The Journal of Socio-Economics 41 (2012) 513–518

Contents lists available at SciVerse ScienceDirect

The Journal of Socio-Economics

journal homepage: www.elsevier.com/locate/soceco

Access to microfinance and intra household business decision making: Implication for efficiency of female owned enterprises in Ghana

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ARTICLE INFO

Article history:
Received 11 January 2012
Received in revised form 6 April 2012
Accepted 29 April 2012

JEL classification:
C51
D13
D24
G21

Keywords:
Stochastic frontier
Technical efficiency
Access to microfinance
Gender
Ghana

ABSTRACT

Inadequate access to credit contributes to poverty among especially women in developing countries. It is evidenced that in patriarchal societies, males are likely to influence investment decisions when loans are granted to their spouses or female relatives. However the existing literature is inconclusive on whether this influence is positive or negative. This study empirically examines the impact of access to microfinance by women, and male involvement in business decision making on efficiency of small scale enterprises in northern Ghana. We found very low level mean technical efficiency of 40% indicating that output of the enterprises could potentially be more than doubled without employing additional inputs. Moreover access to microfinance increases efficiency by 11%; and enterprises with male spousal influence were less efficient than their counterparts that were independently managed by the women. Furthermore, enterprises owned by women who managed more than one business operated at relatively lower efficiency levels.

1. Introduction

Inadequate access to credit by the poor has been identified as one of the contributing factors to poverty. It is estimated that at least 400 million poor and low-income people are not being served by microfinance (MF) programmes (IFAD, 2004). This situation has serious negative impact on poor households struggling to reduce poverty, vulnerability, and attain food security. In the wake of the world economic and food crisis, households in developing countries are in danger of falling deeper into poverty. In the event of this, women are more vulnerable, since in most cases they bear the task of providing for the households' needs. Most microfinance institutions (MFIs), particularly the donor driven ones, target women who are believed to give high priority to basic needs such as health services, water, education and infrastructure and are therefore seen as important agents in the fight against poverty especially in the rural areas. Thus, increasing women's access to microfinance could be a major contributing factor to increasing efficiency in output which could translate into reducing poverty and empowering women. As an ex ante management strategy, poorer individuals demonstrate high degrees of loss aversion by choosing safer investment portfolios such as less risky technologies which are, on average, less profitable (Rosenzweig and Binswanger, 1993; Summers, 2009; Dercon and Christiaensen, 2011). Moreover, credit permits microenterprises to improve efficiency by overcoming liquidity constraints which may affect their ability to purchase and utilize inputs and implement management decisions on time thereby increasing efficiency (Abdulai and Binder, 2006).

Available literature attests to the potential of microfinance in reducing poverty (Morduch, 1998; Remenyi and Quinones, 2000; Morduch and Haley, 2002; Khandker, 2005; Gobezie and Garber, 2007). For example, an impact assessment survey in Vietnam found that more than one-half of the women who participated in a microcredit programme engaged more in decision making at the household and community levels (CEP, 2006). Also, research has shown that access to credit empowers women to make financial decisions which in turn lead to allocation of greater disposable income to improved nutrition, health status, housing, and education of children (Duflo, 2003).

However the transmission mechanism from availability of credit through women empowerment is not straightforward. Firstly, it has been found that loans could be registered in women's names but

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http://dx.doi.org/10.1016/j.socec.2012.04.020

actually accessed and used by male members in a household, and in some cases the women are not aware loans have been taken in their names (Amin, 1993; Harper, 1995; ACORD, 1996). Secondly, many women who access microcredit relinquish the loans to their spouses or fathers-in-law or sons (Goetz and Gupta, 1996; Rahman, 2000; Kabeer, 1998). Furthermore, even if women access credit, the loan could be invested in male dominated activities, such as livestock breeding, for which they do not have comparative advantage (Goetz and Gupta, 1996; Ngo, 2008). Moreover, norm entrenched division of labour within rural households limit business activities women invest in (Johnson, 2004; Emran et al., 2006; de Mel et al., 2008, 2009). Finally, in typical patriarchal societies, women strategically engage their spouses in decision making regarding the use of microcredit in order to improve their bargaining position within the household, strengthen marital bonds, minimize credit default, and improve access to future credit in the event their loan projects fails (Ligon, 2002; Van Tassel, 2004). There is evidence that engaging male partners or relations in investment decision making does not necessarily mean their views steer the outcomes of such decisions, and toward suboptimal outcomes (Silberschmidt, 1992).

Although men are consulted on all issues in patriarchal societies to avoid open confrontations, in reality, the women go with their independent decisions sometimes through manipulating the men (Silberschmidt, 1992). In contrast, a study in Bangladesh found that the most successful families were those that the husbands and wives work in partnership on economic activities (Todd, 1996). In lieu of the preceding plethora of constraints inhibiting the efficacy of microcredit to rural women, there exists limited research on the extent to which access to credit impacts efficiency of female owned and operated businesses, and whether involving males in decision making regarding the use of such credits makes such businesses more or less efficient. Using primary data collected on women beneficiaries of microcredit in typical patriarchal societies in Ghana, we investigate the impact of microfinance on efficiency of female owned small scale businesses, and whether involving males in business decisions making influences the efficiency of such businesses. Chalfin (2000) found that in Ghana several men assist their wives with the overall management of their businesses but do not appropriate the credit.

The political and financial support currently enjoyed by microcredit programmes flows from the belief that, with improved access to credit, rural poor households will be able to raise their living standards by engaging in more lucrative farm and nonfarm income generating activities (Diagne, 1998). In this study we have found very low level mean technical efficiency score of 40% implying that output of the enterprises investigated could potentially be doubled without employing additional inputs. Secondly, while access to microfinance increases efficiency of the enterprises, enterprises that had spousal influence were less efficient than their counterparts that were independently managed by the women. The positive impact of microfinance on technical efficiency has been found in some earlier studies (see, e.g., Islam et al., 2011; Goyal and Suhag, 2003; Tariq and Mohd-Izhar, 2010; Annim, 2010; Martínez-González, 2008). It is noteworthy that access to credit does not depend on how efficient the women are since financial statements were prerequisites. Indeed a number of the recipients use the credit as start up capitals. Furthermore, enterprises managed by women who operate more than one business were less efficient. We also found that nearness to market, age of the individual operating the business, initial endowment, non-formal education, and the number of days spent on processing the products positively impact technical efficiency. On the other hand businesses operated by older individuals were relatively less efficient.

The remainder of the paper is organized as follows. Section 2 presents the theoretical framework of the study. Section 3 contains description of the data. The empirical model is presented in Section 4. The results and discussions are presented in Section 5, while Section 5 concludes the paper.

2. Theoretical framework

The main objective of the study is to establish the link between MF and technical efficiency in the output of MFIs borrowers. The stochastic frontier production function (SFPF) is employed. For any given combination of inputs, the SFPF assumes the realized production of a firm is bounded above by the sum of a parametric function of known inputs, involving unknown parameters, and a random error, associated with measurement error of the level of production or other factors (Battese and Coelli, 1993). Accordingly, the greater the amount by which the realized production falls short of this stochastic frontier production, the greater the level of technical inefficiency. Following Aigner et al. (1977) and Meeusen and Van den Broeck (1977), the stochastic production function is specified as:

$$Q_i = a_i + \mathbf{x}'_i\mathbf{b}_i + v_i + \mu_i \quad (1)$$

where $\mathbf{x}_i$ is the vector of inputs (in logarithms); $\mathbf{b}$ is the vector of coefficients (input elasticities); v_i is the vector of individual specific error term which is assumed to be symmetrical and normally distributed; μ_i is the non-negative random variable, associated with technical inefficiency of production with truncated normal distribution with mean $z_i\delta$ and variance σ^2; and i is respondent's identifier (agro-processor) in the sample. Eq. (2) specifies the relationship between technical efficiency and its possible determinants. Thus,

$$z_i = a_i + \mathbf{h}'_i\boldsymbol{\pi}_i + \varepsilon_i \quad (2)$$

where $z_i \in (0, 1)$ is the efficiency score of household i; $\mathbf{h}$ is a vector of explanatory variables; $\boldsymbol{\pi}$ is the vector of coefficients; and ε is a normally distributed error term.

3. Background of the study area and the data

In Ghana, women constitute about 51% of the total population and also make a substantial proportion of Ghana's informal business sector. However due to gender inequalities rural women have limited access to financial services both in the formal and in the informal sectors. Rural banks are very unequally distributed, with the fewest in the Upper East, Upper West and Northern Regions of the country. Within these regions, the ratio of banks to rural clients is 1:100 000 compared with the national average of 1:16 000–1:26 000 and one bank could serve an area of over 50 000 km^2 (IFAD – Ghana, 2000). For the majority of poor people the cost of a trip to a bank is too high, particularly since the process involved in bank loans often requires several trips. In such a situation women are usually further handicapped from using rural banks since they have problems leaving their children and household duties to travel to the bank. Besides women are mostly not credit worthy as they lack any collateral necessary to access a bank loan. This situation is seen as a major factor that negatively impinges on productivity of women. As a result microfinance institutions within such financially deprived region intend to alleviate hardships and the specific region selected for the study, i.e., the Upper East Region (UER), has been a major beneficiary.

According to the most recent Ghana Living Standards Survey round five (GLSS5), the UER is the second poorest region in the country with about 70% of the population living below the poverty line. However the region has received massive MFIs activities targeting rural poor women. Most of these women engage in agro-processing activities such as rice milling, shea-butter extraction, and malt making. The financial services from MFIs