Rational Herding toward the Poor: Evidence from Location Decisions of Microfinance Institutions within Pakistan

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Summary. — Analyzing the geographical location of almost all the microfinance institutions (MFIs) within Pakistan, this paper gives further evidence that microfinance activities do not reach the poorest rural areas. Especially, we explore how this result is driven by the uncertainty faced by MFIs in their location decision i.e., they can hardly predict accurately whether or not they will perform financially. Furthermore, we find that MFIs are spatially clustered and identify three main reasons for this: common attraction factors i.e., the characteristics of one area fits to the preferences of all MFIs so that they are all located in the same areas; payoff externalities to be collocated; and herd behavior, i.e., MFIs follow one another. Most importantly, we find that a significant part of this herding process is rational, i.e., early locations of MFIs convey information used by later ones such that it reverses or neutralizes the negative impact of uncertainty resulting then in more locations in needier areas. Since it allows them to be located in poorer areas, MFIs improve the achievement of their social goal. This latter result is rather good news for those who reckon that a better access to financial services enhances economic growth and fosters poverty alleviation. Indeed, rational herding constitutes an endogenous moderator effect to the big issue that financial services penetration is too weak in the poorest rural areas.

Key words — microfinance institutions, location decisions, uncertainty, rational herding, panel Poisson regression

1. INTRODUCTION

In the world’s poorest countries, a recurrent point of concern in the field of development is the low penetration of financial services in rural areas, most particularly in the poorest ones. Improving access to financial services is crucial because of the great impact it may have on poverty alleviation and on economic development within these localities. Indeed lack of access to financial services is a leading cause of low development and persisting poverty since it prevents people from seizing investment opportunities and removing tight financial constraints (Banerjee & Duflo, 2005, chap. 7; Claessens & Perotti, 2007). At a macroeconomic level skewed access in favor of relatively well-developed areas is likely to maintain economic inequalities, which are considered to produce lower economic growth (Aghion, Caroli, & Garcia-Penalosa, 1999; Banerjee & Duflo, 2003; World Bank, 2005). Conversely, financial deepening would yield increasing returns to scale benefiting the whole economy within such regions (Greenwood & Jovanovic, 1989; King & Levine, 1993; Pagano, 1993).

An uneven spatial distribution of financial services raises the question of the location decisions of financial institutions, more especially those of microfinance institutions (MFIs thereafter), which are perceived as, and expected to be, the best equipped to reach the poor in most remote areas. However, MFIs’ decisions are shaped by strong financial constraints, i.e., they have to streamline costs and are required to get a high repayment rate from their customers. Indeed, donors’ subsidies depend widely on a good repayment performance; more directly, displaying low default rates is a mandatory condition to achieve the self-sustainability aimed for by MFIs. In addition, MFIs’ self-sustainability depends on their ability to control costs. Such financial efficiency stands in contradiction with the low creditworthiness of borrowers and the higher transaction costs generally associated with the provision of financial services to the rural poor. Consequently, although they do have a social commitment, MFIs might not primarily choose to be active in the poorest, most remote rural areas (Sharma & Zeller, 1999).

Moreover, since it is made prior to establishment, any location decision is inherently uncertain. This may further accentuate the MFIs’ move away from poorest areas. As the levels of poverty and remoteness increase, the probability of a successful establishment in terms of financial performance tapers increasingly. The existence of some high-performing MFI branches in adverse areas has been well described in the literature; but no systemic rule can be drawn from this that would describe the environmental features of a region required to ensure the successful establishment of a branch. From one place to another, it is complicated to distinguish among several types of poverty, some of which are easier to deal with than others. Moreover, it can be hard for an MFI to know exactly which level of poverty it will be able to handle. Traditional prospecting tools such as statistics on poverty appear to have little relevance, which implies looking for more idiosyncratic information that is also less available and less easy to interpret. Therefore, though MFIs may know it is possible and socially desirable to reach out to poorer regions, the uncertainty, i.e., the risk of a wrong decision, is so high that they may be reluctant to enter these types of areas—at the expense of people living there.

In this paper we flag an important issue, namely that in this context of uncertainty MFIs may rely upon a very valuable

* The authors thank the Banques Populaires for their generous financial support. The authors are grateful to Matteo Millone, Jaap Bos for useful comments at the 2014 Financial Management Association European conference; Oleg Shehetin, for his discussion at the 2014 European Economic Association annual meeting. Authors also thank Cherif Diagne, Judy Frels, Andrew Gershoff, Constantin Zopounidis for interesting feedback and constructive suggestions. Finally, authors are grateful to the anonymous reviewers for their encouraging and helpful comments. Any errors or omissions remain entirely our responsibility. Final revision accepted: February 29, 2016.
source of information: past location decisions made by other MFIs. Proceeding to observational learning (Banerjee, 1992; Bikhchandani, Hirshleifer, & Welch, 1992; Welch, 1992) from earlier institutions’ location decisions, MFIs can make a rational Bayesian inference of regions where it must be possible to run sustainable microfinance operations. As a consequence, regions that have already attracted some MFIs may be more likely to attract more MFIs subsequently: this is called rational herding (Zhang & Liu, 2012).

Rational herding of MFIs would be rather good news for those who believe that access to financial services has a positive impact on poverty alleviation and economic development. It would allow MFIs to reach poorer, more remote locations. As those areas mean a lot of uncertainty for MFIs (especially in terms of financial performance) information they can infer from the presence of other MFIs (i.e., through observational learning) in one of these areas may have much influence on their decision to finally settle there. Conversely, such influence is likely to be lower in wealthier regions, where MFIs are faced with lower uncertainty about the financial performance of their branches. Observational learning allows MFIs to make more social location decisions with a greater guarantee to achieve a good financial performance. They should therefore seize this opportunity, primarily because reaching out to the poorest is an argument to maximize in their utility function.

Herding has been widely studied in finance, economics, management science, and many other research fields in which location or allocation decisions have to be made under uncertainty. In particular, empirical research projects analyzing herd or imitation behavior in location decisions have been booming. At an international level, much attention has been paid to this behavior in the foreign establishment of multinational firms (Belderbos, Ollfen, & Zou, 2011; Gimeno, Hoskisson, Beal, & Wan, 2005; Hahn, Doh, & Bunyaratavej, 2009; Head, Mayer, & Ries, 2002; Henisz & Delios, 2001). At a city level (Chang, Chaudhuri, & Jayaratne, 1997) analyzed rational herding in the establishment of bank branches in areas of New York. More theoretically, Suire and Vicente (2009) analyzed the role of mimetic behavior in firm clusters formation. In order to verify the likelihood of herd behavior, we analyzed 588 location decisions taken by 26 MFIs within Pakistan over a period stretching from 1994 to 2011. In the same way as the literature analyzing location decisions, our empirical test of herding relies on non-linear panel models in order to capture the likelihood that an MFI will open a new branch in a region if it knows that MFIs have already been set up there. It is based upon the counting of MFI branches at Tehsil level and the year of their establishment.

Those variables have been extracted from a brand new database that we generated from a map released very recently on the websites of the Pakistan Microfinance Network’s (PMN) and the Pakistan Poverty Alleviation Fund’s (PPAF). We also used Pakistan census data, from which we extracted (at a Tehsil level) a certain number of cross-regional features likely to reflect variation in the level of poverty and remoteness from one place to another. We used Tehsil-level fixed effects in our panel Poisson regressions to disentangle herd behavior from mere sequentially correlated entry decisions within a Tehsil. More precisely, the methodology we applied to identify rational herding, i.e., how herding intensity is likely to vary depending on the level of poverty of a place, was inspired by Zhang and Liu (2012). This consists in testing the influence of interaction variables between the lagged presence of MFIs and the poverty characteristics of a place.

Our main results find evidence of (1) an overall low presence of microfinance in Tehsils that are both remote and poor; (2) herd behavior, such that after having controlled for the heterogeneity of places, the lagged presence of MFIs positively increases the likelihood of a subsequent entry; (3) rational herding toward the relatively weakly developed Tehsils, i.e., the likelihood of herding increases with the degree of poverty of a Tehsil.

To the best of our knowledge, our study is the first to investigate the herd behavior of MFIs—the most important actors of microfinance in the field. Thus it contributes to the relatively scarce literature analyzing the determinants of location decisions by MFIs (Fruttero & Gauri, 2005; McIntosh, de Janvry, & Sadoulet, 2005; Sharma & Zeller, 1999). Our preliminary results are in line with those of previous studies and thus confirm the fact, in Pakistan’s case, that microfinance providers tend to be more present in relatively well-developed areas.

However, by identifying a rational herding, we raise the important point that MFIs may have real willingness to solve their informational issue in order to reach out to poorer areas. Also, to the extent that our model could be generalized, it has a predictive power regarding the future geographical pattern of microfinance establishment, i.e., the positive influence of pioneering MFIs grows with the level of poverty they are prepared to take on.

In terms of methodology, we contribute to the literature by applying the recent work of Zhang and Liu (2012) to location decisions; this captured the rational herding of micro lenders on an online peer-to-peer crowd funding website. The main interest of this approach is to bring out whether herding occurs as a mean to struggle against the uncertainty that might have prevented MFIs from reaching out to a poor, remote area. The idea is that herding is rational to the extent that it will eventually allow an MFI to open a branch in a place that it would not have chosen before due to the poverty features that are at the basis of strong uncertainty.

The remainder of the paper is organized as follows. In the next part we will present the theoretical background concerning the determinants of MFIs’ location decisions. A third part will display our data, the methodology employed to test our hypotheses and the results. Our fourth part will draw some conclusions from the study.

2. THEORETICAL BACKGROUND

The location decisions of MFIs may be sensitive to the level of poverty in the target area. Overall, for financial and informational reasons, MFIs may not primarily choose regions featuring a high level of poverty and remoteness. However, their uncertainty may be mitigated by their peers’ earlier location decisions and herd behavior may occur.

(a) The impact of risks and uncertainty on location decisions

On the basis of a survey of MFIs in Asia, Africa, and Latin America conducted in 1999 by the International Food Policy Research Institute (IFPRI) team on microfinance, Lapenu and Zeller (2001) noted that there were “Only 19.5% of MFIs specialized in rural areas where the majority of the poor in the developing world live”. This statement provides a good introduction to the problem faced by microfinance in reaching the poorest people in rural areas and a fortiori those in poorer, remoter ones. Whether designed to diminish dependency on donors or to make a profit, all MFIs are in search of good financial performance (Godquin, 2004). Consequently, expectations concerning borrowers’ creditworthiness and costs; and the accuracy of these expectations are very likely to play an important role in the highly strategic decision of where to be located.
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