Does financial inclusion increase financial resilience? Evidence from Bangladesh

A.H.M. Belayeth Hussain, Noraida Endut, Sumonkanti Das, Mohammed Thanvir Ahmed Chowdhury, Nadia Haque, Sumena Sultana and Khandaker Jafor Ahmed

ABSTRACT
This study explores the impact of financial inclusion on financial resilience in Bangladesh, using World Bank data on global financial inclusions. It finds that respondents with financial accounts are more resilient than those without accounts. The chances of being financially resilient are around 1.4 times higher for account holders than their counterparts. There was also a significant relationship between gender and financial resilience; males are 1.4 times more resilient than females when other covariates are considered in the regression model.

ARTICLE HISTORY
Received 13 February 2018
Accepted 2 January 2019

KEYWORDS
Governance and public policy; Gender and diversity; Social sector; South Asia

Introduction

The importance of an inclusive financial system is widely known in development policy and is perceived as a priority in many countries. It enables an efficient allocation of productive resources, creates access to appropriate financial services and can help to reduce the growth of informal sources of credit (Sharma 2010). Financial inclusion involves ensuring access to appropriate financial products and services to the people, regardless of their income level. At the primary level, the process starts with having a bank account, although for the purposes of this study we demarcated financial inclusion as the combination of financial account penetration, savings, and borrowings. On the other hand, financial exclusion is the inability of individuals, households or groups to access financial services in an appropriate form, which denies their entrance to larger economic opportunities and increases the risk of poverty.

Moving to a banking system can deliver an entry point into the formal financial system, which can lead to substantial increases in savings and a change to formal from informal savings. According to Global Findex data (Demirgüc-Kunt et al. 2015), 38% of adults remain unbanked around the world. Providing a regulatory framework favourable to expanding account ownership can lower or even eliminate obstacles to financial inclusion. The challenge in each circumstance is to design suitable financial products that meet the needs of the unbanked population and enable them to use an account with ease and appropriateness.

In the last few years, account ownership has increased in every region across the world, with growth particularly robust in East Asia and the Pacific, South Asia, and Latin America and the Caribbean. Each region witnessed a growth in account penetration of more than 10%. This escalation was focused in account penetration in financial institutions everywhere except sub-Saharan Africa, where digital financial (mobile banking) services promoted overall account penetration from 24% in 2011 to 34% in 2014 (Demirgüc-Kunt et al. 2015).

Financial inclusion is not an end in itself; rather it increases risk-taking behaviour. When people have a safe place to save money and access to credit in need, they are better able to manage potential risks. To understand how people around the world are financially resilient, we need a country-
specific dataset to analyse the key embedded factors in local circumstances. In Bangladesh, evidence of financially-resilient people is varied. Bangladesh has experienced a great deal of development in the processes of financial inclusion in recent years. It is timely to examine what factors are responsible for making people financially resilient, even though they have financial penetration through various channels. Therefore, this study aims to consider the effects of gender gaps, education, and income on financial resilience. Before proceeding with the analyses, we review relevant literature to identify the state of different factors in the processes of financial inclusion.

Status of financial inclusion in Bangladesh

Financial services that include a deposit or savings account play a major role in tackling anticipated or unexpected crises in various ways. In Bangladesh, Khalily et al. (2014) found from a cross-sectional survey that nearly 66% of households have some form of savings, either in a bank, microfinance institution or informal savings association. Among these households, about 13% have multiple accounts in diverse institutions. These households have better financial stability to lessen insecurity in unforeseen circumstances. Han and Melecky (2013) used data from 90 countries to study the link between financial inclusion and financial resilience. The authors perceived that financial inclusion, measured by broader access to and use of deposits, can improve banks’ deposit bases in times of financial shocks. This eventually promotes the financial stability of nations, especially middle-income countries. Similarly, Hannig and Jansen (2010) found that the inclusion of underprivileged and low-income people in financial systems leads to increments of credit and deposit bases which help to improve local economic activities.

In Bangladesh, access to any type of savings is above 70% in the Khulna, Barisal, Rangpur, and Rajshahi administrative divisions of the country. However, the rates for families accessing a bank savings account are highest in Sylhet and Khulna, and other divisions do not have significant rates of access to a bank savings account. Bangladesh’s financial sector has seen new concepts introduced in the last few years, with an increase in the use of ATM machines, credit cards, debit cards, mobile banking and “Ten Taka” accounts. Among these services, mobile banking has experienced a sharp rise in popularity. It does not require the customer to attend a bank branch and transactions can be carried out either through their own mobile bank account or by using another’s bank account. Hence it is convenient for both poor and well-off customers (Khalily et al. 2014). It can be assumed that mobile banking plays a key role in the deepening of financial inclusion in Bangladesh.

Gender and account penetration

Based on the 2012 Global Findex data of 98 developing nations, Demirgüc-Kunt, Klapper, and Singer (2013) highlighted a remarkable gender gap in terms of account ownership, formal saving and formal credit. They demonstrated many factors for this gender gap (a lesser likelihood for women to be financially included) in the formal financial inclusion: a lack of financial knowledge and experience regarding business; a greater barrier to provide personal or collateral guarantees; a lack of documentation or because another member of the household already has an opened account (Fungácová and Weill 2015); and the husband’s adverse credit record and vulnerabilities faced in the financial system. On a global scale, a significant gender gap prevails in overall account ownership (Allen et al. 2016). In contrast to this general scenario, a cross-country study demonstrates that women are less likely to get financing from a formal financial institution compared to men (Muravyev, Schäfer, and Talavera 2009).

Demirgüc-Kunt and Klapper (2012) observed that the gender gap is statistically significant in all regions, even when education, age, income, and country-level characteristics are controlled. Figure 1 demonstrates the gap between males and females in having an account in different regions in the world, and highlights the variation of account ownership. The proportion of males having an account is higher in all regions. However, the highest gender gap is in South Asia, with
25% female account penetration as oppose to 41% of males with financial accounts. The lowest gender gap prevails in sub-Saharan Africa (a difference of 5%) and East Asia and the Pacific (difference of 6%). However, around a 10% gender gap is present in the Middle East and North Africa, Latin America and the Caribbean, Europe and Central Asia.

**Education, financial inclusion and financial resilience**

Allen et al. (2016) found a greater likelihood of account ownership at a formal financial institution for richer, more educated, older, urban citizens, employed, married or separated individuals. Fungácová and Weill (2015) and Zins and Weill (2016) also found that richer and more educated adults are more likely to be financially included. The seminal work on the impact of financial education by Bernheim and Garrett (2003) revealed that middle-aged individuals who attended a personal financial management course in high school saved more than those who did not pursue the course. This supports the view that having financial education helps people to be concerned with financial issues. Similarly, Hira and Cäzilia (2005), in a sample of employees of a large insurance company, established that financial literacy improves workers’ expectations about their future financial situation, which will help them to be financially more resilient.

**Economic status and financial resilience**

Bruhn and Love’s (2014) study found that financial inclusion fosters the income level of poor people and consequently there was a greater likelihood to be employed, which affects their level of financial resilience in future. Poverty traps may appear for those who fail to be included in financial systems, their economic development is hampered (Demirgüç-Kunt and Klapper 2012) and their financial resilience declines as a by-product of this underdevelopment. In these circumstances, however, whether rich or poor, they may adopt different strategies to cope with their financial vulnerabilities. For instance, Lianto (2007) highlighted a few instruments adopted by low-income households in the Philippines to cope with the negative outcomes of risk events (Table 1). Particularly, one strategy for the low-income households is “informal on spot action” which delineates seeking instant help from relatives, friends, money lenders or selling their precious things.
Savings patterns and financial resilience

The savings and asset investments of poor households can play a crucial role in building resilience (Allen 2002; Allen and Panetta 2010). A study on extremely poor Marma households by Chakma (2013) found that local people in the Chittagong Hill Tracts significantly changed their financial behaviour (regarding savings and investing) as a result of their involvement with the village savings and loan association (VSL) and their savings increased. It helped them to cope with illness and crisis moments, and enabled them not only to invest in income-generating activities for subsistence but also mitigate the impacts of shock.

Methodology and materials

This study utilised the World Bank’s (2014) data on global financial inclusion known as the Findex database. This database was published in 2015. We considered 1,000 representative samples randomly collected from the civilian and non-institutionalised population aged 15 and above in Bangladesh. The two main concepts used here, financial inclusion and financial resilience, have been defined following the World Bank’s operationalisation. Financial inclusion combines financial account penetration, savings, and borrowings. Financial resilience is the condition of managing the risk of need for emergency funds in a short time frame. To manoeuvre the necessary variables and their analyses, we created three new variables from the existing database.

Because this study defines financial resilience as the possibility of accessing emergency funds, this concept has been operationalised as how possible it is that a respondent could come up with 1/20 GNI per capita (in local currency) within the next month. Originally, the respondents had four possible answers: “very possible”, “somewhat possible”, “not very possible” or “not at all possible”. For our analyses and simple interpretation of outcomes, we defined our first new variable, financial resilience, as the combination of the answers “very possible” and “somewhat possible”. We categorised respondents who answered “not very possible” and “not at all possible” as not being financially resilient.

To view the gender gap among financially included individuals and their status of being financially resilient, we created a second new variable labelled as “financial account by gender.” We separated “males with financial accounts”, “females with financial accounts”, “males without financial accounts” and “females without financial accounts”. Employing this new variable, we wanted to see how likely a respondent (male or female) was able to come up with emergency funds (financial resilience), with or without a financial account.

For the third new variable, we narrowed down the variable educational status into two possible options: “primary or less educated” and “secondary or higher educated”. In the World Bank dataset, household economic status is measured according to monthly household income in local currency before taxes, which covers income from wages and salaries, remittances from family members living elsewhere, farming, and all other sources. From the income variable, household economic condition is broadly classified into five groups according to quintiles of the income distribution. The groups are ordered as poorest (1st quintile) to richest (5th quintile). The other available variables

| Coping mechanism | Description |
|------------------|-------------|
| 1. Informal, on-the-spot action | Support from relatives, loans from money lenders, sale of assets (e.g. livestock, farm animals). |
| 2. Local informal “social protection” schemes | Support from rotating savings and credit associations, and other informal schemes. |
| 3. Institutional insurance schemes | Social security system, government service insurance system, commercial insurers (if the households can access them). |
| 4. Micro-insurance schemes | Schemes developed by MFIs, mutual benefit associations, or cooperatives. |

Table 1. Lianto’s typology of mechanisms to cope with risk events.
in the data and considered in this study are given in Tables 2a and 2b. In our analyses, we assumed four hypotheses in relation to financial inclusions and financial resilience in Bangladesh:

Hypothesis 1: Males are more likely to be financially included and resilient than females.

Hypothesis 2: Better educational attainments improve financial resilience.

### Table 2a. Distribution of respondents and their financial resilience status (multinomial).

| Background characteristics | Number of respondents | Financially resilient (%) | Chi-squared value | p-value |
|----------------------------|-----------------------|---------------------------|-------------------|---------|
| Has financial account?     |                       | Very possible | Somewhat possible | Not very possible | Not at all possible |
| Yes                        | 310                   | 22.6          | 47.1             | 12.9            | 17.4             | 49.162 | 0.000 |
| No                         | 683                   | 10.2          | 38.2             | 19.2            | 32.4             |        |       |
| Gender                     |                       |               |                  |                 |                 |         |       |
| Male                       | 508                   | 15.7          | 42.5             | 19.5            | 22.2             | 16.863 | 0.001 |
| Female                     | 485                   | 12.4          | 39.4             | 14.8            | 33.4             |        |       |
| Financial account by gender|                       |               |                  |                 |                 |         |       |
| Male with                  | 181                   | 27.1          | 44.8             | 14.9            | 13.3             | 70.883 | 0.000 |
| Female with                | 130                   | 16.9          | 50.0             | 10.0            | 23.1             |        |       |
| Male without               | 329                   | 9.7           | 41.0             | 22.2            | 27.1             |        |       |
| Female without             | 355                   | 14.2          | 40.9             | 17.3            | 27.6             |        |       |
| Education status           |                       |               |                  |                 |                 |         |       |
| Secondary or higher        | 492                   | 21.1          | 45.3             | 16.1            | 17.5             | 76.257 | 0.000 |
| Primary or less            | 501                   | 7.2           | 36.7             | 18.4            | 37.7             |        |       |
| HHS’s economic status      |                       |               |                  |                 |                 |         |       |
| Richest 20%                | 187                   | 33.7          | 47.1             | 10.7            | 6.7             | 143.341 | 0.000 |
| Fourth 20%                 | 198                   | 11.6          | 48.0             | 18.2            | 22.2             |        |       |
| Middle 20%                 | 203                   | 13.3          | 43.8             | 15.3            | 26.6             |        |       |
| Second 20%                 | 219                   | 5.5           | 40.2             | 18.7            | 35.6             |        |       |
| Poorest 20%                | 188                   | 8.0           | 25.0             | 23.4            | 43.6             |        |       |
| Has any savings in the past year? Yes | 238                   | 24.4          | 52.5             | 9.7             | 13.4             | 67.197 | 0.000 |
| No                         | 756                   | 10.8          | 37.3             | 19.6            | 32.3             |        |       |
| Total                      | 994                   | 14.1          | 41.0             | 17.2            | 27.7             |        |       |

### Table 2b. Distribution of respondents and their financial resilience status (binary).

| Background characteristics | No. of respondents | Financially resilient (%) | \( \chi^2 \) value (p-value) | Binary logistic model |
|----------------------------|---------------------|---------------------------|-----------------------------|----------------------|
| Has financial account?     |                     |                           |                             | B | p-value | OR  |
| Yes                        | 310                 | 69.7                      | 38.79 (0.000)               | 0.359 | 0.031 | 1.432 |
| No                         | 683                 | 48.5                      |                             | – | – | – |
| Gender                     |                     |                           |                             | B | p-value | OR  |
| Male                       | 508                 | 58.3                      | 4.257 (0.039)               | 0.360 | 0.011 | 1.433 |
| Female                     | 485                 | 51.8                      |                             | – | – | – |
| Financial account by gender|                     |                           |                             | B | p-value | OR  |
| Male with                  | 181                 | 71.7                      | 41.18 (0.000)               | – | – | – |
| Female with                | 130                 | 66.9                      |                             | – | – | – |
| Male without               | 329                 | 50.8                      |                             | – | – | – |
| Female without             | 355                 | 46.2                      |                             | – | – | – |
| Education status           |                     |                           |                             | B | p-value | OR  |
| Secondary or higher        | 492                 | 66.3                      | 49.65 (0.000)               | 0.680 | 0.000 | 1.975 |
| Primary or less            | 501                 | 44.0                      |                             | – | – | – |
| HHS’s economic status      |                     |                           |                             | B | p-value | OR  |
| Richest 20%                | 187                 | 81.1                      | 98.53 (0.000)               | 1.799 | 0.000 | 6.043 |
| Fourth 20%                 | 198                 | 59.8                      |                             | .943 | 0.000 | 2.567 |
| Middle 20%                 | 203                 | 57.4                      |                             | .964 | 0.000 | 2.621 |
| Second 20%                 | 219                 | 45.7                      |                             | .648 | 0.029 | 1.597 |
| Poorest 20%                | 188                 | 32.8                      |                             | – | – | – |
| Has any savings in the past year? Yes | 238                 | 76.8                      | 59.29 (0.000)               | 1.012 | .000 | 2.751 |
| No                         | 756                 | 48.3                      |                             | – | – | – |
| Total                      | 994                 | 55.0                      |                             | 1.423 | .000 | .241 |
Hypothesis 3: Richer people are financially more resilient than poorer.

Hypothesis 4: Better saving patterns indicate more financial resilience.

Two well-known statistical techniques, chi-square test and logistic regression analysis, were employed to test the hypotheses. The chi-square test is used to test the hypothesis considering only the relevant factors seeing the financial resilience variable as four-level and two-level factor. To test whether the hypotheses are significant after controlling for other factors, a multiple binary logistic model has been developed considering all the significant predictors of the financial resilience simultaneously. These two tests reveal univariate and multivariate relationships of the considered factors with the financial resilience.

Results and discussion

Table 2a provides the approximations of financial resilience indicators. Different conditions were used to test the strength of the results and address multi-strand associations among the variables. Earlier, we defined financial resilience as the combination of the possible answers of “very possible” and “somewhat possible”, with respondents who answered “not very possible” and “not at all possible” as not being financially resilient. The results derived from the chi-square test and binary logistic model indicate gender, education, financial inclusion, economic status and saving patterns are significantly associated with financial resilience (Table 2b). The logistic model was found to fit well to the data based on the Hoosemer-Lemeshow test (chi-square = 6.07, p-value = 0.64). The area under the receiving operating curve (ROC) indicates that about 76% (95% CI: 73–79%) of individuals can be correctly classified according to their financial inclusion status. Based on the fitted binary logistic model (Table 2b), the results of the hypothesis tests are explained below.

Hypothesis 1: males are more likely to be financially included and resilient than females

Considering account penetration, respondents with financial accounts (financial inclusion) are more resilient than those who do not have such accounts; and the odds ratio of being financially resilient is about 1.4 times higher for financial account holders than those who do not have access to accounts (Table 2b). For the gender dimension, there is a significant association between gender and financial resilience, where the odds ratio of being financially resilient is about 1.4 times higher for male compared to female respondents when the covariates remain the same. The percentage of males with financial accounts and resilience (71.7%) is higher than the percentage of females (66.9%). In the instances where males do not have financial accounts, they are still more resilient than females without accounts. We found 50.8% of males without financial accounts are resilient, compared to 46.2% of females (Table 2b). Therefore, in both circumstances, we see females are less resilient than male respondents; but in intra-gender analysis, females with financial inclusion have more resilience control than females without financial inclusion. Hence, our first hypothesis regarding the gender identity, account penetration, and financial resilience is accepted.

Referring to individual’s account penetration, the results show that respondents with financial inclusion are more resilient than those without financial inclusion. Various studies also support these findings. For instance, in a study based on microfinance institutions, the International Labour Organization (2011) suggests that by being financially included (through microfinance institutions) individuals can achieve savings, insurance and emergency loans which reduce their vulnerability and make them capable of managing various risks. Similarly, Ramji (2009) argues that a strong financial system makes poor households and small entrepreneurs independent of receiving support from middlemen. That implies that households seem more resilient through the process of financial inclusion.
Our results indicate that females are less resilient than male respondents. Likewise, Holloway, Niazi, and Rouse (2017) argue that women in the developing countries not only have poor shares in account ownership but also minimal formal saving experience. Therefore, their ability to manage risk and smooth consumption in the face of shocks or loss of income is also inadequate. In a study based in Thailand and Vietnam, Slopen et al. (2010) assert that female-headed households might be more vulnerable to poverty as they face higher risks and/or have fewer options and strategies to cope.

**Hypothesis 2: better educational attainments improve financial resilience**

In order to see the relationship between educational attainment, financial inclusions and financial resilience, there is a significant association between educational attainments and financial resilience. Respondents having at least secondary or higher education are more resilient than respondents who completed primary education or below. The odds ratio indicates that respondents with at least a secondary or higher level of education are about twice as likely to be financially resilient compared to respondents with a primary level education or below (Table 2b). Therefore, our second hypothesis about educational attainment and financial resilience is accepted statistically.

Regarding education, the results show that respondents having at least secondary or higher education are more resilient than those who have only primary education or less than that. We find similar empirical studies that support these findings. For example, in a study based on African-American and Hispanic households, Lusardi and Mitchell (2006) found that household heads with higher education can accumulate a larger amount of wealth and face different types of emergency difficulties because education makes them conscious to use and save money. Ramji (2009) found that besides financial inclusion, education is also necessary for financial resilience. According to his study, although all households of Gulbarga were financially included through government initiatives, they were financially vulnerable due to lack of education and training. Similarly, the Alliance for Financial Inclusion (2016) states that education and awareness are the critical factors in the uptake of any financial service or product; hence reducing risk. Knowledge, skill and financial awareness help borrowers assess their repayment capacity and prevent them from over-borrowing and over-indebtedness (Kelegama and Tilakaratna 2014). Therefore, financial education can improve levels of financial literacy, help individuals to overcome financial vulnerability caused by personal circumstances, and potentially break down their psychological barriers (Atkinson and Messy 2013).

**Hypothesis 3: richer people are financially more resilient than poorer**

Respondents who have the highest economic status are more likely to be financially included than those who are in the poorest 20%. Referring to a household’s economic status, the likelihood of being financially resilient escalates with the progress of household economic status. Results show that the higher the household’s economic condition, respondents are more likely to be financially resilient. Among the households, the richest 20% of respondents are about six times more resilient compared to the poorest 20%. The middle 20% of households are approximately 2.6 times more resilient than the poorest 20% households. The second 20% of households are 1.6 times more likely to be resilient than the poorest 20% households (Table 2b). A household’s economic status is therefore found to be a significant indicator of financial resilience. Therefore, the third hypothesis in relation to economic status and financial resilience is also accepted.

Regarding the household’s economic status, data imply that the higher the household’s economic condition, the more likely respondents are to be financially resilient. The findings support other relevant studies. For instance, in a study in Sri Lanka, the Asian Development Bank Institute (2004) found that poor people pawn possessions to meet their emergency needs because they have no other option. The study also suggests that through financial inclusion, low-income households can address their day-to-day needs, adjust to their risks and undertake investments which make them...
capable to expand their income and assets. Similarly, in a study in Mexico, Eriksen and Kelly (2007) argue that poor people are not capable enough to meet emergencies, such as a sick or dying family member, that can plunge a family into crisis. They must borrow money even though they are financially included.

According to CGAP (2000), poor people face a more vulnerable situation with various types of risks. They cannot easily handle unexpected emergencies such as sickness or death of a family member and losing employment. However, Chen and Rutherford (2013) showed that financial inclusion (through microfinance institutions) can play an effective role to manage risk and economic stress.

**Hypothesis 4: better saving patterns indicate more financial resilience**

Respondents who save money (saving status during the three months preceding survey) are more likely to be financially resilient than who do not save. After considering the socio-economic variables, the financial inclusion and saving pattern covariates are found to be significant predictors of the financial resilience. As we have seen before, respondents with a financial account have around 1.4 times higher possibility to be financially resilient compared to respondents without financial accounts. Likewise, respondents with savings are almost three times more likely to be resilient compared to respondents without savings (Table 2b). Therefore, the findings confirm the fourth hypothesis – better saving patterns improve financial resilience.

Other literature supports these findings. Though not directly related to financial resilience, Brune et al. (2011) found that increased financial access through saving accounts in rural Malawi improves the well-being of poor households as they use savings for agricultural input and crisis management. CGAP (Consultative Group to Assist the Poor) found that financial services provide the means for poor households to transform small amounts of savings, which work as a way of decreasing vulnerability in the long run. Based on digital savings accounts, the Women World Banking found that savings accounts make women able to save money and use it for emergency needs. In a study based on a low-income area of Mexico City, Niño-Zarazua and Copestake (2008) found that the discipline of holding savings more securely controls financial-saving behaviour, which helps risk-prone respondents cope with emergency sickness, loss of earnings or business failure (Niño-Zarazua and Copestake 2008; McGuinness and Tounytsky 2006), death of a family member (McGuinness and Tounytsky 2006), and housing repairs (Niño-Zarazua and Copestake 2008).

**Conclusions**

Financial inclusion starts with having a bank account and its use. Shifting payments from cash into accounts plays a significant role in a formal financial system, as it can improve the security and transparency of payments. This formal financial inclusion may lead to noteworthy increases in savings. Studies claim that people with savings are financially more resilient than their counterparts. The World Development Report (2014) recommends that countries should attempt to encourage a wider use of financial tools not only for economic development but also to balance the broader policies to improve financial stability and increase financial resilience. Financial inclusion and access to finance are separate issues, where many people have poor access to financial services due to barriers to their use. But it is strongly believed that many barriers can be reduced by introducing better policies. Financial inclusion offers people a safe place (a financial institution) to save money and even provides access to credit when needed; as such people become able to manage risks (financial resilience).

However, there is a gender gap in being financially resilient in Bangladesh; and even in intragender, the nature of risk-taking behaviour is different. There is a significant association between gender and financial resilience where males enjoy better financial resilience than females. In intragender disaggregation, females with financial inclusion have more resilience than females without
financial inclusion. Therefore, regarding the implications of financial inclusion on financial resilience, banks must increase financial services including mobile banking (where physical mobility of users is not significant) in unbanked areas and extend the volume of services to women and people who are out of reach. Often people are not aware of all services; especially in rural areas. Another finding of this study acknowledges a positive and direct impact of education (more specifically, financial knowledge) on financial sustainability in need. These findings are useful for policy avenues to enhance financial inclusion by targeted programming for rural areas, low-income and female-headed households, and people with poor educational attainment.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

A. H. M. Belayeth Hussain is a Teaching Fellow at the Centre for Research on Women and Gender (KANITA), Universiti Sains Malaysia (USM), Malaysia, and a Professor in the Department of Sociology, Shahjalal University of Science and Technology, Bangladesh.

Noraida Endut is Professor and Director of the Centre for Research on Women and Gender (KANITA), Universiti Sains Malaysia (USM), Malaysia.

Sumonkanti Das is a Postdoctoral Researcher in the School of Business and Economics, Maastricht University, Netherlands.

Mohammed Thanvir Ahmed Chowdhury is an Associate Professor in the Department of Applied Sociology and Social Work, North East University, Bangladesh.

Nadia Haque is an Assistant Professor in the Department of Sociology, Shahjalal University of Science and Technology, Bangladesh.

Sumena Sultana is an Assistant Professor in the Department of Sociology, Shahjalal University of Science and Technology, Bangladesh.

Khandaker Jafor Ahmed is a PhD candidate in the Department of Geography, Environment and Population, University of Adelaide, Australia.

ORCID

A.H.M. Belayeth Hussain http://orcid.org/0000-0002-9509-9562

References

Allen, H. 2002. CARE International’s VS&L Programme in Africa: Microfinance for the Rural Poor that Works.
Allen, H., and D. Panetta. 2010. “Savings Groups: What Are They?” Washington, DC: The SEEP Network. Accessed 24 May 2013. www.pciglobal.org/downloads/SGsWhatAreThey.pdf
Allen, F., A. Demirgüç-Kunt, L. Klapper, and Peria M. S. 2016. “The foundations of financial inclusion: Understanding ownership and use of formal accounts.” Journal of Financial Intermediation, 27, 1–30. https://doi.org/10.1016/j.jfi.2015.12.003
Alliance for Financial Inclusion. 2016. “AFI Annual Report 2016.” Accessed 10 January 10, 2018. www.afi-global.org/publications/2498/2016-AFI-Annual-Report
Atkinson, A., and F. Messy. 2013. “Promoting Financial Inclusion through Financial Education: OECD/INFE Evidence, Policies and Practice.” OECD Working Papers on Finance, Insurance and Private Pensions No. 34. Paris: OECD Publishing.
Asian Development Bank Institute. 2004. “Annual Financial Inclusion (AFI) Report.” 2016. Chiyoda: Asian Development Bank Institute.
Bruhn, M., and I. Love. 2014. “The Real Impact of Improved Access to Finance: Evidence from Mexico.” Journal of Finance 69 (3): 1347–1376.
Brune, L., Xavier, G., Goldberg, J., and Yang, D. 2011. “Commitments to save: a field experiment in rural Malawi.” Policy Research Working Paper, No. WPS 5748, Impact Evaluation series, No. IE 50. Washington, DC: World Bank. Retrieved on February 13, 2018, from http://documents.worldbank.org/curated/en/881911468271793505/Commitments-to-save-a-field-experiment-in-rural-Malawi.

Bernheim, B. D., and D. M. Garrett. 2003. “The Effects of Financial Education in the Workplace: Evidence from a Survey of Households.” Journal of Public Economics 87 (7/8): 1487–1519.

Chakma, N. 2013. “The savings and investment behavior of extreme poor Marma community households in resilience building: a case study on Green Hill village savings and loan association intervention in the Chittagong Hill Tracts.” Working Paper Number 19. Accessed 13 February 2018. https://assets.publishing.service.gov.uk/media/57a089ee40f0b6497400031e/19-EcoDev_final.pdf

Chen, G. and S. Rutherford. 2013. “Predictors of Microcredit Default: Evidence from Bangladesh, Malawi, and the Philippines.” Policy Research Working Paper. Washington, DC: World Bank.

Demirgüc-Kunt, A., and L. Klapper. 2007. Measuring Financial Inclusion: The Global Findex Database.” Policy Research Working Paper No. 4616. Washington, DC: The World Bank.

Demirgüc-Kunt, A., L. Klapper, and D. Singer. 2013. “Financial Inclusion and Legal Discrimination against Women: Evidence from Developing Countries.” Policy Research Working Paper No. 6416. Washington, DC: The World Bank.

Demirgüc-Kunt, A., L. Klapper, D. Singer, and P.V. Oudheusden. 2015. “The Global Findex Database 2014: Measuring Financial Inclusion around the World.” Policy Research Working Paper. Washington, DC: World Bank.

Eriksen, S.H. and P.M. Kelly. 2007. Climate Change 2007 – Impacts, Adaptation and Vulnerability: Working Group 2, Contribution to the Fourth Assessment, Report of the Intergovernmental Panel on the Climate Change.

Fungáčová, Z., and L. Weill. 2015. “Understanding financial inclusion in China.” China Economic Review 34: 196–206.

Hannig, A., and S. Jansen. 2010. “Financial inclusion and financial stability: current policy issues.” ADBI Working Paper No. 259. Tokyo: Asian Development Bank Institute.

Hira, T. K., and L. Cäzilia. 2005. “Understanding the Impact of Employer-provided Financial Education on Workplace Satisfaction.” The Journal of Consumer Affairs 39 (1): 173–194.

Holloway, K., Z. Niazi, and R. Rouse. 2017. Women’s Economic Empowerment through Financial Inclusion: A Review of Existing Evidence and Remaining Knowledge Gaps. New Haven, CT: Innovations for Poverty Action.

International Labour Organization. 2011.

Kelegama, S., and Tilakaratna, G. 2014. “Financial inclusion, regulation, and education in Sri Lanka.” ADBI Working Paper, No. 504, Asian Development Bank Institute (ADBI), Tokyo. Retrieved January 18, 2018, from https://www.econstor.eu/bitstream/10419/115320/1/805587837.pdf.

Khaliy, M. A., et al. 2014. Access to Financial Services in Bangladesh. Dhaka: Institute of Microfinance.

Lianto, G. M. 2007. “Policy and Regulatory Issues and Challenges in Micro-Insurance: A Philippine Case.” Philippine Journal of Development XXXIV (1): 61–86.

Lusardi, A., and O. S. Mitchell. 2006. Financial Literacy and Planning: Implications for Retirement Wellbeing. Philadelphia: Pension Research Council, University of Pennsylvania.

McGuinness, E., and V. Tounytsky. 2006. The Demand for Micro Insurance in Pakistan. Washington, DC: Microfinance Opportunities.

Muravyev, A., D. Schäfer, and O. Talavera. 2009. “Entrepreneurs’ Gender and Financial Constraints: Evidence from International Data.” Journal of Comparative Economics 37: 270–286.

Niño-Zarazua, M., and J. Copestake. 2008. “Financial Inclusion, Vulnerability, and Mental Models: From Physical Access to Effective use of Financial Services in a Low-income Area of Mexico City.” Savings and Development 32 (4): 353–379.

Ramji, M. 2009. “Financial Inclusion in Gulbarga: Finding Usage in Access.” Working Paper Series No. 26. Sri City: Institute for Financial Management and Research.

Sharma, M. 2010. “Index of Financial Inclusion.” Washington, DC: CGAP.

Slopen, N., G. Fitzmaurice, D. R. Williams, and S. E. Gilman. 2010. “Poverty, Food Insecurity, and the Behavior for Childhood Internalizing and Externalizing Disorders.” Journal of the American Academy of Child and Adolescent Psychiatry 49 (5): 444–452.

World Bank. 2014. Global Financial Development Report: Financial Inclusion. Washington, DC: World Bank.

World Development Report. 2014. Risk and Opportunity: Managing Risk for Development. Accessed 13 February 2018. http://econ.worldbank.org

Zins, A., and L. Weill. 2016. “The determinants of financial inclusion in Africa.” Review of Development Finance 6 (1): 46–57.