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Obstacles to Accessing Pro-Poor Microcredit Programs in China: Evidence from Penggan Village, Guizhou

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Abstract

Why do poor farmers not take up microcredit loans, even when the terms are designed to be pro-poor? Fieldwork in a village in China's Guizhou province revealed a puzzle: although the county government had designed a loan program that was intended to be unusually pro-poor, only three of the 349 eligible households had successfully applied. This article analyzes three potential hypotheses: farmer failure (risk aversion or financial illiteracy), market failure (lack of viable or stable market opportunities), and institutional failure (structural or institutional barriers precluding taking up loans). Based on evidence from intensive interviews, we reject the first hypothesis, and conclude that the persistence of structural and institutional barriers can preclude the poor from taking up loans. However, even if these barriers are overcome, we suggest that microcredit loans should be integrated into a larger development policy designed to stimulate the market and market opportunities in which the poor can participate.

Keywords

microfinance, rural China, poverty, local government

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As part of an effort to apply China's President Xi Jinping's "precision poverty reduction" policy, the government of Lüdi county in Guizhou created an unusually ambitious microcredit program.¹ Based on the idea that financial exclusion remains a barrier to poverty reduction, local officials targeted Penggan, a remote village deep in the mountains. Their dedication was remarkable: officials at the township and county levels reached out individually to the 349 households living under the poverty line (more than a quarter of the township's households), encouraging them to apply for a microcredit loan that could range from RMB 30,000 (approximately USD 4,387) to RMB 100,000 (USD 14,623). Understanding the high failure rate for microcredit programs that do not consider either the agricultural production cycle or the repayment challenges faced by most subsistence farmers, the government's terms were especially pro-poor: no interest accrued, and no payment was required for the first three years. However, despite these farmer-friendly terms designed to accommodate the special needs of the poor and even with door-to-door efforts to promote the loan, the loan reached only three of the eligible households. Why was the microcredit program not utilized by greater numbers of local farmers in this area?

This puzzle reflects a broader question in the microcredit literature regarding the ways in which microcredit programs can best be structured and implemented to reduce poverty in poor areas. Many argue that microcredit programs can be effective at reducing poverty in ways that do not increase dependence on aid or welfare programs. By providing seed money at lower-than-market-rate interest to start small-scale businesses or commercial agricultural activities, microcredit loans can be serviced by the profits generated by such economic activities. Repayment in turn allows money to be offered to greater numbers of low-income recipients, rendering the program self-sustainable and even profitable—at least according to microfinance proponents (e.g., Hossain, 1988; Woodworth, 2000; Banerjee, 2013). The idea caught fire, finding early supporters of all ideological stripes: the left were encouraged by the asset focus of microcredit, and for its empowerment of the poor, especially women. Microfinance's pro-market orientation and focus on self-help appealed to the right.

Despite this support, even before Muhammad Yunus was graced with the Nobel Prize in 2006, scholars were hotly debating the extent to which microcredit programs benefit the poor (see Banerjee, 2013). Although proponents underscore microcredit's potential to reduce poverty, even early supporters typically emphasize that the effectiveness of microcredit is both limited (e.g., unhelpful to the poorest of the poor) and conditional (e.g., Morduch, 1999: 1610). Success, these proponents maintain, depends on such factors as the availability of subsidies and regulations (Ghosh, 2013: 1215–18), the effective

application of mobile technology (Lopez and Winkler, 2018: 1566–67), delegation of loan decisions to local agents (Maitra et al., 2017), and the ideology of the local government (Gul et al., 2017). Detractors have criticized microcredit initiatives broadly for perpetuating fundamentally flawed systems of neoliberalism (e.g., Bateman and Chang, 2012), ignoring cultural differences (Yang, 1994), perpetuating unequal power relations (Loubere, 2016: 12–17), and shifting blame for poverty from policy makers to farmers themselves (Ali, 2014). Other critics argue more narrowly that microcredit programs do not spark development or reduce poverty (e.g., Mader, 2016). For instance, loans often fail to reach the poorest of the poor (e.g., Hsu, 2014: 254–56), and are often directed to wealthier recipients who are believed to be more capable of paying off the loans (Ghosh, 2013: 1207). Poor recipients will sometimes divert microcredit loans to meet basic needs rather than apply the funds to revenue-generating investments (e.g., Banerjee, 2015). When poor recipients cannot service their debt, some accept additional microcredit loans, creating and perpetuating, rather than addressing, vicious cycles of debt (e.g., Karlan and Zinman, 2011; Zeller and Meyer, 2002). Even when poor recipients establish businesses, critics contend that such businesses are often unsustainable or actually worsen farmers' situations (Bateman, 2015). Even when these businesses succeed, they often fail to increase consumption, a fundamental indicator of poverty reduction (e.g., Banerjee, 2013: 504). Other critics charge that due to concerns of sustainability or profitability, most microcredit programs are structured to make repayment difficult or impossible for poor farmers. This is said to undermine the ability of microcredit to reduce poverty through a self-sustaining program, especially in rural contexts where income is tied to seasonal or even annual cycles that preclude monthly repayment schedules (e.g., Park and Ren, 2001: 52–53; Unger, 2002: 25).

Despite this diversity of arguments, the debate has largely centered on microcredit programs' effectiveness after loans have been distributed. Comparatively less attention has focused on factors that deter individual farmers from applying for loans, or ultimately failing to receive them. Indeed, previous research trying to understand the low take-up rate has conducted statistical analysis (for a review, see Hamada, 2010). But these overly aggregated studies have been inconclusive and point in different directions. What is more, aggregated statistical analysis can sometimes conceal the conditions under which a program could be effective (e.g., Li, Gan, and Hu, 2011b).

Thus, an effort to understand the puzzling outcome in Penggan's case contributes to these understudied aspects of the debate. Local officials designed the program proactively to avoid the fundamental problems and concerns that microcredit's critics raise. Detractors often dismiss microcredit for being little more than ordinary microloans provided by private enterprises at a high

interest rate, with repayment encouraged through social pressure. By contrast, in Penggan, the local government attached substantial subsidies and waved interest payments. The microcredit program here targeted individual households, not a group of villagers or neighbors from the same area, meaning there would be none of the social pressure that exists in a group-lending structure. The government viewed the program not as an alternative to welfare, but as a supplement. Far from shifting pressure away from poverty reduction, as discussed above, the program resulted from the intense pressure from Beijing to eliminate poverty entirely.

Further deepening the puzzle, rural China is in many ways ripe for using microcredit to reduce poverty. Although the role of agriculture has declined over time, it remains strong, with functional distribution systems and markets and some cash crops and livestock. As for Lüdi county, its transportation infrastructure has rapidly been improved, and now includes higher quality paved roads that traverse the mountains and link townships in the area to the county seat. Self-sufficiency in agriculture has long been a central national security priority. Moreover, China's credit market has been gradually opening up to nongovernmental-affiliated organizations, allowing the entry of private microcredit firms into the market. The Hu Jintao administration focused on rural development (Looney, 2015: 910–12), while the Xi Jinping government in 2015 prioritized the complete elimination of rural poverty in a very short time and held local government officials accountable for success (Xinhua News Agency, 2017).

Moreover, microcredit specifically enjoys substantial political support. Both the central government and international organizations working in China have applied microcredit to reduce both rural and urban poverty (for background, see Revindo and Gan, 2017; Loubere and Shen, 2018). As early as 1993, local governments had experimented with different models and approaches to providing microcredit, with varying degrees of success (Sugeno and Yahata, 2016; World Bank Group, 2018). The central government doubled-down on the use of microcredit to reduce poverty by establishing the Employment Microcredit Program in 2002. Originally designed to target urban poverty, the program has since 2006 been extended to rural areas (Loubere and Shen, 2018). Subsequently, China's central government has issued a number of policies, directives, and suggestions regarding the use of microcredit for poverty reduction. For instance, the program established in Penggan was inspired by a central initiative promulgated by the State Council Leading Group Office of Poverty Alleviation and Development in December 2014. The initiative, "Guidance on Innovation and Development of Poverty Alleviation Microfinance," in many ways mirrors the Lüdi county government's program; indeed, local officials cited these and other directives in

modestly deflecting credit for the innovative and proactive portions of their microcredit program. The leading group's document does underscore the goal of using microcredit to reduce poverty, calling for providing credit to poor households, specifying "three-year loans of up to RMB 50,000 for poor households that meet the conditions for the loan," while stressing that local governments *may* arrange subsidies for interest payments. To support the broad goal of providing more access to credit in rural areas, the China Banking Regulatory Commission (CBRC) in 2014 committed to expanding its network of financial services to all villages within three to five years (World Bank Group, 2018: 26, 39–40).

However, following the leading group's call to local governments to innovate based on local conditions, Lüdi county government officials went well beyond the regulations by establishing subsidies that altogether eliminated payments for the first three years and by extending the loan ceiling to RMB 100,000. While the 2014 document implores local government officials to prioritize microcredit as part of their anti-poverty policies, it does not prescribe the kind of door-to-door efforts that local government officials have used to encourage farmers to apply for loans. Due to the Lüdi government's genuine efforts to promote the program and make it especially pro-poor, it is especially puzzling that few loans were disbursed.

Our research focuses on the township-turned-village, Penggan. Its population mainly survives on agricultural production, especially on subsistence crops such as corn and rapeseed; commercial crops, including sorghum and tobacco; and animal husbandry—chickens, pigs, and cows. It is part of Qianwan township, which is a minority township and one of the poorest in Guizhou, which itself is one of China's poorest provinces. Even with the recently completed paved road that traverses the mountain separating the village and the township seat, getting to the village still requires a one-hour journey. The vast majority of residents in the village are subsistence farmers, with several shopkeepers and restaurateurs running businesses in the few-block urban area within the larger village. The area had recently seen the closure of an employment mainstay, as two coal mines succumbed to tumbling coal prices, putting nearly a thousand workers from Penggan and surrounding villages out of work. When open, the mines allowed most households with at least one able-bodied member to count on a stable cash income during the farming off-season. Although rural families in the village receive central rural subsidies and welfare programs that have been promulgated over the past decade (e.g., Lin and Wong, 2012: 28–33, 44–45), the area has remained poor and underdeveloped. Like most other poor villages in contemporary China, Penggan experiences little hunger or homelessness. Yet most of the residents have little spending money, and they struggle to eke out a living on subsistence farming.

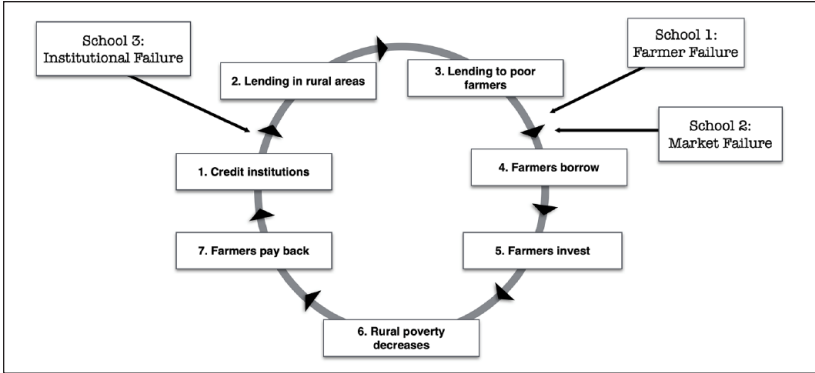


Figure 1. Poverty alleviation cycle.

Despite facing problems shared by most other poor villages in China, Penggan is in many ways an ideal area for this study. Penggan is a relatively developed village in the area. Because it was previously a township, the area is somewhat more urbanized than most typical, remote villages. Many raw materials for traditional Chinese medicine, including *du zhong* and *tianma*, grow wild, scattered around the village and its surrounding area. Yet the scale of growth and remoteness of the village preclude the widespread cultivation of the raw materials for traditional Chinese medicine, although the local doctor picks these and other herbs fresh when treating patients who come from afar. Its sorghum farmers have managed to sell their produce to Guizhou's well-known distilleries in Maotai, at least until Xi's anti-corruption drive sharply crimped demand for elite brands of rice wine. Finally, Penggan is located in a province that has historically developed market opportunities that rural residents with little formal education and experience can take up (Donaldson, 2011). Thus, the area is in many ways ideal for a successful microcredit program—yet it failed, not after loans were distributed, but at earlier links in the causal chain that theoretically connects microcredit programs with poverty reduction. For this reason, unraveling this puzzle has direct implications for the future of effective financial inclusion strategies.

Based on the burgeoning literature on microcredit, we identify seven stages of microcredit concerned with, first, obtaining it, and subsequently investing and repaying it. These segments represent links in a causal chain; each link is required if microcredit is to succeed (see Figure 1). Various factors can encourage or discourage the utilization of microcredit. These seven stages allow us to trace more clearly the causal mechanisms that drive the process of successfully implementing microcredit programs. Our puzzle

directs us to focus on the first four segments of the chain. In which segment did the Lüdi county government's microcredit program go awry?

The academic literature reveals three primary schools of thought that pertain to this puzzle, each representing a cluster of hypotheses that could potentially explain the puzzling low take-up rate in Penggan. First, the “farmer failure” school argues that farmers are reluctant to borrow because they are either too ignorant (financial illiteracy) or too stubborn (risk aversion) to take up credit. This widely held opinion holds that, even when a microcredit program's designers focus on helping the poor (segment 3), a lack of formal education and a cultural penchant against risk-taking continue to inhibit farmers from borrowing (segment 4) (e.g., Evans et al., 1999: 420–21, 427–28; Develtere and Huybrechts, 2005: 174; Beck, Demirgüç-Kunt, and Honohan, 2009: 133; Banerjee and Mullainathan, 2010). Further, farmers often face diminished access to formal credit as they may not have the basic literacy levels needed to understand complex financial concepts, let alone the tools to apply for credit (Mohamed, 2003: 22–24). In the Chinese context, in explaining the lack of demand for formal microcredit loans, many researchers assume, though rarely test, a general lack of financial literacy among rural farmers, (e.g., Li, Gan, and Hu, 2011a: 237, 243–45; Tang, Guan, and Jin, 2010: 12, 16).

- **Hypothesis 1 (farmer failure):** Farmers' financial illiteracy causes them to not apply for microcredit loans.
- **Hypothesis 2 (farmer failure):** Farmers' risk aversion causes them to not apply for microcredit loans.

A second line of thought, held by the “market failure” camp, rejects the idea that farmers are inherently risk averse or ignorant. Instead, farmers' reluctance to accept loans is often based on their genuine belief that their region lacks reasonable market opportunities (segment 5). In an early study, Robert A. Collins (1985) suggested that business risk—risk that is exogenous to the firm—can undermine farmers' willingness to access debt. He further argued that government policies designed to reduce such risks will encourage farmers to increase their financial leverage (Collins, 1985: 627, 629). However, Collins provided no empirical evidence to support his model. Though many have continued to refine Collins's model mathematically, few studies have actually explicitly studied risk aversion and business risk empirically. Colum Turvey and Kong Rong's (2009) research in China represents one such exception. Surveying 400 farm households, they conclude that farmers' debt choices are shaped more by their attempts to balance risks on yield, price, and revenue, than by risk aversion, which they measure by

attitudes toward changing production choices, adopting new technology, and applying new management practices (Turvey and Kong, 2009: 156, 165, 169). In addition to this direct research, indirect evidence also suggests that farmers are deterred from borrowing less by irrational risk aversion than by high levels of business risk. For instance, when Karlan and Zinman (2011) randomly assigned microcredit borrowers to business training, poor Filipinos tended not to invest, suggesting that the training helped potential borrowers to discern that many potential opportunities might not represent shrewd investments. However, beyond this and a handful of other empirical studies, most scholars have not empirically tested the idea that turning down loans can be reasonable, instead concluding that such behavior represents irrational risk aversion.

In addition to concerns related to business risk, geographic considerations can distort markets. For instance, sheer physical distance from larger-scale economic activity causes weak integration into the national economy, reducing remote households' access to and demand for credit (Okurut, 2006: 5; Kabeer, 2006: 65). Scholars argue that low levels of formal lending are linked to farmers' proximity to formal banking institutions (Tang, Guan, and Jin, 2010: 11, 13–14). In addition, socioeconomic networks of recommendation and information, which are purported to play a crucial role in households' attempts to obtain formal credit, are becoming more disperse (Vaessen, 2001). Farmers living farther away from village centers and administrative offices are likely to face high transaction costs such as the time and expense involved in travel. These combine to weaken the social and economic integration of remote rural households. Thus, while the first camp would anticipate farmer failure, the second would look at failings in the market.

- **Hypothesis 3 (market failure):** The lack of appropriate, actionable market opportunities dissuades poor farmers from applying for loans.
- **Hypothesis 4 (market failure):** Geographic isolation from sufficiently large markets dissuades poor farmers from applying for loans.

Finally, a third group of scholars—the “institutional failure” camp—argues that the structures and institutions that frame and surround microcredit programs increase barriers that impede farmers, or certain classes of farmers, from accessing credit. Structural factors, such as gender or ethnic discrimination, or lack of political capital, prevent lending programs (segment 2) from reaching the poorest farmers (segment 3). First, many argue that women in a variety of contexts face diminished access to formal and informal microcredit (e.g., Goetz and Gupta, 1996: 49–53; Mohamed, 2003: 13, 21–22). As Naila Kabeer (2006: 65) suggests, the intersection between gender-based bias and

economic deprivation creates for women from poor households an additional layer of discrimination and social exclusion compared to poor men. In China as well, women have systematically lower access to credit, both from informal and formal sources, including rural credit cooperatives (RCCs) (e.g., Cheng and Ahmed, 2014: 312–13). Given the feminization of farming in recent decades (e.g., de Brauw et al., 2013), this is an especially vexing problem. Second, ethnic minorities face higher poverty rates and have less access to anti-poverty programs (e.g., Van de Walle and Gunewardena, 2001). The political exclusion of China's ethnic minorities begets economic exclusion, increasing the difficulty for minority households to access the mechanisms—including access to credit—required to lift themselves out of poverty (Howell, 2019). Third, farmers' lack of political capital—connections to powerful decision makers—impedes access to financial resources (Claessens, 2006: 219, 225; Banerjee and Newman, 1993). Many argue that because lending often takes place on the basis of existing relationships and connections (e.g., Standifird and Marshall, 2000; Yang, 1994), poor people's relative lack of political clout diminishes their ability to obtain credit from formal lending institutions (Li, Gan, and Hu, 2011a: 238). However, others counter that political capital is not a significant factor (Tang, Guan, and Jin, 2010: 15).

Some in this institutional failure camp argue that poor households face insurmountable institutional barriers. Many have noted the contradiction between most microcredit programs' twin goals of reducing poverty and sustainability. If loan officers are required to show high repayment rates, they often reject applications from the very poor, who should be their targets. Informal lenders sometimes offer lower interest rates. Financial institutions typically demand a bewildering array of documents, business plans, and collateral; these burdens are substantially lower with informal lending institutions (e.g., Tsai, 2002; OECD, 2005; Ayyagari, Demirgüç-Kunt, and Maksimovic, 2010; Turvey, Kong, and Huo, 2010: 134). In addition to these rational factors, sociocultural linkages among relatives and friends offer greater credit access from informal channels (Hoff and Stiglitz, 1990: 238, 241; Boucher and Guirkinger, 2007; Tang, Guan, and Jin, 2010: 7, 10–11).

Some microcredit pioneers have taken these structural barriers into account when designing their programs. For instance, the Grameen Bank in Bangladesh uses institutional and structural factors to improve the performance of its programs. Importantly, Grameen established clear goals of empowering women and supporting their economic roles in the household and society; it is this that has enabled Grameen to achieve its twin goals (Kumar, Hossain, and Gope, 2015: 114–16, 118). By contrast, China's microcredit programs focus on households and offer credit with an emphasis on the needs and interests of the men of the household (Unger, 2002). With no clear

consistency between the aims and structure of most microcredit institutions, the institution may lose sight of its mission—indeed, its *raison d'être*: poverty reduction. This may be reflected in the rigid structure of the microfinance institutions in rural China, resulting in lower take-up of microcredit. Thus, the third camp looks not to farmers or markets to explain low take-up rates, but to two types of institutions: social structures such as discrimination as well as the way microcredit programs themselves are implemented.

- **Hypothesis 5 (institutional failure):** Discrimination based on gender and sexist definitions of family cause poor farmers to be rejected when they apply for loans.
- **Hypothesis 6 (institutional failure):** Poor farmers' lack of political capital causes them to be rejected when they apply for loans.
- **Hypothesis 7 (institutional failure):** Poor farmers are rejected for technical reasons, such as lack of proper paperwork.
- **Hypothesis 8 (institutional failure):** Poor farmers are rejected due to the very factors that made them poor, such as poor health or advanced age.

These three major camps have implications for understanding the poor take-up rate of microfinancing. These camps are not mutually exclusive—it is possible that a combination of two or three (or none) of these combined to help explain our puzzle. Similarly, it is possible that one or more of these camps are partially consistent with any given hypothesis. In any case, adjudicating between these camps is vital, for they each imply different policy prescriptions. Some are more pessimistic about the possibility of the acceptance of microcredit loans; others would prescribe minor revisions in policy. Importantly, most research in the past has advanced one argument or the other, without specifically testing competing explanations. Thus, this article is designed to weigh evidence for and against each of these explanations.

Case Selection and Methodology

Ideally, these camps would be tested in a region that has engaged in a new credit program with liberal terms but with puzzlingly low take-up rates. If possible, this new region should be one that has recently opened to markets but has not yet reaped the benefits of these changes. In order to determine how microcredit programs help poor rural residents encountering new markets, the region should still be poor and, until recently, relatively isolated. As noted earlier, Penggan village matches these criteria—it is poor though not desperately so, and its road to the township had only recently been paved,

meaning that it is able to access other markets. Our interviews with both township and county officials reveal that they experienced considerable pressure to eliminate poverty in the region and had even gone door to door to inform poor households in the area about the program and to urge them to apply for the loans. With the exception of the ethnic component,² the prerequisites of all three camps can be found in Penggan, a fair test to understand the puzzle.

This study adjudicates the debate over why farmers do not accept micro-credit loans by applying qualitative methods, particularly by tracing the causal mechanisms that link each camp's hypotheses about failure (Bennett and George, 2005). This will help identify key factors that are important not only to understanding the puzzling failure of this program but also to understanding the mechanisms that actually caused the failure. To this end, we interviewed villagers, village leaders, and representatives of county and township government agencies. However, our access to certain sections of the government was limited. For instance, we were unable to access loan officers responsible for executing the scheme. Regarding the interviews outside the village, we asked a nonprofit microfinance organization operating in China and a for-profit microfinance organization interested in entering the market about the difficulties they faced working in the Chinese market, how they assess creditworthiness, and the considerations they take into account when working with Chinese field partners representing their organization. In addition, we conducted face-to-face semi-structured interviews with rural residents in all parts of Penggan village. To this end, we interviewed 41 farmers, 15 of whom were women. Of these, nine were also involved in sideline activities such as coffin making, selling medicinal herbs, alcohol distilling, and selling agricultural products. The interviewees were selected because they were on the township's list of poor households in the area, which we will see is imperfect as a reflection of the true poverty situation. To ensure regional diversity, interviewers divided up the village's officially designated neighborhoods. Interview questions revolved around knowledge of and ease of access to microcredit, the types of market opportunities (if any) of which the interviewees were aware, and if they perceived microcredit generally as being potentially beneficial to them. The questions focused on issues related to the farmers' current needs for finance, their assets, and their survival strategies. In addition, we asked them about their perception of and experience with the microfinance program being implemented in Penggan, as well as any barriers they might have encountered. The interviews, conducted in the respondents' homes, were designed to be open-ended. Even as interviewers came prepared with a few guiding questions, respondents were free to guide the conversation.

In this way, we test the causal logic of the three camps' expectations for the failure of Penggan's rural residents to take up microcredit loans. If the farmer failure hypothesis proposed by the first school of thought is correct, we would expect to see evidence of financial illiteracy (such as a lack of basic knowledge of the process of taking up and using loans) or cultural signs of risk avoidance (such as evidence that farmers are unwilling to invest despite the potential to earn significant profits). If the market failure hypothesis held by the second school of thought is correct, we would expect to see evidence of—and farmers' recognition of—the rapid variation in crop prices of relevant products, the great spatial distance from farmers to credit sources, or the lack of viable market opportunities. If the institutional failure camp is correct, we would expect to see structural factors—racial or gender discrimination or lack of *guanxi* (connections with powerful people)—being primary barriers, or that the institutions are designed in such a way as to preclude systematically the participation of poor rural residents, such as by setting criteria that poor farmers systematically cannot meet. Note that the three camps vary from each other in that, while all three expect that farmers would shy away from taking up formal loans, in the first case, their reluctance would be due to cultural factors, in the second, it would be due to market factors, and in the third, it would be due to institutional or structural factors.

Testing the Hypotheses

First School of Thought (Farmer Failure)

Inconsistent with the farmer failure school, our findings revealed that the farmers we interviewed (all 41 of them) are equipped with a sufficient understanding of relevant aspects of finance. Regarding the knowledge of loans, without exception, all farmers we interviewed communicated a clear understanding of loan policies, including the duration of the loan, repayment terms, and interest rates being charged, and so forth. Additionally, farmers were aware of the institutions that they could approach if they chose to borrow from a formal microfinance institution. While most farmers did not use the specialized terminology and vocabulary often associated with the processes in such formal microloans, they universally possessed a layman's knowledge of how those processes work. This provided a clear indication that farmers possessed adequate knowledge and understanding of how such loans functioned. Moreover, we found little evidence of risk aversion. To be sure, many farmers said they declined to apply for loans because of a fear of market volatility. Separating this factor from actual risk aversion is difficult; a fine line divides investing in often-presumed market opportunities and

investing funds, say, in a lottery. While social scientists would label the second investor foolish for risking money on such clearly impossible odds, the same social scientists may label as risk averse those who decline investments in markets that might be as foolhardy as purchasing a lottery ticket. We deal with this conundrum in two ways. First, when we discussed an unwillingness to take up the loans, we looked for signs that farmers had examined potential market opportunities. Farmers who had seriously considered market opportunities and could provide objective reasons why those investments were unlikely to succeed we deemed not risk averse. (These signs of market failure are discussed in the next section.) Second, we looked for other evidence that farmers were willing to take risks in general.

First, the farmers we interviewed displayed a clear understanding and knowledge of the markets in which they were operating, and the subsequent fluctuations involved in different markets, reflecting knowledge of the economic opportunities. They could cite with some specificity the volatile nature of prices of crops and meat, with prices of pork and beef noted as being particularly erratic. As one respondent argued, “The price of pigs changes so quickly every few months, so it’s risky to take up a loan to raise them if I don’t know what the price will be like. Next year, the price of pigs may be very low, and I might not be able to earn enough to be able to pay back the loan” (Interviewee 2). He also explained that, given the loan quantum, he could only afford a small number of pigs. Even if the price remained stable, if he lost one or two, he would be ruined and unable to pay back the loan. Another echoed this sentiment, noting that “The loan being offered is too small to buy enough livestock to sell and make a good profit after repaying the original loan” (Interviewee 22). This provides direct indications that, contrary to what many scholars and policy makers believe, farmers in Penggan are financially literate and aware of market conditions.

Second, farmers’ lack of risk aversion was also supported by indirect indications. For instance, we observed the willingness of many farmers to migrate in search of better opportunities, a step entailing numerous risks. Initial risks on migrating are very high (e.g., Huang, 2009; Zhang, 2015). Still, the willingness of farmers to migrate indicates that they are willing to accept some level of risk to improve their economic situation. Furthermore, many farmers willingly make major sacrifices to ensure that their children attain higher levels of education. This also presents itself as a risky investment since graduating from university guarantees neither a stable job nor a higher income (Chan, 2015; Wang, Cooke, and Lin, 2016). Furthermore, a small handful of farmers do indeed access loans, but informally through friends and families, and invest these in potentially risky opportunities. For instance, Interviewee 26 reported that she was unable to borrow from formal channels since she

was consistently unable to meet existing debt repayments on previous bank loans. In order to address her constraints on credit, she turned to informal channels such as her relatives. She also shared her preference for borrowing from informal channels given the higher bank interest rates she would be charged compared to borrowing from relatives. Evidently, many farmers are willing to accept risks when they see viable opportunities, a finding that is inconsistent with the farmer failure hypothesis.

- **Hypothesis 1 (farmer failure):** Farmers' financial illiteracy causes them to not apply for microcredit loans.

Inconsistent: Penggan farmers showed reasonable levels of financial literacy.

- **Hypothesis 2 (farmer failure):** Farmers' risk aversion causes them to not apply for microcredit loans.

Inconsistent: Penggan farmers generally did not show signs of risk aversion, and instead exhibited behavior that indicated they were willing to accept reasonable risks.

Second School of Thought (Market Failure)

In contrast to our conclusions regarding the first school of thought, the evidence collected during interviews was consistent with the second hypothesis: the erratic nature of the market in part caused farmers' unwillingness to take up loans. We found that some farmers chose not to accept loans from formal credit institutions due to their lack of confidence in their ability to make repayments to the institutions. What is more, many villagers cited their own or others' negative experiences in the same market. Farmers speak with great familiarity and confidence about the volatility of prices of meat and vegetables. Moreover, most were aware that their ability to sell many products at a high price is constrained. Transportation to distant markets is costly. Unlike the practice seen in other villages (for a discussion, see Zhang and Donaldson, 2008: 37–41), middlemen do not come to Penggan to purchase cash crops because there is insufficient quantity to attract them. As noted earlier, some farmers believed that the loan quantum would not create sufficient scale for them to overcome these obstacles on their own. Others could see opportunities in cultivating raw materials for traditional Chinese medicine, but the relative prices of the product and transportation costs prove prohibitive for making a living from the product. In this regard, Interviewee 1 shared that

If there was a place we could process *du zhong*, it would be good since people could work there. This area has a lot of *du zhong*, but because it's unprocessed, it's too cheap to sell, only one yuan for five hundred grams.

Farmers thus face a chicken-and-egg problem that they cannot autonomously solve. Given the constraints, we concluded that the farmers had reasonable justifications for not applying for loans.

On the other hand, our evidence was less consistent with the hypothesis that spatial distance between rural parts of China and financial institutions would be a hindrance to obtaining loans. Distance from socioeconomic networks and the associated transaction costs were not observed to affect farmers' credit demand and credit choice from formal microfinance institutions due to the presence of the RCCs even in rural areas. Furthermore, government officials regularly make trips even to more remote rural areas to inform residents of such a policy and encourage loan take-up. This is evidence for the active socioeconomic integration of residents in remote areas, and the proximity of rural farmers to formal banking and credit institutions. Distance was therefore not observed to be a factor that impeded rural farmers' access to formal microfinance institutions.

- **Hypothesis 3 (market failure):** The lack of appropriate, actionable market opportunities dissuades poor farmers from applying for loans.

Consistent: Many of Penggan's farmers cited the lack of market opportunities as a reason for not accepting loans.

- **Hypothesis 4 (market failure):** Geographic isolation from sufficiently large markets dissuades poor farmers from applying for loans.

Largely inconsistent: While Penggan village is remote, it is connected to the nearest township by a good road. Geographic distance has not precluded financial institutions from reaching out to villagers and vice versa.

Third School of Thought (Institutional Failure)

The evidence gathered from interviews also proved consistent with several aspects of the institutional failure school of thought. In contrast with the energy with which local officials promoted the loans, in practice farmers who applied for loans were rejected for a number of institutional and structural factors. First, gender is an important factor in determining a household's

access to microcredit. Our findings are consistent with studies that point out that women in rural China must rely on using their husband's name to access microcredit loans. One typical sentiment was, "Loans must be made in the husband's name" (Interviewee 30). Although loans are targeted at households, in practice they are officially written to the male head of the household—clear evidence that the entire process is gendered. Although a married man can take up a microcredit loan even if his wife is unwilling, a married woman does not have that same opportunity to do so as the husband must be the main signatory of loans. This condition was mentioned explicitly by our interviewees.

Another major factor that loan evaluators unofficially consider (according to multiple interviewees) in assessing applicants is their marital status. Ironically, while a woman who is present in the family does not need to sign in order for the male head of household to take up a loan, practice has shown that if the applicant is unmarried, or if the couple is divorced or separated, or has insufficient paperwork to prove a bona fide marriage, their loan application will be rejected. One interviewee explained that he was unable to take up loans as he was single, while others cited marital status as a key factor in determining their ability to take up loans. One interviewee explained, "If you're not married, if you're divorced or if you're widowed, you can't get a loan. If you're married but your husband or wife has run away, you also can't get a loan" (Interviewee 30). Another, Interviewee 5, said that "The loan requires you to be married, but since my wife ran away, I can't get a loan." Importantly, while the wife's signature is not required, she becomes part of the chain of guarantee for loan repayment. As one farmer explained, "Your wife becomes your guarantor to ensure that you [as the husband] do not run away [from a bad debt]" (Interviewee 2). Another respondent explained the logic as, "If you're not married, it's easy for you to run. If you're married, it becomes far more difficult to avoid repayment" (Interviewee 37). Thus, one's marital status is a significant factor in obtaining loans.

Relatedly, many poor families have run afoul of China's conceptualization of the household. For instance, many poor Chinese farmers—whether driven by choice, or compelled by social pressure, economic necessity, or ensuring sufficient resources in old age—often bear more children than are permitted by law. Local governments levy a fine on farmers who do this, but the disadvantages continue even after the fine is paid. This microcredit program is one such example: families that previously violated China's family planning policies were rejected for loans. In addition, extended family members are often considered to be from the same household. Thus, if

an applicant's parents or children were already in debt, other family members were often precluded from receiving microcredit loans. This intergenerational restriction inhibits the ability of their children to take up loans to manage investments of their own.

The evidence also supported the hypothesis that the lack of political capital is a barrier to taking up microcredit loans. The farmers we interviewed mentioned political capital (*guanxi*) as crucial to obtaining loans and securing favorable lending terms. One interviewee explained how his family "lacks *guanxi*, which caused my application for a loan to be rejected" (Interviewee 22). In their words, those without adequate political capital can apply for microcredit loans but are unlikely to get them. The family we interviewed who managed to obtain a loan acknowledged the role that political capital played in the successful application. As one interviewee explained it, "*Guanxi* is necessary to obtain loans. In order to get better lending terms, you need to have connections with the government" (Interview 29).

In addition to these structural barriers, many rural residents seeking to apply for microcredit loans were confronted with a number of institutional barriers. First, many respondents pointed out a dilemma that is endemic to the design of the loan program. Once a household applies for a loan, officers must evaluate its ability to repay it. Oftentimes, sheer poverty is seen as a barrier to loan repayment; revenues made from any activity, and perhaps even the loan itself, might need to be diverted into securing basic needs or managing unexpected expenses. If a family has already accrued a sizeable debt—a common occurrence for many poor families—it can be disqualified from receiving assistance under the microcredit scheme.

Furthermore, most poor farmers are impoverished for a specific reason—lack of sufficient human capital, age, poor health, or other factors have thrust them into poverty—that often reduces their ability to pay back loans. First, advanced age or serious health issues are both major causes of poverty, as well as a reason some poor farmers were rejected or do not apply for loans. For instance, one respondent's savings were drained completely due to high costs related to treating his health conditions. This farmer never married, but as an older man, he had unofficially adopted and raised an orphaned girl. However, she was currently studying in a Lüdi county high school, and thus had no income with which to support her father. Yet, his health was failing, rendering him unable to obtain employment in outdoor activities, such as farming, mining, or construction (Interviewee 3). With no visible way to earn money with a loan, his application was rejected. Another shared how his family's insufficient human capital precluded him from working more:

I can't go out to work as I have to stay home and look after my elderly relatives. My wife ran away and I don't have anyone else to help me. My elderly relatives are also sick so they can't help look after the children. (Interviewee 5).

Both health and human capital are direct contributors to poverty. Ironically, these were also factors that blocked these farmers' participation in this anti-poverty program.

Second, many families were deterred for another reason often linked to the poor: lack of proper paperwork. Many poor families built their own houses but lacked an official deed. An interviewee mentioned his lack of a deed as a reason why he did not apply for a loan (Interviewee 22). Others have been married for decades, but due to the nature of their marriage or the circumstances under which their marriage was performed, they lack official marriage certificates. For instance, one interviewee said, "When I married my wife, we were in [a remote area], far from government offices. No one asked us to register the marriage" (Interviewee 37). Interviewee 2 faced a similar problem: he and his wife never registered his marriage (the official we talked to suspected that the farmer had purchased his wife). To compound this problem, he, like many other poor farmers, also did not carefully retain the papers needed to apply for loans (Interviewee 2). Interviewee 4 said that "Without your household registration card, you can't get a loan. If I had mine, I would have thought about applying for one and purchasing several cows." This farmer faced an additional barrier: officials failed to find the electronic version of the official records ("When they looked for my records, they came up empty-handed"). He was not in the system and had no paperwork to overcome this problem. Producing these forms of paperwork is a requirement for successfully applying for microcredit loans.

This reveals a paradox. On the one hand, the county and township governments aggressively encourage farmers to apply for loans. On the other hand, they implement criteria that poor farmers cannot meet. This dilemma stems from two contradictory goals: the loans are designed to reduce poverty, but loan repayment is also a high priority. These two goals are often in conflict. As scholars in this school of thought often emphasize, in order for microcredit loans to work as a poverty reduction vehicle, one goal (loan repayment and sustainability) or another (poverty reduction) will prevail. In this case, even though the loan's pro-poor structure and design weighed poverty reduction over repayment, the program's priorities were reversed when loan decisions were being made. Thus, to make up for the lack of information, the lender instead looks at other criteria like health and age to decide credit worthiness and this produces the effect of rejecting farmers who need these loans but cannot qualify for them.

While village-level officials could see the problem, officials we talked to at the township or county level failed to grasp the irony. To be sure, officials promoting loans are separate from those who evaluate them, and we were unable to interview the evaluators. But local government officials did not hold these evaluators as being responsible for the failure of the program. After all, local officials explained, the evaluator's job was to understand the risks to the program's sustainability. If a loan applicant represented too high a risk, then it was reasonable to reject the application. The implication was that it was the farmers' responsibility to qualify. Instead of thinking of ways to address this dilemma, local officials focused on alternative models, such as shifting the funds from a loan program from poor households to agribusinesses or wealthy potential investors, with poor households perhaps being stakeholders in any resulting enterprise.

- **Hypothesis 5 (institutional failure):** Discrimination based on gender and sexist definitions of family cause poor farmers to be rejected when they apply for loans.

Consistent: Males were assumed to be the head of household and were thus privileged in applying for loans. In addition, marital status was considered, as was the status of extended family members.

- **Hypothesis 6 (institutional failure):** Poor farmers' lack of political capital causes them to be rejected when they apply for loans.

Consistent: Political capital was cited as a reason for loan approval, as well as a reason why loans were rejected.

- **Hypothesis 7 (institutional failure):** Poor farmers are rejected for technical reasons, such as lack of proper paperwork.

Consistent: Penggan farmers lacking house titles, bank statements, or marriage documents were rejected for loans.

- **Hypothesis 8 (institutional failure):** Poor farmers are rejected due to the very factors that made them poor, such as poor health or advanced age.

Consistent: Health, age, and even poverty itself were used as criteria for rejecting applications for loans.

Conclusions

Our evidence reveals that although the microcredit programs were based on pro-poor principles, most poor farmers in Penggan could not qualify for or would not accept loans. If this result was due to barriers that were resistant to change—cultural factors, for instance—the potential for microcredit might be very much constrained. However, the evidence is inconsistent with the hypothesis that the puzzling lack of loan take-up was due to more immutable issues such as risk aversion or credit ignorance. We found most poor farmers quite willing to take reasonable risks, as evidenced by their willingness to migrate, to apply for these microcredit loans, and to engage in other risk-taking activities. Similarly, ignorance of microfinance did not represent a major barrier. The problem is not that farmers do not understand microcredit programs and the market—the problem is that they understand so well that uncertain markets undermined their confidence in their ability to repay loans with even the most liberal terms.

Two major barriers emerged as most important. First, despite the government's attempt to reduce income disparity and expand the financial inclusion of the rural poor through state microcredit schemes, most farmers who were eligible based on income were unable to participate. We observed that characteristics of rural farmers that caused their impoverishment often became the factors that justified rejecting them for a program designed to reduce poverty. These barriers have been put in place to increase the likelihood of loan repayment, reduce fraud, and increase accountability—an institutional Catch-22. Thus, one important lesson is the need for institutional changes that reduce discrimination and increase flexibility. However, such changes would require fundamentally recasting the rural credit system and designing new ways of ensuring responsible use of the loans. Even more difficult than wholesale institutional change is reducing major structural social barriers, such as discrimination due to gender, marital status, and lack of political capital. Together, these institutional and structural barriers go a long way toward explaining Penggan's puzzlingly low take-up rate.

As important as these factors may be, even more important is the lack of a stable market. Consistent with the predictions of Collins (1985) and Turvey and Kong (2009), the farmers were deterred by clear indications of business risk, rather than by risk aversion. Thus, even if institutional and structural barriers were somehow removed, the lack of stable markets and realistic investment opportunities would still deter most potential borrowers.

While this article focuses on the barriers to farmers taking up loans, shadows of the remaining steps in the poverty alleviation cycle (Figure 1) directly affect these decisions. Farmers we interviewed cited reasons related

to Step 6 (would investments from the loan pay off and pull me out of poverty?) and especially Step 7 (if the investment does not pay off, how can I repay the loan?), affecting Step 4 (whether farmers take up the loan) and Step 5 (whether they invest in productive activities). Thus, a second lesson is that microcredit programs should be part of larger programs that focus on improving market stability, thus providing more opportunities for reasonable investments.

Collins (1985) suggests that government policies can help to stabilize markets, thereby reducing business risks and increasing farmers' willingness to take up microcredit loans. Indeed, the mechanisms and policies through which the government and entrepreneurs have stabilized markets in other areas of China are legion. These include contracting floor prices with farmers or demonstrating stable markets by purchasing all farmers' produce. In other areas, local governments or entrepreneurs have established factories to process agricultural goods, thus increasing local demand and adding off-season wage employment (see, e.g., Zhang and Donaldson, 2008: 33–35). What is more, the region has an unusually rich endowment of indigenous raw materials for traditional Chinese medicine. Would investment in a processing factory provide the impetus needed for farmers to invest their credit in growing these on a larger and more viable scale? Initiatives of this kind could encourage the introduction of more attractive and lucrative market opportunities. In addition, such partnerships could facilitate the transfer of knowledge and skills to the rural poor in order to enable farmers to upscale production. However, the sundry development ideas initiated by Qianwan's local government have thus far not focused on such market stabilization measures.

Would addressing these issues and increasing the take-up rate have helped reduce poverty in Penggan? It is impossible to determine. As discussed previously, critics of microfinance in general abound. To be sure, the government carefully designed this microcredit program to avoid some of the pitfalls that have emerged elsewhere. Yet, there are numerous remaining concerns that could prevent microcredit loans from reducing poverty. If the concerns of critics are indeed correct, perhaps the low take-up rate represents a blessing in disguise.

These concerns aside, the cautious and conditional conclusions of microcredit's advocates suggest that a well-designed microcredit program can be a complementary part of a more comprehensive poverty-reduction initiative. To be sure, loan repayments must consider crop cycles, and interest rates must be low so that additional debt is not overly burdensome. However, even this is insufficient. Microcredit programs must also consider the characteristics of poor farmers when it comes to approvals and be prepared to sacrifice repayment goals in favor of approving more risky loans. If the goal

of anti-poverty policy is to help rural residents take advantage of market opportunities in order to increase their own income, could microcredit, if structured carefully, help overcome one of the major hurdles—financial constraints—that many poorly connected subsistence farmers face? Such an approach could also provide an attractive alternative to migration; if farmers can stay in their local areas, they can continue to rely on their social capital and contribute to rural development.

Such questions are at the core of our puzzle, which focuses not on whether loans could be effective, but why so few farmers wound up with loans in the first place. The research contributes to the growing understanding that the effectiveness of microfinance is at best contingent. Perhaps a microcredit program, if part of a larger initiative, would help to relieve poverty by supporting farmers' own efforts and without relying on additional subsidies and other welfare programs. However, when it comes to investing in commercial activities, even farmers with sufficient credit often face a dilemma: in order to shift into more lucrative activities, they require some form of external impetus that promotes opportunities in which poorly educated farmers can participate. At the same time, for that impetus to succeed, the area would have to have a sufficiently large scale of production. Could this chicken-and-egg dilemma be resolved by a set of measures and development programs, of which carefully designed, pro-poor microcredit programs could be a part? In this regard, our research can only be suggestive. What is clear is that the lack of such a comprehensive approach doomed this microcredit program, perpetuating a frustrating pattern of failure.

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Notes

1. All place names (except for the province) have been changed.
2. While Qianwan township has a large number of ethnic minorities, Penggan village itself is predominantly Han. Thus, we were unable to test for the role that ethnicity plays vis-à-vis microcredit programs, one of the major structural barriers proposed in the literature.

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