Journal of BANGLADESH STUDIES

BDI
Bangladesh Development Initiative

CONTENTS

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

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Abstract

The effectiveness of microfinance in improving the economic lives of the poor has been under extensive scrutiny in the last two decades. The experience of Bangladesh has played an important role in this debate. Most of the existing studies on Bangladesh focus on the impact of microfinance on poverty and empowerment of women. We provide a discussion of the recent literature on two relatively neglected aspects: the impacts on moneylenders and the coping ability of households facing adverse shocks such as flood and seasonal famine (Monga). The available evidence suggests that the microfinance NGOs in Bangladesh helped free many households from the "clutches" of moneylenders, contradicting the claim of some critics that microfinance exacerbates the dependence on moneylenders. The likelihood that a household goes to moneylenders for credit declines by about 70 percent once it becomes a member of a microfinance program. However, the evidence also suggests that moneylender interest rates go 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 floods and the Monga. But microfinance membership does not reduce the propensity to sell labor in advance in the lean season and may not help a household finance short-term migration to urban labor markets in response to a shock.

Keywords: Microcredit, Moneylenders, High Interest Rates, Monga, Seasonal Shock, Food Security, Pecuniary
         Externality, Bangladesh

Introduction

The effectiveness of microfinance as a poverty alleviation and development strategy has come under extensive scrutiny in the last 20 years (Banerjee, 2013; Mahmud and Osmani, 2016).[1] The Bangladesh experience is of special importance for the ongoing debate because it is a pioneer in the microfinance movement. Many of the studies on microfinance in Bangladesh focus on its impacts on poverty measured in terms of household consumption and/or assets (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 (Kabeer, 2017). The focus of this paper is on two relatively less researched areas - the effects of microfinance on informal credit market in Bangladesh, especially moneylenders, and 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 the Classic Grameen or Grameen-I model, focused primarily on how to create a credit market for poor borrowers, especially women, who lacked any collateral, and ensure repayment. However, the microfinance non-governmental organizations (NGOs) were very much aware that the poor face a host of other missing or imperfect markets in addition to the credit market failures. For example, labor markets in developing countries are usually highly segmented because of high transaction costs, and are characterized by high rate of 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.[2] A substantial literature in development economics emphasizes the interlinked nature of credit, labor, land, and product market transactions in poor villages (Bardhan, 1980). For example, landless households are likely to be involved in interlinked labor and credit transactions with the landlord/moneylender. The adoption rate and the impact of microcredit would therefore 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 shopkeepers in the village, would vary depending on the nature of imperfections in other markets through this interlinked web of economic relations. If households switch from moneylenders to microcredit, the value of the microfinance institution (MFI) loan contract outweighs the value derived from the interlinked transactions with moneylenders. Since microcredit allows the borrower to start a backyard economic activity, the borrower may no longer be as dependent on the landlord-moneylender for employment opportunities.[3]

As we discuss below, the classic microcredit model, with its emphasis on inculcating discipline in the form of weekly repayment and commitment savings, is not suitable for filling in for any missing insurance market. The microcredit NGOs in Bangladesh began to appreciate this trade-off after the 1998 flood, and redesigned their loan contracts, known as Grameen-II model. The redesigned loan contract did not only deal with a failing credit market, but could also partially fill in for missing insurance markets for economic shocks such as floods, seasonal famine, and illness. Since a large part of the demand for moneylender loans is to meet the emergencies such as health shocks and 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. It is based on recent research in the context of Bangladesh, and utilizes heterogeneity in loan contracts and multiple missing markets as organizing principles.

Does Microfinance Help Free the Bangladesh 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 et al. 1993). These moneylenders can exploit interlinked credit and labor market transactions, for example, to charge very high interest rates without the risk of borrower default. This belief motivated government interventions in the credit market through the provision of subsidized loans by specialized public agricultural banks, credit cooperatives such as the Comilla model in Bangladesh, and many NGO programs focusing on credit for the poor. For 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 rural poor households on moneylenders. As Muhammad Yunus states regarding 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, p. 2, 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 switched to the MFIs for their credit needs. By providing loans at a lower interest rate to the poor without any collateral, the MFIs were also expected to reduce the interest rate a moneylender could charge the borrowers.[4] A lower moneylender interest rate would provide a positive pecuniary externality and benefit those households who still need to take loans from the moneylenders after the entry of microcredit NGOs in a village. The argument that microfinance NGOs would both reduce the dependence of the poor on moneylenders and lower the interest rate was widely shared among policymakers and NGO practitioners in the early days of the microfinance movement. A number of theoretical analyses provided conceptual foundations for such an optimistic view - the models developed by Bell (1990) and McIntosh and Wydick (2005) illustrate this. One would thus expect that whether the spread of microfinance created effective competition for moneylenders or not would 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]

In a study on microcredit borrowers from Grameen Bank in the early 1980s, Hossain (1988) reports that, for households who own less than half acre land, and are also 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 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 regarding usurious moneylenders or Mohajons in Bangladesh. The estimates of moneylender interest rates in the early 1980s range from 50 per cent to more than 100 per cent. For example, a BIDS-IFPRI study based on a 1982 survey estimated an average interest rate of 125 per cent 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 discussion by Mahmud and Osmani (2016) shows that microfinance NGOs in Bangladesh expanded dramatically their presence in the rural credit market in Bangladesh in the 1980s and 1990s. How did this expansion of microfinance branches affect the nature of interactions between the poor households and 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 three districts in northern Bangladesh (Rangpur, Kurigram, and Nilphamari) and reports an average moneylender interest rate of 103 per cent, with the maximum of 240 per cent 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 needed 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 rates 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 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 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 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 rates is negligible, but when the MFI coverage is high enough, moneylender interest rates increase in a village. This nonlinear effect is intuitive, as one would not expect a substantial impact on moneylenders when only a few households get 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 is 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 investment 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 rates in a village even when the entry of MFIs had no impact on the operation of the moneylenders. If this argument is correct, then the estimated impact of MFI coverage on moneylender interest rates 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 we control for village productive potential.[11] Interestingly, the estimates presented by Mallick (2012) also support this conclusion; the magnitude of the impact of

MFI coverage on moneylender interest rates 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 moneylenders for additional funds, Berg et al. (2020) take advantage of a high-quality panel data set collected by Mahabub 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 off 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 such a case. Since the 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 non-borrowing households.[13] The focus of the analysis is on households that were not MFI members in 2000, but became members in between 2000 and 2007, and whether their demand for moneylender loans increased. They develop a difference-in-difference research design with alternative comparison groups. The first comparison group consists of the households that were not members of microfinance programs in either the 2000 or 2007 survey. The second comparison group, in addition, includes the dropout households that were MFI members in the 2000 round, but left the programs in 2007. Alexander-Tedeschi and Karlan (2009) emphasize that ignoring the dropouts may bias the estimated program effect. In addition to OLS, Berg et al. (2020) use the minimum-biased IPW of Millimet and Tchernis (2013) and a 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 the 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, which affects the composition of the quality 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 (or the ultra-poor) to ensure repayment (Emran et al., 2014). This implies that the pool of borrowers available to moneylenders consists of the riskier ultra-poor households. Moneylenders may need to increase the interest rate to compensate for the resulting higher risk of default for their total pool of loans.

The main takeaway 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 moneylenders from being present in 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.

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 an insurance contract with built-in flexibility in the repayment schedule. The role played by informal credit transactions among family and friends in coping with economic shocks has been noted in the literature by many authors.[15] In contrast, the standard microcredit programs following the initial group lending program of Grameen Bank, later dubbed as Grameen-I or Classic Grameen contract, 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.[16] 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 present-biased poor households build-up savings (Morduch, 2010).[17] 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. 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 the 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 (Rutherford, 2006). Grameen-II also explicitly disavowed group liability.[18] Following Grameen Bank, 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 to assess 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 per cent of the microcredit borrowers in the sample were able to reschedule their loans. He also finds that microfinance member households were less likely to skip meals during the flood period, and, especially the female members, enjoyed higher food security. However, the study is based on a small sample with only 289 households, and the conclusions may not be robust 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 2,694 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 households 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.[19]

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 the 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 failures (Sen, 1981). Seasonal hunger takes on an especially stark form in the northern part of Bangladesh in the greater Rangpur region where the lean season can easily devolve into a near famine situation such that 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 ultra-poor 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 is suitable for answering whether the redesign of the loan products after the 1998 flood was effective in dealing with 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 decimals of land which is consistent with the idea of screening out the ultra-poor from the microcredit programs.[20] The insight behind their research design is that the households owning marginally less than 10 decimal land are likely to be comparable to those who own marginally more than 10 decimal land, but their likelihood of getting microcredit are substantially different because of MFI screening. The fact that the survey included 143,000 households allowed the researchers 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 24,132 households.[21]

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. However, the probability of short-term migration for work to nearby town declines once a household becomes the member of a microcredit program.[22] This implies that microcredit programs are not successful in dealing with the challenges of the spatial segmentation of labor markets, especially for the extreme poor. The above evidence suggests that the positive effects on food security discussed above reflect a combination of the following mechanisms. First, microcredit may help a household in generating 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 lentils, 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 stocks for consumption smoothing are much lower for a household borrowing from an MFI at a 16-30 per cent interest rate instead of moneylenders at a 100-125 per cent interest rate. Finally, 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, thus encouraging this activity.

Endnotes

[1] Banerjee (2013) and Mahmud and Osmani (2016) provide excellent surveys of this literature from different perspectives. For a textbook treatment, see Armendariz and Morduch (2010).

[2] For a theoretical analysis of the implications of missing and imperfect labor market for microfinance movement, please see Emran, Morshed, and Stiglitz (2021). They emphasize 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 in the last 20 years has largely ignored this interaction.

[3] An 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).

[4] Note that this widely shared belief 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 corresponding high risks of default in collateral free lending. However, the incidence of default is low in informal credit transactions (Banerjee, 2003).

[5] In 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 Cai et al. (2021) for VoxDevLit does not even contain the word moneylenders.

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

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

[8] Based on a survey of 143,400 households in the same region in Bangladesh in 2010/2011, Rabbani and Hasan (2021) report an estimate of 122 per cent average moneylender interest rate. In contrast, the average (effective) interest rate for MFI loans is 27 per cent.

[9] InM is now called Institute for Inclusive Finance.

[10] Mallick'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.

[11] This 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 are important.

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

[13] Presumably non-borrower households chose not to participate in microcredit programs precisely because they have a 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.

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

[15] See Morduch (1995) and the remaining papers in the *Journal of Economic Perspectives* (Summer 1995) Symposium on Consumption Smoothing in Developing Countries.

[16] One 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 qualitative evidence supporting Mahmud's conjecture.

[17] Present-biased individuals are more impatient with regard to current trade-offs than with regard to future tradeoffs.

[18] Group liability and solidarity are of little help when all the group members are affected at the same time by a shock such as flood or seasonal famine.

[19] The recent analysis of Rabbani and Hasan (2021) suggests that moneylenders still play a role for the households facing unanticipated shocks, and that the most common in their data are health shocks. They suggest that the flexibility of moneylender 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.

[20] Ten decimals is an important threshold in this regard because BRAC-TUP program defines a household as ultra-poor if it has less than 10 decimal land (along with other eligibility criteria). Many earlier studies on Bangladesh relied on 50 decimals (half acre) as the threshold for 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 microfinance membership.

[21] Most other available studies on the effects of microfinance in Bangladesh use the five-acre land ownership as a cut-off, thus those samples usually contain households in the range of 0–5-acre land ownership.

[22] This result is in contrast to Shonchoy (2015) who found that access to microcredit 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.

References

Ahmed, R. & Hossain, M. (1990). *Development Impact of Rural Infrastructure in Bangladesh.* IFRI Research Report No. 83, Washington, DC.

Alexander-Tedeschi, G. & Karlan, D. (2009). *Cross-sectional Impact Analysis: Bias from Drop-Outs*. Working Paper, FAI: Yale University.

Armendáriz, B. & Morduch, J. (2010). *The Economics of Microfinance*, Second Edition, MIT Press Books, The MIT Press.

Banerjee, A. V. (2003). Contracting constraints, credit markets, and economic development. *Econometric Society Monographs*, 37, pp. 1-46.

Banerjee, A. V. (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(1), pp. 487-519.

Bardhan, P. K. (1980). Interlocking factor markets and agrarian development: A review of issues. *Oxford Economic Papers*, 32(1), pp. 82-98.

Bell, C. (1990). Interactions between Institutional and Informal Credit Agencies in Rural India. *The World Bank Economic Review*, 4(3), pp. 297-327.

Berg, C. & Emran, M. S. (2020). Microfinance and vulnerability to seasonal famine in a rural economy: Evidence from Monga in Bangladesh. *The BE Journal of Economic Analysis & Policy*, 20(3).

Berg, C., Emran, M. S., & Shilpi, F. (2020). Microfinance and Moneylenders: Long-run Effects of MFIs on Informal Credit Market in Bangladesh. *The BE Journal of Economic Analysis & Policy*, 20(3).

Cai, J., Meki, M., Quinn, S., Field, E., Kinnan, C., Morduch, J., de Quidt, J., & Said, F. (2021). Microfinance. *VoxDevLit*, 3(1).

Emran, M. S., Morshed, A. K. M., & Stiglitz, J. E. (2021). Microfinance and Missing Markets. *Canadian Journal of Economics/Revue canadienne d'économique*, 54(1), pp. 34-67.

Emran, M. S., Robano, V., & Smith, S. C. (2014). Assessing the frontiers of ultra-poverty reduction: evidence from challenging the frontiers of poverty reduction/targeting the ultra-poor, an innovative program in Bangladesh. *Economic Development and Cultural Change*, 62(2), pp. 339-380.

Hoff, K., Braverman, A., & Stiglitz, J. E. (1993). *The Economics of Rural Organization: Theory, Practice, and Policy*. Oxford: Oxford University Press.

Hoff, K. & Stiglitz, J. E. (1998). Moneylenders and bankers: price-increasing subsidies in a monopolistically competitive market. *Journal of Development Economics*, 55(2), pp. 485-518.

Hossain, M. (1988). *Credit for alleviation of rural poverty: The Grameen Bank in Bangladesh*. International Food Policy Research Institute (IFPRI) Research Report, Vol. 65.

Hossain, M. & Bayes, A. (2009). *Rural economy and livelihoods: Insights from Bangladesh*. AH Development Publishing House.

Islam, A. & Maitra, P. (2012). Health shocks and consumption smoothing in rural households: Does microcredit have a role to play? *Journal of Development Economics*, 97(2), pp. 232-243.

Kabeer, N. (2017). Economic pathways to women's empowerment and active citizenship: what does the evidence from Bangladesh tell us? *The Journal of Development Studies*, 53(5), pp. 649-663.

Khan, A. R. (1979). The Comilla model and the integrated rural development programme of Bangladesh: An experiment in 'cooperative capitalism'. *World Development*, 7(4-5), pp. 397-422.

Klein, R. & Vella, F. (2010). Estimating a class of triangular simultaneous equations models without exclusion restrictions. *Journal of Econometrics*, 154(2), pp. 154-164.

Mahmud, W. & Osmani, S. R. (2016). *The theory and practice of microcredit*. Taylor & Francis.

Mallick, D. (2012). Microfinance and moneylender interest rate: Evidence from Bangladesh. *World Development*, 40(6), pp. 1181-1189.

McIntosh, C. & Wydick, B. (December 2005). Competition and Microfinance. *Journal of Development Economics,* 78, pp. 271-98.

Millimet, D. L. & Tchernis, R. (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), pp. 982-1017.

Morduch, J. (1995). Income smoothing and consumption smoothing. *Journal of Economic Perspectives*, 9(3), pp. 103-114.

Morduch, J. (2010). Borrowing to Save. *Journal of Globalization and Development*, 1(2), pp. 1-11.

Osmani, S. R. (2016). Models of microcredit delivery and social Norm. *Bangladesh Development Studies*, 39(3&4), pp. 1-40.

Rabbani, A. & Hasan, M. M. (2021). The role of borrowing in crisis coping among ultra-poor households in rural Bangladesh. *Journal of Asian Economics*, 73, pp. 101-273.

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, pp. 34-55.

Sen, A. (1981). Ingredients of famine analysis: availability and entitlements. *The Quarterly Journal of Economics*, 96(3), pp. 433-464.

Shoji, M. (2010). Does contingent repayment in microfinance help the poor during natural disasters? *The Journal of Development Studies*, 46(2), pp. 191-210.

Shonchoy, A. S. (2015). Seasonal Migration and Microcredit During Agricultural Lean Seasons: Evidence from Northwest Bangladesh. *The Developing Economies*, 53(1), pp. 1-26.

Toufique, K. A. (2017). Bangladesh Experience in Rural Development: The Success and Failure of the Various Models Used. *Bangladesh Development Studies*, 40(1&2), pp. 97-117.

Wooldridge, J. M. (2007). Inverse probability weighted estimation for general missing data problems. *Journal of Econometrics*, 141(2), pp. 1281-1301.

Yunus, M. (2009). *We Can Create a World of Our Choice*. 7th Nelson Mandela Annual Lecture, Delivered in Johannesburg on July 11, 2009, on the eve of the 91st birthday of Nelson Mandela.