



Munich Personal RePEc Archive

Microfinance, Moneylenders, and Economic Shocks: An Assessment of the Bangladesh Experience

Emran, M. Shahe and Shilpi, Forhad

19 December 2021

Online at <https://mpra.ub.uni-muenchen.de/111159/>
MPRA Paper No. 111159, posted 20 Dec 2021 12:38 UTC

Microfinance, Moneylenders, and Economic Shocks: An Assessment of the Bangladesh Experience

M. Shahe Emran¹
IPD, Columbia University

Forhad Shilpi
World Bank

This Version: December 19, 2021

ABSTRACT

The effectiveness of microfinance in improving the economic lives of the poor has been under extensive scrutiny in last two decades. Most of the studies on Bangladesh focus on the poverty and women's empowerment impacts of microfinance. We provide a discussion on two relatively neglected aspects: the impacts on moneylenders, and the coping ability of households facing adverse shocks. The available evidence suggests that the microfinance in Bangladesh helped free many households from the "clutches" of moneylenders, contradicting the claim of some critics that microfinance exacerbates their dependence on moneylenders. The likelihood that a household takes loans from moneylenders declines by about 70 percent once it becomes a member of a microfinance program. However, the evidence also suggests that the moneylender interest rate goes up when the MFI coverage is high enough in a village, implying that the remaining clients of moneylenders suffer a negative pecuniary externality. The evidence on coping ability suggests that microfinance membership improves food security during flood and Monga. But microfinance membership does not reduce the propensity to sell labor in advance in the lean season, and may not help a household undertake short-term migration to urban labor market in response to a shock.

¹We would like to thank our research collaborators in various microfinance projects: Joseph Stiglitz, Stephen Smith, Claudia Berg, Virginia Robano, and AKM Mahabub Morshed for their insights and fruitful discussions over the years. We are grateful to Baqui Khalily and Mahabub Hossain for sharing data with us. We also acknowledge useful discussions with Wahiduddin Mahmud, Munshi Sulaiman, and Syed Hashemi on various aspects of microfinance in Bangladesh. The standard disclaimers apply.

1 Introduction

The effectiveness of microfinance as a poverty alleviation and development strategy has come under extensive scrutiny in the last 20 years (for alternative views, see Banerjee (2013) and Mahmud and Osmani (2016)). As a pioneer in microfinance movement, the Bangladesh experience is of special importance for the ongoing debate. Many of the studies on microfinance in Bangladesh focus on its impacts on poverty measured in terms of household consumption and/or assets (for a survey, see Mahmud and Osmani (2016)). There is also a substantial literature on the impact of microfinance membership on women's decision making power in the household (see Kabeer (2016) for a survey). The focus of this paper is on two relatively less researched areas: the effects of microfinance on informal credit market in Bangladesh, especially the moneylenders, and (ii) the effects of microfinance membership on the ability of a household to cope with economic shocks.

The first generation microcredit programs (which later came to be known as Classic Grameen or Grameen-I model) primarily focused on how to create a credit market for the poor borrowers (especially women) without any collateral, and ensure repayment. However, the microfinance NGOs were very much aware of the fact that the poor face a host of other missing or imperfect markets in addition to the credit market failure. For example, labor market in developing countries is usually thin and highly segmented because of high transaction costs, and is characterized by high unemployment. The demand for microcredit would be strong in such a context because it creates self employment opportunities, thus addressing imperfections in both labor and credit markets simultaneously.²

²For a theoretical analysis of the implications of missing and imperfect labor market for microfinance movement, please see Emran, Morshed, and Stiglitz (2021). They emphasize

A substantial literature in development economics emphasizes the interlinked nature of credit, labor, land, and product market transactions in poor villages (see Bardhan (1980) for a survey). For example, landless households are likely to be involved in interlinked labor and credit transactions with the landlord-moneylender. The take-up rate and the impact of microcredit would depend both on the design of the loan product and the set of functioning markets available in a village. The impact of microfinance on the moneylenders (who are also the landlords or shop keepers in the village) would vary depending on the nature of imperfections in other markets through these interlinked web of economic relations. If households switch from moneylenders to microcredit, the value of MFI loan contract outweighs the value they derive from the interlinked transactions with the moneylenders. Since microcredit allows the borrower to start a backyard economic activity, the borrower may not be as dependent on the landlord-moneylender for employment opportunities.³

As we discuss below, the classic microcredit model with its emphasis on inculcating credit discipline in the form of weekly repayment and commitment savings is not suitable for filling in for the missing insurance market. The microcredit NGOs in Bangladesh began to appreciate this trade-off after the 1998 flood, and redesigned the loan contract (known as Grameen-II model) in a way so that it not only deals with a failing credit market, but can also partially fill in for the missing insurance market for economic shocks such as flood, seasonal

that a focus on the interactions between missing labor and credit markets for the poor is crucial in understanding some of the major empirical puzzles in microfinance including low take-up rates in recent microcredit programs, difficulties in scaling up projects, and a modest impact on the income and consumption of borrowers but high repayment rates. The empirical literature on microfinance in the last 20 years have largely ignored this interaction.

³An appreciation of the implications of multiple missing markets by the practitioners has been central to other rural development programs in Bangladesh. For example, the Comilla model of "Cooperative Capitalism" tried to fill in for the missing credit, inputs (fertilizer, pesticide, irrigation), and insurance (through group savings schemes) markets. See the discussion by Khan (1979) and Toufique (2017).

famine, and illness. Since a large part of the demand for moneylender loans is to meet the emergencies such as health shocks, crop failure because of flood, a redesign of MFI loan product with built-in features of insurance can create effective competition for the moneylenders. The goal of this paper is to draw a set of conclusions regarding the effects of microfinance on the moneylenders, and the coping ability of the borrowers facing economic shocks, based on the recent research in the context of Bangladesh.

2 Does Microfinance Help Free the Bangladeshi Poor from the “Clutches” of Moneylenders?

There is a widely and deeply held perception, backed by substantial evidence, that moneylenders engage in predatory lending and charge usurious interest rates (Banerjee (2003), Hoff and Stiglitz (1993)). Moneylenders can exploit the interlinked credit and labor market transactions to charge very high interest rates without the risk of borrower default. This motivated government interventions in the credit market (for example, subsidized loans through specialized public agricultural banks), credit cooperatives (for example, Comilla model in Bangladesh), and many NGO programs focusing on credit for the poor (for example, Grameen Bank, BRAC, and ASA in Bangladesh). For the pioneering microfinance programs in Bangladesh such as Grameen Bank and BRAC, a primary goal has always been to reduce, and ultimately eliminate, the dependence of the poor households on moneylenders (especially in rural areas). As Muhammad Yunus states in the context of the origin of the Grameen Bank: “(W)hen my list was done it had the names of 42 victims. The total amount they had

borrowed was US \$27. What a lesson this was to an economics professor who was teaching about billion dollar economic plans. I could not think of anything better than offering this US \$27 from my own pocket to get the victims out of the *clutches of the moneylenders*. (Yunus (2009), seventh Nelson Mandela Lecture. Emphasis added).

The entry of the MFIs into rural credit market was expected to reduce the reliance of the households on the moneylenders as they switch to the MFIs for their credit needs. By providing loans at a lower interest rate to the poor without any collateral, the MFIs are also expected to reduce the interest rate a moneylender can charge to borrowers.⁴ A lower moneylender interest rate would benefit those households who still need to take loans from the moneylenders after the entry of microcredit NGOs in a village (a positive pecuniary externality). The argument that the microfinance NGOs would both reduce the dependence of poor on the moneylenders and also lower the interest rate was widely shared among the policymakers and NGO practitioners in the early days of the microfinance movement. A number of theoretical analysis also provided conceptual foundations for such an optimistic view (see, for example, the models developed by Bell (1990) and McIntosh and Wydick (2005)). One would thus expect that whether the spread of microfinance created effective competition for the moneylenders to be a central focus of the burgeoning empirical literature on microfinance in the last two decades. It is rather surprising that there are only two studies that analyze the interactions between the MFIs and moneylenders.⁵

⁴However, note that this widely held argument implicitly assumes that the moneylenders hold market power and charge interest rates substantially higher than their costs of funds and loan administration. Some authors also argue that the high interest rates reflect the high risks of default in collateral free lending. However, the incidence of default is low in informal credit transactions (see Banerjee (2003)).

⁵In his survey of the microfinance literature, Banerjee (2013) cites only one paper on the effects of microfinance on moneylenders. The recent literature survey of microfinance by VoxDev does not even contain the word moneylenders.

In a study on the microcredit borrowers from Grameen Bank in the early 1980s, Mahabub Hossain (1988) report that, for the households with less than half acre land ownership (the target group of MFIs such as Grameen Bank), more than 90 percent of loans in 1982 were from informal sources including the moneylenders. This reliance on the informal sources was observed in a context where there was a substantial expansion of formal bank branches for agricultural lending in rural Bangladesh in the 1970s and early 1980s.⁶ It is well recognized in the literature that the expansion of rural development banks in the 1970s did little to create effective competition for the moneylenders, partly because they required collateral, and, more importantly, because the loans were largely captured by the medium and large landowners (Hossain and Bayes (2009)).⁷ The evidence on the interest rates charged by the moneylenders in the early 1980s is also consistent with the widely held perception of usurious moneylenders (Mohajons) in Bangladesh. The estimates of moneylender interest rates in the early 1980s range from 50 percent to more than 100 percent. For example, a BIDS-IFPRI study based on a 1982 survey estimated an average interest rate of 125 percent on the moneylender loans (Ahmed and Hossain (1990)). The analysis of Hossain (1988), however, does not deal with the effects of microfinance on the member households previously borrowing from the moneylenders in a village.

The microfinance NGOs in Bangladesh expanded dramatically their presence in the rural credit market in Bangladesh in the 1980s and 1990s (see the discussion by Mahmud and Osmani (1997)). How did this expansion of microfinance

⁶Estimates based on a 1982 survey by IFDC show that only 1.2 percent of households with less than half acre land got loans from the public or private banks during the Boro season.

⁷If part of the subsidized loans from the public Banks were used by the landlords to expand their money lending operations, this would increase the supply of credit to the landless poor borrowers. But the evidence suggests that such trickle down effects were limited at best. Whether such on-lending by the landlords would reduce moneylender interest rate is not clear. For a model where it can raise moneylender interest rate, see Hoff and Stiglitz (1998).

branches affect the nature of the interaction between the poor households and the moneylenders? The first study to analyze this question is Mallick (2012). He uses a 2002 cross-section data set on 156 villages from the baseline survey of the BRAC TUP program in the three districts in the Northern Bangladesh (Rangpur, Kurigram, and Nilphamari) and reports an average moneylender interest rate of 103 percent with the maximum of 240 percent in a village. This is striking given that the average moneylender interest rate reported two decades earlier (1982 survey) was only marginally higher.⁸ The headline result from Mallick's analysis is that the villages with a higher microfinance coverage also had a higher moneylender interest rate, thus suggesting that a deepening of the microfinance market in a village in fact led to moneylenders charging higher interest rates. This conclusion holds especially in those villages where more loans are used for productive purposes. Mallick argues that the higher moneylender interest rates in a village is the result of a higher demand for informal loans by the households taking microloans for productive investment, as they need additional loans to achieve economies of scale. It is also argued that some MFI borrowers need loans from the moneylenders to maintain rigid weekly repayment schedule. However, whether a higher moneylender interest rate reflects a higher demand by the borrowing households cannot be judged from an analysis of the moneylender interest rate alone, we need to look at both the price (interest rate) and quantity (number of borrowers and loan amount from the moneylenders). When a higher moneylender interest rate is primarily due to a rightward shift in the demand curve as argued by Mallick (2012), price and quantity move in the same direction: more households should borrow from the moneylenders and/or

⁸Based on a survey of 143400 households in the same region in Bangladesh in 2010/2011, Rabbani and Hasan (2021) report an estimate of 122 percent average moneylender interest rate. In contrast, the average (effective) interest rate for MFI loans is 27 percent.

take larger loans, even though the interest rate is higher.

In a recent paper, Berg et al. (2020) deal with the issues raised above in the context of Mallick’s analysis. For the analysis of the effects of microfinance penetration in a village, they use an exceptionally large village level data set collected by the Institute of Microfinance (InM) in the Northern Bangladesh.⁹ The InM data set has some important advantages for exploring the questions raised by Mallick’s (2012) analysis. The villages in the data set for moneylender interest rate analysis come from 12 upazilas in 3 districts in the same chronically poor areas in the Northern part of Bangladesh as the BRAC-TUP survey used by Mallick (2012). This is important to ensure comparability of the the results from the two studies. The fact that the sample used by Berg et al. (2020) consists of 793 villages allows them to check if the conclusion of a higher moneylender interest rate is robust, not specific to a small number of villages (89) analyzed by Mallick (2012).¹⁰ To ensure robustness of the conclusions, they report estimates from a number of econometric approaches developed recently in the literature on program evaluation. In particular, they use the minimum-biased IPW estimator of Millimet and Tchernis (2013) and the heteroskedasticity based identification approach of Klein and Vella (2010). Their main finding is as follows: at low levels of coverage in a village, the impact of microfinance on moneylender interest rate is negligible, but when the MFI coverage is high enough, moneylender interest rate increases in a village. This nonlinear effect is intuitive, as one would not expect a substantial impact on moneylenders when only a few households get

⁹InM (Institute of Microfinance) is now called Institute for Inclusive Finance and Development.

¹⁰Mallick’s main results are based on data from 89 villages (see Table 4 in his paper), while the simple OLS regressions without village controls use data from 106 villages. As noted earlier, there are 156 villages in total in the data set. There is a risk that a reader might discount the findings in Mallick (2012) as idiosyncratic because of the small number of villages.

access to microcredit.

A major worry about the above conclusion is whether it is driven by MFIs targeting relatively more productive villages for program placement. A plausible argument goes as follows. MFIs place their programs in relatively productive villages to ensure high repayment rates. Moneylenders in more productive villages can also charge higher interest rates as the returns to household investments are higher (this assumes that the moneylenders enjoy market power and extract most of the surplus). This can give rise to a positive correlation between MFI coverage and moneylender interest rate in a village even when the entry of MFIs in fact had no impact on the operation of the moneylenders. If this argument is correct, then the estimated impact of MFI coverage on moneylender interest rate should go down substantially when we control for productivity characteristics of villages in the regressions. The evidence presented by Berg et al. (2020) rejects this argument because the estimated impact of MFI coverage *increases* once controls for village productive potential are included in the regressions.¹¹ Interestingly, the estimates presented by Mallick (2012) also support this conclusion; the magnitude of the impact of MFI coverage on moneylender interest rate is either unchanged (see columns 1 and 2 in his Table 2) or increases (compare the first and second columns in his Table 3) once village productivity controls are included in a regression.

To understand whether taking loans from a microfinance program makes a household more likely to go to the moneylenders for additional funds, Berg et al. (2020) take advantage of a high-quality panel data set collected by Mahabub

¹¹This also suggests that the location choices of the MFIs in Bangladesh are motivated more by poverty alleviation and target the relatively poorer villages. An analysis of the branch location choices of the two largest MFIs in Bangladesh (Grameen Bank and BRAC) by Salim (2013) shows that both poverty alleviation and repayment objective had been important.

Hossain covering a random sample of 62 villages from 62 districts (funded by IFPRI, IRRI, and BRAC).¹² The 2000 and 2007 rounds of the panel survey are used for the analysis, implying that most of the households are likely to be in the more flexible Grameen-II type contracts (see the discussion in the next section). The main advantage of panel data is that we can use household fixed effects to wipe out the unobserved time invariant determinants of a household's decision to take loans from a microcredit program. Perhaps the most salient of such unobserved factors is entrepreneurial ability of a borrower which leads to an upward biased estimate of the program effect because the high ability borrowers self-select into the microcredit programs in this case. Since innate ability of a borrower does not change after becoming a MFI borrower, the household fixed effect purges the effects of higher ability of a borrower when comparing with the non-borrower households.¹³ The focus of the analysis is on the households that were not MFI members in 2000, but became members in between 2000 and 2007; whether their demand for moneylender loans increased. A difference-in-difference research design is used with alternative comparison groups. The first comparison group consists of the households that were not members of microfinance programs in both 2000 and 2007 surveys. The second comparison group in addition includes the dropouts: the households that were MFI members in 2000 rounds, but dropped out in 2007. Alexander-Tedeschi and Karlan (2009) emphasize that ignoring the dropouts may bias the estimated program effect. In addition to the OLS, Berg et al. (2020) use the minimum-biased IPW of Millimet

¹²Mahabub Hossain was a pioneer in collecting high quality household panel data in Bangladesh.

¹³Presumably, the non-borrower households chose not to participate in microcredit programs because they have low ability and are unable to generate enough returns to repay the loans. One might argue that household fixed effects do not take care of dynamic learning by doing. However, if microcredit enables a borrower to enhance her entrepreneurial and managerial skills through learning by doing, these should be counted as part of the program effect of the MFI credit interventions.

and Tchernis (2013) and doubly robust IPWRA estimator of Wooldridge (2007) to estimate the difference-in-difference empirical model.

The evidence from their empirical analysis shows that the likelihood of borrowing from moneylenders goes down dramatically (by about 70 percent) once a household joins a microcredit program. This contradicts the rightward demand shift as an explanation for the higher moneylender interest rate discussed by Mallick (2012). A natural question that comes to a reader's mind is then how to explain the twin findings of Berg et al. (2020): (i) a higher moneylender interest rate, and (ii) a lower demand for moneylender loans in villages with sufficiently high MFI coverage. The theoretical literature points to two possible explanations. First, Hoff and Stiglitz (1998) emphasize that fixed costs might be important in administration of informal loans by moneylenders, for example, in acquiring information over the years about the potential borrowers in a village. When MFIs come to a village, many borrowers leave the moneylenders to join the microcredit programs, and the evidence discussed above suggests strongly that most of them do not take loans from the moneylender anymore.¹⁴ This implies that the moneylender has to recoup the fixed costs from the few remaining borrowers by increasing the interest rate charged. A second explanation is based on cream-skimming that affects the composition of the borrowers who are retained by the moneylenders after MFIs make significant inroads in a village. There is substantial evidence that the MFIs in Bangladesh exclude the poorest of the poor (the ultrapoor) to ensure repayment (see the discussion in Emran et al. (2014)). This implies that the pool of borrowers available to the moneylender consists of the more risky ultrapoor households. Moneylenders

¹⁴One can argue that the demand for total moneylender loans might have increased if the loan size of the remaining borrowers is large enough. The estimates of Berg et al. (2020) suggest that total loan from moneylenders declined by 40 percent between 2000 and 2007.

may need to increase the interest rate to compensate for the resulting higher risk of default.

The main take away from the discussion above is that MFIs in Bangladesh helped many poor households break free from the “clutches” of moneylenders, but they did not eliminate the moneylenders from the rural credit market. There are some households who still rely on the moneylenders, and they suffer a negative pecuniary externality as a result of the expansion of MFI programs in a village, because they end up paying higher interest rate for their loans from the moneylenders.

3 Does Microfinance Help the Poor Deal With Economic Shocks?

There is a substantial and mature literature in development economics that points out that informal credit transactions in rural areas of developing countries involve elements of insurance contract with built-in flexibility in repayment schedule. The role played by informal credit transactions among family and friends in coping with economic shocks have been noted in the literature by many authors (see Morduch (1995) and the papers in the *Journal of Economic Perspectives* (Summer 1995) symposium on consumption smoothing in developing countries). The standard microcredit programs following the initial group lending program of Grameen Bank (later dubbed as Grameel-I or Classic Grameen contract) in contrast are well-known for their weekly repayment and savings schedule, and their emphasis on creating a culture of borrower discipline. This emphasis on repayment culture was necessary in the early 1980s given the

backdrop of widespread default on loans from public banks in Bangladesh.¹⁵ It is argued by the critics of microfinance that the inflexible repayment makes it difficult for a borrower to cope with negative economic shocks. Most of the MFIs in Bangladesh require regular savings as part of the credit contract. There is a substantial literature that highlights the advantages of such savings schemes as commitment devices that help the present-biased poor households build-up savings (see Morduch (2010)). However, if it is difficult to withdraw the savings when hit by a negative shock as was the case with Grameen-I model of microcredit, the savings are of little help during a flood, local famine, or health shocks.

The limitations of the classic Grameen-I model were laid bare by the 1998 flood in Bangladesh which affected a large proportion of microfinance members, and they were unable to maintain the repayment schedule (Brown and Nagarajan (2000)). Most of the MFIs including Grameen Bank and BRAC did not enforce the repayment and commitment savings schedule, rescheduled the loans if necessary, and provided help with the recovery effort after the flood. The experience of 1998 flood prompted a fundamental redesign of the classic Grameen loan contract by incorporating built-in flexibility, and Grameen-II was implemented by Grameen Bank between 2000-2002. Some of the important features of Grameen-II includes the option of taking a detour to a “flexi loan” when facing a negative economic shock where repayments are rescheduled, and flexibility in withdrawing savings is allowed (Rutherford (2006)). Grameen-II also explicitly disavowed group liability. Group liability and group solidarity are of little help

¹⁵One of the most astute observers of the evolution of microcredit movement in Bangladesh, Wahiduddin Mahmud, suggests that the change in the norm of repayment is an important but largely overlooked achievement of microfinance in Bangladesh (based on personal discussion). In a recent paper, Osmani (2016) provides evidence supporting Mahmud’s conjecture.

when all the group members are affected at the same time by a shock such as flood or seasonal famine. Following Grameen Bank, many other microcredit NGOs introduced similar flexibility in their loan contracts in the 2000s.

Given the differences in the Grameen-I vs. Grameen-II models of credit contract, on a priori grounds, we would expect that the answer to the question posed for this subsection is likely to vary depending on whether the data come from before or after the redesign of the loan contracts. It is especially important for assessing whether the borrowers under the Grameen-II contract are able to cope with economic shocks taking advantage of the design improvements in the loan product. Shoji (2010) looks at this issue in the context of 2004 flood in Bangladesh and finds that 39 percent of the microcredit borrowers in the sample rescheduled their loans. He also finds that microfinance member households were less likely to skip meals during the flood period, especially the female members of a household enjoyed higher food security. However, the study is based on a small sample with only 289 households, and the conclusions may not be relevant for the broader population.

Islam and Maitra (2012) provide an analysis of the effects of microcredit on a household's ability to cope with negative health shocks in Bangladesh. They use a panel data set of 2694 households with three rounds in 1997/98, 1999/2000, and 2004/2005. The first two rounds of the data cover mostly borrowers in Grameen-I regime, while many of the borrowers in the 2004-2005 round are likely to be in Grameen-II type contracts. The estimates in their study thus refer to the effectiveness of a mix of Grameen-I and Grameen-II contracts. Their estimates suggest that microcredit helped a household to cope better with health shocks; unlike other households without access to microcredit they were able to

weather an adverse health shock without selling their productive assets, especially livestock.¹⁶

In a recent paper, Berg and Emran (2020) analyze the question of coping ability from a different perspective; their focus is on whether microfinance is effective in ensuring food security during seasonal famine known as Monga in Bangladesh. In agrarian economies, coping with the lean season is a challenge for many poor households because a lack of employment opportunities can create entitlement failure a la Sen (1981). Seasonal hunger takes on an especially stark form in the greater Rangpur region in Bangladesh where the lean season can easily devolve into a near famine situation when the poor resort to starvation and distress sale of assets (land and livestock) and labor. Their analysis is based on a large data set of 143,000 poor and ultrapoor households surveyed by InM and PKSF in 2006-2007 in three districts Gaibandha, Lalmonirhat, and Nilphamari. We expect most of the borrowers to be in Grameen-II type contracts in 2006-2007, and thus the data are suitable for answering the question whether the redesign of the loan products after the 1998 flood was effective in dealing with the seasonal adversities such as Monga.

The study develops an empirical strategy that exploits the fact that most of the MFIs try to exclude the poorest of the poor to minimize the risk of default. They find evidence that a household is much less likely to get microcredit if it owns less than 10 decimal land which is consistent with the idea of screening out the ultrapoor from the microcredit programs.¹⁷ The insight behind their

¹⁶The recent analysis of Rabbani and Hasan (2021) suggests that moneylenders still play a role for the households facing unanticipated shocks (most common in their data are health shocks). They suggest that the flexibility of moneylenders loans in a crisis situation is the primary reason for this type of demand for moneylenders loans. However, they do not analyze whether being an MFI member reduces this dependence on moneylenders. The flexibility in using the savings to deal with shocks in Grameen-II type contracts would be especially valuable in dealing with unanticipated idiosyncratic shocks such as health shock.

¹⁷10 decimal is an important threshold in this regard because BRAC-TUP program defines

research design is that the households owning a bit less than 10 decimal land are likely to be comparable to those who own a bit more than 10 decimal land, but their likelihood of getting microcredit is substantially lower because of MFI screening. The fact that the survey included 143,000 households allow them to focus on a small interval of landownership (0.06 decimal-0.16 decimal) around the 10 decimal threshold, and their main estimation sample includes 24132 households.¹⁸

The estimates reported by Berg and Emran (2020) show that the probability that a household has to survive on one meal a day during Monga declines by 22 percentage points when it becomes a member of microcredit program, and the probability of having three meals a day increases by 13 percentage points. In contrast, microcredit membership does not reduce the likelihood of distress sale of labor. The probability of short term migration for work to nearby town in fact declines once a household becomes microcredit member. This suggests that the microcredit programs are not successful in dealing with the challenges of spatial segmentation of labor market, especially for the extreme poor.¹⁹

The positive effects of microfinance membership on food security during the Monga season discussed above reflect a combination of the following mecha-

a household as ultrapoor if it has less than 10 decimal land (along with other eligibility criteria). Many earlier studies on microfinance in Bangladesh relied on the 50 decimal (half acre) land threshold for their research design. But there is substantial evidence that the half acre eligibility rule was routinely violated by the MFI programs in Bangladesh. In the data set used by Berg and Emran (2020), the half acre threshold does not have any explanatory power for understanding who chooses to become microfinance member.

¹⁸Most of the other available studies on the effects of microfinance in Bangladesh use 5 acre land ownership as the upper cut-off, thus the sample usually contains households in the range of 0-5 acres land ownership. It is difficult to argue against the observation that the households with no land are likely to be different from those owning 4-5 acres of land in many relevant economic characteristics.

¹⁹This result is in contrast to Shonchoy (2015) who found that microcredit access increases the likelihood of seasonal short-term migration in river island areas in Kurigram served by BRAC. His analysis is based on a survey of 290 households in 17 villages in 2006. Additional analysis of this issue with large nationally representative data sets will be valuable for policymakers.

nisms. First, microcredit may help a household to generate income through home-based economic activities with credit, which is especially important when the labor market collapses during the lean season. Second, they can use the credit to buy food (such as rice and lentil which are nonperishable) at a lower price before the Monga so that they do not have to pay high prices during the lean season. Third, the costs of such food buffer stock for consumption smoothing are much lower for a household borrowing from an MFI at 16-30 percent interest rate instead of at the 100-125 percent moneylender interest rate. Fourth, as noted earlier, an important contribution of microcredit programs is its commitment savings, and Grameen-II type contracts made it much easier to withdraw such savings during negative shocks such the Monga period.

Conclusions

The effects of microfinance on moneylenders and a household's ability to deal with negative economic shocks remain under-researched. Based on the recent economic literature, we provide a discussion on these issues in the context of Bangladesh. Although there are only two studies on the effects of microfinance on moneylenders in Bangladesh, they reach the same conclusion regarding the impact on moneylender interest rate. The moneylender interest rate increases when microfinance coverage is high enough. This contradicts the widely held belief among the NGO practitioners that MFI competition lowers the moneylenders interest rate. However, the evidence also rejects the claim of some critics of microfinance that the observed higher interest rate is due to a higher demand for moneylender loans by the MFI borrowers. The central take away from this research is that microfinance helps free most of the borrowers from the clutches of moneylenders, but the remaining clients of moneylenders pay a

higher interest rate. The evidence on the coping ability suggests that microfinance membership improves a household's food security in the face of adverse economic shocks. However, the main mechanism underlying the improvements in food security is consumption smoothing, taking advantage of the low MFI interest rates (compared to moneylenders) and flexibility in the redesigned loan products after the 1998 flood in Bangladesh. The evidence suggests that microfinance is not effective in dealing with the seasonal labor market failure in a village.

REFERENCES

Alexander-Tedeschi, G. and D. Karlan. 2009. Cross-sectional Impact Analysis: Bias from Drop-Outs. FAI: Yale University.

Banerjee, A. 2003. "Contracting Constraints, Credit Markets, and Economic Development. Chapter in *Advances in Economics and Econometrics: Theory and Applications, Eighth World Congress, Vol. III*, edited by Mathias Dewatripont, Lars Peter Hansen and Stephen J. Turnovsky.

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.

Bardhan, Pranab K, 1980. "Interlocking Factor Markets and Agrarian Development: A Review of Issues," *Oxford Economic Papers*, Oxford University Press, vol. 32(1), pages 82-98, March.

Brown, W and Nagarajan, G, 2000, *Bangladeshi Experience in Adapting Financial Services to Cope with Floods: Implications for the Microfinance Industry*, Working paper, USAID.

Emran, M Shahe & A. K. M. Mahbub Morshed & Joseph E. Stiglitz, 2021. "Microfinance and missing markets," *Canadian Journal of Economics/Revue canadienne d'économique*, John Wiley Sons, vol. 54(1), pages 34-67, February.

Berg Claudia & Emran M. Shahe, 2020. "Microfinance and Vulnerability to Seasonal Famine in a Rural Economy: Evidence from Monga in Bangladesh," *The B.E. Journal of Economic Analysis Policy*, De Gruyter, vol. 20(3), pages 1-36, July.

Berg Claudia & Emran Shahe & Shilpi Forhad, 2020. "Microfinance and Moneylenders: Long-run Effects of MFIs on Informal Credit Market in Bangladesh," *The B.E. Journal of Economic Analysis Policy*, De Gruyter, vol. 20(3), pages 1-35, July.

Emran, M. S., V. Robano, and S. C. Smith. 2014. "Assessing the Frontiers of Ultrapoverty Reduction: Evidence from Challenging the Frontiers of Poverty Reduction/Targeting the Utrapoor, an Innovative Program in Bangladesh. *Economic Development and Cultural Change*, 62 (2): 33980.

Gertler, P., D. I. Levine, and E. Moretti. 2009. "Do Microfinance Programs Help Families Insure against Illness? *Health Economics* 18 (3): 25773.

Hoff, Karla, Avishay Braverman, and Joseph E. Stiglitz. 1993. *The Economics of Rural Organizations: Theory, Practice, and Policy*, Oxford University Press.

Hoff, Karla, and Joseph E. Stiglitz. 1998. "Moneylenders and Bankers: Price-Increasing Subsidies in a Monopolistically Competitive Markets. *Journal of Development Economics*, 55 : 485-518.

Hossain, Mahabub, (1988), Credit for alleviation of rural poverty: the Grameen Bank in Bangladesh, No 65, Research reports, International Food Policy Re-

search Institute (IFPRI).

Hossain, M, and A. Bayes. 2009. Rural Economy Livelihoods: Insights from Bangladesh. Dhaka, Bangladesh: A. H. development Publishing.

Islam, A., and P. Maitra. 2012. "Health Shocks and Consumption Smoothing in Rural Households: Does Microfinance have a Role to Play?" *Journal of Development Economics* 97: 23243.

Kabeer, N. (2016), "Economic pathways to women's empowerment and active citizenship: what does the evidence from Bangladesh tell us?" *The Journal of Development Studies*, 53 (5), 1-15.

Khan, A. 1979. "The Comilla Model and the Integrated Rural Development Programme of Bangladesh: An Experiment in "Cooperative Capitalism". *World Development*, 7(4-5):397-422.

Klein, Roger and Francis Vella. 2010. "Estimating a Class of Triangular Simultaneous Equations Models Without Exclusion Restrictions. *Journal of Econometrics*, 154 : 15464.

Mahmud, W., and S. R. Osmani. 2017. *The Theory and Practice of Microcredit*. New York City: Routledge.

Mallick, D. 2012. Microfinance and moneylender interest rate: Evidence from Bangladesh. *World development* 40 (6): 11811189.

Matin, I., M. Sulaiman, and M. Rabbani. 2008. *Crafting a Graduation Pathway for the Ultra-poor: Lessons and Evidence from a BRAC Programme*. Working paper. Dhaka: Research and Evaluation Division, Building Resources across Countries.

Millimet, Daniel L., and Rusty Tchernis. 2013. "Estimation of Treatment Effects without an Exclusion Restriction: with an Application to the Analysis

of the School Breakfast Program. *Journal of Applied Econometrics*, 28 (6): 9821017.

Morduch, J. 1995. "Income Smoothing and Consumption Smoothing. *The Journal of Economic Perspectives* 9 (3): 10314.

Morduch, J. 2010. "Borrowing to Save. *Journal of Globalization and Development* 1 (2): 111.

Osmani, S R (2016). "Models of Microcredit Delivery and Social Norm", *Bangladesh Development Studies*, December 2016.

Rabbani, Atonu, and Md. Mehadi hasan (2021), "The role of borrowing in crisis coping among ultra-poor households in rural Bangladesh", *Journal of Asian Economics*, vol. 73.

Rahman, H. Z. 1995. "Mora Kartik: Seasonal Deficits and the Vulnerability of the Rural Poor. In *Rethinking Rural Poverty: Bangladesh as a Case Study*, edited by H. Z. Rahman, and M. Hossain New Dehli, India: Sage Publications.

Rutherford, S. 2006. "What Is Grameen II? Is It Up and Running In The Field Yet? *MicroSave Briefing Notes on Grameen II*.

Salim, M. M. 2013. "Revealed Objective Functions of Microfinance Institutions: Evidence from Bangladesh. *Journal of Development Economics* 104 (C): 3455.

Sen, A. 1981. "Ingredients of Famine Analysis: Availability and Entitlements. *The Quarterly Journal of Economics MIT Press* 96 (3): 43364.

Shoji, M. 2010. "Does contingent repayment in microfinance help the poor during natural disasters. *Journal of Development Studies* 46 (2): 191210.

Shonchoy, Abu, 2015. "Seasonal Migration and Microcredit During Agricultural Lean Seasons: Evidence from Northwest Bangladesh," *The Developing*

Economies, Institute of Developing Economies, vol. 53(1), pages 1-26, March.

Toufique, Kazi, A (2017), "Bangladesh Experience in Rural Development: The Success and Failure of the Various Models Used", Bangladesh Development Studies, March-June 2017.

Wooldridge, Jeffrey 2007. Inverse Probability Weighted Estimation for General Missing Data Problems. *Journal of Econometrics*, 141 (2): 12811301.