

Microfinance program and food security: A Review in the Indonesian context

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Abstract

This paper addresses the way microfinance programs affect food security, which is compiled based on a literature review of a total of 58 pieces of literature, from 1995 to 2020. Its paper sheds light on microfinance in rural areas in Indonesia, microfinance and food security, and critics related to microfinance programs based on a literature review. The result indicates that when the program's impact on participants' families' food security and nutrition is measured, the results could be different. Most of the results stated a positive impact, but it might depend on many other factors. Taken together, the paper findings highlight the importance of a cycle of innovation, experimentation, and evaluation that must be carried out to build a robust financial institution to answer challenges and provide solutions to all the various conditions experienced by low-income families, involving various institutional structures, modes, and mechanisms. Other supporting factors are also important, including community involvement, the availability of safety nets, and non-financial support in many fields, such as increasing institutional capacity, business development, technology utilization, procurement, production, and, most importantly, marketing.

Keywords: *finance; accounting; microfinance program; food security; Indonesia*

Abstrak

Jurnal ini membahas cara program keuangan mikro mempengaruhi ketahanan pangan. Jurnalnya menyoroti keuangan mikro di daerah pedesaan di Indonesia, keuangan mikro dan ketahanan pangan, dan kritik terkait program keuangan mikro berdasarkan tinjauan literatur. Hasilnya menunjukkan bahwa ketika dampak program terhadap ketahanan pangan dan gizi keluarga peserta diukur, hasilnya bisa berbeda. Sebagian besar hasil menyatakan dampak positif, tetapi mungkin tergantung pada banyak faktor lain. Secara keseluruhan, temuan makalah menyoroti pentingnya siklus inovasi, eksperimen, dan evaluasi yang harus dilakukan untuk membangun lembaga keuangan yang tangguh untuk menjawab tantangan dan memberikan solusi atas berbagai kondisi yang dialami oleh keluarga berpenghasilan rendah, yang melibatkan berbagai struktur, mode, dan mekanisme kelembagaan. Faktor pendukung lainnya juga penting, antara lain keterlibatan masyarakat, ketersediaan jaring pengaman, dan dukungan non-finansial di berbagai bidang, seperti peningkatan kapasitas kelembagaan, pengembangan usaha, pemanfaatan teknologi, pengadaan, produksi, dan yang terpenting pemasaran.

Kata kunci: *keuangan; akuntansi; program keuangan mikro; ketahanan pangan; Indonesia*

. INTRODUCTION

The concept of food security, initiated since 1996 at the World Food Summit, implies that food security can be realized when all people never lose access to food, both physically and economically, when they can consume food that is safe and healthy while fulfilling adequate nutrition in sufficient quantities, as well as suitable food preferences for a healthy and active life (FAO, 1996). According to Gibson (2012) and Coleman-Jensen et al. (2020), food security is the ability of households and individuals to access food, perform activities, and sustainably lead a healthy life.

As many as 19.4 million Indonesians, according to the World Food Program (WFP), do not have access to sufficient food to meet their nutritional requirements. More than 37% of children under 5 are stunted due to malnutrition, with the prevalence being higher among families that rely on subsistence farming or who live in urban slums (WFP, 2021). A solid effort to realize food security, such as decreasing the number of hungry people and malnutrition, must be implemented properly. As poor people are more likely to live in rural areas than in urban areas, with 14.3% of the population living below the poverty line (WFP, 2021), the effort must be prioritized to help small farmers or rural communities. .

One viable strategy of pursuing food security, especially in the rural community, is through a financial support program or microfinance program. However, the difficulty of accessing formal financial services is a challenge faced by the poor in rural areas. The World Bank (2011) revealed that 42% of citizens over 15 years of age had no access to formal financial institutions but relied on loans from relatives and friends (Mulyaningsih et al., 2015). Linh et al. (2019) and Nugroho (2011) stated that rural households in developing countries have no access to bank credit. Similarly, the World Bank Report (2011) found that only 26.03% of rural residents in lower-middle-income countries (e.g., Indonesia) had accounts at formal financial institutions (Mulyaningsih et al., 2015).

Hence, access to financial services for low-income households in rural areas has been widely provided with the establishment of various microfinance institutions (MFIs). Essentially, this aids poor households and people living in rural areas to escape poverty. Several (see Khanam et al., 2018; Samer et al., 2015; Li et al., 2011) found a positive correlation between access to MFIs and poverty alleviation. By contrast, some studies give evidence of the microfinance programs' positive impact on food security (Zeller & Sharma, 1998; McNelly & Dunford, 1998; Hidayat & Nugraha, 2011; Baihaqi, 2013; Darwis et al., 2014; Kinde & Addisu, 2016; Meador & Fritz, 2017; Bidisha et al., 2017; Shahid & Bohara, 2020; Chilimba et al., 2020).

In the case of small farmers, certain programs with simplified access to credit schemes have enhanced the farmers' livelihood. The availability of financial support for them to support their agricultural activities highly affects their productivity. Nevertheless, only 17% of the farmers were the beneficiaries in 2017 and 2018, whereas the figure rose to 21% in 2019 (FAO, 2018; Badan Pusat Statistik (BPS), 2019). Smallholders' ability to reinvest their credit amounts in a sustainable manner can be hampered by a significant proportion of their income being spent on food and agricultural inputs (FAO, 2018).

This paper addresses how microfinance programs affect food security, by discussing 1) microfinance theory, 2) microfinance in rural areas in Indonesia, 3) microfinance and food security, and 4) critics related to microfinance programs. The focus of the study is to provide a better understanding of the financial support program model or innovation to support rural communities and small family farmers, significantly to increase food security in rural areas, in the community, and at the household level.

MATERIALS AND METHODS

This paper was compiled based on a literature review of a total of 58 pieces of literature, from 1995 to 2020, consisting of reports from the Food and Agriculture Organization (FAO), International Food Policy Research Institute (IFPRI), Asian Development Bank, and World Bank and statistical data belonging to the Statistical Agency or *Badan Pusat Statistik* (BPS), as well as regulation, books, theses, working and discussion papers, and other literature obtained through Google Scholar. The literature was prepared based on this paper's purpose, namely explaining microfinance theory, microfinance in rural areas in Indonesia, microfinance and food security, and critics related to microfinance programs.

This paper was organized and structured to get a better understanding of the background of microfinance in Indonesia, how it can contribute to food security by presenting findings of several studies related to microfinance programs and food security, before presenting some critics of microfinance programs that give some knowledge and ideas about how future programs should run to support better food security.

RESULTS AND DISCUSSION

Microfinance

According to Lensink et al. (2018), microfinance denotes the provision of financial services to those who earn a low income, including small traders, street vendors, small farmers, service providers (e.g., hairdressers and pedicab drivers), artisans, and small producers. Similarly, Mulyati and Harieti (2018) defined microfinance as a financial institution that offers financial services on a microscale, such as microscale savings, microscale credit, and microscale insurance, to serve the poor and the low-income society. The term "microfinance", as broadly defined by Banerjee and Jackson (2017), refers to small-scale financial services, particularly savings and loans, provided to small farmers, fishermen, and pastoralists, as well as those who run small businesses that produce, recycle, repair, and sell goods; provide minor services; work on a commission basis; or earn an income from renting agricultural machinery at the local level, both in rural and urban areas.

In Indonesia, the government has regulated its microfinance institutions (MFIs) through Law Number 1 of 2013. This law stipulates that MFIs are established explicitly to provide services for business development and community empowerment through,

- 1) credit schemes and financial support for microscale businesses to members and society,
- 2) savings management, and
- 3) business development consulting services that are not solely oriented toward making a profit.

Referring to the law, there are two types of MFIs in Indonesia: (1) cooperatives and limited liability companies, supervised and regulated by the Ministry of Cooperatives and Small and Medium Enterprises, and (2) non-bank financial institutions that are technically regulated by the Ministry of Law and Human Rights (Santoso, 2016). Microcredit providers are expected to serve the segment of credit demand that cannot be fulfilled by commercial banks or by other formal financial institutions, as stipulated by the Indonesian Financial Services Authority (Santoso & Gan, 2019).

Microfinance in Rural Areas in Indonesia

In Indonesia, NGOs have relatively less involvement than banks, whereas the Indonesian state-owned and private commercial banks have a dominant role in providing financial access

services (Scanlon & Alawiyah, 2020). This scenario differs from other microfinance pioneer countries, such as Bangladesh and Bolivia, as NGOs there are more dominant in offering microfinance services than commercial banks (Tambunan, 2014). In Bangladesh and Bolivia, the primary focus of banks is on profitability, whereas NGOs prioritize poverty eradication (Takahashi et al., 2010). At present, various MFIs serve various segments of society with different contractual terms. Takahashi et al. (2010) discovered that several MFIs functioned as commercial and secondary banks, state-owned pawnshops, non-governmental organizations (NGOs), cooperatives, and even informal moneylenders. Besides, the government provides small-scale direct cash assistance and credit schemes through various development programs for communities in need.

The journey of MFIs in Indonesia is closely linked to the history of establishing Bank Rakyat Indonesia (BRI), namely the Purwokerto Support and Savings Bank for Netherlands Indies Civil Servants in 1895. This bank was the forerunner of establishing BRI, the largest microcredit service provider in Indonesia (Santoso, 2016). Initially, the purpose of establishing MFI in Indonesia was inseparable from efforts to protect the poor and the indigenous peoples from pawnshops and loan sharks (Firdaus et al., 2020; Robinson, 2002). In line with its development, the characteristics of commercial MFIs in Indonesia (Takahashi et al., 2010) are 1) relatively high application of interest to cover operational costs, 2) mitigation of the risk of default mostly with collateral requirements, and 3) large loan amounts enabled to reduce transaction costs.

For rural areas in Indonesia, the two leading microfinance service providers are 1) BRI (government-owned) with 3,500 branch offices (village units) at the subdistrict level and (2) 9,000 other formal and semi-formal MFIs (Santoso, 2016). Table 1 lists types of MFI in Indonesia categorized as banks and non-banks (Prawiranata, 2013; Santoso & Gan, 2019).

Table 1. Microfinance institutions in Indonesia

Category	Type of institution	Example
State-Owned Banks	1. Conventional Bank	BRI Units, Mandiri Bank, Bank Tabungan Negara (BTN), and Bank Pembangunan Daerah (BPD)
	2. Islamic Bank	BRI Syariah, Mandiri Syariah, and BTN Syariah
Commercial Banks	1. Commercial Bank	Danamon Simpan Pinjam Bank
	2. Islamic Commercial	Tabungan Pensiunan Nasional (BTPN) Danamon Syariah and BTPN Syariah
Non-Bank	1. Cooperatives	Koperasi Simpan Pinjam/Credit Union
	2. Islamic Cooperative	Baitul Maal wa Tamwil (BMT)
	3. Pawnshops	State-Owned and Private Pawnshops

Source: Adapted from Prawiranata (2013) and Santoso and Gan (2019)

Despite the long history and broad reach of MFIs in Indonesia, providing services to rural households and those below the poverty line remains a challenge. Seibel and Rachmadi (2009) noted that in developing countries, including Indonesia, this occurs because of several factors, including the heterogeneity of the MFIs themselves, as they offer services that are still fragmented and related to the rules governing microcredit institutions. In Indonesia, many semi-formal microcredit institutions, such as cooperatives and pawnshops, provide

microcredit services to rural communities, apart from commercial banks as formal financial institutions, both public and private banks. These institutions, both formal and informal, are regulated and supervised by the government.

From the scope of microfinance services, the two types of formal banking institutions in Indonesia are (see Indonesian banking Law No. 7/1992, replaced by Law No. 10/1998) 1) commercial banks that serve microcredit unit divisions with national coverage areas, such as BRI Units, Bank Mandiri, and Regional Development Banks (BPD), and 2) rural banks that prioritize rural households at the subdistrict level, such as Bank Perkreditan Rakyat (BPR). Both formal banking institutions offer credit services to rural households. By-Law Number 25 of 1992, semi-formal financial institutions, such as cooperatives, are regulated and supervised by the Ministry of Small and Medium Enterprises. Rosengard and Prasetyantoko (2011) claimed that Indonesia has been among countries with a broad reach and innovation in providing microfinance services since the past 25 years. However, the accessibility of credit services by the poor has decreased.

In 2009, the World Bank released a report derived from its surveys on Indonesia's financial services and rural households. The report stipulated that approximately 50% of rural households had access to formal financial institutions, mainly commercial banks, with more than half of rural households having savings accounts. However, 30% of all rural households had no access to formal and informal financial institutions. The report further denoted that 53% of Indonesia's population could access money through loans (20% and 33% of this amount secured loans from formal banks and non-formal financial institutions, respectively). The rest of the Indonesians (40%), most of whom resided in rural areas, had no access to a loan from any financial institution (World Bank Report, 2011). This survey reveals that limited collateral, low income, significant debt, and inadequate documents were hindrances faced by rural households from accessing finance. This, in turn, made policymakers in Indonesia to concentrate on rural families, especially to address lack of access to financial services among rural residents (Santoso & Gan, 2019).

According to Tambunan (2015), the main challenge faced by rural households that want to start a micro business is the unavailability of financial capital, which is associated with lack of access to financial institutions. Access to small financial support is trickier for poor households than for middle-income families (Tsukada et al., 2010). Besides, dismissal of new technology deployment among low-income households further limited their business progress (Miyata & Sawada, 2006). They purported that credit constraints were a severe obstacle to the adoption of new floating net cultivation technologies for rural households.

Microfinance and Food Security

Microfinance services contribute to poverty eradication while assuring food security. This is realized through various financial services, ranging from loans, savings, and other financial services that can increase investment, minimize self-insurance costs, and contribute to fulfillment and equity in consumption (Bateman, 2011; Meyer, 2003). Microfinancial services are assessed in three aspects: 1) outreach, if the services reach poor clients; 2) long-term sustainability, if MFIs can continue providing financial services after the initial funds from the government or donor agencies are exhausted; and 3) the impact on clients, if it can sustainably increase income to alleviate poverty and ensure food security for the client's family.

Several studies have thoroughly assessed the influence of credit schemes on household food security (see Table 2). Zeller and Sharma (1998) found that low-income families spent 91% of their total income on household consumption. Despite the loan, this was related to the efforts to meet family food needs. In many developing countries, the money borrowed by

low-income families commonly derives from the informal sector. In fact, the outcomes may differ when the impact of the program on household food security is assessed. Zeller and Sharma (1998) reported the positive impact of credit programs on household scale calorie availability in Madagascar, Bangladesh, and China. On the contrary, studies by Diagne & Zeller (2014) in Schrieder (1996) in Cameroon discovered an insignificant impact and contribution of the credit program on food security among the families of the study respondents. In the context of Bangladesh, Pitt and Khandker (1996) found that the credit program was closely related to seasonal consumption; participation and access to credit increased prior to harvest, also known as the hungry season.

In the case of Indonesia, some studies evidenced the positive effect of microloan programs on FNS. Hidayat and Nugraha (2011) found that the fulfillment of food needs after the program in Pacitan Regency increased by 11.65% from the previous condition. Upon assessing several regions in Indonesia, Darwis et al. (2014) concluded that the program had a positive impact on cases of staple food shortages, which on aggregate decreased from 39.77% to 29.02%. They added that the reduction in staple food shortages was more rapid outside Java than in Java, where the improvement in staple food availability was mainly due to an increase in income stemming from increased diversification of income sources. They denoted that the program had a positive impact on the socio-economic conditions of poor households in rural areas. Improvement of the areas' socio-economic level was signified by the increase in the frequency of eating and consumption of animal food, enhanced economic access to clothing, and access to health services. This was ascribed to the enhanced family economy, as indicated by the increase in income and savings among the poor families.

Meanwhile, Baihaqi (2013), who studied the East Aceh Regency, found a decrease in food shortages experienced by low-income families in the sample village. At the start of the program, 83.33% of poor families in the sample villages had experienced food shortages. In 2012 (four years after the program was initiated), the figure fell significantly to 62.07%. It is noteworthy that those studies measured the short-term impact of the programs. In assessing the long-term sustainability of the impact, changes in the mindset of the poor households should be examined. Empowerment of poor households in railway institutions had a positive impact on self-confidence, gender aspects, and entrepreneurship, which in turn, contributed positively to the use of capital (capital assistance/savings/income) in adopting technology to boost the productivity of their family businesses (Darwis et al., 2014).

In light of gender, positive correlations were noted among access to finance, women, and household food security. In the context of rural Uganda, Meador and Fritz (2017) found a structural link among women's social capital, empowerment, collective action, and additional income access, which, in turn, increased family food security. This was ascribed to the fact that women with additional income were more likely to use it to obtain the means necessary to meet the food needs for themselves and their families. Many similar studies reported positive links among women, access to finance, and food security. This outcome has motivated many countries to provide particular interventions (from government and NGOs) to women, to improve their household food security. However, according to research conducted by Shahid and Bohara (2020) in Nepal, even though they suggest that microfinance has an overall positive effect on the food consumption score, the results show no gender difference in the impact of microfinance on the food consumption score of households.

Regarding income, Bidisha et al. (2017) concluded that the microfinance program contributes to raising unearned household income greatly, which increases the ability to spend on food products, which is likely to improve household food security. Providing financial access to rural households would enhance household income, hence reducing food insecurity and improving dietary diversification.

Meanwhile, the effect of microfinance programs on the nutritional level of children seems vague. This is because many factors contribute to improving children's nutrition, including access to clean water and health services, sanitation, and the level of knowledge of parents or caregivers regarding nutrition for children. Pitt & Khandker (1996) revealed the insignificant impact of microfinance programs on improving children's nutrition in Bangladesh, which is in line with those found for Nigeria (Schrieder & Pfaff, 1997) and (Diagne & Zeller, 2014). Improvement in the nutritional status of one-year-old children seemed to increase in Ghana (McNelly & Dunford, 1998). The study found that the nutrition of children from participating families in the program increased significantly from 1993 to 1996, in comparison with that of children from families who dismissed participation. However, the report failed to address the clear link between the extent to which increased child nutrition and increased access to credit in the program. In the context of Indonesia, Darwis et al. (2014) revealed a positive impact on under-5s' weight, where under standard weight on aggregate significantly decreased from 2.35% to 1.03%. However, again, many factors can lead to the decrease of aggregate, and one of them is the active Posyandu program Baihaqi (2013), an integrated health post-program for children and pregnant women.

Table 2. Studies that measured food security of a microfinance program

Researcher	Year	Study area	Result		Explanation
			Positive	Negative	
Schrieder	1996	Cameroon		√	No significant impact and contribution of the credit program on food security
Pitt and Khandker	1996	Bangladesh	√	√	The program is closely related to seasonal consumption, where participation and access to credit increase before harvest, which is known as the hungry season. (Impact on food availability during the season)
Schrieder and Pfaff	1997	Nigeria		√	No significant impact on improving children's nutrition
Zeller and Sharma	1998	Madagascar, Bangladesh, and China	√		A positive impact of credit programs on household scale calorie availability
McNelly and Dunford	1998	Ghana	√		The nutrition of children from participating families

Diagne and Zeller	2001	Malawi	√	<p>in the program increased significantly from 1993 to 1996, compared to those from families who dismissed participation. However, no clear relationship was noted between increased child nutrition and increased access to credit in the program</p> <p>No significant impact and contribution of the credit program on food security and children's nutrition</p>
Hidayat and Nugraha	2011	Indonesia	√	<p>The fulfillment of food needs after the program in the Pacitan Regency increased by 11.65% from the previous condition</p>
Baihaqi	2013	Indonesia	√	<p>A decrease in food shortages experienced by low-income families in the sample village from 83.33% to 62.07%</p>
Darwis et al.	2014	Indonesia	√	<p>A positive impact on staple food shortages with a lower aggregate from 39.77% to 29.02%.</p> <p>A positive impact on under-5s' weight, where under standard weight on aggregate significantly decreased from 2.35% to 1.03%. However, many factors contribute to the decrease of the aggregate</p>
Meador and Fritz	2017	Uganda	√	<p>A structural relationship was noted among women's social capital, empowerment, collective action, and extra income access</p>

Bidisha et al.	2017	Bangladesh	√	that led to better household food security Contributes to a considerable increase in unearned household income, which increases the ability to spend on food products and improves household food security.
Shahid and Bohara	2020	Nepal	√	Overall positive effect on the food consumption score

Several Critics on Microfinance Programs

Microfinance services contribute to poverty eradication while assuring food security. This is realized through various financial services, ranging from loans, savings, and other financial services that can increase investment, minimize self-insurance costs, and contribute to fulfillment and equity in consumption (Bateman, 2011; Meyer, 2003). Microfinancial services are assessed in three aspects: 1) outreach, if the services reach poor clients; 2) long-term sustainability, if MFIs can continue providing financial services after the initial funds from the government or donor agencies are exhausted; and 3) the impact on clients, if it can sustainably increase income to alleviate poverty and ensure food security for the client's family.

To support small family farms' investment, there is an urgent need to increase access to financial services that are tailored to the needs of farms. Nevertheless, the credit approach in a microfinance program as an effort to improve access to financial aid for poor households (including small family farms) is often criticized because it only concentrates on providing loans without paying attention to other financial services sought by low-income families, such as savings and insurance (Meyer, 2003). Even the monograph from the (Zeller et al., 1997) explained the effect of these financial services on family food security:

- 1) Efforts to increase income to alleviate poverty. The expected effect is as follows: First, it can temporarily increase household productivity, both human and physical capital. Second, encouraging households to take risks to run a business or activity that is more profitable or to increase income. This is because; financial services can increase the potential bearer of risk. Extra income and various productive activities can create change; thus, the increment in income contributes to better productivity and investment cycle.
- 2) Good financial services, such as savings, insurance, and credit, can lead to changes in household assets and liabilities, thus reducing the cost of self-insurance for rural households and eradicating poverty. For instance, possession of physical deposits, which are meant to prepare against shock, may decrease. Hence, low prices of productive assets can be avoided, and the opportunity to store the crops for sale at reasonable prices can increase. The need for expensive informal financial services may decrease or even end so that these reductions can lead to better use of resources for better family consumption and increased investment.

- 3) Consumption credit is intended to facilitate household consumption. Each household always meets its daily consumption needs by adjusting its income. When adverse shocks occur (e.g., disasters, health problems and accidents), rural households take traditional steps, such as selling assets, borrowing or getting grants from families, and borrowing from the informal sector, which is often considered unproductive. Proper credit, savings, and insurance services schemes can increase household consumption. They may reduce the use of ineffective traditional methods that prevent them from saving and investing. Similarly, Townsend (1995) depicted that formal financial services, such as credit and insurance, are more efficient than traditional risk sharing, especially in improving welfare across developing countries.

According to Meyer (2003), the three points listed above are more beneficial for the poor, if implemented, instead of merely focusing on production credit alone. Poor households can choose whether they will access financial support for production needs to increase their family income and food reserves or use it for other needs, such as facilitating family consumption, financing their children's education, and paying for family healthcare costs. He added that financial services for poor families should be designed, with more emphasis on transaction costs and liquidity considerations, which may be essential than interest rates. To eradicate poverty with its broad dimensions, both the progress and role of financial institutions that only focus on loans have less impact than those with many kinds of financial services.

According to Sharma and Buchenrieder (2002), one of the essential factors that affect their ability to repay loans is the extent to which borrowing households have access to other complementary production inputs. A number of studies verified the fact that the availability of adequate complementary inputs enabled poor households to benefit from and improve favorably from loans. For instance, if a farming family borrows money to access fertilizers while the irrigation infrastructure is still inadequate or even non-existent, then the results are bound to be non-optimal, so that the credit services provided to increase income may not be achieved. This is exacerbated if other necessary infrastructure, such as roads and market access for farmers are unsupported. Thus, the poor households would still have difficulties in repaying their loans or only a short-term impact on increasing family consumption. Both of them then explained that the innovative insurance scheme is very promising to improve the standard of living among poor families or is effective in alleviating poverty. However, according to them, information and law enforcement issues often turn into obstacles to insurance schemes. Hence, in the future, continuous dependence on savings and loans must also provide insurance scheme services aimed at low-income families.

Sharma and Buchenrieder (2002) emphasized that the most important aspect is providing financial services at a low cost for low-income families. In future, the increase in profits from a given investment will depend on how much this cost-reduction innovation is. Government support and attention must be more significant as third-party initiatives may still be limited in both availability and reach. The researchers' review revealed that this effort offers maximum benefits, provided that the ability of households to access other complementary inputs is also fulfilled.

Mahajan (2005) proposed the concept of financial livelihood, as the concept of microcredit does not solve the core problem of poverty but is only a peripheral solution. He proposed the following comprehensive plan to support the poor to earn sustainable income:

- a) Financial services: (i) savings; (ii) short- and long-term loans for investment in natural resources: land, water, trees, livestock, and energy; (iii) insurance for the lives and livelihoods of the poor, covering health, crops, and livestock; (iv) infrastructure finance: roads, power, marketplace, and telecom; and (v) investment in human development including that in nutrition, health, education, and vocational training.

- b) Agricultural and business development services: (i) productivity enhancement; (ii) risk mitigation, other than insurance (e.g., vaccination of livestock); (iii) local value addition; and (iv) alternate market linkages.
- c) Institutional development services: (i) forming and strengthening various producer organizations, such as self-help groups, water users' associations, forest protection committees, credit and commodity cooperatives, and panchayats, and (ii) establishing systems for accounting, performance measurement, incentives, etc.

Microcredit is a single intervention in the form of loans in small amounts and given in a certain period, which is relatively short, mostly individual loans that are not collective. However, the livelihood finance is more than just a loan, as it demands large amounts (it may need equity or risk funds and some public subsidies) over a long term (5–20 years) and is always collective (Mahajan, 2005). Thus, policymakers must pay attention to the increasing importance of impact studies to measure the accuracy of the benefits offered by financial service programs. Because of the diverse financial constraints faced by poor families, a cycle of innovation, experimentation, and evaluation must be carried out to build a strong financial institution that can overcome challenges and offer viable solutions to a range of conditions experienced by poor families (Sharma & Buchenrieder, 2002).

Obaidullah (2015), for instance, assessed Islamic agricultural finance for the rural poor in Indonesia, Pakistan, and Sudan. Each case study program had its uniqueness involving various institutional structures, modes, and mechanisms. He added that the credit mode and the profit-sharing system based on the uniqueness of Islamic finance could each succeed under certain conditions and circumstances. This implies that there is no generic platform suitable for all conditions of the rural poor. According to him, the solution is the most ideal when an integrated model with a combination of components based on philanthropy, non-profit, and profit is applied. To gain maximum results, other supporting factors are also important, such as community involvement, availability of safety nets, and non-financial support in numerous fields, such as increasing institutional capacity, business development, technology use, procurement, production, and, most importantly, marketing.

Additionally, the High-Level Panel of Experts on Food Security and Nutrition (HLPE) (2013) listed some points to improve access to financial services adapted to the needs of small family farms, including facilitating monetary transactions (e.g., mobile phone-based money transfer), even though it then appears as another challenge in Indonesia, where the government is still striving to provide a comprehensive telecommunication network across the country. Safe savings deposit scheme (with incentives to save), low-priced credit (e.g., joint-liability group lending), and insurance (e.g., index-based weather insurance) are integral to enhancing farmers' access to financial service. Novel solutions are being sought for reducing financial risks, lowering transaction costs, and facilitating long-term investments; on the other hand, it is important to ensure that liquidity constraints are relaxed not only on working capital expenditures (fertilizers and seeds), but also on medium- and long-term investments, which are supported by fair subsidy mechanisms.

CONCLUSION

There are some reasons why financial support of a microfinance program is needed to support small family farms and agricultural sectors in Indonesia. First, the agricultural sector in Indonesia plays a crucial role, especially in realizing national food security and providing wide employment opportunities and is a significant contributor to the national GDP. The agricultural sector had employed 40% of Indonesia's population and contributed more than

15% to GDP. Nevertheless, food security has been a lurking issue as many farming communities have begun venturing into other sectors as sources of livelihood. In particular, the interest of the youth appears to decline in the agricultural sector. The declining interest among youth toward farming in Indonesia stemmed from limited capital, apart from the deteriorating soil fertility, increasingly high prices of agricultural inputs (seeds, fertilizers, and pesticides), lack of skills, and fluctuation of crops' selling prices that is further exacerbated by the declining exchange rate. Second, based on the statistics, more than 27 million family farmers existed in Indonesia alone, with the total number of family members approaching 100 million. Of this total, 93% were composed of small family farms, with one in five of them in Indonesia being trapped below the poverty line. Despite being economically active, these poor families experienced extreme poverty and food insecurity. Thus, efforts to provide access to finance for small family farms are crucial, such as provision of microfinance, which demands a diverse approach and innovative products tailored to the conditions and needs of farmers. There is no one-size-fits-all platform suitable for all conditions of the rural poor. So, there is a need of a cycle of innovation, experimentation, and evaluation, involving multiple institutional structures, models, and mechanisms. To get a maximum result, other supporting factors are also important, such as community involvement, the availability of safety nets, and non-financial support in many fields, such as increasing institutional capacity, business development, technology utilization, procurement, production, and most importantly, marketing. Then, local interventions based on the value chain approach were the best and the latest microfinance practice then. To reduce agricultural inefficiency and improve performance of small family farms, policies are required to expand microcredit for marginalized and small family farms to ensure fair, timely, and low-cost loans. Such a move may enhance agricultural performance and farmer welfare, eradicate poverty, and, ultimately, increase food security. Finally, many researchers have mentioned the influence of culture and religion on human behavior. A microfinance program's borrowers are members of the community, an organized group of people who live in a culture that follows a specific behavioral pattern. When it comes to business and management, religion, and ethics (i.e., knowledge of the right and wrong, the right and wrong thing to do, the right and wrong thing to say, and the right and wrong thing to do for the environment) are expected to foster good behavior, good intentions, and trust, as well as a positive character. As Indonesia is the largest Muslim community in the world, an Islamic model of the financial support program with non-interest loans and profit sharing-based investment should be devised to help small family farms while integrating food security into the program.

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