

An Analysis of Microfinance Impact on Rural Agriculture Sector in Developing Countries: A Systematic Review

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ABSTRACT

Microfinance serves as one of the best options to reduce poverty in rural low-income people in developing countries. The majority of rural poor people engage in agricultural activities in rural areas. Microfinance plays an important role in rural agriculture sectors in developing countries. The objective of this systematic review is to understand the present status of microfinance involvement in the rural agriculture sector in developing countries and analysis the impact of microfinance in the rural agriculture sector in developing countries. A total of 23 articles are identified following the PRISMA guideline to achieve the study objectives. This analysis results in there are negative and positive impacts of microfinance involvement in the rural agriculture sector. High transaction cost risk, high risk due to the uncertainty of the climate and weather patterns, and lack of collateral assets harm microfinance. The results showed that the involvement of microfinance institutions along with the government financial entities would have a more efficient influence on the rural agriculture sector. The study concludes that the engagement of microfinance with rural agriculture can enhance the living standards of rural farmers and their livelihoods in developing countries.

KEYWORDS: Developing countries, Microfinance, Rural agriculture

Introduction

Agriculture plays a significant role in supplying raw materials to both developed and developing countries. It is the foundation of many developing countries (Sulemana and Adjei, 2015). However, commercial banks have shown a lack of interest in funding the agricultural financial sector in developing countries (Kodjo et al., 2003; Dossou et al., 2020). Therefore, microfinance has emerged as a primary source of funding in the agricultural financing sector (Wampfler and Lapenu, 2002; Dossou et al., 2020).

Microfinance is defined as "a powerful tool to fight poverty" by the Consultative Group to Assist the Poor (CGAP) (Helms, 2006). Microfinance allows those who have previously been refused access to financial facilities to get access to capital (Khavul, 2010). Microfinance specifically aimed to reduce the poverty. It is defined as providing financial services to low-income people. However, microfinance cannot address all the problems caused by poverty (Helms, 2006). It provides guidance to assist the poor to increase their income and assets to increase their socioeconomic status (Microfinance Sector | Central Bank of Sri Lanka, 2021).

There is a broad variety of financial products and services provided by microfinance. Those are insurance, payment services, savings, and credits. Mainly these services are provided to people who are incompetent to get the services from the traditional banking system or low-income people (Leone and Porretta, 2014; Arandia and Hepp, 2021). Moreover, poor families who are willing to start their careers (self-employed) can get small loans (micro-credit) from microfinance (Addae-Korankye, 2012). There are mainly nine traditional key characteristics of microfinance. These are easy application process, group lending, concentrate on female clients, concentrate on low-income clients, modest transactions and low initial balance, market-level interest rates, customer support in underprivileged areas, loans without any collateral, and loans for commercial activities (Armendariz and Labie, 2011).

Microfinance institutions (MFI) offer small loans to low-income people who have little or no collateral assets (Morduch, 1999; Gutierrez-Nieto et al., 2007). The stability of the microfinance sector will depend on the both financial achievements obtained by MFIs and the social sustainability of the microfinance sector which will encourage the emergence of new members (Armendariz and Labie, 2011). Most microfinance institutions (MFI) provide funds to lower-risk agricultural enterprises including Agri-food manufacturing companies or agricultural trade companies (Dossou et al., 2020).

In this review paper, we focused on the literature that discusses the impact of microfinance on the rural agriculture sector in developing countries. In particular, we provide a systematic overview of research that provide details of the impact of microfinance on rural agriculture in different developing countries around the world. Therefore, we discussed the issues and the solutions that the microfinance sector has taken to improve the rural agriculture sector in countries around the world by reviewing the existing literature. Finally, the outcome of this research would suggest important insight into microfinance and its importance in the rural economy in developing nations in the world. Moreover, this study aims to identify prevailing issues and limitations for the development of microfinance institutes as financial service institutes in rural agriculture in developing countries.

This review is organized as follows. The following section describes the methods used to select the articles for this systematic review. This describes the methodology we followed by systematically reviewing the existing literature. The third section explains the results and discussion of this systematic review. The fourth section highlights the limitations of this study and finally, the last section concludes the review with future direction.

Methodology

This systematic review follows PRISMA guidelines. This is an evidence-based framework with a standard protocol.

Focused Questions

What is the present status of microfinance in the agriculture sector?

What are the different impacts of microfinance when involve in the rural agriculture sector in developing countries?

What are the solutions identified to improve microfinance in the rural agriculture sector in developing countries?

Information Sources

This systematic literature survey was performed on the Google Scholar database according to the PRISMA guidelines. Additionally, this study included the websites of organizations known to be related to microfinance and rural agricultural development including CGAP, USAID, FAO, etc. This was performed from September to October 2021.

Search Strategy

The search strategy keywords include “Microfinance sector”, “Microfinance AND developing countries”, “Microfinance AND issues”, “Microfinance AND issues AND agriculture”, “Microfinance AND agriculture OR rural development”, “Microfinance AND rural development”, “Microfinance AND impact AND rural agriculture” and “Microfinance AND rural agriculture” “Microfinance institutions”. Furthermore, a set of phrases such as “India”, “Bangladesh”, “Nepal”, and “Ghana” and the names of the other countries were added to the above-mentioned keywords.

The phrases of the same group were combined with 'AND' and the different groups combined with 'OR' were entered into the Google Scholar search engine. These phrases were selected based on the aim of this review, which focuses on the microfinance impact has on the rural agriculture sector. The results from this search were reduced systematically according to the purpose of this research study.

Inclusion and Exclusion Criteria

The original research articles including conference proceedings and journals were selected for this systematic review. In this review, we are interested in articles that described the microfinance sector and its impact on rural agriculture in developing countries with the analysis of existing literature. The duplicate articles were removed manually. After that, the unique articles were screened based on the title, abstract, and full text of the paper using the inclusion and exclusion criteria. The inclusion criteria for this review were as follows; the study focuses on the microfinance sector, rural agriculture, microfinance institutions' impact on rural agriculture, and microfinance in developing countries. The exclusion criteria include women empowerment in the microfinance sector, green microfinance, social status in microfinance, and technology with microfinance.

Data Extraction and Selection Process

The following flow chart (Figure 1) shows the steps taken to filter the search results and database search according to the PRISMA guidelines. It represents a systematic review of the literature. This flow chart includes four steps – identification, screening, eligibility and included.

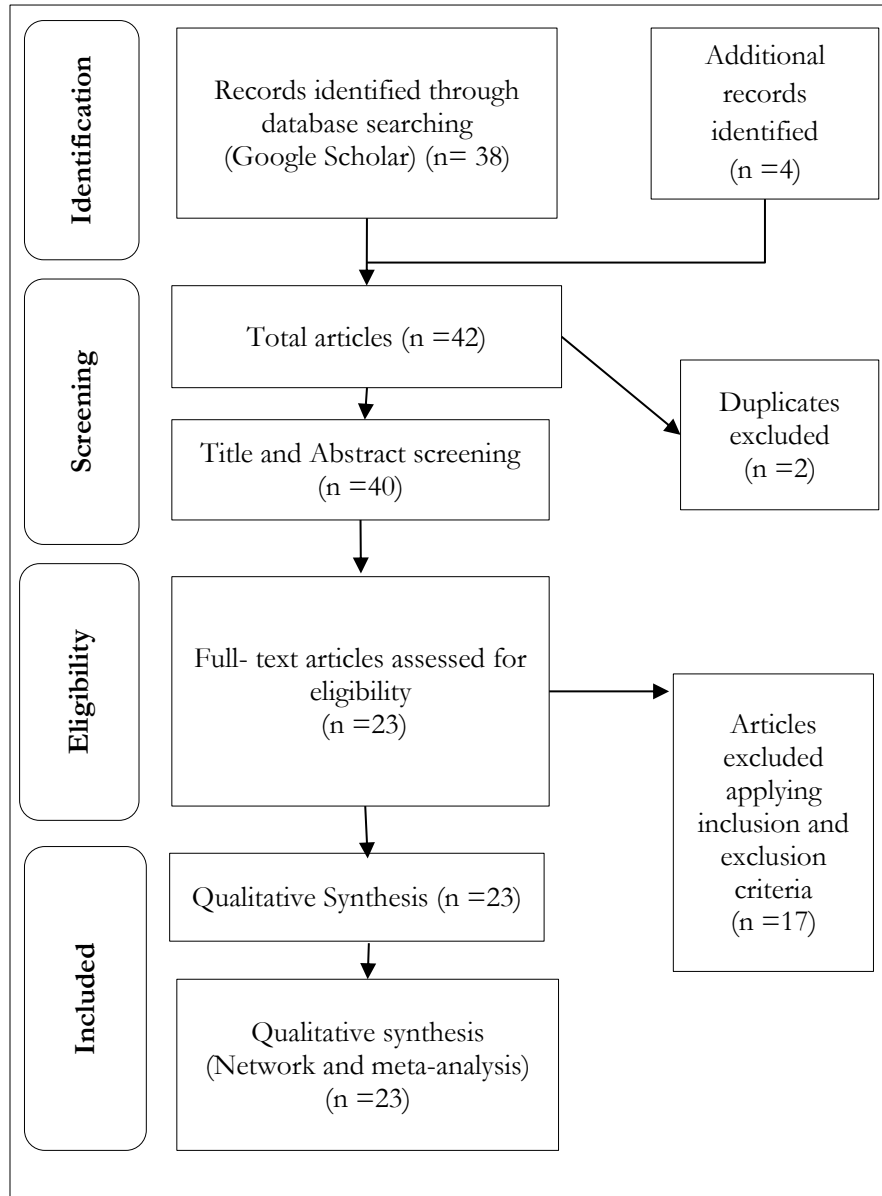


Figure 1: PRISMA Flow Chart

The search generated a list of articles that included microfinance, rural agriculture, and developing countries. According to the PRISMA flow chart (Figure 1), a total of 38 articles were searched primarily from the Google Scholar database. Another 4 publications were reorganized from sources such as the FAO, Central Bank of Sri Lanka, and CGAP from the references of the selected papers. As a result, a total of 42 articles were chosen first, followed by the exclusion of 2 duplicate articles. The remaining 40 articles were screened based on their titles, abstracts, and eligibility requirements. Then 17 articles were excluded by applying exclusion and inclusion criteria.

Finally, 23 articles were identified as being eligible for qualitative content analysis with the We searched for publications in English and published in all years up to and including 2021 in the subject area of microfinance and rural agriculture.

Results and Discussion

This section describes mainly the current situation in microfinance in rural agriculture development in developing countries. We have identified issues in microfinance that have an impact on the rural agriculture sector in developing countries. After that, the results are summarized and discussed with the key findings according to the above research protocol.

Present Situation of the Rural Agricultural Development in Microfinance

The majority of the people in developing countries (Asia, Africa, and Latin America) with over half of the population in the world live in rural areas and rely on agriculture for part or all of their income. Agriculture is the primary source of income for the majority of these rural households. There is a significant focus on reorganization and rural development projects and programs in rural areas are just as significant as the development of industrial facilities in urban areas (Ch02, 2021). According to the Millennium Goals, which dominate the worldwide development program, microfinance is strongly linked with the alleviating poverty goal (Adams and Von Pischke, 1992; Moll, 2005).

There is a difference between urban microfinance and rural microfinance. Therefore, rural microfinance mainly focuses on agriculture. Agriculture is the main economic venture in rural areas with uncertain climatic conditions and predictable seasonality conditions (Moll, 2005). There are frequent difficulties faced by both providers and clients in rural financial markets. Mainly the high transaction cost happens due to the modest average loans and small savings. Additionally, insufficient communication, stagnation of the rural infrastructure, and the remoteness of the local areas become causes of this high transaction cost. Furthermore, higher risks in credit facilities are one of the constraints in rural agriculture financial services. Most rural low-income people depend on the income from agriculture production. Agriculture is a high-risk sector due to natural disasters such as floods, drought, and fluctuating weather conditions. The social factor is another main constraint in most of the rural areas in developing countries. The illiteracy rate is higher in rural areas in most developing countries. They faced difficulties to judge the credit risk and savings, and loan profitability. Additionally, financial institutions in rural areas have workers who are lacking in training and motivation in providing services to clients. (Tenaw and Islam, 2009).

The rural microfinance institutes include rural financial markets. Microfinance Institutions (MFI) are the main provider of financial services in microfinance. It delivers unique characteristics of microfinance to poor communities. Therefore, microfinance institutions have unique characteristics which are closer to the low-income community in rural areas.

Those are as follows: Microfinance institutions provide services to clients who are difficult to reach. They will provide their services in close and regular contact with their clients who are a vulnerable population. It is an essential characteristic of microfinance institutions. Microfinance institutions frequently deal with a well-organized group of clients, allowing information and services to be supplied on a leveraged basis. Microfinance institutions with high quality have build-up the relationship with the client based on trust (Badiola, 2009). However, rural microfinance institutions (MFI) lack institutional capacity as a result of insufficient governance and operating procedures, as well as management staff with limited capabilities (World Bank, 2003; Tenaw and Islam, 2009).

The Impact of Microfinance on the Rural Agriculture Sector in Different Developing Countries

The literature discussed that microfinance institutions require a legally supportive, adequate, and regulatory environment to achieve the goals of establishing a modified regulatory framework. Therefore, microfinance institutions must move further government and donor backing to achieve considerable scale and provide acceptable services to the clients. The lower-level innovations should allow the small informal institutions to achieve these goals in microfinance, by removing them from full registrations and supervision partially or whole. Furthermore, traditional banking regulations and oversight tend to enforce inadequate and overburdening rules for microfinance institutions without modification (Meagher, 2002).

Agricultural finance consists of a variety of financial services. It is used by people at all economic levels who engage in a variety of activities in rural areas. In Bangladesh, the rural economy is playing a major role in the development of the country. Smallholders and marginal farmers are prevailing in the agriculture sector in Bangladesh. Mainly there are three types of rural financial markets in Bangladesh, such as formal, informal, and quasi-formal. Microfinance institutions are included in these quasi-formal rural financial markets. (Faruqee, 2010). The literature showed that there are NGOs, public sector agencies, some commercial banks, cooperatives, and the Grameen banks as microfinance institutions in Bangladesh. It provides housing loans, general loans, programs loans, etc. as credit loans. However, the prevailing rural credit system in Bangladesh continues to be underserved by low-income farmers.

According to one estimate, approximately 16% of farmers have been able to obtain formal loans from formal financial systems (Faruqee, 2010). Therefore, the gap of this scarcity of finance for agriculture was filled by the microfinance institutions up to some extent.

However, the observed factor in the literature showed that there are still farmers who are borrowers of microfinance institutions who have no land or farmhouses (Faruqee, 2010). Poverty can be reduced by injecting liquidity into families which has low cash flows. It will increase domestic products such as better nutrition, improved health care, and improved education. The following Figure 2 shows the impact of microfinance on rural agriculture in Bangladesh.

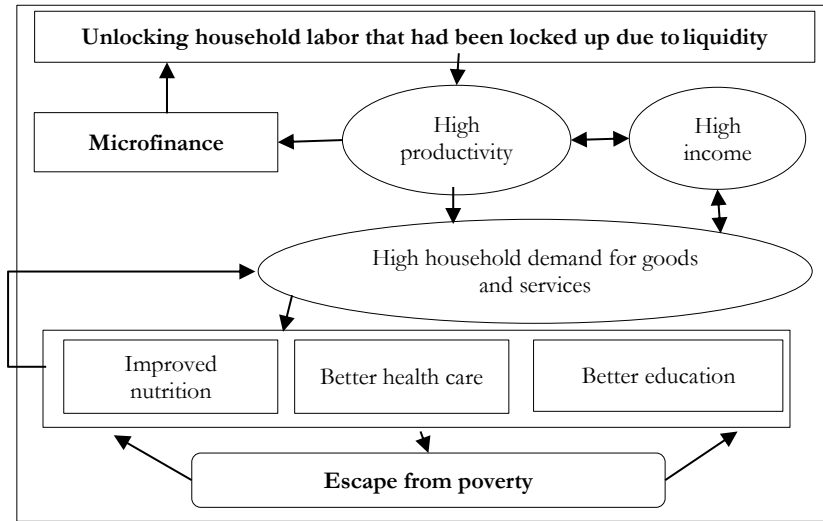


Figure 2: Impact of Microfinance on Agricultural Productivity and Poverty
 (Source: Kiru, 2007; Tenaw and Islam 2009)

In India, the microfinance sector plays a major role for the people who cannot develop micro-enterprises through large-scale finance schemes in India (Singh, 2003). The microfinance sector is intended to reduce the poverty in the country. According to the current research findings, it shows that most low-income people in rural areas are denied access to financial services in India due to the high transaction costs, creditworthiness, and the consideration of banks to finance the poor people without collateral. Furthermore, there is a significant gap between the demand and supply for all financial services (Kumar et al., 2010). There are mainly two impacts of microfinance. Those are the impact on the client's living standards and the impact on the cost of transactions for the borrowers and the credit agencies (Satyasai, 2003).

The living standards of the rural poor were accomplished by altering the lending pattern away from consumption and toward the manufacturing process. It will increase the savings, the empowerment of women, and the income of the rural people (Puhazhendhi, 2000; Satyasai, 2003). This shows a positive impact on the social aspects such as income, access to credit, behavioural patterns, assets, and income of the rural poor. There is an improvement in self-confidence in rural livelihood which helps to reduce the incidents of family violence (Puhazhendhi and Satyasai, 2000; Satyasai, 2003). Self Help Groups (SHGs) are the most important key components of the microfinance sector in India. Self Help Group is a body of individuals who share their savings into a fund from which they can take out loans. The main benefit of a Self-Help Group is that the members of the group have shared liabilities and as a result "peer supervision" of member borrowers (Chakrabarti, 2004).

According to Dhakal (2016), microfinance services helped to improve their socioeconomic conditions by providing job opportunities to the farmers in Nepal. The studies showed that involvement in microfinance activities has a considerable impact on the economic stability of the farmers.

Furthermore, the farmers could involve in the available facilities in the market due to microfinance. Microcredit has boosted micro-enterprise operations, increasing wage and self-employment options for the beneficiaries and community members in Nepal. Microcredit has reduced the resilience of money-lenders particularly the poor people by lowering the average interest rate impact (NAFI SAP-Nepal, 2004; Karn, 2018).

According to the studies, the microfinance programs in Indonesia help to alleviate poverty. BPR-YBS is a microcredit program introduced in Indonesia. The BPR-YBS scheme was developed to be suited for the poor because unlike other Indonesian commercial banks, it does not need collateral and does not provide small loans. Even with the lack of credit, participants had a higher average per capita income and a lower poverty rate in Indonesia (Takahashi et al., 2010).

In Ghana, microfinance plays a significant contribution to agricultural modernization and enhancing agricultural productivity. The studies showed that the farmers face obstacles due to the lack of awareness of the loan implementation and the lack of collateral assets although there is a high demand for agricultural loans. According to the literature findings, the District Agricultural Development Units should encourage farmers with the help of microfinance institutions to establish Active-farmer based organizations. The study discussed that microfinance institutions should encourage farmers to save. It enables the farmers to approach larger loan sizes in the future. Furthermore, microfinance institutions can instruct farmers on the importance of record-keeping to reduce delays in credit access processes.

Additionally, the microfinance institutions and District Agricultural Development Units in Ghana can instruct the farmers to understand the loan application process to reduce the delay in the allocation of lending facilities (Sulemana and Adjei, 2015).

Argentina which belongs to the Southern part of the American region is a developing country. Microfinance is an important sector in rural Argentina. Therefore, there are four reasons for this. First, the ability to sustain the rapid growth and the prosperity of the country can decline due to the restrictions on access for the rural poor consider by the government and funders in the country (Secretaría de Agricultura, Ganadería, Pesca y Alimentación, 1996; World Bank, 1996; Sawers, 1998; Schreiner and Colombet, 2001).

Second, Agriculture is the most important source of foreign currency for Argentina. Third, the availability of financial facilities reduces the unavailability of insurance markets and offers to moderate the spending of low-income people (Zeller and Sharma, 2000; Schreiner and Colombet, 2001). Finally, the fourth reason is the importance of fair access. There are several problems in agriculture due to the significant variances between remote fields and farmlands.

There is a high-risk variance in agriculture among the households. Rural households are exposed to price risks and yield risks due to pest and weather conditions. However, the households utilize their family labours and consume their products to reduce the price risk, avoid transaction costs, and reduce the difficulties in agencies in rural microfinance (Schreiner and Colombet, 2001).

Schreiner and Colombet (2001) findings showed that the microfinance sector in Argentina is a good source for families who has few sources of income and thus the ability to repay loans if a project fails. However, the impact of limited population and large distances on costs is more severe in rural Argentina than in other countries where rural microfinance has been successful. The larger deposits to higher access to loans for rural poor infrastructure development and technology innovations can be used to reduce the high transaction costs, high risk, and inadequate information with the involvement of public entities.

According to the reviewed papers, the following Table 1 showed a summarized impact of microfinance on rural agriculture.

Table 1: Different Impacts of Microfinance on Rural Agriculture in Developing Countries

Country	Impact on Rural Agriculture
Bangladesh	The prevailing rural credit system is continuing to be underserved for the low-income farmers Only up to some extent the gap of the scarcity of finance for agriculture is filled There are still farmer households that have no land or farmhouses Unlocking household labour can increase the higher productivity
India	The impact on the living standards of the rural people can be increased by increasing the savings and income of rural people The impact on social status can be improved by increasing the self-confidence, behavioural patterns and assets, and income of rural people
Nepal	Help to improve the socio-economic conditions in farm families Increase the job opportunities for the farmers Increase the economic stability of the farm households Can involve in the available facilities in markets
Ghana	Contribute to the modernization of agriculture Enhance agricultural productivity Lack of awareness of the loan implementation Lack of collateral assets
Argentina	The ability to sustain the rapid growth and the prosperity of the country can decline due to the restrictions on access for the rural poor which considered by the government and funders in the country Agriculture is the most important source of foreign currency for Argentina The availability of financial facilities reduces the unavailability of insurance markets and offers to moderate the spending of the low-income people A good source for families who has few sources of income and thus the ability to repay loans if a project fails

(Source: Authors' summarizations based on past literature, 2021)

Table 2 summarized the findings to show the impact of different characteristics of microfinance using the strategies in different developing counties.

Table 2: The Characteristics of Microfinance with the Findings from Different Countries

Characteristics	Findings from Different Countries
Easy Application Process	Can instruct farmers on the importance of record-keeping to reduce the delays in lending processes.
Group Lending	Introducing Self Help Group (SHG) to share the savings with a group of people and take our loans or borrowed money when needed
Concentrate on low-income clients	Introducing lending facilities in the manufacturing process can reduce the incidents of family violence by improving the income Helped to improve the socio-economic conditions by providing job opportunities
Concentrate on female clients	Focused on lending for the manufacturing process for the empowerment of women
Modest transactions & low initial balance	Can use the larger deposits to higher access to loans for rural poor infrastructure development and technology innovations to reduce the high transaction costs with the involvement of public entities
Market-level interest rates	The average interest rate impact can be lowered by the use of microcredit and the reduced impact of money lenders on poor people.
Customer support in underprivileged areas	Microfinance entities can instruct the farmers about the loan application process to reduce the delay in the allocation of lending facilities.
Loans without any collateral	Introducing microcredit loan schemes without collateral can increase the per capita income and lower the poverty rate
Loans for commercial activities	Introducing lending facilities for the manufacturing process rather than lending for consumption.

(Source: Authors' summarizations based on past literature, 2021)

Limitations

This systematic review has several limitations. It only considered the published literature on the microfinance impact has on rural agriculture in different developing countries. The unpublished articles, articles in other languages, and unavailable full-text articles are not included in this review. Furthermore, there are different numbers of articles found by using different search strategies. This review does not provide complete coverage of the entire impact of microfinance in the rural agriculture sector.

Conclusions

According to this research findings, the microfinance sector is still playing a vital financial role in the rural sector in many developing countries providing a valuable financial service to the rural agriculture sector in most developing countries. There are both positive and negative impacts in the present microfinance sector in agriculture. Microfinance services have filled out the gap of the scarcity of capital which is needed for the rural economy providing credit facilities for multidisciplinary purposes. Moreover, the microfinance program has greatly contributed to the alleviation of rural poverty by providing capital access. Further, many microfinance services have impacted the improvement of health facilities, education infrastructure and nutritional status of the rural community. In particular, women empowerment and the development of women entrepreneurs is another important impact of microfinance institutions in developing countries. The research review revealed several issues that have been studied in the literature. Most of the microfinancing in rural areas shows mainly common issues such as the higher transactions cost, high risks of weather and climate changes, and the rural credit systems. These are mainly impacted by microfinance in rural agriculture. Moreover, the current literature points out that the involvement of the combination of government entities and microfinance institutions can be influenced positively to better influence microfinance. Furthermore, the review revealed that with the involvement of microfinance in developing countries rural farmers can enhance their standard of living. Finally, we suggest that microfinance in rural agriculture deserves more attention in future research to enhance the rural agriculture sector in developing countries.

Conflict of Interest

The authors have declared there is no conflict of interest.

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