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Dissertation Title: *Essays on microfinance: Financial and social impacts*  
Research Abstract

Rural credit programs in developing countries are designed to help the poorest of the poor by providing collateral-free loans at a low cost. In order to properly measure the efficacy of these programs, one needs to examine not only the pecuniary benefits of the programs but also the non-pecuniary benefits. One way that credit programs can benefit the poor is by providing them opportunities for loans to invest in self-employment activity. Another way that these programs benefit is by empowering women. The credit programs tend to target poor women, thereby providing them with income-generating opportunities that they otherwise lack. A woman's potential contribution to the household income may increase her intra-household bargaining power and empower her. Empowerment may have far-reaching consequences in terms of household investment in children's health and education, as well as a woman's wellbeing. This thesis is composed of two essays that examine the financial and social impacts of credit programs in rural Bangladesh.

In first essay, I examine the effects of credit and non-credit services from three different micro-credit programs on self-employment profits of the borrowers. By controlling for borrowing from different micro-credit programs with varying degree of non-credit services, I isolate the non-credit impact of the credit programs. In addition, I disaggregate the effects by the microcredit and non-microcredit sources of borrowing. I use an Instrumental Variable estimation approach and Fixed Effect to control for selection bias and non-random program placement. The results show that a 1% increase in credit alone reduces borrower's profit by 3%. However, when coupled with other non-credit services, credit increases borrower's profit by 5%, suggesting a positive impact of the non-credit services. The total effect of credit on profit is also larger for non-micro sources than micro sources. My analysis suggests that non-credit aspects are very important in the success of the credit programs.

In second essay, I examine the effect of male and female self-employment returns to borrowing in rural Bangladesh on intra-household resource allocation and decision making processes and how the effect differs when the borrowing sources vary. I measure intra-household allocation via household expenditure patterns. Individuals borrow from either micro-credit sources under a group-contract or non-micro sources under individual-contract and invest in self-employment activities. When the husband borrows, the profit net of cost of borrowing is defined as male returns to borrowing. I use an Instrumental Variable (IV) estimation approach with heckman selection and fixed effect to correct for selection biases of borrowers and non-random program placement. The identification comes from gender restrictions in micro-credit programs and other relevant instruments such as interest rate, distant to the lending institutions, and time-variant village level variables. I use a dynamic bargaining framework with endogenous determinants of bargaining power and demonstrate that male and female returns to borrowing affect household consumption decisions via a woman's bargaining power. I find that households do not have identical preferences. They increase consumption of female-oriented goods when female returns increase. In contrast, an increase in male returns decreases consumption of goods more valuable to women and increases consumption of goods more valuable to men. In addition, female micro-credit borrowers are better able to allocate their business income toward goods more valuable to them, make major household decisions, and travel outside the household than their non-micro counterparts. These results suggest that allocation of household resources favors the woman when her income increases and serve as evidence of increased empowerment or bargaining power. Moreover, they show that even in patriarchal countries such as Bangladesh, women's empowerment can still be obtained through lending policies and programs that target women.