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Credit, Microfinance and Empowerment

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Abstract

Notwithstanding the mixed evidence, microfinance reduces poverty, vulnerability to health shocks and hastens recovery after a natural disaster. There are heterogeneous impacts in terms of women's empowerment across households that vary with gender defined social norms. Group lending attempts to overcome the dual problem of missing collateral and lack of intermediary capital. However, in recent years, there has been a shift towards individual lending contracts, in part a response to client complaints that group lending creates excessive peer pressure within groups. Shift of the focus to financial sustainability raises serious concerns about dilution of the outreach of microfinance (i.e. the number (breadth) and socioeconomic level (depth) of the clients served by MFIs). That the trade-off exists is undeniable but little is known about its extent. However, retaining a non-profit charter signals commitments not to divert donated resources for personal gain. This may also help attract outside capital donations and prevent mission drift. Use of existing social networks between current and new microfinance clients may help reach out to the poor at a considerably lower cost than when such networks are not used. In sum, while the magic of microfinance has eroded with financial sustainability overriding social goals, there are ample grounds for optimism about resolving this trade-off.

Key words: Microfinance, poverty, vulnerability, empowerment, group lending, financial sustainability, mission drift, social networks.

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Objectives

Recent evidence has raised deep questions about targeting of microcredit, viability of group lending, whether microcredit promotes resilience against vulnerability to natural and market shocks, microinsurance, trade-offs between outreach and sustainability, commercialisation of microcredit, and the regulatory role of the state in promoting the pro-poor agenda of microfinance. Our study addresses these questions drawing selectively upon a substantial body of recent empirical evidence. Careful attention will be given to lessons for investors/donors, governments, and microfinance institutions that follow from our review. The present study is largely a synthesis but an optimistic one.

Scheme

Section 1 will give a brief but focused exposition of credit market failures that impede access of the poor and livelihood expansion. An attempt will then be made to elaborate how these credit market failures are sought to be overcome through microcredit/microfinance¹. Section 2 identifies key issues that recent evidence has thrown up raising doubts about expansion of microcredit and its pro-poor focus. Of particular importance is the commercialisation of microcredit and alleged “mission drift”. In Section 3, we offer a distillation of vast empirical evidence on the impact of microfinance that has accumulated but with divergent findings. While an attempt will be made to resolve some of these divergences, definitive conclusions in a few cases must await more detailed investigations. Section 4 concludes with observations from a broad policy perspective with an emphasis on lessons for various stakeholders.

1. Credit Market Failures

(a) Identification

In an important contribution, Besley (1994) examines the view that credit market interventions should be restricted to cases where a market failure has been identified, given reports of financial repression. A case in point is government regulations to hold interest rates on loans below market clearing levels. Without a market clearing mechanism, savings and credit are misallocated. Many of these policies were not consistent with helping the poor. The default rates were high, and much of the benefits of credit subsidies accrued to the wealthier farmers.

A market failure occurs when a competitive market fails to achieve an efficient allocation of credit. Loans are traded competitively and the interest rate is determined by supply and demand. A Pareto efficient outcome for credit is when the loans cannot be reallocated to make one individual better off without making another worse off. Failure to repay a loan either because of a contingency or unwillingness to pay require a legal enforcement framework. But if the costs of enforcement are high, a lender may cease to lend. Another difficulty is informational imperfections. Willingness to lend depends on the reliability of the borrower and on the likelihood of the borrower using the funds wisely. Absence of such information is an impediment to lending to some.

¹ Microcredit (unsecured small loans) has evolved into microfinance that also includes microsaving and basic forms of insurance and transfer mechanisms (Conning and Morduch, 2011).

As monitoring is not costless and enforcement and information are far from perfect, a constrained Pareto efficiency criterion is invoked. This allows for the full set of feasibility constraints. So a market failure occurs when the credit allocation is not constrained Pareto efficient. Markets also operate inefficiently when there are externalities.

Three features of rural credit markets are salient.

- (a) Collateral that could be seized if the borrower defaults is typically scarce in rural areas. The borrowers are too poor to have assets that could be collateralised. This difficulty is exacerbated by the absence of well-defined property rights that come in the way of appropriating collateral in the event of a default.
- (b) Lack of literacy, and weak communications tend to make formal bank arrangements costly for many individuals. Absence of complementary markets such as insurance markets compounds the repayment problems. If individuals could insure against income volatility, the default may be less of a problem.
- (c) A related but distinct feature is that agriculture on which large segments of the rural population still depend for their livelihood is prone to weather shocks, and volatility of market prices that affect whole regions. Such shocks result in large-scale defaults. This problem is exacerbated if large groups withdraw their savings at the same time. If lenders' loan portfolios were more diversified, the severity of these risks would be considerably lower. In fact, however, rural credit markets tend to be *segmented* in the sense that a lender's portfolio is concentrated on a group of borrowers that face a common income shock—either because they are concentrated in one geographic region, or because they produce a particular crop, or because they belong to a particular kinship group. Segmented credit markets depend on informal credit, such as local money lenders, friends and relatives, rotating credit and savings associations that use local information and enforcement mechanisms. As a result of segmentation, funds fail to flow across regions or groups of individuals despite potential gains from doing so, as credit needs differ across locations. For example, a drought may require credit to diversify livelihoods. Deposit retention schemes that require a percentage of deposits to be reinvested in the same region further exacerbate the segmentation. Optimal financial intermediation involves a trade-off: while local lenders have better information and may be more accountable to their depositors than large, national lenders, the latter have better access to more diversified portfolios.

(b) Stylised Facts

A recent study (Banerjee and Duflo, 2010) summarises empirical evidence on credit markets in developing countries. Salient facts comprise: (i) few people have access to formal credit and rely largely on informal credit. A survey of 13 developing countries revealed that, with the exception of Indonesia, no more than 6 per cent of the funds borrowed by the poor came from a formal source. The vast majority of the remaining was supplied by money lenders, friends or merchants. (ii) Lending rates are often considerably higher than deposit rates within the same local area. Gaps ranging between 30-60 percentage points (deposit rates of 10-20 per cent and lending rates of 40-80 per cent) are common. (iii) Lending rates vary widely within the same credit markets. Differences of 50 percentage points or more between

rates charged to different borrowers within the same area are normal. (iv) Richer people borrow more and pay lower interest rates than the poor. (v) Defaults are relatively rare.

Fixed costs of administering a loan explain why interest rates for small loans are so high, why they vary between borrowers, and why the poor pay higher interest rates. As those with little wealth get small loans, the fixed administrative cost has to be covered by the interest amount, pushing up the interest rate. But high interest rates make it harder to repay. Consequently, total lending shrinks further and this pushes up interest rates more until the loan amount is small enough and the interest rate high enough to cover the fixed cost for even a small borrower. Thus small differences in the borrower's wealth, or in the cost of monitoring of the borrower, lead to large interest rate differences.

2. Innovative Features of Microcredit

Microfinance programmes were devised to mitigate credit market failures in developing countries. As noted already, the poor do not have access to formal financial institutions because they lack collateral and are forced to rely on local money lenders who charge exorbitant rates of interest. Microfinance aims to overcome these difficulties. The premise is that by using innovative new contracts, microlenders can both make profits and serve the poor.

Group lending not only reduces transaction costs of small loans but also ensures high repayment rates. Should a borrower fail to repay a loan, the entire group suffers because of joint liability. If groups are formed voluntarily, *assortative* matching of safe and risky borrowers reduces adverse selection inefficiencies. Group lending could also mitigate *ex ante* moral hazard problems. The group members have incentives to monitor each other and impose 'social sanctions' when risky projects are chosen (de Aghion and Morduch, 2005)². However, as noted by Banerjee and Duflo (2010), group liability may also impose a cost. The incentive for group participants is to reduce the risk taken by their fellow members, since participants do not benefit from the upside of any risky investment, but are liable for the downside. As a result, members of a group may impose excessive risk aversion. Under certain conditions, however, borrowers may also take greater business risks when under a group liability than under individual liability loans

An additional innovation is 'progressive lending'. Each borrower gets a small initial loan payable in a year in weekly instalments. Upon satisfactory repayment, the loan size increases. It allows the lender to screen the borrowers while the opportunity cost of nonrepayment rises as nonrepayment could terminate a growing stream of future loans. However, when there is more than one microlender, threats to cut-off future loans lack credibility. Moreover, as loan size increases, defaults become more attractive if the relationship between the microlender and the borrower has a clear final date.

Another innovation is flexibility in the type of collateral. This has the potential of reaching a wider clientele. A case in point is the use of livestock, land and working tools in rural Albania. One difficulty, however, is that it still require some form of collateral that could undermine efforts of microlenders to reach the poorest. But it has worked in the case of those

² For a more nuanced view on the latter, see Banerjee and Duflo (2010).

just below and above the poverty line, a target group of Bank Rakyat Indonesia - a leading for-profit lender.

This raises the important question of how to target a group which is both reliable and poor. This takes us to the next innovation of focusing on female clients. A recent estimate is women make up 80 per cent of the clients of the world's largest 34 microlenders (de Aghion and Morduch, 2005). There are two reasons for targeting women: one is *financial* and the other is *social*. As women are more conservative in undertaking investment strategies and more vulnerable to the shame of noncompliance, their repayment rates are higher than those of men. Khandker et al. (1995), for instance, found that in Bangladesh 15 per cent of male borrowers had missed payment as against just 1 per cent of female borrowers. Such stark differences are reported by others for Malawi and Malaysia (Hulme, 1991, and Gibbons and Kasim, 1991, respectively). However, it is not enough to know that women on *average* are better clients.

This brings us to the social objective. Evidence has accumulated confirming that women are among the poorest of the poor, and that money in their hands is better spent on children's health and education. Microlenders in Latin America have thus focused on empowerment of women and spreading of knowledge on good health, nutrition and hygiene.

A fourth innovation of microfinance relates to the emphasis on savings. Recent evidence shows that even poor households are keen to save and do so but through imperfect informal means (e.g. sewing notes into one's clothing or hiding it in the house). These means are costly and provide no hedge against inflation or limited security. Many microfinance institutions (including the Grameen Bank) thus started encouraging saving facilities. Consequently, saving facilities in tandem with lending further enhanced the lenders' financial self-sustainability (de Aghion and Morduch, 2005). However, Banerjee and Duflo (2010) are somewhat sceptical. They argue that, if microcredit is understood as a form of commitment to save, this is not the only way-perhaps not even the best way-to offer a commitment for saving, as saving in a more direct form, rather than repaying a loan, involves receiving interest rates rather than paying it³.

There are signs of a shift from *compulsory* to *voluntary* deposits. An important concern is that institutions which take deposits need greater regulation than those which only lend. However, regulatory practices could stifle growth of microfinance as they are often much too demanding and onerous. More on this later.

3. Impact

(a) Poverty, Vulnerability and Empowerment

Much of the recent evidence is based on randomised control trials and some that rely on conventional econometric methods (e.g. difference-in-difference estimators to overcome the

³ Dupas and Robinson (2009), for example, report that micro-business owners with access to a savings account, a form of commitment savings product, recorded higher business investment, a reduced sensitivity to shocks, and higher per capita expenditure.

selection bias). The findings are unavoidably mixed because of the use of different methodologies and data sets. A distillation is given below, based on a few important contributions. As noted earlier, we will examine a wide range of effects on poverty, women's empowerment, vulnerability to health shocks, short and long term welfare effects, interest rates charged by local money lenders, commercialisation of microfinance, trade-offs between sustainability and outreach, and credit subsidy.

Access to finance has several *potential* benefits that reduce poverty. These include (i) long lasting increases in income through higher investments in income generating activities, and a more diversified livelihood; (ii) asset accumulation and consumption smoothing; (iii) reduction of vulnerability to illness, droughts, floods; (iv) empowerment of women through expansion of economic opportunities and enhancement of social status; and, (v) finally, through spillover effects that extend beyond the borrowers (Hermes and Lensink, 2011). The important question is whether these claims are supported by empirical evidence.

The evidence on the impact of microfinance on poverty is mixed. In important contributions, Pitt and Khandker (1998), and Khandker (2005) report two major findings for Bangladesh: (i) microfinance increases consumption expenditure, especially if loans are taken by women; the extremely poor benefit more from microfinance than moderately poor⁴. Roodman and Morduch (2009), however, reject these findings on the grounds that the instrumentation strategy is inappropriate and important explanatory variables are omitted. Copestake et al. (2005) are also not optimistic about the impact of microfinance. Based on a survey carried out in Peru and a mix of methods (difference-in-difference and in-depth interviews), they find that it is the 'better-off' rather than the core poor who benefit most from microfinance.

Imai et al. (2010) examine whether household access to microfinance reduces poverty, using a multidimensional welfare indicator⁵. Using national household data from India, the treatment effects model is employed to estimate the poverty-reducing effects of microcredit for productive purposes, such as investment in agriculture or non-farm businesses. This models take into account the endogenous binary treatment effects and sample selection bias associated with access to MFIs. Despite some limitations, such as those arising from potential unobservable important determinants of access to MFIs, significant positive effect of MFI productive loans on the multidimensional welfare indicator is confirmed. The significance of treatment "effects" coefficients is verified by both Tobit and Propensity Score Matching models. In addition, it is found that loans for productive purposes were more important for poverty reduction in rural than in urban areas. However in urban areas, simple access to MFIs has larger average poverty-reducing effects than access to loans from MFIs for productive purposes.

A recent study (Li et al. 2011) evaluates the impact of microcredit in rural China on a few welfare indicators (e.g. income, consumption). This is particularly important as there are few studies of microcredit's potential in reducing poverty in China. Data were collected by the authors through a household survey in Hubei province during November 2008 and January

⁴ The latter is based on a follow-up study based on panel data for 1991-92 and 1999.

⁵ Poverty is defined by the IBR (Index Based Ranking) Indicator that captures various aspects of well-being including landholdings, salaried income sources, livestock, transport assets, housing and sanitation facilities.

2009. To overcome the deficiency of the standard DD method, the authors evaluate the welfare impact using the adjusted DD strategy based on fixed effects regression⁶. In general, their analysis reveals that microcredit improves the household welfare such as income and consumption. In contrast to the results obtained using a binary measure of participation, the positive impact of a cumulative measure of borrowings is significant. However, the magnitude is small. The results also show that those who invest their micro loans in income generating activities (such as agriculture and self-employment) improve their livelihoods more. But the main beneficiaries are non-poor.

Driven by analytical rigour, there has been a surge in studies using randomised approaches to assess the impact of microfinance. But even these studies throw up mixed results. Among the pioneering contributions, Coleman (1999, 2006) uses a randomised approach that relies on an external event, that is, a microcredit program introducing microfinance in the Northeastern part of Thailand with random and unannounced delays. His analysis shows that microfinance has a positive impact on the more wealthy villagers only. Karlan and Zinman (2009) assess the impact of microfinance on small business investment in Manila (Philippines). Their two important findings include: (i) profits from business increase- especially for male and higher income entrepreneurs; and (ii) businesses substitute away from labour into education and formal insurance into informal insurance⁷. Banerjee et al. (2009) assess the impact of opening of MFI branches in the slums of Hyderabad (India). Their results are mixed, but on the whole the welfare effects of microcredit are *moderate*.

But this methodology is not without its critics. Deaton (2009), for example, is emphatic that the results are not generalizable. It is also unclear how many times an experiment has to be repeated before a robust conclusion could be drawn for policy purposes. A related concern is that this methodology cannot be used in a macro setting except in a narrow range of circumstances (e.g. natural experiment)⁸. So, if the experiences across countries are to be assessed, as Imai et al. (2012) do, standard econometric approaches are unavoidable. Indeed, there is a strong case for using both randomised and non-randomised approaches, as emphatically argued by Roodman and Morduch (2009).

A recent assessment (Pellegrina, 2011) is innovative in two respects: (i) she assesses the impact of microfinance relative to the impact of bank loans and informal credit. (ii) She focuses on the impact of credit on investment on the grounds that through investment higher living standards are feasible in the long run. Her analysis is based on a large survey in Bangladesh in 1991-92. Her results show that microfinance is less effective than bank loans in terms of long-term investments. She attributes this to short and regular repayment schedules and the group lending method. The borrowers are thus pushed toward projects with short-term revenues.

Becchetti and Castriota (2011) examine the effects of microfinance in helping people in Sri Lanka who were hit by the Tsunami in 2004. It is a quasi- natural experiment as it creates two groups: those who were hit by the Tsunami and others who were not. Before the Tsunami,

⁶ For methodological details, see Li et al. (2011).

⁷ For a thorough but somewhat critical appraisal, see Morduch (2011).

⁸ For a cogent critique, see Ravallion (2005).

access to microfinance was an important reason for income convergence among the borrowers. But this convergence process was disrupted by this natural disaster. However, microfinance loans after the Tsunami helped in reducing the income gap between those who were hit by it and others who were not. What is indeed striking is that this process of recovery was fast. There is thus strong evidence for the effectiveness of microfinance as a recovery tool.

Health shocks are frequent and pervasive in developing countries. Although there is a voluminous literature on how these translate into changes in consumption or income, the evidence is mixed. There is a consensus, however, that the impact of health shocks depends crucially on the ability of the households to insure against such shocks, which in turn is related to health and access to financial markets. Thus financial institutions have a key insurance function but it is undermined by the general weakness of such institutions and their inability to serve the poor. Islam and Maitra (2012) carry out an insightful analysis of the role of microcredit in Bangladesh in performing an insurance function, using four rounds of a panel data set. This analysis presumes that health shocks are *unpredictable* and *idiosyncratic* in nature. Using a variety of models, they offer insightful findings. Their results show that households that have borrowed from microcredit organisations are better able to cope with health shocks. The main instrument of insurance used is trading in livestock. Households that have access to microcredit do not have to use this instrument, to the extent households without access to microcredit need to, in order to insure consumption against health shocks⁹. As elaborated, there are two ways in which microcredit is potentially useful. In the short-run, it helps insure consumption. In the long-run, the change in the value of livestock in response to health shocks is lower for households with access to microcredit, and thus insurance does not come at the expense of productive efficiency. The latter has not received the critical attention it deserves.

Does access to microcredit enhance women's role in intra-household decision making? Does more cash in women's hands alter allocation of goods and services within households? Using an innovative bargaining model with a few simulations anchored to Kabeer's (1998, 2001) empirical findings for Bangladesh, Ngo and Wahhaj (2008) throw new light on key conditions that explain heterogeneity of impacts across households. The analysis is premised on an environment in which gender roles are defined by social norms.

They demonstrate that access to credit may not improve a woman's decision-making authority within the household if she has limited skills for an autonomous productive activity; or, even when she has skills to do so but the husband finds it in his strategic interest to appropriate the loan to maintain his own bargaining power. By contrast, in households where capital can be invested in a joint productive activity, such an investment will shift decision-

⁹ In an interesting study, Munshi and Rosenzweig (2009) show using a panel data set for India that nearly one-quarter of the households in the sample participated in the insurance arrangement each year prior to the survey round, giving or receiving transfers (gifts and loans). Although loans account for just 20 per cent of all within-caste transactions by value, they are more important than bank loans or money lender loans in smoothing consumption and in dealing with contingencies such as illness and marriage. Indeed, they go on to argue that such within-caste loans are actually more important than microcredit. But the context matters. In Bangladesh, Islam and Maitra (2012) point out, the credit institutional structure differs, in particular, microcredit is more common.

making authority in favour of the spouse who is initially in a weaker bargaining position. Hence *cooperation* and *jointness* of decision-making may be more desirable for women than autonomous control over resources. This perspective offers new insights into the empowering potential of microfinance programmes. Specifically, contrary to a dominant view, if new economic opportunities lie outside the traditional realm of the female spouse and exit options for women are severely limited, then she may be better-off ignoring them to preserve her social ties within the community¹⁰.

An interesting contribution focusing on women's empowerment but with a somewhat narrow focus is Rai and Ravi (2011). They use a unique data set consisting of 280,000 microfinance borrowers in India. These borrowers are required to purchase health insurance once they get a loan. The main finding is that borrowers make considerably more use of health insurance (in terms of filing their claims) than their partners do. Moreover, and more importantly, women who are borrowers make significantly more use of health insurance than non-borrowing women who have obtained the insurance through their spouses. Thus there is support for the view that microfinance empowers women.

Much of impact assessment of microcredit is confined to short-term impacts. The distinction between short and long-term impacts is important as short-term impacts differ from long term ones. In the short-term, for example, some households may cut back on consumption to finance investment in the hope of becoming richer in the long-term. Islam (2011) fills this gap by distinguishing between short-term participation, and medium and long-term participation effects in a microcredit programme in Bangladesh. Four rounds of a survey were conducted by Bangladesh Institute of development Studies and Palli Karma-Sahayak Foundation (PKSF) covering the years 1997-98, 1998-99, 1999-2000, and 2004-05. The first, third and fourth rounds of the survey were used as the second fell short on outcome data. A mix of methods is employed but mainly difference-in-difference-in-difference (DDD) estimator. The DDD estimates reported here are for two categories of newcomers-newcomers 1 including those who joined the programme in 1999 and continued in 2004-05; and newcomers 2 comprising households that joined after 2001¹¹.

The results show that *continuing* participants gain in all outcome measures, and the treated-untreated differentials are larger for these households. This suggests that long-term participation in microcredit can help households significantly more than short-term participation. Moreover, the gains accrue even after the participation period but it is difficult to generalise for how long. The estimated treatment effects are lower when leavers are included in the treatment groups.

¹⁰ Kulkarni (2011) develops the argument that women's empowerment needs to occur in multiple dimensions: economic, sociocultural, familial/interpersonal, legal, political and psychological. These dimensions cover a broad range of factors, and thus women may be empowered within one of these subdomains. For instance, the sociocultural dimension covers a range of empowerment subdomains, such as marriage systems, norms regarding women's physical mobility, non-familial social support systems and networks available to women.

¹¹ In fact, five groups are considered: apart from two groups of newcomers, there are leavers 1 who were old clients but dropped out after 1998, leavers 2 who participated until 2001 and then dropped out, and, finally, drifters comprising occasional clients.

The principal conclusion is that the exit from poverty in Bangladesh requires longer-term participation. Household entrepreneurs require time to achieve productive efficiency or to earn higher returns from self-employment activities. Since existing members of microcredit generally obtain larger amounts, MFIs should be encouraged to offer larger loans sooner rather than later. Although results for leavers are subject to small sample problem, it is interesting to note that they leave (about 60 per cent) because they cannot cope with the frequency of loan repayment and the obligation to attend weekly meetings.

Most of the recent studies of the impact of microfinance on poverty or income have relied on micro-level evidence based on household data or entrepreneurial data, as summarised above. Due to the scarcity of reliable macro data on microfinance, macro-level studies of the impact of microfinance on poverty are rather limited. However, there are a few recent works that investigate the relationship between the macro economy and microfinance activities and/or performance, such as Ahlin, Lin, and Maio (2011), Ahlin and Lin (2006) and Kai and Hamori (2009), among others. The thrust of these studies is either to examine the environmental context in which microfinance operates, or investigate the potential effect of microfinance on key macroeconomic variables, such as gross domestic product or inequality.

Imai et al. (2012) build on this literature using cross-country data on 48 countries for 2007, and a panel data set on 61 countries for 2003 and 2007, constructed by combining MIX and World Development Indicators (World Bank, 2011). It analyses the role of microfinance—volume/scale of activities (not performance/quality)—on Foster-Greer-Thorbecke (FGT) class of poverty indices.

With a view to measuring microfinance activities in a country, we rely mainly on Gross Loan Portfolio (GLP) (divided by the total population) given that it measures actual funds disbursed to households. Total GLP of MFIs aggregated for each country is adjusted for write-offs and inflation. This is a benchmark indicator generated by MIX. Standardization of raw data facilitates meaningful comparison of benchmark indicators (MIE, 2010). Other variables in the poverty equation include gross domestic product per capita, domestic credit as a share of GDP, and regional dummies. While a robust inverse relationship between poverty and GDP per capita is confirmed in extant literature, share of domestic credit in GDP has a more complex role partly because financial development is both a cause and result of growth. It is, however, plausible that when financial development is low there may be a mutually reinforcing relationship between financial development and microfinance. Finally, as poverty is conditioned on many unobservable regional characteristics (e.g., vulnerability to natural shocks), regional dummies are used¹². Broadly, the results imply that GLP per capita of MFIs benefits not just the poor but also the poorest. In other words, gross loan portfolio per capita of MFIs is negatively associated with the incidence, depth, and severity of poverty (the FGT class of poverty indices)¹³. Other factors that contribute to poverty reduction

¹² The methods of estimation used include OLS, IV, fixed effects and random effects. For details, see Imai et al. (2012).

¹³ A question central to these results is: how does poverty reduction occur when targeting of microcredit on the poor and poorest is generally so weak. As pointed out earlier, there are important spillover effects of microcredit (e.g. secondary employment and income generation of microcredit projects). The reduced form specifications employed capture the totality of effects on poverty.

include GDP per capita and share of credit in GDP (as a measure of financial development of an economy). Besides, there are significant regional effects. The simulations point to worsening of poverty in a mild recession scenario with small reductions in gross loan portfolio per capita, GDP per capita, and share of credit in GDP. These simulations are helpful in adding precision to anecdotal evidence about how setbacks to MFIs hurt the poor. Indeed, sustained flows to MFIs may help avert to some extent accentuation of poverty as a consequence of the slow and faltering recovery of the global economy.

(b) Microfinance and Money Lender Interest Rate

The effects of the expansion of microcredit on the informal credit market are largely neglected *despite* the fact that the latter figures prominently in the development discourse. Recent research suggests that the response of interest rates in the informal sector to the expansion of formal credit depends on the characteristics of both sectors, such as the market structure in the informal sector as well as the repayment schedules of the formal sector. Hoff and Stiglitz (1993) show that if some borrowers can satisfy all their borrowing needs from the formal sector at lower interest rates, there will be less demand for informal credit. Under perfect competition and information, this will dampen interest rates. But in a monopolistically competitive market with free entry and one money lender as an imperfect substitute for another, a subsidy in the formal credit market may cause interest rates to rise in the informal sector because the induced new entry drives up the marginal enforcement cost of lending in the latter. Jain and Mansuri (2003), by contrast, focus on the ‘crowding in’ effect of microfinance on informal lenders. Under certain conditions, this crowding in effect may raise the interest rate in the informal sector.

Based on data collected in 2002 from 156 villages in three districts in northern Bangladesh, a regression analysis was carried out of the determinants of the annual average money lender interest rates. The determinants comprised MFI coverage (percentage of households borrowing from MFIs) in a village, and a set of control variables¹⁴. The main finding is: greater coverage of MFI programmes increases moneylender rates in the villages in which more loans are invested in productive economic activities. If the overall demand for funds rises (as indicated by higher percentage of households borrowing from MFIs), and if loans are inadequate or the repayment schedule is, borrowers will turn to local moneylenders pushing up their interest rates. Borrowers can make more productive investments if MFIs meet their demands for loans by allowing more flexibility in loan disbursement and repayment schedules. A useful insight is that the presence of local moneylenders may even be beneficial, if increasing competition between formal and informal lenders increases borrowers’ access to funds at competitive interest rates (Mallick, 2011).

(c) Sustainability versus Outreach

Following Hermes and Lensink (2011), the debate is between financial sustainability of MFIs and poverty reduction. Those who advocate financial sustainability claim that empirical evidence neither shows that the poor cannot afford higher interest rates, nor that there is a

¹⁴ For details of correction for endogeneity, see Mallick (2011).

negative correlation between financial sustainability and poverty reduction. Their contention is that large-scale outreach to the poor on a long term basis cannot be guaranteed if MFIs are not financially sustainable. In line with this concern, donors, policy makers, and other financiers of microfinance have shifted from subsidising MFIs towards financial sustainability and efficiency of these institutions. This is due to several factors: greater competition among MFIs, the commercialisation of microfinance (involvement of banks and other investors), technological change in microfinance, and financial liberalisation and regulation measures of the government (Rhyne and Otero, 2006).

A few facts are helpful in understanding this shift. Barely 1-2 per cent of all MFIs in the world (some 150 organisations) are financially sustainable. Most of these are larger, mature and regulated and relatively well-known MFIs. About 8 per cent of all MFIs are close to being profitable. Both groups are commercial organisations. A third group (20 per cent of all MFIs) consist mostly of NGOs which are not yet sustainable but have the potential to be sustainable. The remaining (70 per cent of all MFIs) are relatively small, start-up organisations that are not sustainable and heavily dependent on subsidies (Hermes and Lensink, 2011).

Shifting the focus to financial sustainability, it is argued by many, raises serious concerns about dilution of the outreach of microfinance (i.e. the number (breadth) and socioeconomic level (depth) of the clients served by MFIs). The presumption is that there is a *large* trade-off between these two objectives.

Among the few rigorous studies of the trade-off, an important contribution is Cull et al. (2007). It examines financial performance and outreach, based on a large data set of 124 microfinance institutions in 49 countries. Their results show that MFIs providing mainly individual loans are more profitable, but the fraction of poor borrowers and of women in the loan portfolio is lower than in institutions that concentrate on group lending. Moreover, MFIs that provide individual loans increasingly focus on wealthier clients-often referred to as “mission drift”-while this is less so for the group- based MFIs. So an important policy implication is the importance of institutional design in reducing the trade-off.

Mission drift is measured differently in various studies. Serrano-Cinca and Gutierrez-Neto (2013) offer a comprehensive and detailed analysis. First, a composite measure of mission drift (MD) is constructed using three indicators: average loan size, percentage of loans to women, and percentage of loans to rural population, and relate the values for an MFI to the country average values. Using percentile ranks, a mission drift index is computed that ranges from 0 to 1. If a given MFI gets a 0.5 MD, it is in the average of the country. The most centred (on the mission of helping the poorest) MFI obtains a value close to 0 while the most drifted is nearer 1. A logistic regression yields the following results. MD is positively associated with the deposit to asset ratio, as also with total assets. By contrast, MD is negatively associated with donation to equity ratio, as also with yield on gross portfolio. A policy message is that sustainability is feasible without MD by reducing costs and gaining efficiency through innovative use of information and communication technology.

Another important contribution is Hermes et al. (2011). It offers new evidence on the trade-off, based on an analysis of data on 415 MFIs covering the period 1997-2007. Specifically, it

examines the relationship between cost efficiency of MFIs (sustainability) and the depth of outreach measured by the average loan balance and percentage of women borrowers¹⁵. They offer strong evidence that outreach is negatively related to efficiency of MFIs. Specifically, MFIs with lower loan balance are less efficient. Besides, MFIs that have more women borrowers are less efficient.

Whether prudential regulation and supervision affect the performance and outreach of MFIs is examined by Cull et al. (2011). This has become especially important as MFIs have begun collecting large deposits from the public—especially from relatively poor people. Their analysis is based on the largest 245 MFIs. The main findings are: supervision has a negative effect on outreach, as supervision is positively associated with the average loan balance, while it is negatively associated with percentage of women borrowers. Given the current emphasis on broadening of the capacity of MFIs through larger deposits, it is not self-evident that this approach is welfare enhancing.

Whether subsidies promote efficiency of MFIs is yet another important policy concern. Hudon and Traca (2011) address this concern, based on an analysis of financial data supplied by two rating agencies on 100 MFIs. They find evidence of a positive relationship between the subsidy intensity and the efficiency of MFIs. But there is a *threshold* effect implying that if the subsidy intensity rises above a certain level efficiency is compromised. So the policy message is important: subsidies promote efficiency but only up to a certain minimum level.

Whether networks help diffusion of microfinance is studied by Wydick et al. (2011). Recent research has documented that individuals imitate the choices made by other members of the same network for several reasons including similarity of the environment, conformity to the network, and information about what kind of behaviour is welfare-enhancing. Wydick et al. (2011) use data on 465 households from a survey in Guatemala. The empirical analysis shows that a household's access to credit is closely related to membership of a church network. A practical implication is that MFIs should utilise existing social networks in order to broaden and/or deepen the outreach of their microfinance services.

4. Concluding Observations

Instead of summarising the main findings, our focus is on lessons that follow from the rich and illuminating recent literature on microfinance. The observations are selective.

Although the evidence is mixed, in our judgment, apart from reducing the incidence, depth and severity of poverty, microfinance has an important role in recovery after a natural disaster. Moreover, given the frequency of health shocks, households that have borrowed from microcredit organisations are better able to cope with such shocks and avoid costlier adjustments (e.g. through sale of livestock).

On the premise that gender roles are defined by social norms, there will be heterogeneous impacts in terms of women's empowerment across households. Specifically, access to credit may not improve a woman's decision-making authority *within* the household if she has limited skills for an autonomous productive activity; or even when she has skills to do so but

¹⁵ The cost efficiency is measured using a stochastic frontier analysis. For details, see Hermes et al. (2011).

the husband appropriates the loan to maintain his own bargaining power. Investment in a joint productive activity, however, enhances a woman's bargaining power. Hence *cooperation* and *jointness* of decision-making may be more desirable for women than autonomous control over resources. From a somewhat narrow perspective, women who are borrowers make significantly more use of health insurance than non-borrowing women who have obtained the insurance through their spouses. Thus there is support for the view that microfinance empowers women.

Exit from poverty requires longer-term participation. Household entrepreneurs require time to achieve productive efficiency or to earn higher returns from self-employment activities. Since existing members of microcredit generally obtain larger amounts, MFIs should be encouraged to offer larger loans sooner rather than later but without diluting the focus on the poor.

An important lesson from impact studies is that the lending technology and the type of contract that MFIs use have important implications for the way borrowers use their loans. Using loan contracts with regular repayment, for example, discourages investments with longer gestation period. There is thus a case for more flexible lending technology and contracts.

Group lending attempts to overcome the dual problem of missing collateral and lack of intermediary capital. In a typical arrangement, a micro-lender forms small groups and loans are conditional on individuals sharing a degree of liability in each other's loans. Thus incentives are created for borrowers to become peer monitors of each other's loans. In other cases, members are not jointly liable but are denied future loans in the event a member defaults. However, in recent years, two pioneers of group lending, BancoSol of Bolivia and Grameen Bank of Bangladesh, have turned to individual lending contracts, removing joint liability clauses. The switches were in part a response to client complaints that group lending creates excessive peer pressure within groups; it also involves transaction costs and functioned poorly in heterogeneous groups. Borrowers also take greater business risks when under a group liability than under individual liability loans. Free-riding also gets worse as group size enlarges.

How credible is the threat that defaulters will be denied future loans? It is a credible threat when lenders are monopolists. But as markets thicken and borrowers have more options, there is always another lender to try in the absence of credit bureaus or enforceable liens. "Excessive competition" and "over-borrowing" through multiple loans were held responsible for the microfinance crises in Bolivia, Uganda, Bangladesh, Nicaragua, Bosnia and India. Credit bureaus with unique identification are an important part of the solution.

Shifting the focus to financial sustainability raises serious concerns about dilution of the outreach of microfinance (i.e. the number (breadth) and socioeconomic level (depth) of the clients served by MFIs). That the trade-off exists is undeniable but little is known about its extent. One interesting finding is that the trade-off is large for small loans. Since the early 1990s, transformation of the more successful microfinance NGOs into regulated for-profit investor owned firms has been underway. The rationale is that commercialisation would expand microfinance's ability to benefit from commercial capital markets, reduce dependence on donor capital and subsidies, and bring market discipline and business

efficiency to drive down costs. Regulatory considerations also matter in so far as institutions need to be shareholder corporations authorised to receive deposits. Does this transformation involve a higher priority for profits than welfare of clients? Analysis of leverage and social investment shows that, in some contexts, little leverage from commercial capital markets is likely when working in poorest communities. On the other hand, retaining a non-profit charter could signal commitments not to divert donated resources for personal gain. This may help attract outside capital donations and prevent mission drift.

Use of existing social networks between current and new microfinance clients may help reach out to the poor at a considerably lower cost than when such networks are not used. This would better enable MFIs to expand their outreach without compromising their financial sustainability.

In conclusion, while the magic of microfinance has eroded with financial sustainability overriding social goals, there are ample grounds for optimism about resolving this trade-off.

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