Doctoral Dissertation

Agricultural Credit, its Impact, and Farmers' Preferences in Rural Afghanistan

(Summary)

MASAOOD MOAHID

Graduate School for International Development and Cooperation Hiroshima University

March 2021

The agricultural sector plays an indispensable role in the economy and process of economic development of Afghanistan. However, the country's agriculture sector is characterized by low productivity, subsistence farming, and low income for farmers. Farmers' credit access is inevitable for agricultural development. Since the new government's formation in 2001, the financial sector's development has generated much hope to increase farmers' overall status. Various types of financial institutions provide credit to farmers. However, the coverage of formal credit to agriculture is shallow in the country. The participation rate remains low. Most of the cash-starved farmers rely on informal credit sources to obtain inputs and consumption smoothening. Sound policies that encourage farmers' formal credit access need to be strengthened to enhance farmers' credit access.

This study provides evidence-based policy input for designing effective agricultural credit policies in Afghanistan, which can be extended to other countries with a similar context. It analyzes both informal and formal agricultural credit for suggesting an effective formal agricultural credit policy. Informal credit includes personal and transaction-oriented loans of informal lenders. Formal credit users include borrowers from financial institutions regulated by law. This study's overall objective explores and examines farmers' credit access, impact, and preferences in the context of Afghanistan. The specific objectives are to explore and analyze the characteristics of formal and informal agricultural credit, examine the advantages of informal agricultural credit providers over formal agricultural credit providers in providing credit to farmers, investigate the determinants of credit access by farmers, examine the impact of credit participation on farmers' economic outcomes, and analyze farmers' preferences for formal agricultural credit policy's attributes. Qualitative and quantitative data and methodologies are combined, as appropriate in this study. The first survey occurred in September 2018 in Afghanistan's rural areas and involved 302 farming households. Three districts (i.e., Paghman, Behsood, and Balkh) were selected based on the importance of agriculture in the livelihood and the availability of formal and informal agricultural credit. In 2019, various agricultural credit stakeholders were interviewed in three major cities (Mazar, Kabul, Jalalabad) and the three districts. In 2020, a social experiment was conducted in the Surkhrood, Behsood, and Kama districts of Nangarhar Province, a leading agricultural province in Afghanistan. Three hundred farmers participated in the experiment. In addition to the primary data collection, 13 policy documents that include formal agricultural credit were also reviewed.

The main findings of the study can be arranged per chapter. Chapter 1 addresses the background, motivation and research questions, conceptual framework, objectives, and an overview of the study area and methods. Chapter 2 explores various characteristics of formal and informal agricultural credit in Afghanistan, utilizing thematic analysis and descriptive statistics of qualitative and quantitative data. Through the analysis of policy documents, the study identifies gaps in formal agricultural credit policies. It also tries to determine the challenges that keep the country's financial sector from serving agriculture effectively and the challenges farmers face using informal credit. Chapter 2 further analyzes what lessons can be learned from informal agricultural credit to design effective formal agricultural credit policies. The results showed that Afghanistan is a less experienced country in agricultural credit intermediation. The government does not have a unified regulatory mechanism to supervise formal agricultural credit activities. The main challenges to the expansion of formal agricultural credit are farmers' high vulnerability due to production and marketing risks and low productivity; less active real estate markets; societal challenges (particularly religious constraints); and operational challenges. The informal credit analysis uncovered that informal credit for agriculture has two main features (transactional and personal credit) and various types. Most types of informal credit were complying with Islamic doctrines. The loan size and terms and conditions are very diverse. The main implication of informal credit analysis is that formal financial institutions should consider informal agricultural credit contextual while entering agricultural credit. The important reasons for obtaining informal credit were the easiness in its availability, no religious taboo, and the need to expand existing or undertake a new farming activity. However, informal agricultural credit in the country is inadequate, lacks transparency and creates farmers' dependency.

Chapter 3 employs a double hurdle model to investigate what affects farming households' credit participation and quantity and a probit model to determine what affects credit constraints. The chapter utilizes data from 292 farming households. The study finds that households obtain credit for their agricultural activities from various formal and informal sources. The double hurdle model results reveal that crop diversity, education, number of adults in a household, land size, and access to extension positively determine households' credit participation. Non-agricultural income and distance to the cities decrease the likelihood of participation. The credit constraint results largely resemble the results of the analysis of credit determinants. The study of credit constraints indicated that formal credit did not help small-scale and remoter farming households. However, these households relied on informal credit, especially when faced with income shock. Furthermore, religious belief increased the chances of avoiding formal credit but not informal credit.

Chapter 4 analyzes agricultural credit impacts, specifically on net revenue and costs in the context of Afghanistan. This chapter also examines the agricultural credit and extension services' interaction effects, mostly overlooked in the agricultural credit literature. Thus, to overcome selection bias in formal and informal agricultural credit evaluation, matching designs and IPWRA were applied to 277 farming households in three districts (i.e., Behsood, Paghman, and Balk) in Afghanistan. Control and treatment groups comprise individuals who participate in informal and formal credit and agricultural extension services. The credit treatment is the participation in credit, including various characteristics and the average amount of credit obtained over the 2016–2018 period. The results show that farming households accessing formal agricultural credit have a positive and differentiated impact on farming costs and net revenue. However, the effect increases when a farming household has access to both formal credit and extension services. The results also reveal that credit constraints squeeze farming costs and net revenue. The study provides some practical implications for agricultural development policymakers. First, formal agricultural credit matters for farm revenue in rural Afghanistan. Second, the impact of credit bundled with agricultural extension services on farm revenue is higher than the effects of the provision of each service separately.

It is essential to determine which type of credit services to provide and what farmers require from their formal credit providers. Chapter 5 first proposes an appropriate formal agricultural credit policy that can ensure formal agricultural credit participation, based on the findings of the previous chapters. The analyses imply that a better agricultural credit policy includes a simultaneous provision of agricultural credit and advisory services and the credit mechanism complying with Islamic doctrines. The previous chapters likewise suggest that the disbursement process, installment modes, service provider's location, type of loan security, and the services' implementer features should be farmer-friendly. Therefore, Chapter 5 investigates the preferences for a policy that includes the components mentioned above. This chapter precisely measures the above-mentioned agricultural credit policy attributes' causal effects on farmers' participation probability and WTP through a randomized conjoint field experiment with 300 farmers, conducted in the three Nangarhar Province districts. This study is first to estimate the causal effects of formal agricultural credit policy's attributes on farmers' participation probability and non-parametrically measured farmers' WTP for participation in the proposed policy.

The results reveal that farmers support the suggested agricultural credit policy. The agricultural credit policy that includes quarterly and biannual repayment installments significantly and widely increases farmers' policy acceptance probability. This preference arises because farmers do not have a recurring and regular income, making it challenging to repay credit frequently (i.e., monthly). The significant results indicate that the rapid disbursement of loans impacts both internal and external choice probabilities. This finding implies that the loan disbursement procedures convenient for farmers, wasting little of their time and effort are essential. The results also suggest that farmers prefer joint liability group credit without collateral. Farmers in Afghanistan rarely possess land titles that can be used as collateral for financial institutions. Even if they have collateral, legal procedures are usually cumbersome. The results also show that the service provider’s location in the district significantly impacts the internal choice probability. Furthermore, the lower bound of farmers’ WTP for participation in the policy is as high as 5% of their average annual income.

Chapter 6 concludes and presents relevant recommendations. The study suggests that a sound formal agricultural credit policy in Afghanistan is a mixture of a longer repayment time, quickly disbursed credit, collateral-less group loans, and conveniently accessible credit agencies. These credit attributes should be incorporated into a credit setting compliant with the Islamic doctrines of finance and bundled with agricultural advisory services.