

DOES MICROFINANCE EMPOWER WOMEN? A STUDY IN SOME SELECTED AREAS OF MYMENSINGH DISTRICT

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ABSTRACT

As a lower-middle-income country, Bangladesh has been pioneering microcredit for the past 4 decades. The target group of microfinance institutions (MFIs) is predominantly women, accounting for more than 90% of their members. The study aims to investigate whether microfinance has a significant impact on increasing women's empowerment. We collected primary data from 200 households, comprising treatment and control groups, in three Upazilas of Mymensingh district. We have used eight indicators to measure women's empowerment. We found that the treatment group's mean empowerment scores are higher than those of the control group across three of the eight indicators: mobility, ability to purchase, and awareness and involvement in social and political issues. However, based on the logistic regressions, the treatment group is found to be more empowered than the control group on only two indicators: economic security and the ability to purchase. In light of the negative relationship between microfinance borrowing and domestic violence revealed by the logit results, future studies should investigate whether microfinance exacerbates domestic violence rather than enhances women's empowerment. The logit result also dictates a negative association between microfinance borrowing and intra-household food distribution, suggesting that future research should focus more on investigating this issue. Since a significant proportion of women borrowers lack substantial control over the loan, it is less likely that microfinance improves the entrepreneurial capabilities of the treated women in the sample. In such a context, it is difficult to justify the claim that a tiny amount of funding can lead to significant empowerment of women.

JEL Classifications: O10, I30, C10

Keywords: Microfinance, women empowerment, poverty reduction.

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INTRODUCTION

Microfinance has emerged as a major tool in poverty reduction programs in low- and middle-income countries over the last couple of decades. Poor households usually lack collateral and so they cannot access loans provided by the formal financial institutions. Given this, microfinance institutions (MFIs) have played a pivotal role by providing microloans, micro savings, insurance, and other services to millions of poor households, especially women, thereby helping them achieve self-sufficiency and improve their standard of living.

Being a lower-middle-income country³ with a per capita national income of \$2,784 (Government of Bangladesh 2024), Bangladesh has been pioneering microcredit during the last four decades. Although the country has shown remarkable progress in poverty reduction in recent years, about 19% of households live below the upper poverty line and 5.6% below the lower poverty line (Bangladesh Bureau of Statistics 2023). Currently, there are 724 licensed MFIs in Bangladesh with 26,071 branches, serving 41.6 million members and 32.2 million borrowers. In addition, Grameen Bank and various Government and Non-Government banks have been providing microfinance services to another 22.8 million members and 13.9 million borrowers. Therefore, the total number of members and borrowers served by the MFIs comprises 64.4 million and 46.1 million, respectively. In 2023-24, the outstanding loans and savings provided by the microfinance sector amounted to 1,976.2 billion BDT and 972.2 billion BDT, respectively (Microcredit Regulatory Authority 2024).

Reducing gender-based inequality and advancing women's empowerment remain major policy challenges in Bangladesh. Women's empowerment is generally defined as their ability to reduce dependency and socio-economic vulnerability on men. It also encompasses areas such as involvement in household decision-making and control over resources and economic activities. Hence, improving women's empowerment and attaining gender equality has been one of the imperatives of the Millennium Development Goals over the past decades and currently constitutes one of the Sustainable Development Goals (Goals 3 and 5 of the MDGs and SDGs, respectively). Women comprise roughly half of the total population of the country, although they have been traditionally subject to diverse forms of discrimination, disparities, and violence in the household, community, and different spheres of society. Therefore, the country's social and economic development can never be achieved until half of the population remains lagging behind.

The target group of MFIs is predominantly women, who constitute 90.8% of its members (Microcredit Regulatory Authority 2024). It is often claimed that microfinance has been instrumental in raising women's empowerment in Bangladesh during the last couple of decades. Some studies have found substantial positive impacts of microfinance on women's empowerment, such as greater decision-making power, increased entrepreneurial capabilities, greater mobility, and greater access to household resources (Hashemi et al. 1996, Pitt et al. 2006, Akhter 2018, Osmani 2023). However, some studies have expressed scepticism, highlighting women's additional burden resulting from loan repayment schedules, male family members' control over loans, the limitations of the "credit-only" approach in breaking patriarchal norms, etc. (Kabeer 2001, Mahmud 2003, Ali & Hattat 2012).

³According to World Bank classification of countries by their income status
(Source: <https://blogs.worldbank.org/en/opendata/world-bank-country-classifications-by-income-level-for-2024-2025>)

OBJECTIVES AND RATIONALE

Given the background cited above, the study aims to investigate whether microfinance has a significant impact on increasing women's empowerment in Bangladesh. The specific objectives of the study are as follows:

- (i) To examine the level of empowerment of women participating in microfinance programs vis-à-vis comparing control groups;
- (ii) To check if there are significant differences between microfinance recipients versus non-recipients in terms of estimated levels of empowerment;
- (iii) To look at the extent to which the borrowing women have control over the use of the loan

The study is expected to add value to the current debate on the role of microfinance in empowering women, with significant implications for policy in the country's socio-economic development and a direction for further research in the field.

LITERATURE REVIEW

In a patriarchal social-structure, women are subject to various forms of discrimination, deprivation, and the denial of rights. Women's empowerment is conceptually difficult and entails diverse approaches and interpretations. Pertinent literature has defined women's empowerment as a multidimensional process. Two standard dimensions discussed in the literature concern women's "absolute" and "relative" well-being. From the perspective of absolute well-being, women's empowerment is measured through indicators that enhance their well-being, such as access to education and literacy, improved health and nutrition, participation in labour markets, increased mobility in different public domains, increased financial literacy, etc. However, the relative well-being approach defines women's empowerment as a process of containing the unequal gender relations faced by women compared to men in the family, community, and different spheres of society. In this approach, the most commonly used measures of women's empowerment are increasing access to intra-household resources such as decision-making at the household (education of children, household expenditure, etc.), access to income and assets, exercising managerial control over loans, reduced violence against women, etc. (Mahmud 2003, Kabeer 2001, Ali & Hatta 2012, Osmani 2023).

Various factors can influence women's empowerment. For example, the position of male children can affect women's empowerment (Saha and Sangwan 2019). Similarly, Bushra and Wajiha observed that factors such as education, poverty, and available economic opportunities can affect women's empowerment. Marriage at a legal age is another determinant that can affect women's empowerment (Yount et al. 2018).

Various theories explain the importance of microcredit for marginalised people from different angles. For example, earlier studies observed that access to financial services, through activities that can generate income and thereby enhance economic and social status, can play a key role in the socio-economic development of marginalised populations (Aqib Ali 2023, Noor et al. 2022). As a result, the gap between the rich and the poor can be reduced as microfinance includes people in the formal financial system who were not included before (Subhi Aprianoro & Herviana 2023, Khursheed et al. 2021).

Another dimension of women's empowerment is reflected in Sen's (1999) Capability Approach, which emphasises the expansion of individuals' capabilities and freedoms rather than income alone. In the context of microfinance, this framework suggests that access to financial services can enhance women's well-being by improving education, health, decision-making, and other dimensions of empowerment (Sen 1999, Adeosun & Shittu 2022). In Bangladesh, it is observed that when microcredit is available alongside access to healthcare and education, people's capabilities increase. However, it has also been found that patriarchal structures opposing women's agency can negatively affect this contribution (Rahman & Khondkar 2020).

Other factors, such as trust, mutual support, and social networks, have also been highlighted as key determinants (Bourdieu 1986, Putnam 2000). These factors, particularly in community-based lending can improve the loan recovery and outcome of the programme (Gazi et al. 2023). This is particularly true for tightly knit rural communities in Bangladesh, where borrowers seek to uphold the community's support and expectations (Hassan et al. 2023). Additionally, through circulating positive information on skills, this type of networking increases the final result of microfinance not only in terms of finance but also in terms of other avenues (Zainuldin & Lui 2022).

Another key factor in limiting women's empowerment is access to credit, as it is essential for women to engage in economic activities (Hashemi et al. 1996). Like poor men, poor women are also sidelined by credit institutions, which deem them unworthy of credit (Nader 2008). Therefore, according to Portes et al. (2019), empowering women is a key to reducing poverty and income inequality.

It is often claimed that microfinance plays a pivotal role in increasing women's empowerment in rural Bangladesh, where strong patriarchal norms prevail, and women are especially vulnerable to the denial of their fundamental human rights. Microfinance borrowers are predominantly women, and it is commonly believed that MFIs contribute to increasing their status within the household and community by providing financial resources. The causal mechanism through which microfinance empowers women involves a two-step process – first, microfinance increases the relative bargaining power of women in the household; second, the greater bargaining power causes higher relative well-being of the women, such as greater access to household resources, greater degree of autonomy, and greater decision-making power (Osmani 2023).

In an earlier empirical study among Grameen Bank and BRAC participants, Hashemi et al. (1996) found that microcredit positively affected women's empowerment. In another study, Pitt et al. (2006) found that participation in microcredit programs increased women's empowerment, including better household decision-making, greater access to financial resources, expanded social networks, greater bargaining power within the household, and increased mobility. A recent study conducted among participants in the Programmed Initiatives for Monga Eradication (PRIME) program in Rangpur district found that microfinance recipient women are more empowered than non-recipients (Akhter 2018). In another study conducted in the district of Tangail, Osmani (2023) found that microfinance improves women's overall capabilities, though the impact is partial rather than complete. She found that microfinance's impact was positive on women's autonomy and intra-household access to resources, and that its impact on women's control over decision-making was limited.

However, microfinance should not be treated as a “magic bullet” or “panacea” for enhancing women's empowerment (Kabeer 2005). MFIs are often interested in providing loans to relatively solvent women because they are more likely to repay them. The staff sometimes humiliates poor clients by using derogatory and shameful language and putting pressure on them to repay loans. Thus, the pressure to repay loans places a burden on women who take loans, increases tensions, and worsens gender relations within the household. Moreover, female loan-holders are double-burdened in managing the loan-assisted business on one hand and simultaneously managing household chores on the other hand, which causes additional physical and psychological burdens for them (Ali & Hatta 2012, Mahmud 2003). Microfinance-recipient women often surrender the loan amount to male family members, thus losing control over the use of these loans, which implies that credit rather reinforces male dominance and disempowerment of women. There are instances when husbands invest the loan poorly, and their wives have to repay instalments by cutting off household savings, reducing household consumption, or depleting household resources, such as selling eggs or vegetables. Husbands often misuse loans or refuse to repay the loans, which leads to increased family tension and a higher incidence of domestic violence (Goetz & Sen Gupta 1996, Kabeer 2001). Most microcredit programs follow the “credit-minimalist” approach, thus excluding the non-credit components from the program. Some authors have argued that credit programs, unless accompanied by other measures such as education, training, and social and political awareness-raising activities, may not be sufficient to break the patriarchal social structure and increase female empowerment (Rahman 1986, Hashemi et al. 1996, Akhter 2018).

Adeosun and Shittu (2022), observed a rise in business ownership, decision-making power and mobility by women borrowers in their study of six countries. However, one key limitation noted by Brodny and Tutak (2022) is that economic gains do not always translate into social improvement. In another study, Pervin, Ismail and Noman (2023) used Kabeer's empowerment framework and employed the case study method, field interviews, and focus group discussions. They observed that microfinance did not empower women economically or politically, but rather socially. For example, microfinance-recipient women played a key role in family decision-making. The study also found that, along with age and education, factors such as financial literacy, family type, and microfinance training played a significant role in women's empowerment.

More recent studies continued to find a significant relationship between microfinance and women's empowerment. The study by Chemo and Singh (2026) observed that the importance of microfinance is not limited to financial changes only but includes many other changes. It is particularly important in achieving broader change. This is mainly due to the fact that microfinance gives them access to financial services, reduces poverty and challenges various norms. It also helps them to attain financial stability along with the fulfilment of various other factors like education and health. They also drive various social transformations. Therefore, women's empowerment comes through economic, social and political empowerment.

In another study on Egypt, Said et al. (2025) examined the impact of microfinance on socio-cultural empowerment. The analysis includes various types of empowerment, including interpersonal empowerment, political empowerment, legal empowerment, and psychological empowerment. An interesting aspect of their research was that they examined the relationship with moderating role of age and education. Using online survey, they applied structural equation model (SEM) analysis. According to the research, significant relationships were observed between microfinance and various types of empowerment. Moreover, they also observed that age and education level moderate these relationships.

Similar findings were observed by Wondimu et al. (2023) in their study on Ghana. Based on information from the Central Region, they observed that microfinance generally has a positive impact, particularly on economic well-being and social agency. However, the results on true household autonomy were not that straightforward and therefore remain a complex challenge.

Bhusal and Rana (2025), in their study on Nepal, examined the social and economic empowerment of women. They analysed the empowerment of rural women and saw a positive relationship. Factors of women empowerment included income, asset, savings, social standing and ability to take decisions. Based on primary data of 387 women, collected through simple random sampling, the study observed significant positive relationship between microfinance and empowerment. It also observed various barriers like limited financial literacy, male dominance and cultural norms.

In another study on Nepal, Vasishta (2026) examined women's empowerment in five dimensions. These dimensions were economic, political, social, personal and psychological. Using data of 180 women, correlation and multiple regression analysis were carried out. In all dimensions, significant impact was observed, with personal empowerment being the strongest, followed by political and economic empowerment. Moreover, strong inter-relationships existed among the five dimensions.

Using data of 150 women who have taken microcredit for at least three years, Dhungana et al. (2024) showed that microcredit and three other variables significantly and positively affect women's empowerment. These other variables were the establishment of microbusiness, saving habits, and financial literacy. They therefore concluded that microfinance is an effective way of empowering women.

In light of the above discussions, there are notable disagreements in the literature regarding the role of microfinance in women's empowerment in Bangladesh. Some studies have claimed that access to credit has reduced violence against women (e.g. Al-Amin and Mathbor 2019), while there are quite a few studies that claim the opposite (e.g. Rangathan et al. 2022). It is worth noting that these "conflicting" conclusions depend heavily on how a researcher approaches and operationalises empowerment. While some studies have used quantitative indicators to assess empowerment, others have used qualitative or anecdotal evidence. Some studies have defined empowerment as a "process-based indicator," such as who controls loan use, women's workload and burden, etc. In contrast, others have used "outcome-based indicators",

such as women's ownership of assets, mobility to different places. Based on the above discussion, the specific contribution of this research is threefold:

- (i) This study uses a comprehensive number of indicators (eight, to be precise) to analyse the impact of microcredit. The indicators include not only economic aspects but also social aspects.
- (ii) The findings will provide disaggregated results, helping not only in taking precise policy decisions but also in making policies more effective.
- (iii) To our knowledge, no similar study with these characteristics has been conducted in the study area of this research. Therefore, specific policies can be identified for the study area based on the research outcomes.

METHODOLOGY

The study uses a multi-stage sampling procedure, in which primary data were collected from 200 households. The justification for the sample size is given by the following formula, suggested by Cochran (1977) -

$$n = \frac{Z^2 pq}{e^2}$$

where n=required sample size

Z= z-score at desired confidence level

p=estimated proportion

q=1 – p

e=margin of error

At 7% margin of error and 95% confidence level for Z, we find $n = \frac{(1.96)^2(0.5)(0.5)}{(0.07)^2} \approx 196$

While the minimum sample size is 196, we collected data from a few additional households to account for potential incomplete information and inconsistencies. After removing inconsistencies in filled-in questionnaires, we finally kept the sample size at 200.

We had selected three Upazilas in Mymensingh district and then chose six villages from these three Upazilas purposively (two villages from each upazila). They are – Chandrabari and Noyabila villages of Muktagacha Upazila; Kakchar and Konabari villages of Trishal Upazila; and Kaiarchala and Chandpur villages of Fulbaria Upazila. The reason for selecting Mymensingh district and the said Upazilas as the study locations is their relative familiarity and accessibility. We purposively selected households from the treatment (microfinance borrowers) and control (non-borrowers) groups and administered a structured questionnaire survey. However, we surveyed both the treatment and control households from the same villages. Although it could result in some demonstration effects of microfinance on the control households, it would also cause a particular advantage, which could reduce the program placement bias⁴. Moreover, since MFIs have nowadays spread across most areas, it was difficult to find non-program villages within the relative familiarity and accessibility of the authors.

Due to time, resource and accessibility constraints, it was not possible to conduct a probability sampling. An ideal probability sampling would require the list of MFI borrowers in the study areas. Given the constraints of our time, resources, and accessibility, it could be a mammoth task to collect a list of borrowers from all MFIs operating in the study villages, then construct a random sample of treatment households. As an alternative, we attempted to obtain a list of borrowers from the major MFIs in the study villages (such as Grameen and BRAC), but we were unable to access this data. Since most of the MFIs don't follow strict eligibility criteria, it was difficult to construct an ideal control group for the study. Therefore, in order to construct a comparable control group, we tried to collect information from non-

⁴ Program placement bias arises because MFIs often tend to operate their programs in relatively prosperous villages so as to ensure recovery of their loans.

borrowing women who belonged to a poor socioeconomic status, based on visible attributes of households (like the physical appearance of the homestead, landownership patterns, etc.)

In doing so, we can't completely rule out selection bias. Although we have controlled for the visible attributes of the treatment and control groups in our regression models, we acknowledge a limitation in the sampling design: women who participated in the microfinance program may differ from those who didn't in unobservable characteristics, such as entrepreneurial capabilities and motivation. Therefore, the findings should be interpreted cautiously, with a positive relationship viewed as an association rather than a definitive causal effect.

The study uses the following analysis tools: descriptive statistics (mean, frequency tables, diagrams), mean differences, and logistic regression (logit model). We have considered the following model to estimate the effect of microfinance on women's empowerment:

$$Y_i = \alpha + \beta Treatment_i + X_i + u_i \quad (1)$$

Here, Y_i represents women's empowerment, which is a dichotomous variable. The variable, $Treatment_i$, stands for if a woman has borrowed from MFI(s) or not, thus also being a dichotomous variable. X_i refers to various personal, household, and village-level characteristics, such as age, household education level, household land ownership status, and village dummy. Finally, u_i , stands for the stochastic disturbance term. We have used the logistic regression (logit) framework to estimate the model. The "log-odds" associated with equation (1) involves the estimation of a model like the following –

$$\ln\left(\frac{Y_i}{1-Y_i}\right) = \alpha + \beta Treatment_i + X_i + u_i \quad (2)$$

where Y_i refers to the probability that a woman is empowered, while $(1-Y_i)$ refers to the probability that a woman is not empowered⁵.

We have used eight indicators to measure women's empowerment; related literature has mostly used these indicators (Hashemi et al. 1996, Pitt et al. 2006, Akhter 2018). These are – (i) mobility; (ii) economic security; (iii) ability to purchase essential household items; (iv) involvement in major household decisions; (v) involvement in decisions on family planning matters; (vi) freedom from domestic violence, abuse, and threat; (vii) awareness and involvement in political and social issues; and (viii) intra-household food allocation (see table 1). A woman is treated as empowered or not within a given empowerment dimension based on her score above or below a threshold. For example, let's take "mobility" as an empowerment variable. Here, we asked 5 questions to respond with "yes/no" (i.e., "if she can go outside of the village" without any restrictions from her husband/in-laws). If she responds "yes", she gets a score of "1"; and if she responds "no", she gets "0". Then, she is considered "empowered" if she has scored "2 or more" (out of 5).

⁵ See Gujarati et al. (2009) for details about the logistic regression framework.

TABLE 1. INDICATORS USED TO MEASURE EMPOWERMENT

Main indicators	Sub-indicators
(i) Mobility	If the respondent can visit the following places without any restriction of husband/in-laws - market, health care centre/hospital, Bank/MFI, outside of the village, outside home whenever want
(ii) Economic security	If she has her own independent income, savings, own productive assets (livestock/poultry, etc.), can access an emergency fund from her husband, can access an emergency fund by selling assets, can manage funds by borrowing (from relatives, moneylenders, etc.)
(iii) Ability to purchase household essentials	If she buys household food items, toiletries, hygiene products, dishes, pots, etc., chips, juice, chocolates for children; own clothes
(iv) Involvement in major household decisions	If she can take decision regarding house-repairing, purchase/sale/lease of lands, purchase /sale of livestock, and children's education-related matters
(v) Involvement in taking the Family Planning decision	If the husband values her opinion regarding fertility and reproductive choice (family size, birth spacing, child birth methods (normal/cesarean); use of birth control methods
(vi) Freedom from domestic violence, abuse, and threat	If the husband puts the threat of divorce, having another marriage, conducts verbal abuse, and conducts physical assaults
(vii) Awareness and involvement on political and social issues	If she voted in the last election, can name of the area's UP chairman/MP ever campaign in local/national elections, can participate in social/political activities, etc.
(viii) Intra-household food allocation	If she ate less than her husband/male HH members during last one week

DATA DESCRIPTION: RESPONDENTS' PROFILE

The background characteristics of the surveyed households are summarised in Table 2. The mean ages of the respondents and their husbands are estimated to be 33.2 and 40.0 years, respectively. The respondents had an average of 5.5 years of education. The average education of their husbands is slightly lower (5 years). The respondents' household size is 4.7, with an average of 3.4 dependent members. Households' average monthly income is estimated to be 20,751.7 BDT, while the average landholding (including homestead) is 21.5 decimal.

TABLE 2. BACKGROUND STATISTICS OF THE RESPONDENTS

Indicator	Mean		
	Treatment	Control	All
Respondent's age (years)	34.07	32.18	33.19
Age of the husband(years)	40.55	39.41	40.02
Respondent's education (years)	5.07	5.98	5.49
Husband's education (years)	4.26	5.78	4.97
No. of household members	4.67	4.77	4.72
No. of dependent members	3.37	3.39	3.38
Household's monthly income (BDT)	20,331.07	21,235.67	20,751.71
Land including homestead (decimal)	18.39	25.10	21.51
Distance from the market (Km.)	1.17	1.35	1.25
N	107	93	200

Source: Field survey, 2025

The average distance of the survey households from the market is 1.25 km. A careful investigation of the treatment and control groups reveals that they are quite comparable across all background indicators, including income and landholding categories.

Table 3 presents the amounts and lengths of borrowing for the treatment women. The average loan amount borrowed per woman is 59,095 BDT, ranging from 10,000 BDT to 200,000 BDT.

**TABLE 3. AMOUNT AND LENGTH OF MICROFINANCE BORROWING:
TREATMENT GROUP**

	Amount (BDT)	Length of borrowing (years)
Mean	59,095.24	8.23
Min	10,000	1
Max	200,000	25
Std deviation	31514.5	5.85
N	105	105

Source: Field survey, 2025

From Table 4, it can be observed that more than half of the treatment women (53%) borrowed between 25,000 BDT and 50,000 BDT, followed by 39% who borrowed between 50,001 BDT and 100,000 BDT. About 45.7% of the borrowing women reported borrowing for 5 years or less, followed by 22.9% borrowing for 6-10 years, 17.1% borrowing for 11-15 years, and 14.3% borrowing for 15 years or more (table 5). The average borrowing duration, which is quite long (8 years), indicates that the borrowing women constitute an ideal treatment group for capturing microfinance's impacts on them.

**TABLE 4. DISTRIBUTION OF TREATED RESPONDENTS
BY AMOUNT OF BORROWING**

Amount (BDT)	Frequency	Percent
<=25,000	9	8.57
25,001 – 50,000	53	50.48
50,001 – 100,000	39	37.14
100,000+	4	3.81
N	105	100

Source: Field survey, 2025

**TABLE 5: DISTRIBUTION OF TREATED RESPONDENTS BY
LENGTH OF BORROWING (YEARS)**

Length of borrowing (years)	Frequency	Percent
<=5	48	45.71
6-10	24	22.86
11-15	18	17.14
15+	15	14.29
N	105	100

Source: Field survey, 2025

Information about the distribution of treatment respondents is presented in Table 6. About 36% of the treatment group reported borrowing money from Grameen Bank, followed by 34% from BRAC, 31% from ASA, and 7.6% from other MFIs.

TABLE 6: DISTRIBUTION OF TREATED RESPONDENTS BY MICROFINANCE INSTITUTIONS (MULTIPLE RESPONSES)

Microfinance institution	Frequency	Percent
Grameen bank	38	36.19
BRAC	36	34.29
ASA	33	31.43
Others	8	7.62
N	105	100

Source: Field survey, 2025

RESULTS AND ANALYSIS

Level of Empowerment of Women: Treatment Vs Control

Mobility

During the survey, respondents were asked whether they could visit various places without their husbands' or in-laws' restrictions. They were asked five questions regarding their visit to – (i) market place; (ii) health care centre or hospital; (iii) bank/microfinance institutions; (iv) outside of the village; (iv) outside of the house whenever they want. We have assigned a score of “1” to respondents who answered “yes” and a score of “0” to respondents who answered “no” for each question. Therefore, the maximum mobility score could be “5” and the minimum could be “0” depending on their reported frequency of visits to these places. It is revealed that the mean score of the treatment group is 2.04, while the corresponding score of the control group is 1.48 (Table 7). The mean difference between the two groups is statistically significant (p-value = 0.02), suggesting that the mobility score in the treatment group is higher than that in the control group.

Economic Security

In order to understand the relative state of empowerment relating to economic security of the respondents, we asked six questions to the respondents – (i) if she had her own independent income; (ii) if she had her own independent savings; (iii) if she had own productive assets such as livestock, poultry, or any other asset; (iv) if she could avail money from her husband in time of an emergency need; (v) if she could manage fund by selling asset during time of emergency; and (vi) if she could manage fund by borrowing from relatives or moneylenders during emergency. A positive response would translate into a score of “1” while a negative response would count as a score of “0”. Thus, the potential maximum and minimum scores could be “6” and “0”, respectively. The respective mean scores for this indicator in the treatment and control groups are estimated to be 2.74 and 2.46, respectively (Table 7), with the mean difference test indicating no significant difference between the groups (p-value = 0.12). Therefore, we don't find a significant difference between the two groups in terms of economic security.

Ability to Purchase

One of the dimensions of empowerment investigated in the study is if the respondents' husbands allowed them to purchase household needs. They were asked to report six questions – (i) if she purchased regular household food items, such as essentials, groceries, etc.; (ii) if she bought the toiletries, cosmetics, and female hygiene products; (iii) if she bought dishes, pots, pans, etc. for the household; (iv) if she bought chips, juice, chocolates, etc. for her children; (v) if she bought clothes for her own use; and (vi) if she bought children's clothes. Therefore, the maximum and minimum scores could be “6” and “0”, respectively. The study finds that the mean score of the treatment group is 2.97 and that of the control group is 2.14 (Table

7). The corresponding p-value for the mean difference test is 0.02, suggesting that borrowing women perform significantly better than non-borrowing women in purchasing household items.

Involvement in Making Family Planning Decisions

The study investigates the extent to which respondents are valued in family planning decision-making. They were asked to report three questions – (i) if the husband valued her opinion about fertility or reproductive choice, such as family size/birth time/ birth spacing, etc.; (ii) if the husband valued her opinion about childbirth methods, such as Normal Vaginal Delivery (NVD) or Cesarean-Section (C- Section); and (iii) if the husband discussed with her /valued her opinion about birth control use/method. Thus, the maximum and minimum scores in this section would be “3” and “0” respectively. Here, the mean score for both the treatment and control groups is 2.50 (Table 7), and the mean difference test indicates no significant difference between the two groups (p-value = 0.82).

Freedom from Domestic Violence, Abuse and Threat

The respondents were asked four questions: (i) if the husband threatened her with divorce; (ii) if the husband threatened to take another wife; (iii) if the husband/other family members/in-laws verbally abused her; and (iv) if the husband/other family members/in-laws physically abused her. Here, the respondents were given three options to respond – “yes, sometimes”; “yes, often”; and “no”. A “no” response is scored “1”, while the other two options are scored “0”. Thus, the maximum score is “3”, and the minimum score is “0”. It is worth noting that the mean score in the treatment group is lower than that in the control group (2.81 vs 3.13, respectively; Table 7). It thus indicates that the microfinance borrowing women experienced more domestic violence, abuse, and threats as compared to the non-borrowing women. The mean difference test also suggests a significant difference between these two groups (p-value = 0.02).

Awareness and Involvement in Social and Political Issues

The study investigates the level of awareness and involvement of the respondents in various social and political issues among the treatment and control groups. We asked four questions to the respondents – (i) if she casted her vote in the last election; (ii) if she could name the area’s UP chairman/member of the parliament (MP); (iii) if she ever campaigned in favor of her candidate in local/national election; and (iv) if she expected that her husband would allow her to attend a protest against violence, such as dowry, wife beating, etc. or social injustice/corruption. Thus, the maximum and minimum potential scores would be “4” and “0” in this section. Our findings suggest that borrowing women have significantly higher scores than non-borrowing women (1.43 vs 1.18, p-value = 0.05; Table 7).

**TABLE 7: MEAN SCORES IN VARIOUS INDICATORS OF EMPOWERMENT
AMONG THE TREATMENT AND CONTROL GROUPS**

Indicators of empowerment	Treatment	N	Control	N	Mean difference test t-value (Pr T > t value)
Mobility	2.04	106	1.48	93	+2.44 (0.02)
Economic security	2.74	107	2.46	93	+1.55 (0.12)
Ability to purchase	2.97	100	2.14	87	+2.45 (0.02)
Involvement in taking the FP decision	2.50	103	2.50	87	+0.24 (0.82)
Freedom from domestic violence, abuse, and threat	2.81	107	3.13	93	- 2.4 (0.02)
Awareness and involvement in political and social issues	1.43	107	1.18	93	+1.95 (0.05)

Source: Field survey, 2025

Involvement in Major Household Decisions

The respondents were asked to report if they had been involved in taking four major household decisions – (i) house repairing, (ii) purchase/sale/lease of lands, (iii) purchase /sale of livestock, and (iv) children’s education-related matters such as institution, tuition, equipment, etc. They had been asked whether the husband had made the decision alone, whether the husband and wife had made it together, or whether the wife had made it alone. The study finds that in most cases, decisions were taken by the husband and wife together, in both the treatment and control groups. 78.3% of respondents in the treatment group and 79.6% in the control group reported that the husband and wife had jointly decided on house repairs. Regarding the purchase/sale/lease of land, 56.6% of the treatment and 49.5% of the control reported that they had jointly taken the decision. The corresponding figures are 56.6% and 52.7%, respectively, for purchasing livestock. They are 74.5% and 75.3% for children’s educational issues (annex tables 1-4). Thus, we don’t find significant differences in how these decisions are made between the two groups.

Intra-household Food Allocation

Intra-household distribution of resource constitutes one of the important dimensions of gender-based discrimination particularly in rural households in Bangladesh. In this study, we wanted to investigate if there are significant differences in terms of intra-household food allocation among the treatment and control groups. Respondents were asked whether they ate less than their husbands or male household members during the week preceding the survey. Similar criteria have been used in earlier studies. For example, Blum et al. (2019) used this in their study on Bangladesh while Pechtl et al. (2025) used a similar approach in their paper on Tajikistan. The findings suggest that the control households are relatively better off than the treatment households, with 40% of respondents in the treatment group and 30% in the control group reporting eating less than their husbands or male household members (Table 8).

TABLE 8. DISTRIBUTION OF RESPONDENTS BY REPORTING ABOUT FOOD TAKEN DURING THE LAST WEEK

If ate less than husband/male household members	Treatment		Control	
	Frequency	Percent	Frequency	Percent
Yes	42	40.00	27	30.00
No	63	60.00	63	70.00
N	105	100	93	100

Source: Field survey, 2025

Econometric Analysis of Empowerment: Treatment Vs Control

In the preceding section, we compared the relative positions of borrowing and non-borrowing women using mean differences and frequency tables. In this section, we would like to investigate the empowerment status of the treatment and control respondents using logistic regression. We have conducted eight separate logistic regression models, taking the eight empowerment indicators as dependent variables. We have used the following rule to transform these eight empowerment indicators as dichotomous variables. A respondent has been classified as either empowered (“1”) or non-empowered (“0”) based on whether her score exceeds or falls below a threshold for that indicator. The threshold values above which a woman has been treated empowered are the following – 2 or more in mobility (out of 5); 3 or economic security (out of 6); 3 or more in ability to purchase (out of 6); 1 or more in involvement in family planning (out of 3); 2 or more in awareness in political and social issues (out of 4); and 4 out of 4 in freedom from domestic violence, abuse, and threat. Women who reported making major household decisions jointly with their husbands or alone, such as educational matters for their children, have been treated as empowered. Respondents who reported

of not eating less than male household members has been considered empowered in intra-household food allocation.

However, there may be a legitimate concern regarding how we have chosen the threshold empowerment score, beyond which a woman is to be considered as empowered. In this regard, we have used a general rule of thumb for setting the cut-off points – 50% of the maximum potential score. That is, if the maximum score is 4, we would consider a woman to be empowered if she scores 2 or more. But if the maximum score is an odd number (say, 3), we have chosen a slightly lower threshold than 50%, because a fractional score is not possible here to dichotomise. Thus, we have taken “2 or more” in mobility and “1 or more” for family planning as empowerment threshold values. However, we acknowledge the limitation of such a technique that it may bias the regression results. Therefore, in order to check the robustness of our findings, we test the results in alternative model specifications.

The detailed result of the logistic regressions is shown in Table 9. The respective columns show the dependent variables - the eight empowerment indicators. The respective rows provide the list of explanatory variables – treatment, upazila dummies, age and education of the respondents, distance of the household from the market, and per capita land. The regression results provided in the table show the respective logit coefficients (not the marginal effects). We need to estimate the anti-log of these values to get the odds ratios. Since the variable “treatment” is the primary variable of interest for measuring the effect of program participation on empowerment, we have presented the respective odds ratios for this variable only in a separate table (Table 10). Therefore, to understand the effect of microfinance participation on empowerment indicators, we need to examine the corresponding odds ratios. It is worth noting that an odds ratio greater than 1 indicates a positive relationship between microfinance and the respective empowerment indicator, while a value less than 1 indicates a negative relationship.

Our results show that out of the eight empowerment indicators, there are positive relationships in six of the indicators – mobility, economic security, ability to purchase, major household decision, decision on family planning, and awareness & involvement in political/social issues. However, the results are significant for only two indicators – economic security and the ability to purchase. Thus, we find a significant and positive association between microfinance participation and women's economic security, as well as their ability to purchase. The negative sign associated with the two other indicators - freedom from domestic violence and intra-household food allocation - deserves special attention! One plausible explanation for the link between microfinance borrowing and lesser freedom from domestic violence could be due to the fact that microfinance may increase family tension and anxieties because of the repayment burden of the loans and instalments, thus leading to greater domestic violence. The possible explanation for the negative association between microfinance borrowing and intra-household food allocation is self-selection bias – i.e., poorer households tend to self-select into the programs more than relatively solvent households. This is also evident from the mean amount of land ownership per monthly income, which is higher in the control households than in the treatment households (Table 2). In the poorer households, due to the relative shortage of food, its uneven distribution goes against the women household members, given the strong patriarchal norms. Whatever the cause, future research should pay closer attention to investigating the issues.

It may be mentioned that this type of mixed results is also observed in previous works. As mentioned earlier in the literature review, most of the studies observed a positive impact of microfinance on economic activity and social status (e.g. Portes et al. 2019, Hossain et al. 2025). Regarding the impact of microcredit on empowerment, Adeosun and Shittu (2022) observed complex dynamics with increased economic activity but not social status. However, Pervin, Ismail and Noman's study observed that microcredit empowered social dimension of women, rather than influencing economic and political dimensions (2023). Similarly, differences in significant relationships were evident in earlier studies. In addition to conventional factors, some interesting findings include Saha and Sangwan's (2019) study, which

TABLE 9. DETAILED RESULT OF LOGISTIC REGRESSIONS

	Dependent Variable							
	(1) Mobility	(2) Economic Security	(3) Ability to purchase	(4) Major household decision (children's education)	(5) Decision on Family planning	(6) Freedom from Domestic violence	(7) Awareness & involvement in political/ social issue	(8) Intra HH food allocation (ate less last week)
Treatment	0.476 (0.31)	0.879** (0.34)	0.850** (0.33)	0.226 (0.47)	0.321 (0.50)	-0.208 (0.33)	0.558 (0.33)	-0.500 (0.33)
Upazila dummy Trishal	-1.105* (0.52)	0.043 (0.53)	-0.828 (0.51)	-0.435 (0.67)	-1.147 (1.15)	-0.872 (0.51)	-0.343 (0.53)	0.279 (0.48)
Upazila dummy Fulbaria	-1.433** (0.48)	-0.693 (0.48)	-1.499** (0.46)	0.892 (0.63)	-1.563 (1.06)	-1.133** (0.44)	-0.060 (0.48)	0.601 (0.42)
Age of the respondent	0.032 (0.02)	0.050* (0.02)	-0.000 (0.02)	0.036 (0.03)	-0.017 (0.03)	-0.008 (0.02)	0.080*** (0.02)	-0.007 (0.02)
Education of the respondent	0.074 (0.05)	0.107* (0.05)	0.101 (0.05)	0.121 (0.07)	0.039 (0.07)	0.128* (0.06)	0.102* (0.05)	0.100* (0.05)
Household members	-0.011 (0.11)	-0.093 (0.11)	-0.087 (0.12)	-0.115 (0.15)	-0.053 (0.16)	-0.004 (0.12)	-0.111 (0.11)	-0.211* (0.11)
Distance from the market (Km)	0.047 (0.16)	0.301 (0.16)	-0.061 (0.16)	0.534* (0.25)	-0.177 (0.27)	-0.010 (0.17)	-0.302 (0.16)	0.028 (0.15)
Per capita land(decimal)	-0.038 (0.04)	0.054 (0.04)	0.024 (0.04)	0.063 (0.05)	0.099 (0.06)	0.013 (0.04)	0.006 (0.04)	-0.041 (0.04)
_cons	-0.201 (0.98)	-3.055** (1.09)	0.100 (1.01)	-0.425 (1.70)	3.538* (1.55)	-0.327 (0.94)	-2.958** (1.03)	1.407 (0.94)
N	198	199	186	177	189	199	199	195
Wald Chi ² (8)	15.37	22.48	20.29	9.58	8.52	13.12	23.72	16.49
Prob>Chi ²	0.05	0.00	0.01	0.30	0.38	0.11	0.03	0.04
Pseudo R ²	0.06	0.11	0.08	0.10	0.05	0.06	0.10	0.07

Notes. Values of β represent logit coefficients (not the marginal effects). Values in the parentheses refer to the robust standard errors. The asterisks (**) and (*) represent significance at the 5% and 10% levels, respectively.

TABLE 10: REGRESSION RESULTS OF LOGIT COEFFICIENTS ASSOCIATED WITH THE TREATMENT VARIABLE, ODDS RATIOS AND RESPECTIVE STATISTICAL SIGNIFICANCES

Dependent variable	Explanatory variable: Treatment			
	Logit coefficient	Respective odds ratio	z	p> z
Mobility	0.476	1.61	1.53	0.127
Economic Security	0.879**	2.41	2.59	0.010
Ability to purchase	0.850**	2.34	2.57	0.010
Major household decision (children's education)	0.226	1.25	0.48	0.633
Decision on family planning	0.321	1.34	0.65	0.519
Freedom from domestic violence	-0.208	0.81	-0.63	0.528
Awareness & involvement in political/social issue	0.558	1.75	1.69	0.091
Intra HH food allocation	-0.500	0.61	-1.50	0.134

Author's estimation

found that the position of the eldest male children significantly impacted women's empowerment, and Yount et al.'s (2018) finding that marriages at legal age (18+) were a significant factor.

As we mentioned earlier, dichotomising the empowerment score may bias the regression results. Therefore, in order to test if our findings are robust, we conducted the alternative regressions based on the actual empowerment scores as the dependent variables - that is, we ran eight separate OLS regressions and tested if the sign and significance associated with the treatment variable showed any different results than the logit results (Table 11). The detailed results for the treatment variable across different models are shown in Annex Table A.5. It is worth noting that the logit results are broadly consistent with the OLS regressions - the only exceptional case is associated with domestic violence, where we find that the OLS coefficient is significant, although the direction does not change. Thus, it does not alter the implication of our logit result. More so, a negative and significant coefficient associated with domestic violence demands further research into the phenomenon, which suggests that microfinance may increase domestic violence.

TABLE 11: SIGN AND SIGNIFICANCE ASSOCIATED WITH THE TREATMENT EFFECT

Dependent variable	Sign		Significance at 5% level	
	Logit	OLS	Logit	OLS
Mobility	Positive	Positive	Not significant	Not significant
Economic Security	Positive	Positive	Significant	Significant
Ability to purchase	Positive	Positive	Significant	Significant
Decision in Family Planning	Positive	Positive	Not significant	Not significant
Freedom from Domestic violence	Negative	Negative	Not Significant	Significant
Awareness and involvement in political/social issues	Positive	Positive	Not significant	Not significant

Since the explanatory variables used in the regression models are conceptually different, we don't normally expect the presence of multicollinearity among them. Even after that, we conducted a diagnostic test to check if multicollinearity is a problem in the estimated models. Thus, we have estimated the variance inflationary factors, reported in the Annex Table A6. Since all the explanatory variables are the same in the eight regression models, we just estimated one auxiliary regression using mobility as the dependent

variable. We found that all the VIF values are well below the conventional threshold value of 10. Thus, we may conclude that the multicollinearity is not a concern in the estimated models.

Management and Control of the Loan

It is often claimed that microfinance increases women's empowerment by increasing their entrepreneurial capabilities. However, in their work on Bangladesh, Goetz et al. (1996) found that, in many cases, there is little control over loan use by women borrowers, as their husbands ultimately decide where and how to invest. During the survey, respondents were asked whether they had taken the loans for their own use, such as business or personal needs. We also asked them regarding who had invested the loan – themselves or their husbands. We further asked whether they could repay the loans themselves or needed their husband's financial support. We asked about the level of independence in loan usage, and the surprising findings indicate that only 3.8% of respondents had taken the loans for themselves. As many as 98% of respondents reported that their husbands had invested in the loans. Only 5.7% of respondents reported being able to repay the loan without their husband's support (Table 12). While 66% of respondents reported having very limited control over the loan's use, 12% reported not being involved at all in its use. Only about 5% of respondents reported having significant control, and only 2% reported having full control of the loan.

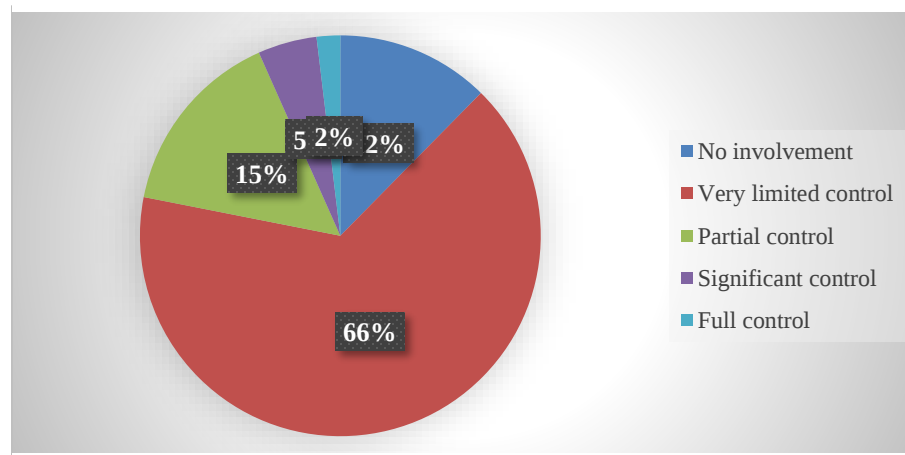
Various reasons can play a role in this low control of loan. For example, lack of formal education can make her less independent and allow their husband to take loan on their behalf. At the same time, the existing patriarchal system generally dictates that men take these decisions. Given that a predominant proportion of respondents lack substantial control over the use of the loan, it's difficult to justify how a tiny amount of microfinance could empower these women by enhancing their entrepreneurial activities. Similarly, various measures like financial literacy and joint decision-making can be included to remove this difficulty.

TABLE 12. MANAGEMENT AND CONTROL OF LOAN

Indicators	Frequency	Percent
The loan has been taken by the respondent (wife)	105	100
If the respondent (wife) has taken the loan for her own use (business, personal use, etc.)	04	3.81
The loan has been invested by the husband	98	93.33
If she has the ability to repay without her husband's financial support	06	5.71
N	105	100

Source: Field survey, 2025

FIGURE 1. CONTROL OVER THE USE OF THE LOAN



Source: Field survey, 2025

CONCLUSION

Over the last couple of decades, microfinance has evolved as a major tool for poverty reduction in low- and middle-income countries. As a lower-middle-income country, Bangladesh has been pioneering microcredit for the past 4 decades. The target group of MFIs is predominantly women in the country, who constitute 90.8 % of the MFI members (Microcredit Regulatory Authority 2024). While some studies have claimed positive impacts of microfinance on women's empowerment in Bangladesh, others have reported contrasting findings. Given this, the study aims to investigate whether microfinance has a significant impact on increasing women's empowerment in Bangladesh.

The study is based on primary data collected from six villages across three upazilas in Mymensingh district. Based on the mean difference test, we find that the estimated mean empowerment scores for the treatment group are significantly higher than those for the control group across three indicators: mobility, ability to purchase, and awareness and involvement in social and political issues. However, once we control for households' background characteristics, the logit results indicate that the significance associated with mobility and awareness of social and political issues disappears. The logit results also suggest that the empowerment associated with economic security in the treatment group is significantly higher than that in the control group. Therefore, among the eight empowerment dimensions, only in two of the indicators - economic security and ability to purchase - the logit coefficient of the treatment group is higher than that of the control group.

It is worth noting that both the mean difference and logit results indicate a negative relationship between microfinance borrowing and domestic violence, although the results are not statistically significant. It has already been mentioned that both (significant and insignificant) types of relationships were observed before. Therefore, an insignificant relationship is not new and is in line with earlier works (e.g. Rangathan et al. 2022). Thus, our study suggests that future studies should examine whether microfinance increases family violence or empowers women.

We also found a negative association between microfinance borrowing and intra-household food allocation, as indicated by the logit results, although it was not significant. This negative relationship may be due to the self-selection bias – i.e., poorer households may be more likely to participate in the microfinance program than relatively poorer households. This is evident from the fact that the mean land ownership and income of the control group are relatively higher than those of the treatment group. The relative food shortage in the poorer households might lead to its uneven distribution among women household members, given the strong patriarchal norms. However, future research should pay more attention to investigating this issue.

Given that a significant proportion of women borrowers lack substantial control over the loan (only 7% have “significant” or “full” control), it is less likely that microfinance improves the entrepreneurial capabilities of the treatment women in the sample. Lack of control over the loan by female borrowers is also observed in earlier studies (Shohel et al. 2022). Moreover, even when an account is opened in the name of a woman, the decision-making authority often remains with her husband (World Bank, 2014). Some previous studies also suggested that husbands often misuse and refuse to repay loans, which leads to increased family tension and domestic violence (Goetz and Sengupta 1996, Kabeer 2001). In about 93% of cases, the loan was invested by the husband. This suggests that microfinance rather reinforces male dominance and the disempowerment of women in the households. In such a context, it is difficult to justify the claim that a tiny amount of funding can lead to significant empowerment of women.

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REFERENCES

- Adeosun, OT, & Shittu, AI 2022, 'Small-medium enterprise formation and Nigerian economic growth', *Review of Economics and Political Science*, vol. 7, no. 4, pp. 286–301. Available from <<https://doi.org/10.1108/REPS-07 2020-0089>>.
- Akhter, N 2018, 'Women empowerment and microfinance: a case from North-Western Bangladesh', *Asian Development Perspectives*, vol. 9, no.1, pp. 35-50.
- Al-Amin, M, & Mathbor, MD 2019, 'The role of microfinance in reducing violence against women in Bangladesh', *Journal of Development Studies*, vol. 55, no.4, pp. 123–135.
- Ali, I & Hatta, ZA 2012, 'Women's empowerment or disempowerment through microfinance: evidence from Bangladesh', *Asian Social Work and Policy Review*, vol 6, pp. 111-121.
- Ali, MA 2023, 'An assessment of Islamic banking in Asia, Europe, USA, and Australia', *European Journal of Islamic Finance*, vol.10, no. 1, pp.1-15. Available from <<https://doi.org/10.13135/2421-2172/7345>>.
- Bangladesh Bureau of Statistics 2023, (Preliminary report) *Household income and expenditure survey 2022*. Statistics & Information Division, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Bhusal, P, & Rana, S 2025, 'Social and economic empowerment of rural women through microfinance in Nepal', *Journal of Development Studies*, vol. 41, no.2, pp. 115–130.
- Blum, LS, Khan, R, and Mansur, F, 2019, 'Using a gender lens to understand eating behaviors of adolescent females living in low-income households in Bangladesh', *Journal of Health, Population and Nutrition*, vol. 38, no.1, pp. 1–11.
- Brodny, J & Tutak, M 2022, 'Digitalization of small and medium-sized enterprises and economic growth: evidence for the EU-27 Countries', *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 8, no. 2. Available from <<https://doi.org/10.3390/joitmc8020067>>.
- Bushra, A & Wajiha, N 2015, 'Assessing the socio-economic determinants of women empowerment in Pakistan', *Procedia Social and Behavioral Sciences*, vol 177, pp. 3–8.

Chemo, A & Singh, R 2026, 'Beyond finance: The role of microfinance institutions in driving social transformation and women's empowerment', *World Development*, 185, Article 106789.

Cochran, W G, 1977, *Sampling techniques*, 3rd ed, New York: John Wiley & Sons.

Gazi, MAI, Masud, AA, Sobhani, FA, Dhar, BK, Hossain, MS, & Hossain, AI 2023, 'An empirical study on emergency of distant tertiary education in the southern region of Bangladesh during COVID-19: policy implication', *International Journal of Environmental Research and Public Health*, vol. 20, no. 5, pp. 1–22. Available from <<https://doi.org/10.3390/ijerph20054372>>.

Goetz, AM & Gupta, RS 1996, 'Who takes the credit? Gender, power, and control over loan use in rural credit programs in Bangladesh', *World Development*, vol. 24, no.1, pp. 45-63.

Government of Bangladesh 2024, Bangladesh economic review 2024. Finance Division, Ministry of Finance, Government of the People's Republic of Bangladesh.

Gujarati, DN, Porter, DC & Gunasekar, S 2009, *Basic econometrics* (5th edition). McGraw Hill Education.

Hashemi, SM, Schuler, SR, & Riley, AP 1996 'Rural credit programs and women's empowerment in Bangladesh', *World Development*, vol. 24, no. 4, pp. 635-65.

Hassan, MK, Islam, MT, Ahmed, Z & Sarker, JI 2023, 'Islamic banking in Bangladesh: a literature review and future research agenda', *International Journal of Islamic and Middle Eastern Finance and Management*, vol. 16, no. 5, pp.1030 -1054. Available from <<https://doi.org/10.1108/IMEFM-05-2022-0185>>.

Kabeer, N 2005, 'Is microfinance a 'magic bullet' for women's empowerment? analysis of findings from South Asia', *Economic and Political Weekly*, vol. 40, no. 44/45, pp. 4709-4718.

Kabeer, N 2001, 'Conflicts over credit: re-evaluating the empowerment potential of loans to women in rural Bangladesh', *World Development*, vol. 29, no.1, pp. 63-84.

Khursheed, A, Fatima, M & Mustafa, F 2021, 'Customers' perceptions toward islamic banking in the Gulf Region', *Turkish Journal of Islamic Economics*, vol. 8, no. 1, pp.111–135. Available from <<https://doi.org/10.26414/a105>>.

Mahmud, S 2003, 'Actually, how empowerment is microcredit?', *Development and Change*, vol. 34, no. 4, pp. 577- 605.

Microcredit Regulatory Authority 2024, Microfinance in Bangladesh (Annual Statistics). June 2022.

Nader, YF 2008, 'Microcredit and the socio-economic well-being of women and their families in Cairo', *The Journal of Socio-Economics*, vol. 37, no. 2, pp. 644 - 656.

Noor, MA, Hossain, T, & Shirazi, H 2022, 'Effects of financial inclusion on the economic growth of developing countries: an empirical analysis of the Bangladesh economy', *South Asian Journal of Social Sciences and Humanities*, vol. 3, no. 6, pp. 10–22. Available from <<https://doi.org/10.48165/sajssh.2022.3602>>.

Osmani, Lutfun Nahar Khan 2023, *Enhancing women's capabilities: does microfinance help?* University Press Limited (UPL): Dhaka. Bangladesh.

Pechtl, V, Aliev, J, & Ilyasov, J, 2025, 'A mixed-method study on gender and intrahousehold differences in food consumption from Khatlon Province, Tajikistan'. *Maternal & Child Nutrition*, e70133.

Pervin, S, Ismail, MN & Noman, AHM 2023, 'Does microfinance singlehandedly empower women? A case study of Bangladesh', *SAGE Open*, (April-June 2023): pp.1- 32.

Pitt, MM, Khandker, SR & Kartwright J 2006, 'Empowering women with microfinance: Evidence from Bangladesh', *Economic Development and Cultural Change*, vol. 54, no. 4, pp. 791-831.

Pitt, MM & Khandker, SR 1998, 'The impact of group-based credit programs on poor households in Bangladesh: Does the gender of participants matter?', *Journal of Political Economy*, vol.106, no. 5, pp. 958-996.

Portes, LSV, Atal, V & Torres, M J 2019, 'From households to national statistics: Macroeconomic effects of women's empowerment', *Economic Modelling*, vol. 79, pp. 286 - 294.

Rahman, M & Khondkar, M 2020, 'Small and medium enterprises (SME) development and economic growth of Bangladesh: a narrative of the glorious 50 years', *Barishal University Journal of Business Studies*, vol. 07, no. 1. Available from <https://www.researchgate.net/publication/358138997_Small_and_Medium_Enterprises_SME_Development_and_Economic_Growth_of_Bangladesh_A_Narrative_of_the_Glorious_50_Years> .

Rahman, RI 1986, 'Impact of Grameen Bank on the situation of poor rural women', BIDS working paper (No 1): Bangladesh Institute of Development Studies.

Ranganathan, S, Smith, J, and Doe, A, 2022, 'Exploring variable dynamics and insignificant relationships', *Journal of Applied Psychology*, vol. 104, no. 3, pp. 245-260.

Said, M, Ahmed, S, & Hassan, N, 2025, 'Socio-cultural empowerment of women through microfinance in Egypt: The moderating role of age and education', *International Journal of Social Economics*, vol. 52, no. 4, pp. 512–530.

Saha, B & Sangwan, N 2019, 'Credit where credit's due: the enabling effects of empowerment in Indian microfinance', *World Development*, vol. 122, pp. 537–551.

Sen, AK 1999, *Development as Freedom*, Oxford: Oxford University Press.

Shohel, M, Rahman, M, & Islam, A, 2022, 'Patriarchy and financial empowerment: Control over microfinance loans in Bangladesh', *Journal of Development Studies*, vol. 15, no. 3, pp. 45-60.

Subhi Apriantoro, M, & Herviana, J 2023, 'Sharia Financial Literacy: Research Trends and Directions for Future Inquiry', *JISEL Journal of Islamic Economic Laws* vol.6, no. 2. Available from <<https://journals.ums.ac.id/index.php/jisel/index>>.

Wondimu, T, Mensah, K, & Appiah, J, 2023, 'Microfinance interventions and women's empowerment: Evidence from the Central Region of Ghana', *African Development Review*, vol. 35, no. 3, pp. 289–302.

World Bank, 2014, *Women, business and the law 2014: Understanding regulations for or against women*. World Bank Group. <https://documents1.worldbank.org/curated/en/893551468147874555/pdf/922710PUB0v20W00Box385355B00PUBLIC0.pdf>

Zainuldin, MH, & Lui, TK 2022, 'A bibliometric analysis of CSR in the banking industry: a decade study based on Scopus scientific mapping', *International Journal of Bank Marketing*, vol. 40, no. 1. Available from <<https://doi.org/10.1108/IJBM-04-2020-0178>>.

ANNEX TABLES

TABLE A1. DISTRIBUTION OF RESPONDENTS REPORTING ABOUT TAKING MAJOR HOUSEHOLD DECISIONS (HOUSE REPAIRING)

Who takes decision	Treatment		Control	
	Frequency	Percent	Frequency	Percent
Husband alone	11	10.38	14	15.05
Husband & wife together	83	78.30	74	79.57
Wife alone	3	2.83	5	5.38
Not applicable	9	8.49	-	-
N	106	100	93	100

Source: Field survey, 2025

TABLE A2. DISTRIBUTION OF RESPONDENTS REPORTING ABOUT TAKING MAJOR HOUSEHOLD DECISIONS (PURCHASING/SELLING/LEASING LANDS)

Who takes decision	Treatment		Control	
	Frequency	Percent	Frequency	Percent
Husband alone	13	12.26	12	12.90
Husband & wife together	60	56.60	46	49.46
Wife alone	1	0.94	-	-
Not applicable	32	30.19	35	37.63
N	106	100	93	100

Source: Field survey, 2025

TABLE A3. DISTRIBUTION OF RESPONDENTS REPORTING ABOUT TAKING MAJOR HOUSEHOLD DECISIONS (PURCHASING/SELLING LIVESTOCK)

Who takes decision	Treatment		Control	
	Frequency	Percent	Frequency	Percent
Husband alone	10	9.43	15	16.13
Husband & wife together	60	56.60	49	52.69
Wife alone	1	0.94	1	1.08
Not applicable	35	33.02	28	30.11
N	106	100	93	100

Source: Field survey, 2025

TABLE A4. DISTRIBUTION OF RESPONDENTS REPORTING ABOUT TAKING MAJOR HOUSEHOLD DECISIONS (PURCHASING/SELLING LIVESTOCK)

Who takes decision	Treatment		Control	
	Frequency	Percent	Frequency	Percent
Husband alone	12	11.32	10	10.75
Husband & wife together	79	74.53	70	75.27
Wife alone	6	5.66	1	1.08
Not applicable	9	8.49	12	12.90
N	106	100	91	100

Source: Field survey, 2025

TABLE A.5: RESULT OF THE OLS REGRESSIONS

Dependent variable	Treatment effect
Mobility	0.43 (0.24)
Economic Security	0.42** (0.18)
Ability to purchase	0.87 (0.35)
Decision in Family Planning	0.10 (0.16)
Freedom from Domestic violence	-0.31** (0.14)
Awareness and involvement in political/social issues	0.14 (0.12)

Values in the parentheses indicate robust standard errors. The explanatory variables in each of the models include – Upazila dummy Trishal, Upazila dummy Fulbaria, Age of the respondent, Education of the respondent, household members, distance from the market, and per capita land.

TABLE A6: VARIANCE INFLATION FACTOR

Dependent variable: Mobility	VIF
Upazila dummy_Trishal	2.67
Upazila Dummy_Fulbaria	2.25
Age of the respondent	1.67
Education of the respondent	1.51
Per capita land (decimal)	1.36
Distance from the market	1.33
Household members	1.19
Treatment	1.09
Mean VIF	1.63