

Islamic Financing to Improve Farmers' Welfare and Food Sustainability: A Literature Review

Eka Nurhalimatus Sifa

School of Business and Management – Institut Teknologi Bandung

Sudarso Kaderi Wiryono

School of Business and Management – Institut Teknologi Bandung

Taufik Faturohman*

School of Business and Management – Institut Teknologi Bandung

Mandra Lazuardi Kitri

School of Business and Management – Institut Teknologi Bandung

Atika Irawan

School of Business and Management – Institut Teknologi Bandung

Arson Aliludin

School of Business and Management – Institut Teknologi Bandung

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ABSTRACT

The agricultural sector plays a significant role in economic development in Indonesia. Therefore, due to its urgency, the goal is to achieve some pillar in the Sustainable Development Goals agenda. However, Indonesia faces enormous obstacles in achieving a substantial global plan. Financing is one of the most impactful factors in stimulating food sustainability development because it not only increases food production but also increases the farmers' incomes and improves their welfare. However, the existing financing scheme is less impactful to the farmers' welfare. Therefore, this study aims to review the Islamic financing schemes over the countries. Moreover, we identify future research relevant to a particular research question, topic area, or phenomenon of interest.

Keywords: Agriculture, Food Sustainability, Islamic Financing, Sustainable Development.

1. INTRODUCTION

The agricultural sector is a prominent issue for Indonesia. It was a primary food source for the entire population that will continuously increase as well as the global population increases. Due to its urgency, the integrated development agenda embedded it in the global agenda, namely Sustainable Developments Goals (SDGs). Particularly, our main focus is the second pillar of SDGs, namely zero hunger in 2030. However, Indonesia's condition is experiencing a big challenge to face food security due to four factors.

Firstly, Indonesia's Food Security Index shows a decreasing trend starting from 2014. (BKP, 2019). *Secondly*, food producers are dominated by small producers whose income is

less than half of the major producers (BPS, 2020). Most farmers live in a vicious circle of poverty since they rarely generate income above their consumption requirements to save and use for investment activities (Brehanu & Fufa, 2008). *Thirdly*, the declining of public investment in the agricultural sector as from 0.42 to 0.28, in 2001 to 2018 respectively. *Lastly*, it is also necessary to highlight the increase of food prices caused by supply disruptions due to weather, macroeconomic problems and regional conflicts

Therefore, in the current turbulent environment due to the pandemic, a transition mechanism is required to ensure that the intended Sustainable Development Goals (SDGs) are met to develop a more sustainable world and the long-term viability of human life. Morals and ethics must be implemented endogenously when the analysis is carried out in the framework of sustainable development. Each stakeholder has a responsibility to achieve the food sustainability as well as their need to consume for survival. Therefore, to enhance food sustainability, management could examine food industry sustainability issues from multiple perspectives, such as consumer, government, and business (Yamamoto et al., 2021). There are many attempts to do as well as the complex food system including the food production stage, processing stage, and marketing stage, all of which are linked to the main micro component – agricultural profitability (Tey et al., 2020). This study investigates financing support since it covers most of the whole process.

Agricultural credit is a significant component in farming activities since appropriate funding to farmers makes all farm activities possible and increases production (Udoka et al., 2016). However, the existing financings are mostly less affecting the farmer's welfare because of the following factors: the collateral obligation, the high-interest rate, the existence of middlemen that exploit a significant portion of farmers' income (Oladokun, 2016). In the end, most farmers live in a vicious circle of poverty. Therefore, the new alternative financing might increase farmers' welfare by increasing their income. In this study, we will investigate the alternative financing that has been implemented and proposed by scholars. Our study aims to discuss the alternative financing that did not involve those factors that became the main problems to the un-development agricultural sector, namely Islamic Financing in the Agricultural industry.

2. AGRICULTURAL FINANCING

Credit has a significant role in agriculture development (Zuberi, 1989). An abundance of the literature confirmed that the financial element has significantly positively affected agricultural economic growth and welfare (Belek & Jean-Marie, 2020; Olaniyi, 2017; Osabohien et al., 2020). Since farmers are hard to maintain the cash flow, they also hard to settle the operational farming cost such as buying seeds, fertilizer, labor charges, etc. In addition, the study from the Lahore University of Agriculture validates that cash purchasing of agricultural inputs will save up to 25 percent on expenses (Obaidullah, 2015).

In Nigeria, there is popular financing called Agricultural Credit Guarantee Scheme (ACGS) (Oladokun et al., 2015). The financing mechanism covers 75 percent of farmers' default payments. However, due to the discrepancy with the farmer's characteristics, this program was failed. There are two issues behind this failed. *Firstly*, it was involved interest rate. Udoka et al., (2016) confirm a negative association between interest rates and agricultural output. The imposition of interest rate reduces the farmers' motivation to produce more because the expected return does not justify their work. *Secondly*, It was the involvement of middlemen that exploit the income. Kaleem et al., (2009) reveal that middlemen are the primary financiers and buyers of crops in the rural economy. In fact, the middleman gets more profit with less effort compared to the farmer (Oladokun, 2016).

Based on above review, the existing agricultural financing was still hard facilitate poor farmers. The mechanism also less appropriate to farmers. Alternative financing that not involving such conventional categories is needed to achieve the prosperity of agricultural producers. The new financing model should be eliminating the interest rate. The alternative financing is also should cover the fairness of benefit and risk. Capital owners' exploitation of the economy has exacerbated the poor's situation, making the gap between the two parties more unavoidable (Utama & Suwarsi, 2019).

3. ISLAMIC AGRICULTURAL FINANCING

The existence of Islamic financing provides enormous optimism for the economic well-being of society. The principle of justice is central to Islamic finance, which forbids usury and other exploitative practices such as uncertainty (*gharar*), gambling (*maysir*), fraud, scale reduction, taking wealth with crime, and transactions on unlawful products. The Islamic economic moral is a fundamental disclosure for the establishment of an Islamic Financial Institution (IsFI). According to Leaman (2015), an IsFI is expected to be more than a commercial institution. It is paying attention to social responsibility and encourage returns based on profit and loss sharing to ensure justice for all parties (Nomani, 2021).

Based on the Sharia point of view, the financing schemes in a financial institution are classified into two forms, equity-based and debt-based financing. Equity-based financing implements the Profit and Loss Sharing (PLS) with their clients, while it is not involved in debt-based financing (Fianto et al., 2018). In agricultural funding, equity-based financing is mainly based on *Muzara'ah*, *Mudharabah* and *Musyarakah*. Then, debt-based financing consists of *Murabahah*, *Bai' Salam*, *Ijarah* and *Qard al Hasan*.

3.1 Equity-based Financing

Two classical that are commonly discussed in this form are *Mudharabah* and *Musyarakah*. The *Mudharabah*, also known as a trustee-partnership, is a type of finance in which an IsFI provides capital finance for an agri-business venture initiated by the farmer. The capital is owned by an IsFI known as *Rabb-al-Maal*, and the farmer known as *Mudharib* is in charge of the agri-management. Venture's profit is distributed by a predetermined ratio. The capital provider completely absorbs any losses, whereas *Mudharib* does not bear any losses except business and work (Obaidullah, 2015).

The second is *Musyarakah*, or joint venture, which is a partnership in which both the IsFI and the farmer contribute capital and entrepreneurship. It is an agreement in which the farmer and the IsFI agree to pool their financial resources and manage the venture according to the contract terms (Obaidullah, 2015). Profits are split in the agreed-upon ratio between the IsFI and the farmer. Losses are allocated in direct proportion to their respective capital contributions.

Another type of *Musyarakah* known as *diminishing Musyarakah* has great potential as a financing product for the IsFI. A classical *Musyarakah* seeks to include the IsFI as a permanent partner in the venture, while in a declining *Musyarakah*, the IsFI's equity share is reduced each year through partial capital return. Periodic profits are paid to the IsFI based on its reduced equity share that remains invested during the period. Over time, the farmer's share of the capital grows steadily, eventually resulting in complete ownership of the venture.

The last financing based on equity-based is the *Muzara'ah* scheme. It has been successfully implemented in Sudanese Islamic banks and raised the agricultural sector contribution in the nineties (Mohsin, 2005). *Muzara'ah* is basically the share-cropping

agreement between landowners and cultivators. This type of financing exists as a community tradition rather than a formal institution. Susanti et al., (2021) documents this financing implementation in Probolinggo, Indonesia. The scheme is when landowners hand over the capital of land and seed to cultivators to be managed, while cultivators are responsible for managing the land. When the harvest time comes, the result is divided into two parties. If the cost of seeds and other materials has not been deducted from the business results, the profit-sharing ratio that can be used is 1/3 (one-third) for cultivators and 2/3 (two-thirds) for landowners. If other costs are taken into account, the distribution ratio is 1/2:1/2.

3.2 Debt-based Financing

Moving to debt-based financing, there are *Salam* scheme. Waluyo et al., (2019) suggest that *Salam* as the suitable financing based on Sharia overview since it has been implemented in Indonesia. According to Sharia Statement of Financial Accounting Standards Number 103, *Salam* is a contract of sale and purchase of goods' order with delivery on later days by the seller while the payment made by the buyer is done in advance upon under certain conditions. Kaleem and Ahmad (2010) conclude that the contract benefits both parties because the seller receives the money in advance, and the buyer typically pays the price at a lower rate.

Salam contract was very popular in Pakistan's agricultural financing products (Kaleem & Wajid, 2009). Moreover, Utama & Suwarsi et al., (2019) claims that *Salam* is more appropriate than *murabahah*, the most common financing product used nowadays since its payments are fitted to agricultural sector cash flow. However, Since 2002, *Salam* contract in Islamic banking has not existed at all (Widiana & Annisa, 2018). Hudaifah et al., (2019) confirm that its implementation's main problem is the distinction of business cycle between financial institutions and farmers. In addition, Ningsih et al., (2016) add some causes of non-implemented *salam* in Islamic Banking in Indonesia, such as the risk of banks' fear of dishonesty or farmers' harvest failure and the lack of socialization.

Another sale or lease-based financing stands for *Bai Muajjal*. It is a sale in which payment is postponed on future dates. This scheme often includes *Murabahah* patterns, implying a sale on a cost-plus basis. The mechanism is when farmers need to buy farming equipment. Then, the farmer applies to the Islamic Financial Institution (IsFI). Therefore, IsFI buys to the supplier at the P price and marks the price to the farmer, P+M, where M is the nominal mark-up.

This Islamic credit product is closely similar to conventional interest-based credit. However, there is a clear distinction between these two credits. The amount of debt created by *Bai Muajjal* is the price of the underlying commodity which is fixed and constant at the time of contracting even if the maturity of the product is extended later. However, in conventional credit products, the amount of debt increases as maturity approaches, compounded at the interest rate, as in the case of loan restructuring (Obaidullah, 2015). *Bai Muajjal* may not be appropriate for financing all types of farming activities, such as vegetable growing, fishing, and other agri-based activities. While *Bai Muajjal* can be used to finance the purchase of saplings, fertilizer, fishing nets, and so on, in practice, farmers would need funding for the physical asset(s) involved and working capital.

Apart from the above mentions, Saqib et al., (2015) argue *Qard al Hasan* (QH) as another alternative Islamic agricultural financing. QH is a voluntary loan to one party without any excess or any return on the principal. This contract requires the lender not to obtain any interest payments in excess of the advanced loan's principal amount and take any gift from borrowers (shawkani, 2001). When an excess is not the result of a contractual obligation, or when there is no conventional rule in this regard, the debtor might offer a

portion of his own free will to the creditor as Hibah (gift), as permitted by Islamic commercial law (Hazm, 2008).

4. CONCLUSION AND RECOMMENDATION

In this study, we investigate some Islamic financing models that have been proposed by scholars and implemented over the countries. Saqib et al., (2015) report that Riba-free financing is essentially needed by poor farmers who care about the prohibition of *Riba*. According to the literature review regarding Islamic Financing, we briefly examine the existing Islamic financing and recommend future research on this field.

No	Scheme	Explanation	Supporting Author	Restriction/Critics
1	<i>Muzara'ah</i>	Share-cropping agreement between landowners and cultivators	(Mohsin, 2005) (Hakimi, 2011a) (Hakimi, 2011b)	The financial institution is not a landowner. Therefore, the possibility for the bank to be a landlord is the bank could first buy the land using other principles like <i>Ijarah Muntahiyah Bit Tamlik</i> , <i>Murabahah</i> and <i>salam</i> (Hakimi, 2011a)
2	<i>Mudharabah</i>	A partnership in which two parties contribute as financier and fund manager	(Az-Zuhaili, 2011) (Hakimi, 2011a) (Hakimi, 2011b)	Since the collateral is one of the incompatible factor for farmers (Hassan et al., 2012), taking a <i>Mudharabah</i> financing contract from Islamic banking is still uneasy
3	<i>Musyarakah</i>	A partnership in which both the IsFI and the farmer contribute capital and entrepreneurship	(Obaidullah, 2015)	There is rarely for two parties having both land and capital at once
4	<i>Bai Muajjal/Murabahah</i>	A sale in which payment of the purchase is postponed until a later date	(Obaidullah, 2015)	<i>Bai Muajjal</i> only provides a partial solution (Obaidullah, 2015)
	<i>Qard al Hasan</i>	Voluntary loan to one party without any excess or any return on the principal	(Saqib et al., 2015)	The IsFI may not be interested since this model is more social-oriented than business goals. We argue that QH is more suitable for implementing

				in philanthropy institutions.
5	<i>Salam</i>	Sale and purchase of the agricultural product with payment in advance and delivery on later days	(Kaleem & Ahmad, 2010; Kaleem & Wajid, 2009; Utama & Suwarsi, 2019; Waluyo & Rozza, 2020)	The distinction of the business cycle between financial institutions and farmers (Hudaifah et al., 2019)

Based on our investigation, we recommend additional research that focuses on developing a detailed practical model *salam*. Ehsan and Shahzad (2015) confirm that *Salam* contract is the most suitable Islamic banking product for agricultural sectors compared to other products. Although *salam* has a different cycle between financial institutions and agriculture business processes, some Microcredit Financial Institutions have applied a similar *salam* scheme. Therefore, it needs further investigation to find the best mechanism that benefits both equity providers and farmers. In Indonesia, some microcredit financing institutions are engaged in the agricultural sector field. However, there is no empirical literature concluding the loss-sharing in agricultural financing. The interview or focus group discussion is needed to support and confirm the appropriate scheme.

We also recommend implementing Islamic financing by Micro Credit Institution such as Peer to Peer (P2P) Lending. It accommodates the un-bankable group, in which most farmers are categorized. Micro Credit Institution may facilitate borrowers who may not have access to banks with lower rates of return and more affordable financing. Therefore, it is a strategic way to intermediate the barriers of financing.

To conclude, financing support is the primary support needed by a farmer. The primary goal of development is the community's welfare, therefore it is very relevant to examine the impact of development carried out on the welfare of farmers. Welfare can be achieved by increasing agricultural production, leading to reducing poverty, improving food security, and playing a vital role in other development.

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REFERENCES

- [1] Belek, A., & Jean-Marie, A. N. (2020). Microfinance services and the productivity of cocoa family farms in Cameroon. *Journal of Agribusiness in Developing and Emerging Economies*, 10(5), 557–571. <https://doi.org/10.1108/JADEE-12-2018-0186>
- [2] BPS. (2020). Indonesia's Macro Poverty Calculation and Analysis. In *Badan Pusat Statistik* (Vol. 3205022). <https://www.bps.go.id>

- [3] Brehanu, A., & Fufa, B. (2008). Repayment rate of loans from semi-formal financial institutions among small-scale farmers in Ethiopia: Two-limit Tobit analysis. *Journal of Socio-Economics*, 37(6), 2221–2230. <https://doi.org/10.1016/j.socec.2008.02.003>
- [4] Ehsan, A., & Shahzad, M. A. (2015). Bay Salam: A Proposed Model for Shari'ah Compliant Agriculture Financing. *Business & Economic Review*, 7(1), 67–80. <https://doi.org/10.22547/ber/7.1.4>
- [5] Fianto, B. A., Gan, C., Hu, B., & Roudaki, J. (2018). Equity financing and debt-based financing: Evidence from Islamic microfinance institutions in Indonesia. *Pacific Basin Finance Journal*, 52(August 2016), 163–172. <https://doi.org/10.1016/j.pacfin.2017.09.010>
- [6] Hakimi, M. (2011a). Crafting the Agricultural Product and Loss Sharing in the Place of the PLS for Islamic Agricultural Finance. *Kyoto Working Papers, G-COE Seri*(116).
- [7] Hakimi, M. (2011b). Theory of “Sharecropping” from an Islamic Economic Perspective : A Study al-Muzāra'a & al-Musāqāt. In *Kyoto Bulletin of Islamic Area Studies* (Vol. 2, Issue March, pp. 190–209).
- [8] Hassan, M. T., Sattar, M. A., Tousif, M. A., Nasir, N., Sadiq, M., & Yasmeen, M. (2012). *Role of Islamic Banking in Agriculture Development in*. 2(3), 123–138. <https://doi.org/10.5296/ijld.v2i3.1817>
- [9] Hudaifah, A., Tutuko, B., & Tjiptohadi, S. (2019). the Implementation of Salam-Contract for Agriculture Financing Through Islamic-Corporate Social Responsibility (Case Study of Paddy Farmers in Tuban Regency Indonesia). *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah*, 11(2), 223–246. <https://doi.org/10.15408/aiq.v11i2.10933>
- [10] Kaleem, A., Abdul, R., Kaleem, A., & Wajid, R. A. (2009). *Application of Islamic banking instrument (Bai Salam) for agriculture financing in Pakistan*. <https://doi.org/10.1108/00070700910941471>
- [11] Kaleem, A., & Ahmad, S. (2010). Bankers perception towards Bai Salam method for agriculture financing in Pakistan. *Journal of Financial Services Marketing*, 15(3), 215–227. <https://doi.org/10.1057/fsm.2010.18>
- [12] Kaleem, A., & Wajid, R. A. (2009). Application of Islamic banking instrument (Bai Salam) for agriculture financing in Pakistan. *British Food Journal*, 111(3), 275–292. <https://doi.org/10.1108/00070700910941471>
- [13] Mohsin, M. I. A. (2005). *The Practice of Islamic Banking System in Sudan*. 4, 27–50.
- [14] Ningsih, W. F., & Wardayati, S. M. (2016). Modification Finance of Salam and the Implications for Salam Accounting Treatment in Indonesia. *Procedia - Social and Behavioral Sciences*, 219, 528–533. <https://doi.org/10.1016/j.sbspro.2016.05.030>
- [15] Nomani, A. (2021). *Analysis of Islamic Finance as an Alternative Method for Agricultural Analysis of Islamic Finance as an Alternative Method for Agricultural Financing*. October.
- [16] Obaidullah, M. (2015). Enhancing food security with Islamic microfinance: insights from some recent experiments. *Agricultural Finance Review*, Vol. 75 Is, 142–168.
- [17] Oladokun, N. O., Larbani, M., & Mohammed, M. O. (2015). The problems facing the agricultural sector in Nigeria and the prospect of Muzara'ah and supply chain model. *Humanomics*, 31(3), 354–371.

- [18] Olaniyi, E. (2017). Back to the land: The impact of financial inclusion on agriculture in Nigeria. *Iranian Economic Review*, 21(4), 885–903.
<https://doi.org/10.22059/ier.2017.64086>
- [19] Osabohien, R., Adeleye, N., & Tyrone, D. A. (2020). Agro-financing and food production in Nigeria. *Heliyon*, 6(5), e04001.
<https://doi.org/10.1016/j.heliyon.2020.e04001>
- [20] Saqib, L., Zafar, M. A., Khan, K., Roberts, K. W., & Zafar, A. M. (2015). Local agricultural financing and Islamic banks: is Qard-al-Hassan a possible solution? *Journal of Islamic Accounting and Business Research*, Vol 5 No 1, 122–147.
- [21] Susanti, D. O. (2021). *The Profit-Sharing System Between Landowners and Cultivators of Tobacco : Islamic Economic Law Perspective*. 43(2), 110–122.
<https://doi.org/10.30595/islamadina.v0i0.1528>.Jurnal
- [22] Tey, Y. S., Ibragimov, A., Brindal, M., Sidique, S. F., Abduraupov, R., & Makhmudov, M. (2020). Moving smallholders up rice value chain: a system dynamics approach. *British Food Journal*, 122(3), 852–869. <https://doi.org/10.1108/BFJ-08-2019-0632>
- [23] Udoka, C. O., Mbat, P. D. O., & Duke, S. B. (2016). *The Effect of Commercial Banks' Credit on Agricultural Production in Nigeria*. 4(1), 1–10. <https://doi.org/10.12691/jfa-4-1-1>
- [24] Utama, S., & Suwarsi, A. A. (2019). *Case Study of Indonesian Agriculture Sector*. 261–269.
- [25] Waluyo, B., & Rozza, S. (2020). *A Model for Minimizing Problems in Salam Financing at Islamic Banks in Indonesia*. 10(2), 1–7.
- [26] Widiana, W., & Annisa, A. A. (2018). Menilik Urgensi Penerapan Pembiayaan Akad Salam pada Bidang Pertanian di Lembaga Keuangan Syariah di Indonesia. *Muqtasid: Jurnal Ekonomi Dan Perbankan Syariah*, 8(2), 88.
<https://doi.org/10.18326/muqtasid.v8i2.88-101>
- [27] Yamamoto, K. N., Nemetz, A. M., & Lloyd, R. A. (2021). An Empirical Examination of Formal and Informal Institutional Factors' Influence on Global Food Industry Sustainability Engagement. *Review of Integrative Business and Economics Research*, 10(4), 18–38. <https://ezp.lib.cam.ac.uk/login?url=https://www.proquest.com/scholarly-journals/empirical-examination-formal-informal/docview/2471818515/se-2?accountid=9851%0Ahttps://libkey.io/libraries/603/openurl?genre=article&au=Yamamoto%2C+Katherine+N%3BNemetz%2C+Ann>
- [28] Zuberi, H. A. (1989). Production function, institutional credit and agricultural development in Pakistan. *Pakistan Development Review*, 28, 43–56.