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Cost effectiveness or serving the poor? Factors determining program placement of NGOs in Bangladesh☆

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ABSTRACT

The trade-off between poverty alleviation and cost effectiveness (profit maximization) encountered by NGOs is a global concern for the microfinance industry. To understand this trade-off at the micro level, we investigate the factors determining the program location choice of NGOs using village level survey data from Bangladesh. We document that NGO coverage in a village—measured by the percentage of NGO member households, number of NGOs working, and NGO density in the village—decreases with distance of the village from marketplaces and increases with the adoption of modern irrigation methods. The results suggest that cost effectiveness and loan repayment concerns serve as barriers to reaching the poor. They also suggest the inability of the microfinance program to mitigate credit market imperfections in the presence of output market imperfections, and this implication can be generalized for the microfinance industry worldwide. The results also shed light on the specific nature of the selection bias previously unknown and can be important for impact evaluation of the microfinance program.

1. Introduction

Notwithstanding a large expansion of the microfinance program in many developing countries over the past three decades, a consensus on its efficacy as a poverty alleviation tool is still elusive (for a recent survey of the literature, see Banerjee et al. (2015)). This issue is arguably more pertinent in the context of Bangladesh than anywhere else, as this country is the pioneer in the microfinance revolution.[1] It is now well known that microfinance programs in Bangladesh target non-poor households without adhering to screening devices (Amin et al., 2003; Matin, 2005; Morduch, 2011). There is also evidence that microfinance institutions target program locations (villages and communities) based on criteria other than poverty incidences (Fruttero and Gauri, 2005; Salim, 2013).

There is also a burgeoning body of empirical works investigating the trade-off between serving the poor and cost effectiveness of the microfinance institutions (popularly known as the "mission drift") at the regional or cross-country level (Copestake, 2007; Gutiérrez-Nieto et al., 2007; Mersland and Strøm, 2010). Although this line of research provides important insights into the reasons for the failure of the microfinance institutions[2] to reach the poor, much useful information about local characteristics is lost due to data aggregation at the higher level. Only data at the micro level can uncover the specific nature of, and reasons for, the "mission drift" at the local level.

This paper is intended to fill this gap by investigating the factors determining the program location choice of NGOs[3] in Bangladesh using the village level survey data. The main motivation is that to understand the poverty alleviation performance of NGOs, one also needs to identify the true goals of NGOs and any obstacles they encounter to realize their goals.

One of the stated objectives of the microfinance program is poverty alleviation. It is therefore expected that an NGO will take the program

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[1] Although the role of microfinance in poverty reduction is debated, some studies have found a large contribution of the microfinance program to the overall economy of Bangladesh (Mallick, 2009; Raihan et al., 2017).

[2] The determinants of the "mission drift" include, among others, age, size, returns on asset and equity, disclosure practices, goals and types of the microfinance institutions. See also Quayes (2012), Wijesiri et al. (2015), and Churchill and Marr (Forthcoming).

[3] We do not make any distinction between an NGO and a microfinance institution, and use these two terms interchangeably.

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to the locations where profit-driven financial institutions do not reach and target the poor households in a given location.[4] However, sustainability and expansion of the microfinance program depends on generating enough profit on loans, which in turn depends on loan repayments, as well as on cost effectiveness. To ensure higher loan repayments, an NGO will place its programs in those areas where there are ample opportunities for productive investment and marketing so that the borrowers can generate sufficient income to repay the NGO loan. To achieve cost effectiveness, an NGO will place programs in areas with good physical infrastructure that minimizes its transaction costs.[5] Therefore, the benevolent motive of poverty alleviation of an NGO might be constrained by the risk of its financial sustainability, and this trade-off can be manifested in its selection of program locations.

Our investigation is based on the village level survey data for 156 villages in northern Bangladesh. The dependent variable is the NGO coverage measured alternatively by i) the percentage of NGO member households, ii) the number of NGOs operating, and iii) the NGO density in a village. The first set of determinants of NGO coverage is the transaction costs of the NGOs that are captured by i) the distance of the village from the NGO branch office and ii) the availability and quality of physical infrastructure in and around the village. The second set of determinants is the profitability of NGOs, which will be higher if the microfinance borrowers can utilize their loans to produce and market their products at lower costs. The above transaction costs measures also represent the marketing costs of the producers (borrowers) because the NGO branch office is located at the main marketplace in the region (discussed in detail in online Appendix A.1). In addition, marketing costs are captured by localized marketing facilities in and around the village, such as the number of shops in the village and the distance from the local bazaar. Borrowers' cost of producing goods is captured by i) the adoption of modern irrigation methods and ii) the soil quality of agricultural land in the village. Our identification strategy is a novel method proposed by Lewbel (2012) that does not rely on exclusion restrictions but exploits heteroscedasticity for instrumental variable (IV) estimation.

The empirical results show that the NGO coverage decreases with the distance of a village from the NGO branch office (main marketplace) and the absence of good physical infrastructure (such as a longer distance from a paved road). The NGO coverage is higher in villages with localized marketing opportunities, such as a greater density of shops and closer proximity to the local bazaar. Given the distance and availability of marketing opportunities, NGO coverage increases with the adoption of modern irrigation methods. These results suggest that cost effectiveness and loan recovery concerns dominate over the objective of poverty alleviation in program location choice of an NGO; alternatively, risks of financial sustainability acts a barrier to reaching the poor. We also find some evidence that, even in the presence of such constraints, NGOs with a broader humanitarian objective (having social programs, such as health and education, in addition to the microfinance program) place a larger emphasis on poverty alleviation than NGOs with only microfinance program.

Our findings contribute to the nascent literature on the program location choice of NGOs. The "non-profit location" theory argues that spatial externalities play a crucial role; when the first NGO chooses a location where it invests money to train their local counterparts, this may encourage other NGOs to enter into the same place. Given that the first NGO has been operating in a place with better infrastructure, other NGOs are reluctant to cover remote areas with poor infrastructure (Koch, 2009). However, this argument implicitly implies that NGOs minimize transaction costs, as we document in our results. However, Fruttero and Gauri (2005) hypothesize that since an NGO has to compete for donors' funds with other NGOs, this makes them strategic and risk averse, thus choosing a location where other NGOs are already operating without considering the community need.

Our findings have wider policy implications as they relate the performance of the microfinance program to market imperfections and to the role of the government. Our findings uncover both the village (infrastructure and geographical) as well as NGO characteristics that impede the poverty alleviation objective of the microfinance program. Poor infrastructure is directly related to output market imperfections and is an outcome of the overall macroeconomic development of a country.

In developing countries, several interlinked markets, such as output, input and credit markets, are simultaneously imperfect. Thus, one important question is whether imperfections in one market (e.g., rural credit market) can be mitigated in isolation in the presence of imperfections in another interlinked market (for example, output market).[6] Our investigation can be interpreted as an attempt to understand the performance of the microfinance program in mitigating the credit market imperfections when the output market is also imperfect, more specifically, how program location choice by NGOs is influenced by the impediments in the output market, such as the lack of well-developed physical infrastructure and marketing facilities. NGOs do not invest in infrastructure development but their mission of poverty alleviation relies, to a great extent, on the existing infrastructure. The role of government is crucial in this respect. These implications are also relevant for other countries experiencing an expansion of the microfinance program.

Our findings also have implication for impact evaluation. Although the selection bias at the village level is assumed in the impact assessment literature, the specific nature of this bias is unknown. Our findings shed light on this important issue.

The remainder of the paper proceeds as follows. Section 2 discusses the data and present descriptive statistics. Section 3 explains the estimation strategy. The results are presented in Section 4. Finally, Section 5 concludes.

2. Data and descriptive statistics

All data are at the village level. We measure the NGO coverage by the percentage of households in a village who are current NGO members. There is a significant positive association between the percentage of NGO member households and the number of NGOs working in a village.[7] We thus consider the number of NGOs and the NGO density [(number of NGOs/number of households)*100] as alternative measures of NGO coverage.

Given that the Thana headquarters is the place where NGOs (branch office), commercial banks and the main market in the region are located (discussed in online Appendix A.1), our two proxies for the distance of a village from NGO[8] and the main marketplace are distances from the Thana headquarters and the nearest commercial

[4] By program location, we refer to a village or a community where an NGO engages in microfinance activities (in other words, where its borrowers are located). This is different from the place where the NGO itself is located. It is also important to mention that we do not investigate the reasons for targeting the borrowers in a given location based on their poverty incidences (poor vs. non-poor households); as mentioned, there is literature regarding this.

[5] We define transaction costs of NGOs in terms of costs of transportation to reach a program location, and costs of staff time and resources spent to collect information about potential borrowers and conduct microfinance program such as disbursement and collection of loans. These costs increase with distance and poor quality of physical infrastructure.

[6] Emran et al. (2007) discuss labor market imperfections in understanding some important puzzles and debates in the microfinance program, such as the unwillingness or inability of the producers (borrowers) to scale up their economic activity.

[7] In our data, the regression of the percentage of NGO member households on the number of NGOs produces a coefficient of 0.04 with a robust standard error of 0.009.

[8] Relative distance of a village from the headquarters of two bordering Thanas—one in which the village is located and another bordering—is not important. As mentioned in online Appendix A1, an NGO branch office located at a particular Thana headquarters in our sample districts did not operate in villages beyond the jurisdiction of that Thana.