small loans in his lectures in Edinburgh in the 1790s. Neither the sustainability of MFIs nor the spiked productivity of small loans is new.

backs—or do we let the consumers talk with their choices?

That the productivity of small loans has not been widely expected is a surprise since it is entirely in line with neoclassical theory. The production function used for most growth theory requires the “Inada condition,” which posits the marginal product of capital to become infinite as capital goes to zero. In other words, very small amounts of capital are incredibly productive. This is precisely what the data shows.¹⁰

If we move past the widespread and unjustified urge to characterize MF as “something different,” we get to the more productive approach of setting standards for MF based on the best functioning markets. For example, as a result of this deflection of focus, insufficient attention is being paid to some really interesting issues, such as the seamless integration of MFIs into commercial banking. In addition, the Small Business Administration of the USA tells us that in that country only 80% of new businesses survive the first year. I have been unable to acquire a breakdown by size, but since most new enterprises are small, how is it that 97% can survive a year in Bangladesh while only 80% can survive in the USA?¹¹

Secondly, much concern has been exhibited over the obvious scale and market limits to MF. How many baskets can a market absorb? How many tamales? Hence, critics urge, all MF is inherently limited. That may be so, but a more productive approach will relate products to the elasticity of demand. With elastic demands, higher MF production will lower prices but increase revenues. So MF will benefit the economy when it increases efficiency for goods with elastic demands, and as will be argued below, MF will also provide for more equitable redistribution

¹⁰ Some recent results, such as those of Becchetti and Castriota (2011) are easily interpreted in this fashion, i.e. diminishing returns to capital.

¹¹ I have been unable to get exactly the answers I want, despite corresponding with the SBA and with other scholars, so I am relying on internet sites like the following:

http://www.ces.census.gov/docs/bds/release/tab_fage_release.xls;

<http://answers.google.com/answers/threadview/id/418119.html>

of incomes.

Similarly, people ask why MF beneficiaries require “continual help,” meaning why clients continue to use MFI financing. Comparable figures for small businesses in the USA show that they also tend to maintain continuing relations with the same bank. Do MFI beneficiaries succeed? Some do and some do not. But what are the comparable figures for small business in developed economies? We do not ask banks to create entrepreneurs, only to give them a chance; there is no reason why we should ask for more from a MFI.¹²

Is an increase in GDP *sine qua non* for MF to be beneficial? Perhaps not. In the 1989 segment in the American television program, *60 Minutes* that propelled Grameen to international fame, we see a woman called Sufia Khatun who is the first borrower from Grameen. She made bamboo stools for a net profit of 2c a day. By giving her a loan of \$7 and enabling her to escape the middlemen, Grameen caused her profits to shoot up to \$1.20 per day. These are very impressive numbers, but what is the impact upon GDP? Let us assume Sufia made the same number of stools before and after the loan. Since the same production is brought to the market, there will be no change in either total supply or in price. So the net impact on GDP is zero. If the middleman who supplied Sufia is able to continue we have no change in employment either; otherwise, Grameen could have actually decreased employment. Nonetheless, the world was enthralled by the story of Sufia, and rightly so.¹³ If the market is to function well, those who work hard should reap the results of their labor. This is the only way growth can be encouraged. So, even a loss of employment need not reduce our admiration for MF. At this point sociologists might wish to point out that looking only at averages can

¹² If there is a micro-macro paradox, so that programs beneficial at the micro level fail to show beneficial effects at the macro level, a fruitful research program will ask what accounts for this.

¹³ Proponents of MF have made excessive claims on its behalf, but no more so than any one else trying to get the public to focus on an important issue.

mislead if the outliers—those like Sufia—are setting entrepreneurial examples. As such, we need to look beyond the usual figures when we evaluate MF.

One figure that is often mentioned is the interest rate. Curiously, what should be one of the strongest arguments for MF has turned out to be one of the prime weapons for the opposition. The fact that MF interest rates are in the region of 35% has led people to call MFIs “parasites” and “exploiters.” Whether rates are considered high or low has to be relative to some standard. The critics take the bank interest rate of 12–15% as their standard. However, no one, even the critics, pretends that the poor can actually get a loan from the bank. So why is it even relevant to mention the bank interest rate when bank loans are impossible to obtain? The more important comparison is with interest on loans actually available to the rural poor, which typically have rates in excess of 100%. The fact that the normal interest rate prevalent in Bangladeshi villages today is that set by the MFIs is a point of under-reported importance. It is not that village moneylending no longer exists, just that it has become a marginalized activity.¹⁴

Socially and psychologically, the entry of a MFI into a village is analogous to a multinational corporation coming into a least development country (LDC). Productivity improvements in a village are then the equivalent of what is called “technology transfer.” Instead of the stream of regressions dealing with the “impact” of MF upon villages it is high time that more structured studies were made to examine how villages react to the culture shock of MFI entry, what characteristics mark the villages that adapt successfully and how we can ease the process of productivity improvements and financial innovation.¹⁵

¹⁴ Students at Independent University Bangladesh are required to visit and spend some time in a village. Reading a sample of the reports of these students over the last 15 years clearly supports this observation.

¹⁵ Kwok and Tadese (2006a; 2006b) have written a suggestive article on these issues.

Impact on the Economy, Society and the Future

There are two points to be observed in measuring the economic impact of MF.¹⁶ The first is to look at borrowers before and after they get MF and next we need to compare those within MF with those without. The first step is easier to do, because it involves only those belonging to the MFI. The second is much harder, because it involves those not under your scrutiny. This is the method of double differences. The crucial assumption is that the control and member groups are otherwise comparable. In order to acquire empirical data, we look at the situations over time of various households, some having MF and the others not. But the Households (HH) that choose MF may be systematically different from those who do not, so we have self-selection; and the villages where MF is offered may be systematically different—i.e. why were they chosen? Hence, a clean empirical study is hard without actually engaging in a theory of household choice and a theory of MFI operation. No study that has hitherto been done on MF has paid attention to this question.¹⁷

To engage in a useful comparison, the data points have to be separated in time. But the surrounding economy will not have been standing still. How have the above HHs and MFIs reacted to the changed environment? This may end up being the most significant neglected factor since the influence of the external economy may well dominate both household choice as well as MFI activity. Two factors of enormous importance for Bangladesh are the growth of the readymade garments industry and the inflow of remittances from Bangladeshis abroad. Remittances, in US dollars, have risen from 0.2 billion in 1981 to 1.7 billion in 1999, and to 9 billion in 2009. The value of exports of garments

¹⁶ The list of evaluations is probably too long to note but the most influential are those of Hossain (1988) and Pitt and Khandker (1998).

¹⁷ The history of the Grameen Bank actually makes the comparisons easier, since several early choices were made for the Grameen Bank. However, and this bolsters the general point made in the paper, these are details that cannot be had from the general statistics of any MFI.

(again in US dollars) have grown from 3 million in 1981 to 866 million in 1990, and then to 4860 million in 2000 and 10,500 million in 2009. The impact of the garments industry has been much noticed, particularly the change it has wrought in social attitudes to female labor, but that of remittances is still being studied. I myself have been visiting a village over the last twenty years which has been totally transformed by its overseas workers. Of some 4000 people, about one in five works abroad. The weekly collection at the mosque used to be under Tk 1000 in the 1990s; today it exceeds Tk 30,000.

Measuring only the short-run impact of MF is hard because of a variety of confounding effects. One seldom has an adequate panel data set. A study for Chile that provided answers to questions very similar to the impact of MF was conducted on the effectiveness of SME training. However, it took a 14-year panel to establish the effectiveness (see Tan 2009).

The longer run impact of MF has been less explored, but is central to integrating MF with national economic policy. If MF is profitable, then of course it contributes to GDP and economic growth. But even if MF is unprofitable at current prices, can it still raise future economic potential through investments in health and education? While such questions have been raised and positive answers given in other contexts, there has been little attention paid to it in the context of MF.¹⁸

A second question, that has virtually remained unasked, arises naturally when one recognizes the extreme failure of market prerequisites in 1974. Perhaps we should turn the logic of markets upside down and start by asking how people would behave if all the major markets (for labor, credit and goods) did not exist in the usual sense but each transaction was based on an individual bargain? This would make the following question relevant: if MF does not contribute directly to growth, does it provide for market stability and serve as a buffer against

¹⁸ See the papers of Deninger and Liu for studies of Indian self help groups. Again, the literature on health and education impacts is too large to quote.

catastrophic failure?¹⁹

There are further questions that require answering:

- Does MF serve to smooth out markets by preventing monopoly effects, thereby enabling the market sector?
- Are there poverty traps that prevent market mechanisms from enabling the poor?
- Can MF activities be seen as ensuring the survival condition needed for a general equilibrium? What are the welfare properties of such a “moral economy”?
- Can the awareness and “voice” created by MF programs help political participation and hence make for a more stable market economy?

It is curious that similar questions have been asked and answered when discussing international finance, but the application to MF has yet to be made (e.g. Kose, Prasad & Taylor 2009).

Evaluating MF or MFI?

It has been argued above that MF has been too closely studied by focusing on the exaggerated claims MFIs have made on behalf of MF, and that this has obscured our view of the process as being primarily a financial one. Closely related to the above is the failing of economists to see that MFIs themselves change over time. Since virtually all the data we use is largely generated by MFIs, we may need to separate the evaluation of MF from that of MFIs. This requires theorizing about MFI formation and behavior.

The practices of MFIs are constantly evolving. MFI officials are grappling with real problems, and are ready to make drastic changes if

¹⁹ A recent paper (Buera et al. 2012) has embedded MF in a general equilibrium framework, but the constraints of tractable modeling and equilibrium are such that few of the factors relevant to Bangladesh are captured. Quibria (2012) is a more successful model of the choices involved and now needs embedding in a Walrasian framework.

they find more effective policies, certainly in practice if not on paper. In other words, differences between MFIs can be significant and so can variations over time within the same MFI. This is messy for economists, who would like to keep their analytical lines clear and data sources unambiguous, but it is a reality that cannot be avoided.²⁰ The MFIs are not homogeneous across time, so why should their data always represent purposeful behavior? This is a caveat that has been largely ignored in the evaluative studies. Are we evaluating the MF movement or the MFIs as institutions?

The importance of the internal evolution of MFIs can be understood by looking at two of the most recognizable characteristics of MF: the participation of women and group lending. Both arose from experience in the field and neither was thought of to start with. If economists had “evaluated” Grameen in 1978, we would not have known of either characteristic. In 1987 BRAC had a different, and more controlling, strategy for the disbursement of loans than Grameen. Upon seeing the success of the Grameen group lending model, BRAC quietly adopted it in the 1990s. Such changes in modalities, with potentially significant consequences, may have gone on several times during the operation of the MFIs. It is hard to be sure. This time it is the secretiveness of the MFIs about their operations and their jealousy about the details of their data that is largely to blame.

Since support for MF in practice boils down to support for MFIs, this last point is an important one for policy purposes, and worth illustrating in more detail. In an earlier section it was shown that the first client of Grameen—Sufia—need not be a case of GDP growth. Is this representative of MFI activity? If so, then MF may only be causing beneficial redistribution. But consider an alternative. In 2008, three Bangladeshi women received Citi Microentrepreneurship Awards. The first, Sabina Begum, won an award for her contribution to making waste

²⁰ This does not mean that the changes they make are necessarily for the better—just that MFIs are goal and practice oriented, rather than rule-bound.

fabric useful. This is cost saving. The second, Baby Chakma, received her award for success in livestock farming and biogas and organic-fertilizer production. This is new product innovation. Salma Akter, the third award winner, was recognized for making bobbins and shuttles for the handloom industry by using waste plastic and polyphone. This is process innovation. If we gather the three prizes together and consider the cumulative impact of cost saving, product innovation and process innovation we should see why MFIs consider their role in a more positive light than that cast by evaluations in the academic literature.

As the components of a new service industry, the structure of the MFIs is also worth considering. While most research has focused on two questions—the interest rate charged by the MFIs and their financial sustainability—these are only part of a complex economic picture. Questions relating to industrial organization also need to be addressed, such as concentration ratios, potential competition, and regulation (Gugerty 2008). Perhaps it is time to consider the possibility that MFI interest rates are not motivated by profits but rather set on a cost-plus basis? The reason they cannot go lower lies in the functions any viable financial office must perform—avoiding adverse selection and moral hazard, providing monitoring and the enforcement of contracts. The MFIs bring these services to the borrower's doorstep. If these essential functions can be more cheaply done, let us have a study that shows us how.

The RCT Alternative

The most favored method of analyzing MF today consists of randomized controlled trials (RCTs).²¹ By referring to the practice of the hard sciences and setting up R. A. Fisher and Jerzy Neyman as predecessors, the new experimentalists have set themselves the highest

²¹ Other critiques, which serve to modify but not fundamentally question the value of MF, come from behavioral economics. See Mullainathan and Thaler (2000) and Mullainathan (2006).

of standards. Their work should be beyond reproach. A close reading of the two attempts to do RCT work on microfinance shows that this is hardly the case.²²

The appreciation of history and the importance of contextual analysis are two points that have been stated so often in the course of this critique that I will not repeat them. In a country like Bangladesh, some 30 million people have been associated with microfinance, and in most poor areas it is difficult to find the handful of people who have not been clients at some point. Such experiments are therefore extremely hard to design for their internal validity and pointless for their external validity.

The paper published in *Science* by Karlan and Zinman (2011) on an RCT of MF in Manila is a prominent illustration of these problems. Several parts of the method are truly innovative and worthwhile, in particular, the use of credit scoring to help select samples to be studied for the impact of microfinance. The claims for scientific rigor, however, apply largely to intent, not execution. Needless to add, this may just be the nature of the beast. How does one pull out a sample from a society and yet have them behave credibly? It suggests that randomized evaluations may work well for “marginal” actions of particular business strategies, but when we come to the primary livelihood of families, randomized trials are far from being credible.

The basic problem in the Karlan and Zinman paper is that the sample response is just not plausible, especially given the highest scientific standards that are to be attained. According to Karlan and Zinman’s earlier, and more detailed, working paper (Karlan & Zinman 2009):

More than half of respondents known, from the Lender’s data, to have a loan outstanding from the Lender in the month before the survey do not report having a loan from the Lender.... Nearly half do not report any outstanding formal

²² An earlier paper of McKernan (2002) also adopted a quasi-experimental approach but makes much more qualified claims.

sector loan. (p. 11)

This calls into question the credibility of the individuals in the sample, whether it be their veracity or their memory one cannot tell.

The primary question to be addressed should be profits. The working paper reports positively about the effect of the micro-loans on the businesses that borrowed:

Profit is arguably the most important outcome, as it is arguably the closest thing we have to a summary statistic on the success of the business and its ability to generate resources for the household. The full sample point estimate on last month's profits is positive and nontrivial in magnitude a roughly \$50 US increase, compared to a sample mean of about \$500. (p. 12)

That is approximately a 10% increase in profits. However, this is replaced in the published article with the statement that "Results for three other proxies for business size and success—total profits, gross sales, and inventory—are noisy." The reason for the noise may well be a peculiar behavior noted by the authors in the working paper:

microentrepreneurs used credit to re-optimize business investment in a way that produced smaller, lower-cost, and more profitable businesses. Profits increase in an absolute sense, suggesting that many microentrepreneurs employ workers with negative net productivity, and raising the question of why (and in particular, of why access to credit led them to reduce employment and increase profits). (p. 13)

This is a very important question. Karlan and Zinman state that "various results...relating to risk management suggest an explanation," and it is likely that these unproductive workers served as a type of insurance for the business owner. The fact that we have a sample in which loans are needed in order to fire unproductive workers means it is not a credible sample with which to assess the effectiveness of microcredit.

The authors' conclusion is actually modest—"Our findings add to a very muddled picture on the impacts (or lack thereof) of microcredit"

(Karlan & Zinman 2011: 1282). However, this has not stopped critics of MF from expanding on the wider implications of this research (for example Jonathan Murdoch's "Why Finance Matters" in the same issue of *Science* (pp. 1271–1272). What could be asked is whether the muddle lies in treating MF as a single, indivisible, unstructured entity and thereby confusing the policy question. In reality, the study does not involve group based lending, and is a test *only* of marginally creditworthy borrowers, and for interest rates of 60% plus. This has very little if anything to do with MF as practiced by Grameen.

Angus Deaton (NYUDRI 2012) has pointed out a limitation of RCTs that is ever-present, yet invisible: ²³

RCTs are so highly regarded because people assume that the randomness of the selection eliminates bias. What people don't talk about is that there are actually two stages of selection. The first stage, in which researchers start with the entire population, and choose a group which will in the second stage be randomly divided into the study and control groups, is NOT random. Selection in the first stage may be determined by convenience or politics, and therefore may not be representative of the entire population. At the same time, the studied populations in RCTs are actually very small, which means that an outlier in the experimental group can have a huge distortionary effect.

So instead of prematurely casting doubt on the logic of microcredit, researchers relying on RCTs must wait until they have discovered how to deliver credible and rigorous results. As argued above, the challenges involved are so great that this is not likely to happen in the foreseeable future.

Another prominent paper, Bannerjee et al.'s (2009) "The Miracle of Microfinance?" is also problematic. It begins by noting the arguments of

²³ In correspondence, Angus Deaton has said that the representation of his points is correct, if imprecise.

critics who find the existing evidence unsatisfactory and who even claim that MF achieves the opposite of its intentions:

the critics of microfinance...fear that it is displacing more effective anti-poverty measures or even contributing to over-borrowing and therefore even greater long term poverty.
(p. 1)

Initially, doubt is cast upon the extant methods for determining the effect of MF:

The problem is that microfinance clients are self-selected and therefore not comparable to non-clients. Microfinance organizations also purposively chose some villages and not others. Difference in difference estimates can control for fixed differences between clients and non-clients, but it is likely that those who choose join MFIs would be on different trajectories even absent microfinance....[T]here is so far no consensus among academics on the impact of microcredit.

Such doubts allow us to appreciate the need for a more scientific approach. One can hardly deny the need for more science and perhaps it is even possible to obtain it. But the execution of this good intention by such recognized experts is such that it raises questions about the validity of the science in this context:

Given the complexity of this identification problem, the ideal experiment to estimate the effect of microcredit appears to be to randomly assign microcredit to some areas, and not some others, and compare outcomes in both sets of areas: randomization would ensure that the only difference between residents of these areas is the greater ease of access to microcredit in the treatment area. (p. 2)

The specific application of a RCT is made to an area of India in Hyderabad and the lead MFI in question is called Spandana. However, there are two critical facts about Spandana noted by the authors but left without comment:

Groups are formed by women themselves, not by Spandana.

Spandana does not determine loan eligibility by the expected productivity of the investment....Also, Spandana does not insist on transformation in the household (unlike Grameen). Spandana is primarily a lending organization, not directly involved in business training, financial literacy promotion, etc. (p. 4)

In other words, Spandana neither takes steps to encourage economic efficiency nor does it attempt to transform the impoverished individual's habits or culture. A priori, we should then have no expectation of either economic gains or of intertemporal benefits. What then are we measuring?

The study designers then apply MF to entire communities that were "randomly selected to receive Spandana branches" (p. 7). Randomization of treatments over otherwise homogeneous entities can be expected to give us information. Why entire communities should be considered thus homogeneous is not at all clear. If it is because variables like income, age structure, location and so on have been "neutralized," why can we not "homogenize" with exactly these variables in a standard econometric exercise? It is as though we took a cross section of all poor countries and randomly gave them foreign aid, and then evaluated the results as a scientific.

The authors identify only one direct mode for the impact of MF—the provision of the fixed cost for starting a business:

The need to purchase assets and working capital constitutes a fixed cost of starting a business, and one impact of microfinance may be that it enables households who would not or could not pay this fixed cost without borrowing, to become entrepreneurs....In the case of 30% of Spandana loans the reported purpose was starting a new business; 22% were supposed to be used to buy stock for existing business, 30% to repay an existing loan, 15% to buy a durable for household use, and 15% to smooth household consumption. (p. 8, order of quotes reversed)

Would it not have been easy to actually find out how real these fixed costs are? If the assets in question are readily resalable, they are fixed costs but not sunk costs, so are they very much of an impediment? Informal lenders, family or friends, could take collateral stake and lower the size of the lump. Note that only 30% of the sample are starting a new business, supposedly the primary goal of MF in the model. But why even expect that the empirical results will be notable when the effects in question are expected only from 30% of the treated individuals?

The conclusions reached are therefore quite to be expected:

While microcredit succeeds in affecting household expenditure and creating and expanding businesses, it appears to have no discernible effect on education, health, or women's empowerment. (p. 21)

The authors give little space to the fact that businesses were able to expand, presumably the rationale for a loan. Since Spandana is a "credit only" MFI, the second set of results about education, health, or women's decision-making is even more to be expected. The real surprise is the readiness of the authors to draw a conclusion from such a study:

Microcredit therefore may not be the "miracle" that is sometimes claimed on its behalf, but it does allow households to borrow, invest, and create and expand businesses.

The most important question—the expected productivity of the loan—has not been asked. The randomization is over a complex entity and so the value of randomization is largely negated. And conclusions are "tested" for areas such as health, which are irrelevant to the MFI. This weak output raises serious questions about the applicability of the method in this context.

Conclusion

The application of RCTs to gauge the effectiveness of microfinance is clearly on the wrong track. True, MFI members are self-selected. They are likely to be more entrepreneurial and disciplined than the general

population. Critics are therefore correct in noting that just because this self-selected sample can rise out of poverty through MF, it does not mean that the entire village population can do so.

However, we do not need RCTs to tell us that. All that is required is the greater a priori clarity that comes from viewing microfinance the way it should be, simply as a form of finance. The question that needs to be asked is not whether everybody can benefit from microfinance. Rather, it is what does the ex ante and ex post rates of return tell us when compared with the rates of interest people are asked to pay? Why this has not been done emphatically and as the first order of business is a real puzzle.²⁴ As a result, a fog has descended upon the subject. The fuzzy vision encouraged by this fog has allowed a vague skepticism to prevail, as though the burden of proof lay with microfinance, rather than the other way around.²⁵

The deference to RCTs as the only worthwhile test is visible in the recent review/evaluation of microfinance by UKAid.²⁶ Such a climate may well have contributed to the removal of Dr. Yunus from the control of Grameen Bank and raised the dismal possibility of Grameen being turned into a government organization. Even if the Government of Bangladesh can find bureaucrats with the competence to run Grameen successfully, do such efficient bureaucrats not have better things to do?

To put it simply, microfinance works because finance works. There

²⁴ Two ways to clarify the issue, not decisively but suggestively, are an ABM model and a CGE model. An initial attempt at ABM modeling is in Rashid, Yoon and Kashem (2011), but a proper CGE model awaits.

²⁵ Osmani (2014) provides a careful analytical review of the literature on measurable impact and comes to the conclusion that 1 in 10 do escape poverty. While this is below the claims of some MF enthusiasts, it is quite respectable. I should note that my claim is different, being based directly on profit rates. If this does not translate into benefits, it is not the program that is to blame.

²⁶ Duvendack et al. (2011). The deference to RCT is also visible in a 2011 issue of *World Development* (volume 39, number 6).

are some 70,000 villages in rural Bangladesh. Let us conservatively suppose that some 10 families self-select themselves into MFIs and rise out of poverty in every village. This makes 700,000 families or about 3.5 million individuals who escape penury. No government resources are used to attain this; of late, the figures suggest that no donor funds are needed either. So it is a sustainable anti-poverty program. Are we to raise our eyebrows because it has self-selection bias?

Economists who comment on practical policy issues automatically acquire a responsibility. Given that some thirty million people in Bangladesh alone rely upon microfinance, one would hope that comments and evaluations of MF in Bangladesh would display both caution and moderation. When the livelihoods of many millions are at stake, and if the data are unavailable or inadequate for speaking with clarity, it is best to go back to first principles to decide on our actions.

Table 1.

Potential small business enterprises

Enterprise Type	Capital (Tk)	Profit/Year (Tk)	Profit Rate / Year (%)	People Needed
Advertising	100000	840000	840.00	5
Boutique/embroidery shop	69393	156900	226.10	4
Bags	48333	132000	273.11	3
Bamboo	60000	642000	1070.00	4
Beauty parlor	51666	123996	240.00	3
Brick/sand	60000	111996	186.66	3
Halim & Chotpoti	80000	192000	240.00	2
Buying machine to juice sugarcane	20000	84000	420.00	2
Buying rickshaw to rent	32257	123564	383.06	2
Buying pushcart	17500	60000	342.86	1
Buying van	15000	37500	250.00	1
CD/VCD shop	58750	108000	183.83	1
Candle factory	100000	180000	180.00	4
Cattle	38600	102600	265.80	3

Churi	30000	36000	120.00	2
Cloth/shari	48338	107556	222.51	2
Contract bidding	100000	60000	60.00	N/A
Cosmetics	85000	156000	183.53	2
Dairy farm	61428	82284	133.95	4
Eggs	40000	120000	300.00	3
Electric shop	70500	159600	226.38	2
Fish selling	62105	167520	269.74	1
Flexi load	50000	60000	120.00	1
Flowers	50000	120000	240.00	1
Fruits	47000	164700	350.43	1
Furniture shop	66250	162000	244.53	3
Garments	62500	225000	360.00	N/A
General store	55250	139992	253.38	3
Generators	60000	60000	100.00	2
Gold refiner shop	60000	96000	160.00	3
Grocery shop	62710	129396	206.34	1
Hen selling	37500	114000	304.00	2
Hotel	62678	169332	270.16	5
Ice	50000	72000	144.00	4
Investment in transport	72580	157152	216.52	2
Rod/iron/tin shop	67500	150000	222.22	2
Jewelry shop	100000	240000	240.00	3
Jharu	25000	144000	576.00	2
Juice factory	100000	300000	300.00	N/A
Karchupi	50000	60000	120.00	2
Land (broker)	55555	73884	132.99	1
Land lease	51153	105228	205.71	1
Laundry shop	100000	144000	144.00	2
Leather	50000	480000	960.00	5
Library shop	50000	60000	120.00	2
Mushrooms	50000	60000	120.00	1
Meals	44000	100800	229.09	2
Meat	65833	174000	264.31	1
Motor parts	73333	169992	231.81	2

Nursery	10000	840000	8400.00	3
Oven factory	100000	240000	240.00	5
Pan/biri	37500	105000	280.00	1
Paper	75000	96000	128.00	1
Pharmacy	42500	90000	211.76	2
Phone/fax	68333	127332	186.34	1
Pitha	40000	72000	180.00	1
Plastics	64000	134400	210.00	2
Poultry farm	69411	132000	190.17	5
Raw materials	45400	91392	201.30	2
Rice selling	61818	171264	277.05	2
Rickshaw garage	65357	169704	259.66	4
Rickshaw renting	40484	150072	370.69	2
Saloon	48333	64992	134.47	2
Scrap material	73333	171996	234.54	1
Shoe shop	83333	159996	192.00	2
Tailoring shop	54285	132684	244.42	2
Tea stall	36038	89304	247.81	1
Tiler khaza	20000	60000	300.00	1
Vegetables	45714	142284	311.25	1
Want to go abroad	51100	126660	247.87	N/A
Wood	50500	299100	592.28	3
Workshop	52500	99996	190.47	N/A

Note. Compiled by the author from data collected as part of a study for the Institute of Microfinance (Rashid & Bashir 2010). All values are averages of estimates.

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