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CHAPTER

13 Can We Improve the Impact of Microfinance? A Survey of the Recent Literature and Potential Avenues for Success

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Abstract

By surveying the latest literature, this chapter aims to contribute to the recent discussion on the successes and failures of microfinance. We argue that the question "does microfinance work?" is neither important nor informative. What matters is knowing when, and in which conditions, microfinance works—and for whom. We claim that the answers to these questions depend on the details of the microcredit contract as well as on the range of services that microfinance institutions provide (including non-financial ones). We point at two important reasons why the impact of several microcredit programs is lower than expected: (1) the rigidness of credit contracts, and (2) the human capital of end-users. As reforming contract terms and building human capital via business training and technical assistance are costly, we argue that perhaps subsidies are needed. We focus on studies dealing with end-users, and pay specific attention to the evolving discussion on group lending and the role of joint liability to reduce asymmetric information problems and improve repayment rates. We also discuss the literature focusing on the recent shift of several microfinance institutions to individual lending, and the related trend toward commercialization of microfinance.

Keywords: commercialization, group lending and joint liability, human capital, impact, microfinance, subsidies

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13.1 Introduction

p. 405

p. 406

ABOUT a decade ago, one of the authors of this book chapter edited a special issue on microfinance for the *Economic Journal* (see Hermes and Lensink, 2007). At that time, microfinance was extremely popular. Between 1997 and 2007 the number of microfinance programs grew from 655 to 3352, and the amount of microfinance clients increased from 15.5 million to 155 million. In 2010, this number even increased to over 200 million (Reed, 2015), reflecting the idea that microcredit could play a crucial role in lifting poor people out of poverty. Indeed, if the poor are willing and able to pay high interest rates to informal moneylenders, then there may be scope for win-win solutions: increasing access to capital for the poorest while generating acceptable rates of return for capitalists. Such a market-based approach to development would be (financially) sustainable and "scalable" as it would not depend on charity or development assistance.

We are just ten years later now, and the positive picture of microfinance has changed considerably. Many heavily indebted farmers in the southern Indian state of Andhra Pradesh took their own life in 2010, and many of their unsustainable debts were attributed to aggressive microcredit campaigns. In addition, microfinance often fails to reach the target group featuring in the popular narrative—the poorest. Moreover, recent studies cast doubt on the idea that microcredit can substantially increase the income of poor people (Banerjee, 2013). Based on rigorous impact evaluations conducted in six $\, arphi$ countries, Banerjee, Karlan, and Zinman (2015) drew the disappointing conclusion that microcredit lacks "transformative effects," and will not help much to reduce poverty.

Indeed, some critics even take a more negative view. For example, Bateman (2010) argues, that microfinance may be an obstacle to economic growth and sustainable development. The reason is that neoliberal microfinance waves mainly resulted in the financing of unproductive micro enterprises, creating a flea market economy at the expense of the more productive small and medium-sized enterprise sector.

So where do we stand? In this chapter we survey the recent microfinance literature, and aim to contribute to the recent discussion on the successes and failures of microfinance. We will argue that the question "does microfinance work?" is neither important nor informative. What matters is knowing when and in which conditions microfinance works—and for whom. Based on the recent literature, we argue that the answers to these questions depend on the details of the microcredit contract as well as on the range of services that microfinance institutions (MFIs) provide (including non-financial ones). Traditionally, microfinance is mainly concerned with the provision of microcredit, typically provided under rigid contract conditions. However, many microfinance institutions provide a much broader set of financial services, including savings and insurance products. These services have received less criticism than microcredit. Moreover, MFIs provide non-financial products to enhance the human capital of the borrower, like business trainings and technical assistance. This is sometimes referred to as microfinance-plus activities. The complementarity between financial capital and human capital implies that such initiatives can be very effective.

In surveying the microfinance literature we are constrained by a shortage of space. The literature on microfinance is enormous, and it will be impossible to do justice to each and every study and author. However, the microfinance literature is surveyed in two recent books, Armendáriz and Morduch (2010) and Mahmud and Osmani (2017),¹ and in several recent survey articles, for example, Banerjee (2013), Chakravarty and Pylypiv (2017), and Cull and Morduch (2018).² We have, therefore, deliberately tried to focus on a limited part of the microfinance literature. Specifically, we focus more on studies dealing with end-users, and less on the broad microfinance literature focusing at 4 the MFI level. For the latter, we refer to Hermes and Hudon (2018), who provide an up to date and complete overview of the literature on the supply-side of microfinance by conducting a systematic review of studies that deal with the determinants of the financial and social performance of MFIs. Part of the MFI-level literature focuses on the question whether performance can be improved by other corporate governance systems. We will also not touch on

this burgeoning group of literature in our survey, but see, for example, Galema, Lensink, and Mersland (2012) for a survey.

The structure of the chapter is as follows. In section 13.2 we focus on the evolving discussion on group lending and the role of joint liability to reduce asymmetric information problems and improve repayment rates. Next, we will discuss the literature focusing on the recent shift of several MFIs to individual lending, and the related trend toward commercialization of microfinance (section 13.3), and in section 13.4, we will deal with different views and studies on the success of microfinance. Finally, we will point at two potentially important reasons why the impact of several microcredit programs is lower than expected: (1) the rigidness of credit contracts (section 13.5), and (2) the human capital of end-users (section 13.6). Reforming contract terms and building human capital via business training and technical assistance are costly, so perhaps subsidies are needed. We will close with a discussion on the potential importance of subsidies in section 13.7.

13.2 Group Lending With and Without Joint Liability

13.2.1 The Antecedents of Microfinance

p. 407

The establishment of the Grameen Bank in Bangladesh in 1983 is often seen as the formal start of the microfinance movement. However, microfinance already existed a long time before the Grameen Bank started its operations. Banerjee, Besley, and Guinnane (1994) refer to nineteenth-century credit cooperatives as early antecedents for microfinance. Others, like Rutherford (2009), point to informal rotating savings and credit associations (ROSCAS) as the main root of modern microfinance.

The antecedents of microfinance as well as the modern microfinance movement rely heavily on grouplending systems. Group lending implies that borrowers self-select into groups to discuss issues related to borrowing, saving, and repayment. The Grameen strategy involved combining group lending with the joint liability of borrowers, where joint liability implies that the entire group of borrowers is liable (responsible) for any default of individual group members. Joint liability thus enables the MFI to leverage social capital in order to reduce monitoring and screening costs. In what follows, safe and risky borrowers differ in the probability of success of their project (funded by the loan). Risky borrowers therefore have a lower probability of being able to repay the loan to the MFI than safe borrowers. Since potential borrowers, with superior information L about each other's behavior, prefer not to be in one group with "risky peers," bad credit risks can be identified from the onset (reducing the risk of adverse selection). Moreover, if, due to their close (social) proximity, the borrowers can monitor each other's behavior at a low cost and effectively enforce repayment rules, then the risk of default for the MFI goes down (reducing costs of moral hazard). For extensive surveys of the theoretical literature on joint liability group lending, refer to Armendáriz and Morduch (2010, chapter 4) and especially Mahmud and Osmani (2017, chapters 4 and 5).

In the media and elsewhere the popular image emerged that the microfinance sector mainly consists of institutions that use profitable group-lending systems to lend low cost funds to small groups of extremely poor women, who subsequently benefit strongly from having access to capital. Let us explore the implications of joint liability in more detail.

13.2.2 Joint Liability and Adverse Selection

Joint liability represented an institutional innovation, enabling MFIs to lower transaction costs. Economists have been keen to examine its consequences in considerable detail. In an influential paper, Ghatak (2000; but see also Ghatak and Guinnane, 1999) shows that joint liability lending contracts used by microfinance institutions will induce endogenous peer selection in the formation of groups, and achieve full information efficiency when the lender is uninformed about borrowers' riskiness. Gangopadhyay, Ghatak, and Lensink (2005), however, show that, for the Stiglitz–Weiss (1981) version of the adverse selection problem, the equilibrium with zero profits (the optimal solution in Ghatak, 2000) requires the amount of joint liability in the group to exceed the amount of individual liability.

However, this result is problematic: if the project of one group member succeeds and the project of another fails, then the former may announce to the MFI that both succeeded, and simply pay the interest rate for both (rather than paying joint liability for her partner and paying back her own loan). Gangopadhyay, Ghatak, and Lensink (2005) recalculate the model by adding an additional constraint that the joint liability component cannot exceed the individual liability. The implication is that joint liability contracts can no longer achieve the optimal full information outcome for safe borrowers, as the additional constraint is incompatible with the zero-profit condition and the participation constraint of safe borrowers. A welfare-increasing outcome—albeit not a first-best outcome—is still possible if MFIs are allowed to make a profit on loans to safe borrowers. However, the new equilibrium can only exist for a smaller region of parameter values, reflecting that the inclusion of an extra constraint in the optimization problem will shrink the parameter range for efficiency improvements. Outside the range of parameters the safe borrowers prefer not to participate.

p. 408

Gangopadhyay and Lensink (2014) propose another solution to the potential problem with the Stiglitz– Weiss (1981) version of the adverse selection problem in Ghatak (2000). They focus on a particular type of joint liability contract, and analyse *asymmetric* \downarrow joint liability contracts as an alternative to symmetric joint liability contracts. In contrast to a symmetric joint liability contract, where each successful group member contributes the same amount if a partner fails, asymmetric joint liability lending contracts are group loans where the joint liability component differs across partners in the group. In an extreme form of such a contract a single group member is liable for another group member, which resembles a so-called cosigning contract.

Gangopadhyay and Lensink (2014) argue that (unidirectional) co-signing contracts may be a relevant practical alternative for joint liability contracts. They show that a contract matching risky and safe firms in one group (non-assortative matching) can lead to the first best if risky firms act as the co-signer—lowering the interest rate charged by the MFI. This result is an immediate consequence of the fact that a contract leading to assortative matching (safe with safe) cannot achieve the first best for safe firms as safe firms will be better off by not participating. A contract which assumes that risky firms and safe firms group together, however, can achieve the first best if risky firms are co-signers, and safe firms are not. This contract implies that a safe borrower will accept a risky borrower as a group member, as the safe never needs to pay for the risky. The equilibrium also needs side transfers (collusion) to be allowed. In that case, risky firms can be "bribed" to form a group with safe borrowers, and act as the co-signer. The value of the bribe should be smaller than the gain that results from the lower interest rate charged by the MFI. Indeed, in practice, joint liability contracts are almost never used—co-signing contracts are often used as an alternative.

The results in Ghatak (2000) are a direct consequence of the assumption that borrowers within a group know each other and can distinguish between safe and risky borrowers, leading to a process of assortative matching. Armendáriz de Aghion and Gollier (2000), however, show that joint liability lending may lead to a pareto improvement over individual lending, even with heterogeneous matching in a context where borrowers do not know each other. A condition for this to happen is that safe borrowers, in contrast to risky

ones, are not able to pay the full joint liability component of a defaulting risky partner. The intuition for this result is as follows. The condition implies that risky borrowers, if successful, can always repay their defaulting partners (whether safe or risky). But safe borrowers cannot repay fully for a not-successful risky partner. Thus, defaults are de facto shouldered by risky borrowers only, so that group lending makes risky borrowers indirectly cross-subsidize safe borrowers. This induces safe borrowers to accept the package.

Another important assumption in almost all theoretical joint liability papers is that project returns are independent across borrowers. However, as participants in microfinance projects often live close to each other, and face similar types of risk, this assumption may not hold in practice. Therefore, Ahlin and Townsend (2007) and Katzur and Lensink (2012) analyze joint liability lending in a setting where project returns are correlated. Katzur and Lensink (2012) show that also when project returns are correlated, joint liability lending may be a pareto improvement over individual lending contracts. They even show that under certain parameter conditions the efficiency of joint liability of having to pay the joint liability payment decreases when returns on similar projects are positively correlated and thus borrowers of the same type are more likely to either succeed or fail together. If the correlation between safe projects is sufficiently larger than the correlation between risky projects (within groups), the ex post incentive compatibility problem pointed out in Gangopadhyay, Ghatak, and Lensink (2005) will no longer hold.

p. 409

Finally, an interesting recent contribution to the role of joint liability in reducing adverse selection problems is provided by Ahlin and Waters (2016). They compare efficiency gains in terms of reducing the adverse selection problems of a joint liability group-lending contract to a dynamic, individual contract. The dynamic individual contract specifies that interest rates gradually decline after repayments of a loan, a practice that is used by many MFIs. Ahlin and Waters (2016) show that both types of contracts can reduce adverse selection problems. The context determines which contract is most efficient. The parameter space for which joint liability group lending achieves full efficiency is greater than for dynamic lending. However, dynamic lending gives better possibilities to attract safe borrowers who would otherwise be excluded in the case of joint liability group lending. Dynamic incentives may be preferred over joint liability, especially in so-called marginal environments where repayment affordability is low.

13.2.3 Joint Liability, (Ex Ante) Moral Hazard and Strategic Defaults

Joint liability lending may also play a role in reducing ex ante moral hazard problems, or voluntary exposure to additional risk. The main underlying argument is that joint liability debt contracts induce group members to monitor each other (see e.g., Ghatak, 1999). However, this will only happen if somehow cooperative behavior by the group members is assumed, and deviant behavior is avoided. In a classic early theoretical paper on joint liability lending, Stiglitz (1990) shows that deviant behavior can be circumvented by inducing group members to write a "side-contract" by which they bind themselves to a cooperative agreement. Conning (2005) argues that in rural societies an informal contract can be induced by the use of social sanctions (social norms), and consequently that joint liability, if monitoring is costless, can result in a pareto optimal cooperative outcome. Obviously, results may change if peer monitoring is costly. But Madajewicz (2011) shows that, even with costly peer monitoring, joint liability lending will be superior over individual lending as monitoring. The main reason is that monitoring by a lender will lead to an increase in the interest rate, which will reduce borrowers efforts (moral hazard), while peer monitoring will not distort incentives. Thus, effort levels will be higher, and consequently interest rates lower, for costly peer monitoring by a lender.

In addition to ex ante moral hazard problems, a lender may be confronted with ex post moral hazard, or p. 410 dishonest borrowers lying about project returns (to avoid $rac{1}{4}$ repayment). Such borrowers may not repay

even if they are able to repay, which is also referred to as strategic defaulting. It is well known that dynamic incentives, in the form of threats not to refinance defaulting borrowers, can reduce strategic defaults. In combination with dynamic incentives, many MFIs use a progressive lending scheme (also known as "stepped lending"), in which credit limits increase over time, conditional on the full repayment of previous loans. For instance, Robinson (2001) notes that of eighteen microfinance programs investigated, twelve use a progressive lending scheme. Several papers show that MFIs may prevent strategic defaults by using individual lending schemes combined with dynamic incentives, if the refinancing threat is credible (Armendáriz and Morduch, 2000, 2010; Ghosh and Ray, 2001; Egli, 2004).

In an older, classic article, Besley and Coate (1995) examine whether, if combined with dynamic incentives, joint liability lending contracts are better able to reduce strategic defaults than individual lending contracts. The argument is that joint liability by inducing peers to monitor each other should induce additional incentives to reduce strategic defaults. Moreover, with joint liability, successful peers will have to repay loans of failing peers. However, Besley and Coate (1995) show that, under certain conditions, the entire group will strategically default, while under individual lending some would have repaid. If individuals realize they will not have access to future loans because of defaulting group members, they might as well strategically default themselves. If this happens, individual liability will be better in avoiding strategic defaults than joint liability.

Czura (2015) points at a related reason why joint liability schemes may not increase welfare. She shows that joint liability may result in excessive peer punishment if group members are unable to distinguish between strategic and involuntary default, and punish all types of defaulters in the same manner. Similarly, Allen (2016) explicitly analyzes whether partial joint liability can do a better job in terms of reducing strategic defaults than complete joint liability. He shows that within-group risk sharing will be encouraged with greater levels of group liability. However, too-large group liability may have negative effects by increasing strategic defaults.

13.2.4 Group Lending Without Joint Liability

While the early theoretical literature mainly focused on joint liability group lending, recently the focus has started to shift toward group lending without joint liability. It appeared that the strict interpretation of joint liability for which the entire group becomes liable for the loan of all individual group members is almost never used in practice. Rai and Sjostrom (2013) point out that organizing regular public meetings to accompany group-lending systems can ensure efficient outcomes without joint liability. The reason is that public meetings allow sharing information, enabling borrowers to side contract and improve informal risk sharing.

In a more recent contribution, De Quidt, Fetzer, and Ghatak (2016) develop a theoretical model to analyze the optimal contract choice of borrowers. In their model, borrowers can choose between two types of individual contracts (one where the borrower stands alone and another where she is a member of a group,

p. 411 subject to social pressure) and a 4 formal joint liability group-lending contract. As in other papers, the zero-profit assumption applies and interest rates vary across contracts. The formal joint liability contract is enforced by a dynamic incentive, which implies that the group contract will be terminated if one of the borrowers defaults. Borrowers are allowed to write informal joint liability arrangements, which imply that borrowers promise not only to pay for themselves if successful, but also pay for a failing partner if they are able to. De De Quidt, Fetzer, and Ghatak (2016) argue that such an informal arrangement may be incentivecompatible and avoid strategic defaults. The reason is that if somebody breaks the rule, the failing partner will punish the cheating partner by ending the friendship, which will entail a utility cost equal to a "social capital" value. The main result of their study is that for very low levels of social capital, borrowers cannot guarantee each other, resulting in a choice for standard individual liability contracts. For intermediate levels

of social capital, joint liability contracts will be optimal, while for high social capital levels, group-lending contracts with individual liability, where borrowers informally guarantee each other, are optimal.

The intuition behind this result is as follows. An individual lending contract requires more social capital than an explicit joint liability contract to support a loan guarantee arrangement. Therefore, for very low levels of social capital, the optimal outcome will be a standard individual libaility contract. However, an advantage of explicit joint liability contracts is that they may induce borrowers to guarantee each other, even if they do not have any social capital. The implication is that for intermediate levels of social capital, explicit joint liability contracts (and not implicit joint liability contracts) are optimal. However, if it is assumed that a successful borrower cannot always repay for the failing partner, the explicit joint liability contract may lead to perverse effects: some borrowers will decide to default, while they would have repayed under individual liability. The implication is that if there is enough social capital to sustain a loan gaurantee arrangement, individual liability (and implicit liability) will lead to a welfare improvement compared to explicit joint liability.

De Quidt, Fetzer, and Ghatak's (2016) paper nicely illustrates how the optimal design of microfinance contracts is context specific. The authors argue that in situations where individually liable borrowers have sufficient social capital, implicit (or informal) joint liability may improve repayment performance more than explicit joint liability. They also show that explicit joint liability contracts may be advantageous as they may induce borrowers to guarantee each other even in cases without social capital. However, if the return of a borrower is not high enough to repay for herself and her failing partner, an explicit joint liability contract may have perverse effects by inducing her to strategically default, as she will be punished anyway, while under individual lending she would have repaid.

13.2.5 Summary

In sum, MFIs have relied heavily on group-lending methods. The microfinance literature has therefore always paid a lot of attention to the possible advantages, but also limitations, of group-lending systems. In p. 412 the first instance, the focus was very much on possibilities 4 to reduce adverse selection and moral hazard problems by using formal joint liability clauses within a group-lending setting. More recently, the literature has started to provide much more attention to the benefits of group lending without joint liability and the role of social capital in improving repayment discipline.

13.3 The Shift to Individual Lending and the Commercialization of **Microfinance**

Traditionally, microfinance typically entailed group lending to poor women. However, such traditional group-lending systems start to become relics of the past. Many MFIs have stopped using group-lending practices, especially in combination with joint liability debt contracts, returning instead to a more traditional commercial banking system of individual lending. Using data from MixMarket for the 2008–11 period, De Quidt, Fetzer, and Ghatak (2018a) provide empirical support for the shift to individual lending. Using various techniques, and recognizing that the data is extremely imperfect, they estimate that the share of individual loans increased 2 percentage points over the period.

Maybe even more important, De Quidt, Fetzer, and Ghatak (2018a) show, using a theoretical model, that there is a clear link between the shift to individual lending and commercialization, characterized by an increase in competition and a shift from non-profit to for-profit lending. They argue that, while a joint liability contract requires both loans to be repaid, and hence may provide incentives for borrowers to repay for failing partners, they may also induce a successful borrower to default. In the latter case, an individual

lending contract will lead to higher profits for the MFI and higher borrower welfare than a joint liability contract. More in general, as the joint liability contract implies that a borrower also has to pay for a failing partner, the joint liability contract involves tighter incentive constraints than individual liability contracts. The implication is that a non-profit MFI will offer a joint liability contract whenever it breaks, even as it improves borrowers welfare. However, if competition between MFIs increases, the so-called outside option of borrowers will increase, and hence the threat of a joint liability contract will not work anymore, inducing non-profit MFIs to shift to individual lending (De Quidt, Fetzer, and Ghatak, 2018a).

Moreover, as for-profit MFIs not only require to break even with joint liability, but also to make higher profits with joint liability than with individual lending, they will offer joint liability contracts to a much smaller group of borrowers as some borrowers will repay under individual liability, but decide to default under joint liability. The consequence of all of this is that commercialization will lead to a shift from joint liability lending to individual lending.

 De Quidt, Fetzer, and Ghatak (2018a) provide empirical support for their observation that competition
 p. 413 between MFIs has increased, and that there is indeed a shift from 4 non-profit to for-profit lending. Moreover, they provide emprical support for the main implications of their theoretical model: (1) for-profit MFIs use joint liability lending to a lesser extent than non-profit MFIs; (2) competition reduces the use of joint liability lending by non-profits (but increases it by for-profit MFIs); and (3) MFIs in general lower the use of joint liability lending.

The reduced importance of joint-liability lending also implies that MFIs have to rely on other instruments to reduce defaults. A key instrument is the use of dynamic incentives—future loans for individuals are conditional on own current repayment. See Armendáriz and Morduch (2000) for a survey of instruments used by MFIs other than group lending.

The shift to individual lending is not the only major change in the sector. Another has been the change in funding. Traditionally MFIs were funded mainly by subsidies from private and public donors and aid organizations. However, microfinance also has the potential to be profitable for moneylenders, and profit-oriented suppliers, including commercial banks and private and institutional investors, have flocked into the system. So-called social investors, who value the social as well as financial performance of their investments, have started to invest. In the course of the global financial crisis, with limited investment opportunities elsewhere, pension funds also started to display an increasing interest in microfinance. Microfinance holds the promise of innovative investment opportunities with low co-variate risk, high (social) returns, and great public relations value. In the Netherlands for instance, the retail bank SNS launched the Institutional Microfinance Fund, almost entirely funded by Dutch pension funds.

There is also an increase in the number of MFIs turning to capital markets for funding. Some microfinance institutions have gone public, and become commercial banks. The most well-known example is Compartamos in Mexico. Another example is SKS microfinance in India.

Some argue that the commercialization of microfinance is a blessing, since it improves the scope of an MFI's reach and hence the availability of funds for the poor. There are currently up to 3 billion people without access to proper financial services. There are also an estimated 500 million micro-entrepreneurs worldwide. This means there is a largely untapped demand for microcredits. International investment banks can pool this demand and sell it to investors around the world.

Others, however, fear that the commercialization of microfinance implies that MFIs drift away from their original mission, and start to focus primarily on financial performance (Mersland and Øystein Strøm, 2009; Cull, Demirgüç-Kunt, and Morduch, 2010; Hermes, Lensink, and Meesters, 2011; Louis, Seret, and Baesens, 2013). Critics are afraid that commercialization processes will encourage MFIs to put shareholders above the poor they serve.

Commercialization and the related shift from non-profit to for-profit lending have raised concerns with respect to the amount of borrowers, as well as the types of borrowers, that are served by MFIs. A direct consequence of commercialization may be that MFIs start to focus less on poor clients, reducing the "outreach" of microfinance.

Since lending to poor borrowers can be very costly, outreach and financial sustainability of the MFI (let p. 414 alone for-profit lending) may be conflicting objectives. It appears as 4 if MFIs increasingly focus on wealthier clients, a process termed "mission drift." Cull, Demirgüç-Kunt, and Morduch's (2007) study is one of the first to try to systematically examine financial performance and outreach. Using a data set of 124 microfinance institutions in forty-nine countries, they show that MFIs that mainly provide group loans focus more on poor borrowers and female borrowers than institutions mainly providing individual loans, while the latter group performs better in terms of profitability.

Fon further evidence of the tradeoff between sustainability and outreach refer to the special issue of World Development, edited by Hermes and Lensink (2011). For example, Hermes, Lensink, and Meesters (2011) apply stochastic frontier analysis on a data set of 435 MFI for the period 1997–2007, and focus on the relationship between cost efficiency of MFIs and outreach. Their findings reveal a negative relationship between cost efficiency and outreach.

The commercialization of microfinance and the related shift to individual lending has accompanied diversification of the credit products that MFIs provide. MFIs that traditionally focused on providing microcredit to the poor in the informal sector have also started to recognize that savings and insurance products can be even more important than providing loans. Diversification represents an essential step in the development of microfinance. As a result of this shift toward microfinance, MFIs now collect savings, and provide insurance products. Life insurance, for instance, is a popular product. Life insurance is mostly offered as part of a microcredit package, in the form of credit-life contracts. These contracts ensure that, if somebody dies, the outstanding loans will be paid off and a fixed payout will be provided to the family. In addition to life insurance products, MFIs start to develop health insurance plans as well as property and crop insurance.

Karlan and Zinman (2008) document that demand for credit is price elastic, and higher interest rates affect the composition of the pool of borrowers—driving out the very poor who cannot afford to pay these rates. They also find that loan size is more responsive to changes in maturity than to changes in the interest rate, which would be consistent with binding liquidity constraints.

In addition to life insurance and health insurance products, micro finance institutions have started to experiment with pension schemes. These micro pensions focus on long-term savings, with the aim of providing income security to the aged poor who have worked in the informal sector and are not covered by formal retirement schemes. With their close connections and regular meetings with low-income workers in the unorganized sector, MFIs could be ideal financial institutions to channel micro pension products to the poor in informal sectors. The well-known Grameen Bank in Bangladesh, for instance, introduced the Grameen Pension Scheme in 2001. Several other MFIs and non-governmental organizations, including the Dhan Foundation in India, are now developing micro pension products for their clients. The consequences of micropensions for fertility and social networks could be profound.

In sum, commercialization of microfinance has several effects — some positive and some negative. The ultimate overall assessment of the effect of commercialization has yet to be made. A first interesting p. 415 theoretical and simulation analysis of the welfare effects 4 of commercialization in microfinance is provided by De Quidt, Fetzer, and Ghatak (2018b). They compare welfare under three market structures: monopolistic non-profit or for-profit lending, and a competitive equilibrium. In addition they consider heterogeneous effects depending on the social capital of borrowers.

The main results of their analyses are: (1) a for-profit lender with market power, using joint liability lending, can exploit one borrower's ability to socially sanction another by charging higher interest rates. The implication is that, for this case, welfare decreases in social capital. (2) Despite the welfare-decreasing effects of joint liability lending in the case of a for-profit monopolistic lender, borrowers' welfare is still higher with joint liability lending than with individual lending. An important reason is that joint liability lending, at least for low social capital borrowers, forces lenders to reduce interest rates to ensure that borrowers are willing to guarantee each other. Moreover, joint liability leads to higher repayment probabilities, which will benefit borrowers also via lower interest rates (in a zero-profit equilibrium). (3) In line with De Quidt, Fetzer, and Ghatak (2018a), non-profit MFIs will always offer joint liability contracts, while for-profit MFI will only offer joint liability contracts for a limited range of social capital.

The policy implication of these three results is that regulators should force for-profit monopolistic MFIs, which prefer individual lending, to switch to joint liability lending. According to their simulations, this would increase borrower welfare by 12 to 20 percent. The positive welfare effect becomes even bigger if a for-profit monopolistic lender is forced to switch to a non-profit lender. These effects imply that commercialization, which is partly characterized by a switch from non-profit to for-profit lending—the share of for-profit microfinance lenders increases from 35 percent in the late 1990s to 43 percent in 2009 (De Quidt, Fetzer, and Ghatak, 2018b, p. 1021)—would be welfare decreasing. However, commercialization is also characterized by increased competition. De Quidt, Fetzer, and Ghatak (2018b) argue and show with the simulation exercise that competition in microfinance almost entirely nullifies the negative effects of monopolistic for-profit lending.

Competition, on the one hand, undermines repayment incentives due to more outside options for borrowers (see also De Quidt, Fetzer, and Ghatak, 2018a). However, on the other hand, competition limits lenders' possibility to charge high interest rates, which improves borrowers' welfare. The simulations of De Quidt, Fetzer, and Ghatak (2018b) even suggest that borrowers' welfare under competition is almost equal to borrowers' welfare under non-profit lending. Thus, their analyses suggest that commercialization may not have the, often assumed, negative effects as competition may alleviate the welfare-reducing effects of market power associated with for-profit monopolistic lending. While De Quidt, Fetzer, and Ghatak (2018b) provide a very interesting and hopeful analysis on the potential welfare effects of commercializing microfinance, it should be realized that their conclusions are based on a simulation exercise. More rigorous empirical research is needed to evaluate welfare effects. One important issue that deserves attention, for example, is the fact that dynamic incentives might not work if there are many MFIs. This highlights the importance of transparency via credit bureaus.

$_{\rm p.\,416}$ 13.4 Is Microfinance a Success?

The issue of whether microfinance is to be considered a success, or not, has divided the academic community. An important reason is that measuring impact is very difficult. Most microfinance interventions are targeted, and participation in microfinance programs is voluntary. This implies that measuring impact of microfinance requires to uncover whether the change in outcomes is due to microfinance, or due to so-called program placement or self-selection biases. A rigorous evaluation, therefore, needs to assess what would have happened without the microfinance intervention. The key to such a study is to find a control group that (a) is identical to the microfinance members in the absence of microfinance, (b) would respond in the same way to a microfinance intervention as microfinance clients would do, and (c) is subject to a similar set of other interventions as the group of microfinance clients (Gertler et al., 2011). A variety of techniques have been used to deal with the problem of missing valid counterfactuals, such as difference-in-difference, regression discontinuity, propensity-score matching, but also experimental approaches, for example, randomized controlled trials (RCTs).

Morduch (2016) argues that the answer to the success question depends on the objectives of microfinance that are evaluated and the assessment methodology (Morduch, 2016). There are basically four types of statistics dealing with microfinance, which all give a different picture of the achievements of microfinance.

First, there is data on the rapid growth (and pro-poor orientation) documented by the Microfinance Summit Campaign, a grass-roots organization, launched in February 1997 at a global summit in Washington, DC. When the Microfinance Summit Campaign was launched, there were only 13 million microfinance customers globally, of which 8 million were among the poorest. During the 1997–2007 period, the number of programs increased from 655 to 3,352. In 2016, there were more than 10,000 MFIs worldwide. The amount of people served increased to 211 million in 2013, of which more than 80 percent were women and 114 million were among the poorest (Microcredit Summit Campaign, 2015).

The global financal crisis certainly has adversely affected the expansion of MFIs, but after the crisis the sector has again experienced a grow of 10 to 15 percent. Since 1997, there has been an enormous growth in customers served. Moreover, until 2010 there was also a steady increase in the amount of poor customers served. However, and reflecting the discussion above about commercialization, from 2010 onwards the trajectories of total borrowers and the "poorest" borrowers diverge-indicating an increase in focus on the relatively well-off (Microcredit Summit Campaign, 2015). While these diverging trajectories are also a cause for concern for the Microcredit Summit Campaign, microfinance remains a huge success, in their view.

Second, there is data on the profitability and commercial orientation of microfinance by Microfinance Information Exchange (MixMarket), the largest public dataset available on MFIs. For an extensive survey of this literature, refer to Hermes and Hudon (2018). A closer look at the data on profitability of MFIs shows p. 417 that, while most MFIs have 💪 positive accounting profits, only a small percentage has positive economic profits. In an interesting contribution Cull, Demirgüc-Kunt, and Morduch (2016), using a sample of MFIs for the 2005–9 period, show that around 70 percent of all MFIs are profitable. However, controlling for implicit grants and subsidies (including equity grants and cheap capital), reduces the share of profitable MFIs to less than 30 percent of the sample. Thus, despite the focus on financial sustainability and the ongoing commercialization, only a relatively small percentage of MFIs is actually profitable.

Cull, Demirgüc-Kunt, and Morduch (2016) calculate the subsidies given to different groups of MFIs. Interestingly, and counter-intuitively, subsidies per borrower are higher for the most commercialized MFIs than for the NGO type of MFIs that focus on the poor and women: with a median of 93 US\$ and 23 US\$ per borrower, respectively.

Third, there is information from financial diaries studies, focusing in detail on the finances of households in LDCs (see e.g., Collins et al., 2009). These analyses point out that access to (micro) finance may be extremely important in terms of smoothing consumption through the year. Thus, even if it turns out that microfinance does not enhance investments and/or reduce poverty, it may play a vital role in terms of providing funds for immediate emergencies, such as health crises. Yet, as is confirmed by Coleman (2006), it is questionable whether MFIs do reach the poorest of the poor.

Finally, there is data on the social and economic impacts of microfinance on end-users. The majority of these studies focus on the impact of microcredit on livelihoods and income of the poor. Given the narrative of microfinance as a scalable means to reduce poverty and perhaps ignite a process of inclusive growth, these studies perhaps provide the ultimate test of the success of microfinance.

During the 1990s, several studies documented the positive impacts of microcredit. However, most of these studies suffered from severe methodological problems, most notably the statistical challenges posed by self-selection bias or program placement bias. A few exceptions are notable, such as the well-cited study by Pitt and Khandker (1998) on the impact of microcredit in Bangladesh. In their study they find that microcredit has a large marginal impact, especially for lending to women. However, their approach is

criticized by more recent investigations. For example, Chemin (2008), Duvendack and Palmer-Jones (2012), and Roodman and Morduch (2014) reveal that replicating the findings from Pitt and Khandker's study is difficult. Any impacts of microfinance that arise seem much smaller or even negligible. Roodman and Morduch (2014) raise general questions about the value of non-experimental observational studies, in terms of their ability to address attribution questions.

Another relatively dated study that is worth mentioning is Coleman (1999). This study exploits information about the expansionary strategy (pipeline approach) of MFIs to control for self-selection bias and program placement bias, which allows for rigorously measuring the impact of microfinance. He analyzes the impact of group lending provided by village banks in Northeast Thailand in 1995–6, and finds that, after controlling for selection biases, group lending has no significant impact on any of the selected outcomes variables, such as physical assets, savings, production, sales, health care, and education. Using the same data, Coleman (2006) examines whether specific types of \lor borrowers do benefit from group lending. The results suggest that wealthier clients are likely to benefit from the program, indicating that village banks do

p. 418

not positively affect the poorest of the poor.

A more positive result is found by Bruhn and Love (2014). They focus on the impact of the opening of branches of Banco Azteca in Mexico. In March 2002, Elektra (a large retailer for electronics and household goods) received a banking license and in October of the same year it opened more than 800 bank branches, almost overnight, in locations with large groups of low-income clients without access to capital. Using a difference-in-difference regression technique Bruhn and Love find that the opening of new Banco Azteca branches improved employment, and helped owners of informal businesses to keep their business and helped others to set up new ones.

Three reviews summarize the results of microcredit impact studies. Duvendack et al. (2011) provide a systematic review of fifty-eight impact studies (published between 1994 and 2010), which use different methods of measuring impact, including RCTs, pipeline designs, with/without comparisons, natural experiments, and general purpose surveys. Their main conclusion is that there is no convincing evidence showing that microfinance has a significant impact on the well-being of the poor. Van Rooyen, Stewart, and de Wet (2012) focus on impact studies of microfinance in Sub-Saharan Africa, published in 2001–10. They find that while microcredit has a moderately positive impact, it may also harm the poor under certain conditions. Some studies show that microfinance actually leads to increased poverty, reduced women empowerment, and reduced education of children. Savings services are generally perceived to have a more positive impact on the poor as compared to credit. Bauchet et al. (2011) provide a descriptive overview of twenty RCTs that evaluated the impact of microfinance, published in 2008–11. With respect to microcredit, the authors conclude that these studies show a modest positive impact, but that this impact is not necessarily always in terms of increasing business opportunities for the poor (which has been the dominant impact narrative). In line with financial diaries studies, access to credit may also allow the poor to increase consumption, deal with shocks, pay for education of their children, etc.

Banerjee, Karlan, and Zinman (2015) discuss the results of six RCTs in eight countries, and find that microcredit tends to have a positive, but small, impact on people's lives. In general, access to microfinance does little to raise profits of microenterprises and fails to raise households out of poverty.

Some studies focus on the impact of microcredit on female empowerment. A survey of this literature is given by Armendáriz and Morduch (2010, chapter 7), Duvendack, Palmer–Jones, and Vaessen (2014), and Huis et al. (2017, 2019). While microfinance proponents argue that women should be empowered by access to microcredit, the empirical evidence is actually mixed (e.g., Kabeer, 2001; Weber and Ahmad, 2014). Kim et al. (2009) find that microcredit improves financial security and self–confidence. However, many other recent studies do not find any positive impact of access to microcredit and women's decision–making power (Banerjee et al., 2015; Crépon et al., 2015; Tarozzi, Desai, and Johnson, 2015). Garikipati (2008) and Johnson

p. 419

(2004) even argue that access to microcredit may have a negative effect on women's empowerment if loans are used 🔓 for items over which women do not have control. There is also some evidence that the bargaining power of women is more affected by small informal loans used for day-to-day expenses than by planned loans (Garikipati et al., 2017). The studies discussed by Banerjee, Karlan, and Zinman (2015) also do not find strong evidence for women's empowerment effects.

Impacts of microcredit depend on the impact evaluation method used. Probably, the most convincing approach is the implementation of so-called randomized controlled trials, where assignment to treatment (i.e., access to finance) is randomly allocated via a lottery. This approach produces control and treatment groups that are equivalent, enabling superior attribution of impact. Most RCTs suggest much weaker microfinance impacts than had emerged from studies based on observational data.

One element brought out by some of these studies is particularly interesting, however. It appears as if the impact of microfinance varies not only across but also within countries, and even within the sample of clients of specific MFIs (Angelucci, Karlan, and Zinman, 2015). While access to credit has placed some households on pathways out of poverty, it has also sometimes created unsustainable debts and further impoverishment for others. The latter outcome was illustrated by the many microcredit-related suicides in the southern Indian state of Andhra Pradesh, to which we referred in the introduction to this chapter.

It is far too early to conclude from the above-mentioned set of RCTs that microcredit fails to address poverty. Maybe it takes more time before impacts start to materialize, or perhaps microfinance has to be accompanied by additional interventions to be effective. Moreover, although randomized experiments offer the best opportunity to study causality questions rigorously, in practice the conditions for ideal RCTs almost never hold (Deaton, 2010). In addition, many of the RCTs mentioned above suffer from severe power problems related to low uptake rates of credit. Yet it seems fair to conclude that the impact of microcredit has been much smaller than expected, and certainly was not, nor will it be, the magic bullet that many people believed.

The question then arises whether there are possibilities to improve the impact of microfinance in general and of microcredit in particular. In the remainder of this chapter we will discuss two possibilities to improve microfinance impact: a change in the traditional microcredit contract and/or the role of microfinance-plus activities to enhance the technical skills of the borrowers.

13.5 The Design of Microcredit Contracts

Traditional microcredit contracts are characterized by group loans that are short term, not backed by collateral, and repeating. Microfinance repayments were typically structured as weekly installments, which p. 420 made the loans largely unattractive for farmers 4 because agricultural investments rarely generate a regular flow of predictable revenues. Even the original microfinance movement thus shifted away from lending to farmers. Furthermore, the system of weekly repayments required the partial abandonment of the focus on business loans (at least, for loans for productive activities). That is, microfinance loans are usually described as business loans, but tend to have more in common with consumer loans (Morduch, 2013) in that they are repaid from household cash flows (not by revenues earned from investment projects), and they often finance consumer purchases or health expenses.

Therefore, recently, it was emphasized that to improve the performance of microfinance it may be worthwhile to rethink product design. It may well be that microfinance products need to be adapted more to the needs of the poor to raise take-up and increase the positive impact on the welfare of the poor. As a result of this rethink, MFIs started offering loans with less frequent repayment obligations, loans with a "grace period" before loan repayment, and loans with a repayment schedule linked to the cash flow or crop cycle of the client's business. Some MFIs also started offering emergency loans, contingent loans (i.e., loans with flexible terms) and loans with the option to repay early without a penalty.

There is not yet much evidence on the impact of more flexible microfinance contracts. Yet, an interesting experimental study conducted in India by Field et al. (2013) strongly suggests that microcredit products with more flexible repayment terms—in their case, longer grace periods—have profound effects. The longer grace period increases short-run high-return, high-risk investments, profits, and household welfare. However, the new microcredit contracts also induce moral hazard and adverse selection problems, leading to worse repayment performance and lower financial sustainability for the MFIs. This means MFIs have little incentive to introduce such credit products if they are not subsidized.

13.6 Microfinance-Plus: The Need to Enhance Technical Skills of Microcredit Borrowers

Initially, the microfinance movement was based on the idea that poor people, especially women, were "trapped" in poverty because they lacked access to capital. Relaxing this binding constraint, via a small loan, would set in motion a process of development. Other constraints, such as inadequate human, social, or organizational capital, were considered of secondary importance—or less. Nobel laureate Yunus, for instance, argued in his famous book *Banker to the Poor* that:

Rather than waste our time teaching them new skills, we try to make maximum use of their existing skills. Giving the poor access to credit allows them to immediately put into practice the skills they already know.

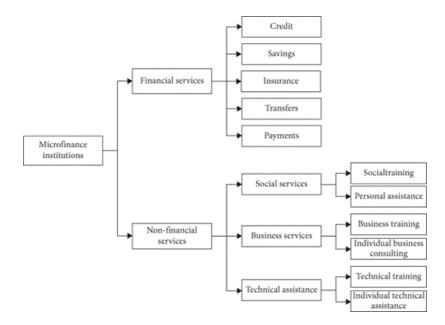
p. 421 Thus, microfinance regarded business training or additional social services as relatively unimportant, assuming poor people already had the necessary entrepreneurial skills and knowledge. But the situation in developing countries, as in other parts of the world, is not quite so simple. Most owners of small shops and businesses do not implement standard business practices: Formal records rarely are kept; household and business finances often are mixed; and no proper marketing takes place. Moreover, because poverty is multidimensional, poor people require access to a coordinated combination of microfinance and other development services, including business and financial literacy training, to have a viable opportunity to overcome their poverty (Khandker, 2005).

Because human and financial capital may complement each other in development processes, the impact of microfinance is conditional on the level of human capital of the borrower. To be successful, microfinance interventions may need to increase the human capital of their recipients. The issue of education as a mediating variable implies more direct suggestions for action. Human capital, in the form of financial literacy and business knowledge, can be accumulated rapidly. Responding to this opportunity, many MFIs and NGOs have started providing training sessions for microfinance clients, typically including modules on marketing, book-keeping, financial literacy, and stock-keeping. Occasionally, these training sessions also contain additional modules, for example, dealing with gender empowerment or health issues.

In addition to offering financial services, several MFIs have started to offer non-financial services. The bundling together of financial and non-financial services has become known as the microfinance-plus strategy (Biosca, Lenton, and Mosley, 2014a). Lensink et al. (2018) provide a survey on the impacts of microfinance-plus at the MFI level. In this chapter, we concentrate on studies focusing on end-users (see also Garcia and Lensink, 2019).

Figure 13.1 categorizes the financial and non-financial services of MFIs, classified by delivery mode, that is, at group level or individually.

Figure 13.1



Microfinance Services Classified by Objective and Delivery Mode.

Source: The figure is taken from Garcia and Lensink (2019).

Nowadays, many MFIs provide, in addition to microcredit, social services, such as health and child nutrition services, and female empowerment training. A well-known example is the social training that Pro Mujer (2018) provides on healthy habits and oral hygiene to groups of women in Latin America. Biosca, Lenton, and Mosley (2014b) provide evidence that the impact of microcredit is enhanced by these social activities. The argument is that the risk of illness is reduced by the introduction of health-related programs. Huis et al. (2019) provide evidence that access to a combined gender and business training for a group of microcredit borrowers improved women's empowerment, measured by control beliefs and decision-making on larger expenditures. However, and contrary to these hopeful results, Bulte and Lensink (2019) organized an RCT in Vietnam and found that participating in gender training organized by an MFI actually resulted in more intimate partner violence (as measured with a so-called list experiment, guaranteeing the anonymity of individual respondents).

MFIs are also providing business services, such as business training, in order to improve managerial processes (Bruhn, Karlan, and Schoar, 2010). In addition, MFIs, especially in rural areas, provide technical assistance, such as advice to farmers on their choice of seeds, pest control, use of fertilizers, and sowing and harvesting processes. While both technical 4 assistance and business services aim to improve human capital, the former focuses directly on the production of goods and services, and the latter on managerial processes.

There is some anecdotal evidence that the provision of technical assistance by MFIs may help MFIs to reduce poverty (see Garcia and Lensink, 2018). However, rigorous evidence on the effects of technical assistance or its combination with microcredit is not yet available (Garcia and Lensink, 2018). There is more evidence on the impact of business training on the knowledge, behavior (practices), and income (profits) of microfinance clients. The initial results are mixed. McKenzie and Woodruff (2014) survey the "old" literature on business training and find little robust evidence that training influences economic outcomes. However, they conclude this is not unexpected since many studies "suffer from small sample sizes, measure impacts only within a year of training, and experience problems with survey attrition and measurement." They conclude, among other things, that there is a need for studies that analyze larger samples (or more homogeneous firms), use better measures of outcomes, design experiments to measure spillovers, and

p. 422

measure outcomes over longer periods. Several recent studies are more positive about the impact of business training; see, for example, Giné and Mansuri (2014) and Berge, Bjorvatn, and Tungodden (2014) who report substantial effects.³

p. 423 We conducted a large RCT in northern Vietnam to evaluate the impact of business training (for details, refer to Bulte, Lensink, and Vu, 2017). A large MFI had extended the range of services it provides, and began to offer a nine-week training program to its (female) clients on a voluntary basis—the standard ILO business training (GET Ahead). As a pilot, we organized an RCT with 170 centers and thousands of women members. We measured impact shortly after the training sessions (when we expected to pick up mainly knowledge and practice effects) as well as one year after training (when we expected to find evidence of the impact on income as well). To evaluate the impact of the training intervention on knowledge, practices, and income, we used post-treatment as well as a difference-in-differences approach, comparing treated and untreated members before and after the training.

Table 13.1 summarizes the main results of the study. We probed the impacts of two treatment arms. *T*2 refers to the treatment group where only female members were invited. *T*1 refers to a treatment group where husbands were also invited to come to the training session, to test whether the presence of men helped to increase the impact of the training. The estimation results refer to post-treatment intention-to-treat (ITT) linear regression results for the endline.⁴ The study found that training significantly improves business knowledge (*Knowledge*), and business practices (*Practices*). We also found a significant positive impact on profits (*Profits*). However, the evidence for positive impacts on "deep" outcome variables (like profits, income, and sales) is weaker as, for alternative measures (not presented in Table 13.1), results are not significant. The training also induces entry of new firms (*Entry*), while reducing exit (*Exit*). In general, we did not \downarrow find evidence for additional impacts if husbands were invited. However, it should be noted that many husbands in *T*1 did not attend the training (considerable non-compliance), which may imply that the

p. 424

	Knowledge	Practices	Profits	Entry	Exit
Τ1	2.52***	1.82***	2.14***	0.06***	-0.03
T2	2.30***	1.74***	1.60**	0,13***	-0,09**

study is underpowered to pick up on any significant additional impacts of inviting husbands.

Table 13.1 Impact of Business Training on Business Outcomes

Notes: Post-treatment Linear regression results for the Endline. *** p<0.01; ** p<0.05; * p<0.1 (based on robust standard errors adjusted for clusters in centers). *T1* refers to the treatment group where male partners were invited to join the training; *T2* refers to the treatment group where only female members were invited; *Knowledge* refers to Business Knowledge index 1. *Practices* refers to the *General* business practices index. *Profits* refers to previous month total profits; *Entry* refers to a dummy variable indicating if a household started new business activities at the midline and/or at endline; *Exit* refers to a dummy variable indicating business activities reported at the baseline which were subsequently abandoned at the midline or endline. For details of all variables refer to Bulte, Lensink, and Vu (2017). All regressions include baseline controls, and region dummies. Amount of observations vary between 3500 and 4250.

Thus, the Vietnam study strongly suggests that investments in human capital may usefully complement microfinance activities. However, such training interventions are costly. Might we expect that some of the "lessons" spread automatically across the target population? To what extent will trained members of MFI groups discuss the content of training sessions with their (untrained) peers, so that the impact of training

can be leveraged by natural diffusion processes? The presence of spillover effects would improve the costeffectiveness of training interventions.

Many organizations responsible for training interventions simply assume that information about new behavior and innovations spreads from one individual to the next. Empirical evidence, however, suggests otherwise.

We have organized an RCT in rural Rwanda to probe the impact of a standard financial literacy training session. The first set of results, as summarized in Sayinzoga, Bulte, and Lensink (2016), is fully consistent with the findings from Vietnam: when comparing trained individuals to untrained individuals (from the comparison group), we find the training improves knowledge, practices, and (to a lesser extent) income. But these effects are confined to the trained individuals. When we compare the peers from trained individuals (i.e., fellow farmers from the same local bank branch or lending group) to randomly selected farmers from the comparison group, we find no evidence of statistically significant differences.

These dismal insights are consistent with data in a recent paper by BenYishay and Mobarak (2018), who develop a large experiment to study the diffusion of agricultural innovations in Malawi. One key finding of this study is that innovations may spread via (trained) peer farmers, but only when these farmers are incentivized to share the new information with their fellow villagers. There are barriers to the spread of information—and overcoming these barriers costs money.

13.7 Should We Subsidize Microfinance?

Empircal evidence suggests a subtle story. There is a tradeoff between outreach and financial sustainability —engaging with the poor as clients implies sacrificing profits. Moreover, while microfinance may help to alleviate poverty, its impact depends on the complementarity of financial and human capital—both are in short supply. The poor can be trained, but information from training sessions does not travel easily beyond trained beneficiaries to the larger population of peers. Finally, to further increase the attractiveness of microcredit for the poor, more flexible contracts would be helpful.

However, the great majority of MFIs is not even profitable in the absence of human capital interventions or flexible contracts.

p. 425 The evidence suggests that microfinance is probably not the double-edged sword many people expected (or hoped) it would be. There may be little scope for carving out a double bottom line of reduced poverty of clients and positive profits for the MFI and its investors. Instead, some tension remains between profits and poverty alleviation.

The academic and policy communities are divided on the issue of financial sustainability and the desirability of subsidizing microfinance. Two competing perspectives currently co-exist—a financial sustainability perspective and a poverty lending perspective. Proponents of the former perspective argue against subsidizing MFIs. They highlight the need to achieve scale (i.e., be independent of outside funding), and point to dismal experiences with so-called "cheap credit" policies in the 1970s. In an effort to promote investment, governments of many developing countries capped the interest rates that banks could charge their customers. These caps, in turn, caused low (or negative) real interest rates on deposits, which curtailed the inflow of savings. The predictable result was demand for money exceeding its supply (via savings), thus inviting credit rationing, corruption, nepotism, and patronage. Privileged community members who could access (subsidized) credit borrowed too much, and engaged in socially wasteful "capital stuffing" (e.g., mechanization).

Instead, the poverty lending approach concentrates on using credit to help people overcome poverty, primarily by improving the terms of credit contracts, but also by augmenting financial services with training programs. In the debate about whether or not to subsidize microfinance, it appears as if the financial sustainability perspective is winning. As a result; "nearly all MFIs face pressure from policy makers, donors and investors to eliminate their reliance on subsidies" (Karlan and Zinman, 2008).

The evidence discussed above suggests this trend comes at a cost—a reduced ability to adequately cater to the poor. It appears as if the way forward is a two-pronged strategy: Scale up profitable microfinance operations to serve the not-so-poor, where possible; but also support another tier of MFIs that tries to reach out and interact with the poor. The poor are unable to benefit from market-based financial services. Reduced poverty generates important social benefits, which may well justify the outside funds (development assistance) necessary to support these MFIs. This would have to be assessed on a case-by-case basis.

References

Ahlin, C. and Townsend, R. M. (2007). "Selection Into and Across Credit Contracts: Theory and Field Research," *Journal of Econometrics*, 136, 665–98.

Google Scholar WorldCat

Ahlin, C. and Waters, B. (2016). "Dynamic Microlending Under Adverse Selection: Can it Rival Group Lending?" *Journal of Development Economics*, 121, 237–57.
Google Scholar WorldCat

Allen, T. (2016). "Optimal (Partial) Group Liability in Microfinance Lending," *Journal of Development Economics*, 121, 201–16. Google Scholar WorldCat

Angelucci, M., Karlan, D., and Zinman, J. (2015). "Microcredit Impacts: Evidence from a Randomized Microcredit Program Placement Experiment by Compartamos Banco," *American Economic Journal: Applied Economics*, 7(1), 151–82. Google Scholar WorldCat

p. 426 Armendáriz, B. and Morduch, J. (2000). "Microfinance Beyond Group Lending," *Economics of Transition*, 8(2), 401–20. Google Scholar WorldCat

Armendáriz, B. and Morduch, J. (2010). *The Economics of Microfinance*, 2nd edn (London: MIT Press). Google Scholar Google Preview WorldCat COPAC

Armendáriz de Aghion, B. and Gollier, C. (2000). "Peer Group Formation in an Adverse Selection Model," *Economic Journal*, 110, 632–43.

Google Scholar WorldCat

Banerjee, A. (2013). "Microcredit Under the Microscope: What Have We Learned in the Past Two Decades, and What Do We Need to Know?" *Annual Review of Economics*, 5, 487–519.Google Scholar WorldCat

Banerjee, A., Besley, T., and Guinnane, T. (1994). "Thy Neighbor's Keeper: The Design of a Credit Cooperative with Theory and a Test," *Quarterly Journal of Economics*, 109(2), May, 491–515. Google Scholar WorldCat

Banerjee, A., Duflo, E., Glennerster, R., and Kinnan, C. (2015). "The Miracle of Microfinance: Evidence from a RandomizedEvaluation," American Economic Journal: Applied Economics, 7(1), 22–53, available at: doi: 10.1257/app.20130533.Google ScholarWorldCat

Banerjee, A., Karlan, D., and Zinman, J. (2015). "Six Randomized Evaluations of Microcredit: Introduction and Further Steps,"
 American Economic Journal: Applied Economics, 7(1), 1–21.
 Google Scholar WorldCat

Bateman, M. (2010). Why Doesn't Microfinance Work? (London: Zed Books).

Bauchet, J., Marshall, C., Starita, L., Thomas, J., and Yalouris, A. (2011). "Latest Findings from Randomized Evaluations ofMicrofinance," Access to Finance Forum Reports by CGAP and Its Partners, No. 2, December.Google ScholarGoogle PreviewWorldCatCOPAC

BenYishay, A. and Mobarak, A. M. (2018). "Social Learning and Incentives for Experimentation and Communication," *Review of Economic Studies*, (0), 1–34. Google Scholar WorldCat

Berge, L. I. O., Bjorvatn, K., and Tungodden, B. (2014). "Human and Financial Capital for Microenterprise Development: Evidence

from a Field and Lab Experiment," Management Science, 61(4), 707-22. Google Scholar WorldCat

Besley, T. and Coate, S. (1995). "Group Lending, Repayment Incentives and Social Collateral," Journal of Development Economics, 46.1-18.

Google Scholar WorldCat

Biosca, O., Lenton, P., and Mosley, P. (2014a). "Microfinance Non-Financial Services and Competitive Advantage: The Mexican Case," Strategic Change, 23, 507-16. Google Scholar WorldCat

Biosca, O., Lenton, P., and Mosley, P. (2014b). "Where is the 'Plus' in 'Credit-Plus'? The Case of Chiapas, Mexico," Journal of Development Studies, 50(12), 1700-16. Google Scholar WorldCat

Bruhn, M. and Love, I. (2014). "The Real Impact of Improved Access to Finance: Evidence from Mexico", Journal of Finance, 69(3), 1347-76.

Google Scholar WorldCat

Bruhn, M., Karlan, D., and Schoar, A. (2010). "What Capital is Missing in Developing Countries?" American Economic Review, 100(2), 629-33. Google Scholar WorldCat

Bulte, E. and Lensink, R. (2019). "Women's Empowerment and Domestic Abuse: Experimental Evidence from Vietnam," European Economic Review. 115:172-191. doi:10.1016/j.euroecorev.2019.03.003. Google Scholar Google Preview WorldCat COPAC

Bulte, E., Lensink, R., and Vu, N. (2017). "Do Gender and Business Trainings Affect Business Outcomes? Experimental Evidence from Vietnam," Management Science, 63(9), 2885–902. Google Scholar WorldCat

Chakravarty, S. and Pylypiv, M. (2017). "Microfinance: What Do We Know? Where Do We Go?" Annals of Corporate Governance, 2(3), 171–289. WorldCat

Google Scholar

Chemin, M. (2008). "The Benefits and Costs of Microfinance: Evidence from Bangladesh," Journal of Development Studies, 44, 463-84.

Google Scholar WorldCat

Coleman, B. E. (1999). "The Impact of Group Lending in Northeast Thailand," Journal of Development Economics, 60, 105-41. **Google Scholar** WorldCat

p. 427 Coleman, B. E. (2006). "Microfinance in Northeast Thailand: Who Benefits and How Much?" World Development, 34, 1612–38. WorldCat Google Scholar

Collins, D., Morduch, J., Rutherford, S., and Ruthven, O. (2009). Portfolios of the Poor: How the World's Poor Live on \$2 a day (Princeton, NJ: Princeton University Press). **Google Scholar Google Preview** WorldCat COPAC

Conning, J. (2005). "Monitoring by Peers or by Delegates? Joint Liability Loans and Moral Hazard," Economics Working Paper Archive at Hunter College 407, Hunter College Department of Economics. **Google Scholar Google Preview** WorldCat COPAC

Crépon, B., Devoto, F., Duflo, E., and Pariente, W. (2015). "Estimating the Impact of Microcredit On Those Who Take It Up: Evidence from a Randomized Experiment in Morocco," American Economic Journal: Applied Economics, 7(1), 123-50.

Google Scholar WorldCat

Cull, R. and Morduch, J. (2018). "Microfinance and Economic Development," in T. Beck and R. Levine (eds.), *Handbook of Finance and Development* (Edward Elgar: Cheltenham), 550–73. Google Scholar Google Preview WorldCat COPAC

Cull, R., Demirgüç-Kunt, A., and Morduch, J. (2007). "Financial Performance and Outreach: A Global Analysis of Leading Microbanks," *The Economic Journal*, 117(1), ff. 107–33. Google Scholar WorldCat

Cull, R., Demirgüç-Kunt, A., and Morduch, J. (2010). "Microfinance Meets the Market," *Contemporary Studies in Economic and Financial Analysis*, 92, 1–30. Google Scholar WorldCat

Cull, R., Demirgüç-Kunt, A., and Morduch, J. (2016). "*The Microfinance Business Model: Enduring Subsidy and Modest Profit,*" World Bank Policy Research Working Paper No. 7786. Google Scholar Google Preview WorldCat COPAC

Czura, K. (2015). "Pay, Peek, Punish? Repayment, Information Acquisition and Punishment in a Microcredit Lab-in-the-field Experiment," *Journal of Development Economics*, 117, 119–33. Google Scholar WorldCat

Deaton, A. (2010). "Instruments, Randomization, and Learning about Development," *Journal of Economic Literature*, 48, 424–55. Google Scholar WorldCat

De Quidt, J., Fetzer, T., and Ghatak, M. (2016). "Group Lending Without Joint Liability," *Journal of Development Economics*, 121, 217–36.

Google Scholar WorldCat

De Quidt, J., Fetzer, T., and Ghatak, M. (2018a). "Commercialization and the Decline of Joint Liability Microcredit," *Journal of Development Economics*, 134, 209–25. Google Scholar WorldCat

De Quidt, J., Fetzer, T., and Ghatak, M. (2018b). "Market Structure and Borrower Welfare in Microfinance," *Economic Journal*, 128(610), 1019–47. Google Scholar WorldCat

Duvendack, M., Palmer-Jones, R., Copestake, J. G., Hooper, L., Loke, Y., and Rao, N. (2011). "*What is the Evidence of the Impact of Microfinance on the Well-Being of Poor People?*" EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Google Scholar Google Preview WorldCat COPAC

Duvendack, M., Palmer-Jones, R., and Vaessen, J. (2014). "Meta-analysis of the Impact of Microcredit on Women's Control over Household Decisions: Methodological Issues and Substantive Findings," *Journal of Development Effectiveness*, 6(2), 73–96. Google Scholar WorldCat

Egli, D. (2004). "Progressive Lending as an Enforcement Mechanism in Microfinance Programs," *Review of Development Economics*, 8(4), 505–20. Google Scholar WorldCat

Field, E., Pande, R., Papp, J., and Rigol, N. (2013). "Does the Classic Microfinance Model Discourage Entrepreneurship Among thePoor? Experimental Evidence from India," American Economic Review, 103(6), 2196–226.Google ScholarWorldCat

Galema, R., Lensink, R., and Mersland, R. (2012). "Governance and Microfinance Institutions," in J. R. Barth, L. Chen, and

C. G. Wihlborg (eds.), *Research Handbook on International Banking and Governance* (Cheltenham: Edward Elgar), 565–78. Google Scholar Google Preview WorldCat COPAC

Gangopadhyay, S. and Lensink, R. (2014). "Asymmetric Group Loans, Non-Assortative Matching and Adverse Selection," *Economics Letters*, 124, 185–7. Google Scholar WorldCat

Gangopadhyay, S., Ghatak, M., and Lensink, R. (2005). "On Joint Liability and the Peer Selection Effect," *Economic Journal*, 115, 1012–20.

Google Scholar WorldCat

p. 428 Garcia and Lensink (2019). "Microfinance-Plus: A Review and Avenues for Research," in Hudon, M, M. labie and A. Szafarz (eds.) A Research Agenda for Financial Inclusion and Microfinance, (Edward Elgar: Cheltenham), 11–125.
 Google Scholar Google Preview WorldCat COPAC

Garikipati, S. (2008). "The Impact of Lending to Women on Household Vulnerability and Women's Empowerment: Evidence from India," *World Development*, 36, 2620–42. Google Scholar WorldCat

Garikipati, S., Agier, I., Guérin, I., Szafarz, A. (2017). "The Cost of Empowerment: Multiple Sources of Women's Debt in Rural India," *Journal of Development Studies*, 53, 700–22. Google Scholar WorldCat

Gertler, P., Martinez, S., Premand, P., Rawlings, L., and Vermeersch, C. (2011). "*Impact Evaluation in Practice*," World Bank, available at: http://www.worldbank.org/pdt. Google Scholar Google Preview WorldCat COPAC

Ghatak, M. (1999). "Group Lending, Local Information and Peer Selection," *Journal of Development Economics*, 60, 27–50. Google Scholar WorldCat

Ghatak, M. (2000). "Screening by the Company You Keep: Joint Liability Lending and the Peer Selection Effect," *The Economic Journal*, 110, 601–31. Google Scholar WorldCat

Ghatak, M. and Guinnane, T. W. (1999). "The Economics of Lending with Joint Liability: Theory and Practice," *Journal of Development Economics*, 60, 195–228. Google Scholar WorldCat

Ghosh, P. and Ray, D. (2001). "*Information and Enforcement in Informal Credit Markets*," unpublished manuscript, Department of Economics, New York University. Google Scholar Google Preview WorldCat COPAC

Giné, X. and Mansuri, G. (2014). "*Money or Ideas? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan*," World Bank Policy Research Working Paper No. 6959. Google Scholar Google Preview WorldCat COPAC

Hermes, N. and Hudon, M. (2018). "Determinants of the Performance of Microfinance Institutions," *Journal of Economic Surveys*, 32(5), 1483–513. Google Scholar WorldCat

Hermes, N. and Lensink, R. (2007). "The Empirics of Microfinance: What Do We Know?" *Economic Journal*, 117(1), ff. 1–10. Google Scholar WorldCat

Hermes, N. and Lensink, R. (2011). "Microfinance: Its Impact, Outreach and Sustainability," *World Development*, 39, 875–81. Google Scholar WorldCat Hermes, N., Lensink, R., and Meesters, A. (2011). "Outreach and Efficiency of Microfinance Institutions," *World Development*, 39, 6, 938–48.

Google Scholar WorldCat

Huis, M. A., Hansen, N., Otten, S., and Lensink, R. (2017). "A Three-Dimensional Model of Women's Empowerment: Implications in the Field of Microfinance and Future Directions," *Frontiers in Psychology*, 8(1678).
Google Scholar WorldCat

Huis, M., Lensink, R., Vu, N., and Hansen, N. (2019). "Impacts of the Gender and Entrepreneurship Together Ahead (GET Ahead)Training on Empowerment of Female Microfinance Borrowers in Northern Vietnam," World Development. 120: 46–61.Google ScholarGoogle PreviewWorldCatCOPAC

Hulme, D. and Mosley, P. (1996). Finance Against Poverty, Volumes 1 and 2 (London and New York: Routledge).Google ScholarGoogle PreviewWorldCatCOPAC

Johnson, S. (2004). "Gender Norms in Financial Markets: Evidence from Kenya," *World Development*, 32, 1355–74. Google Scholar WorldCat

Kabeer, N. (2001). "Conflicts over Credit: Re-evaluating the Empowerment Potential of Loans to Women in Rural Bangladesh," *World Development*, 29, 63–84. Google Scholar WorldCat

 Karlan, D. and Valdivia, M. (2011). "Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions," *Review of Economics and Statistics*, 93(2), 510–17.
 Google Scholar WorldCat

Karlan, D. S. and Zinman, J. (2008). "Credit Elasticities in Less-Developed Economies: Implications for Microfinance," *American Economic Review*, 98(3), 1040–68.
 Google Scholar WorldCat

Katzur, T. and Lensink, R. (2012). "Group Lending with Correlated Project Outcomes," *Economics Letters*, 117, 445–7. Google Scholar WorldCat

Khandker, S. (2005). "Micro-finance and Poverty: Evidence Using Panel Data from Bangladesh," *World Bank Economic Review*, 19, 263–86.

Google Scholar WorldCat

p. 429 Kim, J. C., Ferrari, G., Abramsky, T., Watts, C., Hargreaves, J., Morison, L., ... and Pronyk, P. (2009). "Assessing the Incremental Effects of Combining Health and Economic Interventions: The IMAGE Study in South Africa," *Bulletin of the World Health Organization*, 87, 824–32.
 Google Scholar WorldCat

Ledgerwood, J. and White, V. (2007). *Transforming Microfinance Institutions: Providing Full Financial Services to the Poor* (Washington, DC: World Bank). Google Scholar Google Preview WorldCat COPAC

Lensink, R., Mersland, R., Vu, N., and Zamore, S. (2018). "Do Microfinance Institutions Benefit from Integrating Financial and Nonfinancial Services?" *Applied Economics*, 50(21), 2386–401. Google Scholar WorldCat

Louis, P., Seret, A., and Baesens, B. (2013). "Financial Efficiency and Social Impact of Microfinance Institutions Using Self-Organizing Maps," *World Development*, 46, 197–210. Google Scholar WorldCat

Madajewicz, M. (2011). "Joint Liability versus Individual Liability in Credit Contracts," Journal of Economic Behavior and

Organisation, 77, 107–23. Google Scholar WorldCat

Mahmud, W. and Osmani, S. R. (2017). *The Theory and Practice of Microcredit* (London: Routledge). Google Scholar Google Preview WorldCat COPAC

McKenzie, D. and Woodruff, C. (2014). "What are we Learning from Business Training and Entrepreneurship Evaluations Around the Developing World?" *The World Bank Research Observer*, 29(1), 48–82. Google Scholar WorldCat

Mersland, R. and Øystein Strøm, R. (2009). "Performance and Governance in Microfinance Institutions," *Journal of Banking & Finance*, 33(4), 662–9. Google Scholar WorldCat

Microcredit Summit Campaign (2015). *State of the Summit Report 2015*, available at: https://stateofthecampaign.org/data-reported/.

Google Scholar Google Preview WorldCat COPAC

Morduch, J. (2013). "*How Microfinance Really Works*," available at: http://www.financialaccess.org/sites/default/files/publications/How Microfinance Really Works_April 02013.pdf. Google Scholar Google Preview WorldCat COPAC

Morduch, J. (2016). "*How Statistics Shaped Microfinance*," New York University and the Institute of Statistical Studies, November. Google Scholar Google Preview WorldCat COPAC

Pitt, M. M. and Khandker, S. R. (1998). "The Impact of Group-Based Credit Programs on Poor Households in Bangladesh: Does the Gender of Participants Matter?" *Journal of Political Economy*, 106, 958–96.

Pro Mujer (2018). "Where We Work," available at: https://promujer.org/get-know-us/where-we-work/. WorldCat

Rai, A. S. and Sjostrom, T. (2013). "Redesigning Microcredit," in N. Vulkan, A. E. Roth, and Z. Neeman (eds.), *The Handbook of Market Design* (Oxford: Oxford University Press), 249–67. Google Scholar Google Preview WorldCat COPAC

Reed, L. (2015). *State of the Microcredit Summit Campaign Report 2015* (Washington, DC: Microcredit Summit). Google Scholar Google Preview WorldCat COPAC

Robinson, M. (2001). The Microfinance Revolution: Sustainable Finance for the Poor, Vol. 1 (Washington, DC: World Bank).Google ScholarGoogle PreviewWorldCatCOPAC

Roodman, D. and Morduch, J. (2014). "The Impact of Microcredit on the Poor in Bangladesh: Revisiting the Evidence," *Journal of Development Studies*, 50(4), 583–605. Google Scholar WorldCat

Rutherford, S. with Arora, S. (2009). *The Poor and their Money*, 2nd edn (Bourton on Dunsmore, Warwickshire: Practical Action Publishing). Google Scholar Google Preview WorldCat COPAC

Sayinzoga, A., Bulte, E. H., and Lensink, R. (2016). "Financial Literacy and Financial Behaviour: Experimental Evidence from Rural Rwanda," *Economic Journal*, 126(594), 1571–99. Google Scholar WorldCat

Stiglitz, J. E. (1990). "Peer Monitoring and Credit Markets," World Bank Economic Review, 4(3), 351-66.

Google Scholar WorldCat

p. 430 Stiglitz, J. E. and Weiss, A. (1981). "Credit Rationing in Markets with Imperfect Information," *The American Economic Review*, 71(3), 393–410.
 Google Scholar WorldCat

Tarozzi, A., Desai, J., and Johnson, K. (2015). "The Impacts of Microcredit: Evidence from Ethiopia," *American Economic Journal: Applied Economics*, 7(1), 54–89.Google Scholar WorldCat

Van Rooyen, C., Stewart, R., and de Wet, T. (2012). "The Impact of Microfinance in Sub-Saharan Africa: A Systematic Review of the Evidence," *World Development*, 40, 2249–62. Google Scholar WorldCat

Weber, O. and Ahmad, A. (2014). "Empowerment Through Microfinance: The Relation Between Loan Cycle and Level of Empowerment," *World Development*, 62(0), 75–87.
 Google Scholar WorldCat

Notes

- 1 The books by Armendáriz and Morduch (2010) and Mahmud and Osmani (2017) provide fairly complete surveys of the economics of microfinance. A difference between the two books is that Mahmud and Osmani (2017) focus much more explicitly on experiences with microcredit in Bangladesh, and provide a more comprehensive survey of the theories of microcredit (especially related to group lending). Armendáriz and Morduch (2010) are more complete in covering various aspects of microfinance (e.g., beyond group lending, gender issues, commercialization, and managing MFIs). Older "survey" books on microfinance include Hulme and Mosley (1996) and Ledgerwood and White (2006).
- 2 Banerjee (2013), Chakravarty and Pylypiv (2017) and Cull and Morduch (2018) summarize recent literature on microfinance. Banerjee (2013) pays specific attention to potential future research directions in microfinance. Chakravarty and Pylypiv (2017) focus specifically on the problems microfinance is faced with, paying attention, for example, to mission drift, savings, and management of microfinance. Cull and Morduch (2018) review claims and results of microfinance. They argue that, on the one hand, expectations about what could be achieved by microfinance were much too high, and that, on the other hand, current stories about failures are exaggerated.
- 3 See also Karlan and Valdivia (2011). Their study shows the "mixed" results of business training.
- 4 Bulte, Lensink, and Vu (2017, and the associated online appendix) also present midline results, results based on difference-in-difference regressions, and so-called Local Average Treatment Effects (LATE).