

Chapter 8

Agricultural Finance Towards Food Security in Saudi Arabia



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Abstract Achieving food security is the main target that all countries strive to realize. The provision of finance for agricultural projects and activities is the key factor for sustaining food security. For Saudi Arabia, the Kingdom has prioritized food security in its Vision 2030. This chapter aimed to shed light on the role played by agricultural finance in achieving food security in the Kingdom of Saudi Arabia (KSA). It also sheds light on the Agricultural Development Fund (ADF): general requirements for accepting applications for credit services, lending terms, credit services, and others. It is evidence that KSA has realized the importance of agricultural finance in sustaining food security thus establishing the ADF. It has also assigned the role of sustaining KSA food security to the Ministry of Environment, Water and Agriculture (MEWA) represented by the General Food Security Authority (GFSA). The ADF is playing a crucial role in sustaining food security in KSA through liaising with MEWA and the National Development Fund in the provision of support, credit, and consultancy to agricultural investors (investing locally and/or abroad) and importers. The annual values of ADF's loans distributed to beneficiaries are increasing over time by 13.7 million US Dollars/annum. It is clear that the ADF has contributed effectively to enable the Kingdom to achieve its current situation of food security, which can be called stable and food secure.

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1 Introduction

The world is witnessing major challenges in how to meet the growing food demand for the rapidly increasing world population, which according to the UN (2017) is forecasted to reach 11.2 billion people by 2100. Thus, to meet the global demand for food, agricultural production must be substantially increased. This could be done by improving land and labor productivity, along with access to finance and agricultural inputs. There is also an urgent need to develop appropriate measures and supportive policies that might lead to a significant increase in agricultural investment. Moreover, investing in smart agricultural technologies and practices to enable farmers in improving their production is also critical in addressing malnutrition and poor farmers' incomes. Thus, the provision of support and appropriate finance is fundamental in applying innovations and encouraging investment, which in turn improves food production and sustains food security.

Saudi Arabia has given special attention to food security in Vision 2030. It also assigned the role of the supervision and follow-up of achieving food security in the Kingdom to the Ministry of Environment, Water and Agriculture, represented by the General Food Security Authority (GFSA). In the same vein, it established the Agricultural Development Fund (ADF) for the purpose of the provision of funds, support, and consultancy in the field of agricultural investment. The ADF liaises with MEWA and related institutions in achieving food security in the Kingdom. In this regard, it is worth noting that, the contribution of the agricultural sector to the Kingdom's GDP during the past 57 years was 392.8 billion US Dollars, whereas, the contribution of ADF to the GDP and the agricultural GDP of the kingdom was 35.47 billion US Dollars, and 9%, respectively (ADF 2020b).

Based on the substantial role played by agricultural finance in improving farmers' income and agricultural productivity, the objective of this chapter is to highlight the important role played by agricultural finance on food security in the Kingdom of Saudi Arabia (KSA). It provides an overview of the basic concepts of both agricultural finance and food security, the role of agricultural finance in sustaining food security in KSA, the Agricultural Development Funds, and food security, and finally draws conclusions and outlines prospects.

2 Concept of Food Security

Food security is defined according to the World Food Summit in 1996 as a situation that "exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food

preferences for an active and healthy life” (FAO 1996). The state of food security is determined through the interaction of different factors ranging from political, social, economic, and agricultural to health factors. In fact, food security has four distinct, but interrelated dimensions that must be fulfilled simultaneously: physical availability of food, economic and physical access to food, food utilization, and stability (Ahmed et al. 2023). Physical Availability of Food addresses the “supply side” of food security and is determined by the level of food production, levels of stock, and net trade (Brown et al. 2015). Economic and Physical Access to Food refers to an adequate supply of food at the national or international level but does not guarantee household-level food security. Concerns about lack of access to food have led to increased policy attention on income, spending, markets, and prices in attaining food security goals.

Food Utilization refers to how the body uses the food. Adequate food intake is the result of good care and feeding practices, food preparation, diet diversity, and food distribution within the household along with good biological use of the food consumed, and this governs the nutritional status of individuals. Whereas, food Stability refers to the sustainability of all food security dimensions over time. Even if individuals eat enough food today, they are still considered food insecure because they might not have sufficient access to food periodically. It is worth noting that bad climate situations, political instability, or economic factors have a significant impact on food security conditions.

On the other hand, food insecurity is defined as “a situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life” (FAO 1996). Food insecurity can be divided into two types depending on the period of insecurity: Chronic food insecurity and transitory food insecurity (FAO 2008). Chronic food insecurity is a long-run or persistent phenomenon that occurs when individuals are incapable of satisfying their least possible food needs for a prolonged time, due to prolonged exposure to poverty, lack of assets, and insufficient access to productive or financial resources. It can be addressed with long-term development measures, such as education or facilitating access to production inputs through facilitating credit. Whereas, Transitory Food Insecurity: refers to temporary, short-term events resulting from a sudden decrease in the individual’s ability to produce or obtain adequate food to maintain their nutritional status, due to short-term shocks and fluctuations in food availability and access, including year-to-year changes in food production and prices, and family income (FAO 2008). Addressing the problem of transitory food insecurity requires intervention through an early warning system and safety net program. There is also seasonal food security. Seasonal food security: is the situation that happens when an individual falls between the two types of food insecurity: chronic and transitory. It is usually expectable and follows a series of recognized events (limited duration). It happens due to the presence of a cyclical pattern of insufficient food availability and accessibility coupled with seasonal variations in weather conditions, cropping patterns, job opportunities, and disease. On the other hand, the term vulnerability refers to the likelihood of a sharp decline in food access, or consumption, concerning a specified value that determines the least possible levels of food required by human

well-being (FAO 2008). Accordingly, vulnerability is the summation of two things: exposure to risk and risk management. Risk exposure is the “probability of an event or shock”, if it happened, would inversely affect the household such as drought, floods, and others. On the other hand, risk management refers to the capability of a household to mitigate the consequence of possible shocks. It can be accomplished through the adoption of different coping strategies.

The world has made great efforts to eradicate poverty and address global food insecurity, however, the number of undernourished people around the world started to increase slowly in 2015 after long periods of decline. Statistics showed that in 2020, there are 3.1 billion people in the world who may not have access to safe and healthy food. Moreover, the number of people affected by hunger in the world is expected to exceed 670 million by 2030 (FAO et al. 2022).

3 Concept of Agricultural Finance

It is essential to shed light on some financial terms before proceeding forwards. Borrowing: is defined as the use of something belonging to others with the intent of returning it back, with or without cost, and in an agreed-upon manner. It is also considered the transfer of control over resources from the lender to the borrower according to certain conditions. Whereas a loan is defined as the sum of money that the borrowers should pay back with interest. It also refers to the act of lending something to someone. In the case of money: the lender is the owner of the money whereas the borrower is the investor given that the borrower undertakes to return the money in the future.

Credit and Debt: the two words have to do with owing money, yet are not the same. Debt is money that investors owe, whereas credit is the money the investor can borrow. That is, credit is synonymous with borrowing or crediting. Thus, investors can form debt through credit (borrowing money). However, agricultural finance is defined as the provision of the necessary money for investment in the agricultural sector (e.g. agricultural production and reproduction including activities such as storage, transport, sales, and marketing), regardless of its source (self or borrowing), so agricultural finance is more comprehensive than borrowing.

Agricultural loans are used as a means to advance agricultural development, improve net income and raise the farmers' standard of living by providing or achieving the following:

- (a) Increase capital formation in the agricultural sector.
- (b) Maintain an appropriate size of agricultural activity (to take advantage of economies of scale).
- (c) Increase production efficiency (such as the owner obtaining modern machines - purchasing fertilizers and improved seeds).
- (d) Increase the ability to cope with the changing economic conditions (such as replacing means of production to keep pace with technical developments).

- (e) Confront seasonal fluctuations in income and expenditure.
- (f) Protect from unforeseen (favorable) natural conditions.
- (g) Enable ownership.

4 Agricultural Finance and Food Security

Agricultural finance is considered among the main factors that affect agricultural development and food security in any country. It plays a critical role in both the supply (food availability) and demand side (food accessibility) of food security. It affects the food availability (production) pillar of food security through the provision of the right quantity and quality of input, enhancement of agricultural operation and harvest, in addition to facilitating the marketing of agricultural output. Whereas, it directly affects food accessibility through the provision of funds and indirectly through the income generated from the invested loans. Moreover, Asghar and Salman (2018) mentioned that removing the constraints facing the provision of agricultural finance improves agricultural production, and in turn, decreases food insecurity levels by ensuring the availability of food for all. However, it is worth noting that most of the farmers living in the rural areas of the developing countries are poor, and in desperate need of credit to carry out their agricultural activities. Moreover, they are not able to purchase the right inputs in terms of quantity and quality, consequently, their productivity remains low (Sheik and Abbas 2007). According to Islam (2020), the provision of formal agricultural credit helps small-scale poor farmers to obtain agricultural inputs at the right time and place, thus increasing food production and improving the livelihoods of poor farmers. He also argued the presence of both short and long-run relationships between agricultural credit and agricultural productivity and stresses the importance of increasing the provision of agricultural credit on improving agricultural production, which in turn nurtures economic growth in Bangladesh.

The type and severity of risks that farmers face vary across their agricultural systems, their physical and economic conditions, and the prevailing state policy (Klein et al. 1999).

The techniques of microfinance applied in urban areas of developing countries can provide good models for agricultural lending operations in rural areas. Problems involving high risks and costs limit agricultural production and financing (Klein et al. 1999). Furthermore, Onyiriuba et al. (2020) Stresses on the importance of using financing policies to improve agricultural production and ensure food security. These policies should also be accompanied by complementary measures to address risk aversion tendencies among lenders, weak credit guarantees, subsidies, and budget allocations to agriculture. Additionally, the importance of ensuring the effective commitment of lenders to direct financing towards agriculture and agricultural insurance support is also essential. Of course, the success of these policies requires strong links to the agricultural credit access and monitoring chain.

These policies should also be directed toward rural development targets target youth, women, and smallholder farmers.

Generally, financial institutions are usually confronted with different types of risks, the most important of which are: credit or loan default risk, liquidity risk, interest rate risk, and foreign exchange risk (Klein et al. 1999). These risks have a significant impact on farmers' borrowing and the financial institutions that provide them with loans. However, good management can play a major role in reducing these risks. It is worth noting that risks and uncertainties affect agricultural production more than most other activities. The unpredictability of how much losses are associated with production could have a significant negative impact on farmers' incomes and their ability to repay their loans. On the other hand, (Lin et al 2022) confirmed the presence of a statistically significant positive effect of inclusive digital financing on food security in the marketing areas of the main grain of China, in addition to the balanced production and marketing areas. They also found a non-statistically significant effect of inclusive digital financing on food security in the main grain production areas.

5 Agricultural Development Fund and Food Security in KSA

Several years ago, the ADF launched seven initiatives to address the challenges facing the agricultural sector and to ensure sustainable food security in the Kingdom, namely (ADF 2019):

- (a) Agricultural Information Center (Manar) initiative,
- (b) Rationalization of water use in agricultural crops (except for wheat and green fodder),
- (c) Develop handling and marketing of agricultural crops methods (vegetables and fruits). In addition to initiatives of:
- (d) Raise the efficiency of the poultry sector,
- (e) Development of palm and dates sector,
- (f) Improvement of sheep breeding and initiative, and
- (g) Development of the fisheries sector.

However, in 2020 the ADF initiated three initiatives, worth 988.8 million US Dollars to overcome the negative effects of COVID-19. The first initiative deals with the postponement of due loan installments: the total amount of funds allocated for the initiative are 40 million US Dollars, and the total beneficiaries were 4398. The second initiative is the encouragement of small and medium-scale enterprises (direct and indirect loans): here 243.47 million US Dollars were allocated for this initiative. The third one is the initiative of financing the import of targeted agricultural products in the food security strategy: here 480 million US Dollars were assigned as bank guarantees for importing crops like rice, soybeans, corn, red meat, soybeans, and sugar. (ADF 2020a). Before the virus outbreak, the ADF's budget had already

risen about 60% from a year earlier, including allocating 0.27 billion US Dollars for overseas investment. It is worth noting that food security is one of the main goals of KSA Vision 2030 that ADF liaises with MEWA, the National Development Fund, and other related institutions to achieve. The overseas funding offers low-interest loans for companies, which cultivate crops like alfalfa, wheat, barley, sugar, rice, and corn and send at least half of their output to Saudi Arabia. Increasing home production of fruit and vegetables is one of the Kingdom’s top priorities. Accordingly, the ADF offers loans that cover a larger share of capital investments for hydroponics and technology that uses 90% less water than traditional farming methods (ADF 2021).

The actual ADF distributed loans have increased steadily over time, it increased from 244.37 million US Dollars in 2011 to 361.52 million US Dollars in 2015, and however, it dropped to 164.67 million US Dollars in 2017 and then increased again to reach 474.56 million US Dollars in 2020. It is also clear from the trend line of the distributed loans for the period 2011–2020 ($Y = 13.675X + 211.58$, where y = actual distributed amount of loans and X = years), that the amount of distributed loans increased steadily over time with 13.675 million US Dollars/year (Fig. 1). However, the number of borrowers showed a fluctuating trend over time. It increased from 3,923 as an average for the period 2011–2015 to 4524 in 2017 then decreased to 2905 in 2019 and increased to 3,999 borrowers in 2020 (Table 1).

It is worth noting that, the total number of approved loans since the start of the ADF’s activity until the end of the fiscal year 2021 was 467,949 and the total approved value was 14.67 billion US Dollars (ADF 2021). Out of which, 4.53 billion US Dollars was distributed to 5395 specialized agricultural projects. The poultry sector (broilers, laying eggs, hatchers, grandmothers, automated slaughterhouses) occupied the first position with 1370 numbers of loans representing 26% of the total number of specialized agricultural projects and more than 1.6 billion US Dollars representing (32%) of the total value of loans provided for them (ADF 2021). Moreover, greenhouse

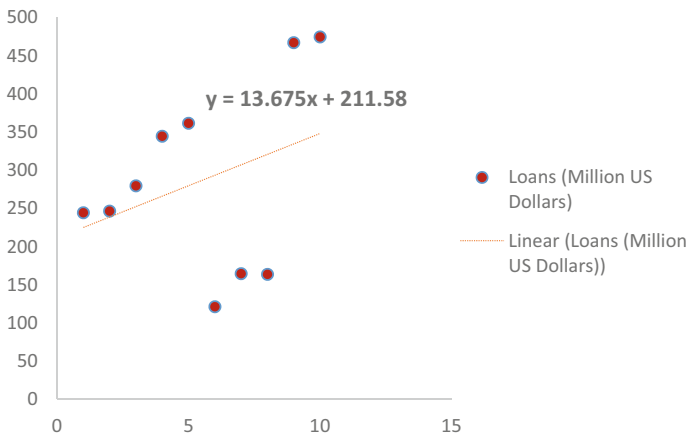


Fig. 1 Saudi Agricultural Development Fund: Amount of lending loans (Million US Dollars) and numbers of beneficiaries for the period 2011–2020. *Source* ADF (2020a)

Table 1 Saudi agricultural development fund: numbers of beneficiaries (loan receivers) for the period 2011–2020

Years	Beneficiaries numbers
Average 2011–2015	3923
2016	3590
2017	4524
2018	4671
2019	2905
2020	3999

Source ADF (2020a)

projects in the vegetable sector, received loans number 464, representing (8.6%) of the number of loans approved for agricultural projects, with an estimated total value of about 0.75 billion US Dollars, representing (16%). In addition to dairy production, fish and shrimp farming, as well as date factories, refrigeration warehouses, and other specialized agricultural projects (ADF 2021).

Thirteen initiatives of ADF have been identified within the updated strategy of ADF (2021–2025). Seven of them are external initiatives, and six are internal ones. Details of their charters and objectives are as follows (ADF 2021):

- (a) Provision of support to the local agricultural sector: this initiative will contribute to supporting local agricultural production following the directives of The National Agricultural Strategy. The objectives of this initiative are increasing the fund allocated to aquaculture, poultry production, and greenhouse to 364.67 million, 533.33 million, and 320 million US Dollars, respectively. However, only 21% were achieved by the end of 2021.
- (b) Supporting the Sustainable Agricultural Rural Development Program: this initiative will contribute to the promotion of rural development by benefiting from comparative advantage. It provides financing credit services under the directives of and the initiatives of the Sustainable Agricultural Rural Development Program. The objectives of this initiative are to increase the fund allotted to development credits to 800 million US Dollars, however, only 11% were achieved.
- (c) Support expansion across supply chains: Providing credit services to support agricultural input projects, transportation, handling, storage, processing and primary manufacturing, marketing, and distribution (especially marketing and exporting of dates). Raising loans to 30% of gross credit, yet only 13% were realized.
- (d) Supporting agricultural investment abroad: this initiative will contribute to enhancing food security through the provision of financing credit services, in accordance with the directives and initiatives of the investment strategy responsible for abroad agricultural investment. The initiative aims to raise the fund allotted for abroad agricultural investment to 1466.67 million US Dollars, yet only 11% were attained.

- (e) Encouraging the use of modern technologies, especially irrigation techniques: this initiative will provide finance to stimulate the use of modern technologies, especially irrigation techniques (in coordination with the General Irrigation Corporation and other concerned parties), in addition to, contributing to preserving natural resources and improving productivity. The objective of this initiative is to raise the fund allocated to the usage of modern technology to 756.27 million US Dollars, whereas, only 20% were attained.
- (f) Developing a portfolio of services and activating partnerships: this initiative is concerned with the Development of credit products through cooperation with cooperative associations, partnerships with commercial banks, and activation of consultancy services through the approval of specialized companies. The objectives of this strategy are establishing a post of consulting and development and activation of services, establishing the post of partnerships, and activating partnerships. In addition to, activating new financing products in the agricultural sector. Yet, only 33% were realized.
- (g) Develop customer-targeting methods and improve marketing effectiveness: the concern of this initiative is the development and implementation of the marketing plans and managing customer relations based on the proactive approach and collaboration with partners, use of digital channels to improve customer experience, and enhance operational effectiveness. The objectives of this initiative are to develop and implement a marketing strategy, develop and implement a digital customer experience strategy, and reach the level of 90% of customer satisfaction. It is worth noting that the achievement level is 50%. In addition to the other six initiatives that deal with the internal environment of the ADF.

Evidence showed that Saudi Arabia has reached a sustainable level of food security. It is also clear that KSA depends on three sources for sustaining its food security: local production, investment abroad, and imports. Pertaining the agricultural production, it shows a steady increase over time. For instance, fish production has increased from 30 thousand tons in 2015 to 110 thousand tons in 2021 (MEWA 2021). Likewise, self-satisfaction from poultry, table eggs, dairy, and red meat has increased from 40%, 110%, 100%, and 25% in 2015 to 66%, 112%, 121%, and 43% in 2021, respectively (MEWA 2021).

5.1 About Agricultural Development Fund

The Saudi Arabian Agricultural Bank was established according to Royal Decree No. 58 dated 27 April 1963 as a governmental credit institution specialized in financing agricultural activity in the Kingdom to develop the agricultural sector through providing interest-free soft loans to farmers (ADF 2023a). On 26 January 2009, the Council of Ministers, after considering Shura (Senate) Council Resolution No. (106/71) dated 12/2/2008, approved the Agricultural Development Fund (ADF) regulations in the form attached to the resolution. Among the most prominent features

of the regulations is that ADF replaces the Saudi Arabian Agricultural Bank, which has a capital of 5.33 billion US Dollars (ADF 2023a). It is noteworthy to mention here that, the ADF capital can be increased taking into account water conservation, the rationalization of its agricultural uses, and the preservation of the environment, however, it is subjected to the Council of Ministers approval. The ADF aims to support agricultural development and its sustainability by providing soft loans and the necessary credit facilities (ADF 2023a).

5.2 ADF Vision and Mission

The ADF vision is “A leading fund that offers best-in-class sustainable financing solutions to promote the realization of the National Agriculture Strategy”. Whereas, its objectives are “Contribute to enhancing food security while preserving natural resources; Contribute to economic growth and promote sustainable agricultural rural development by building on regional comparative advantages; Provide best-in-class financing solutions and services by leveraging strategic partnerships; and Enhance financial sustainability, develop employee capabilities and achieve operational excellence within an established risk management framework (ADF 2023b; ADF 2021).

5.3 ADF Credit Services

ADF classifies loans into four types: development loans, specialized projects loans, regular operating loans, and operating loans for specialized projects (ADF 2023c). Development loans are long-term agricultural loans that are granted directly to farmers to be used in the field of growing crops (fruit farms, apiaries), fishing boats, agricultural tourism, veterinary clinics and pharmacies, and vegetable carts (ADF 2023c). Specialized project loans are long-term credit granted directly to specialized projects for establishing new projects, expansion of existing ones, or rehabilitation of specialized projects. Obtaining this service requires an economic feasibility study and a license from the Ministry of Environment, Water and Agriculture. The repayment period is determined for specialized projects, based on cash flows, project studies, and credit analysis (ADF 2023c). Whereas, regular operating loans are short-term loans that are granted as direct loans for small enterprises to cover operating costs for one production cycle, and whose repayment period does not exceed one year. On the other hand, operating loans for specialized projects (agricultural products and projects) is one of the important services provided by the ADF, through which it provides an opportunity for the farmers to obtain a direct loan to finance working capital. It is a short-term credit service that covers the operating costs for one production cycle, the repayment period of which does not exceed two years (ADF 2023c).

5.4 Handling Troubled Projects Program

The idea of this program is based on the reoperation of troubled projects in cooperation with both the Ministry of Environment, Water and Agriculture and investors who wish to invest in these projects (ADF 2023d).

5.4.1 Program Objectives

The objectives of handling the trouble project program are as follows (ADF 2023d):

- (a) Treating the loans of troubled projects by offering those projects to new investors.
- (b) Providing opportunities for new investors wishing to invest in the agricultural field.
- (c) Restarting the troubled projects owned by ADF's borrowers.
- (d) Contribute to the increment of the product in the local markets and reduce the supply and demand gap.
- (e) Contribute to the development of the areas surrounding the establishment projects.

5.4.2 Possible Treatments for the Troubled Project According to the Status of Each Case

Generally, there are four types of project failures: financial, marketing, administrative, and technical (ADF 2023d). The possible treatments for the troubled project according to ADF (2023d) are rehabilitating the project, refinancing the project, scheduling installments of the defaulted debt, transferring the indebtedness to a new investor, leasing the project to an investor who wishes to invest without transferring ownership. In addition, entering the defaulter into a partnership with a new investor, and coordinating with the MEWA with regard to licenses such as changing the activity, and renewing the license.

5.5 The ADF Privacy Lending Policy

This policy was developed to show how the Agricultural Development Fund collects, uses, and protects personal information provided by the borrower, based on the ADF's commitment to protecting the privacy of its customers and its keenness to achieve customers' benefit from using the Fund's website (ADF 2023e).

5.5.1 Collection and Uses of Customers' Personal Information

Customer's personal information that is willingly disclosed online during the provision of services is used to improve and activate the services they request. It is also used to complete and update the borrower's records and introduce them to other services; conduct research to improve ADF products, services, and technologies; follow up on requests and other services provided by the ADF website; in addition to, what is required by the authorities and applicable laws (ADF 2023e).

Pertaining to the disclosure of information: ADF has the right to disclose the collected information about the customers, services, traffic patterns of the ADF website and other information to its affiliates or other well-known parties to the extent permitted by laws and regulations, except the personal identity data, unless otherwise stated in the privacy policy. ADF can also disclose information that is required to be disclosed by law and/or that protects its legal rights (ADF 2023e).

Security protection of Information: the ADF website takes numerous measures (technical and security) to protect the security of customers' personal information from loss, misuse, mistreatment, modification, corruption, or destruction. All ADF employees are committed to follow a strict and comprehensive security policy that does not allow access to personal data Except for those authorized to do so and who are committed to preserving its confidential nature (ADF 2023e).

Links to other websites: the ADF gives a clear announcement to all ADF website users, which stated, "Please be aware when you use any link on the ADF website to direct you to another site, you might lose ADF privacy policy". ADF also advises visitors to first review the privacy policy of the website they want to browse before providing any personal identification information (ADF 2023e).

5.6 General Requirements for Accepting Applications for Credit Services

The General requirements for accepting applications for credit services are (ADF 2023e):

- (a) The minimum age for the ADS's clients (individuals) should not be less than 21 years.
- (b) Applications for credit services provided to companies are accepted under the criteria for their official registration.
- (c) The ADS's client applying for credit services is considered an independent financial liability, whose obligations towards the ADF are linked based on the credit services it receives.
- (d) The application for obtaining credit services is accepted if the application is done through ADF's website or other approved channels.
- (e) The ADF headquarter is specialized in studying loans for specialized agricultural projects, finalizing all procedures, and then disbursing loans and following them

- up. It is also specialized in studying and approving development loans whose validity is greater than that of the branches.
- (f) The ADF branches and offices are concerned with studying development loan applications, deciding on them, disbursing them, and following them up according to their validity.
 - (g) The ADF headquarters is concerned with studying all loans for its employees and loans for the first-degree relatives of branches and office managers, approving them, and following them up on their implementation.
 - (h) Submission of an estimated cost analysis of the investment.
 - (i) The guarantees are fulfilled in accordance with the indicators and practical risks mentioned in the financing and credit risks.

Credit services are provided by ADF based on the approved financing activities and in line with the requirements of credit finance risks on which the credit decision-making is based, taking into account the following (ADF 2023e):

- (a) Acceptance of credit services is approved after fulfilling the basic requirements for each financing activity of the ADF's activities.
- (b) Obtaining an acknowledgment and undertaking on the ADF's client, in the event of the expiration of the validity period specified for the technical examination, that the client be not entitled to a refund of the paid examination fees.
- (c) The credit service application, which has passed the technical examination for more than one year for regular loans, and two years for loans for specialized projects, shall be canceled.
- (d) The customer is notified at least twice within a year to complete the application procedures electronically.
- (e) Collection of a new examination fee for the application from the ADF's client, after the statutory period prescribed for the technical examination has passed.
- (f) In the event that the ADF's client submits a request to complete the credit service procedures, the technical examination will be repeated.
- (g) Compliance with the technical requirements for credit services licensed by the Ministry of Environment, Water and Agriculture.
- (h) The ADF's client is not entitled to sell, donate, assign, or lease the loaned areas without the Fund's approval.
- (i) The customer is obligated to provide the Fund with any changes in the position of the credit services provided to him during the application submission, study, contract signing, disbursement, and payment stage.
- (j) The ADF is obliged to clarify its position on providing the credit and the financing services that it supports, based on its strategy in the event that the customer applies for the credit service.
- (k) The loan decision depends on the customer's creditworthiness and his/her ability to repay in the event of risks during implementation and operation.
- (l) What applies to the ADF Saudi client applies to the foreign clients (independent investor or partner) for loans for Specialized Projects, if the documents and conditions of the foreign investor are met.

- (m) The life span of the specialized projects is usually two years; the approval of these projects is subject to the submission of contracts and invoices.
- (n) Follow-up and evaluation fees are refunded for the rest of the contract period if the ADF's client pays the full amount of the loan and during the validity period of the contract.

5.7 Lending Terms for Specialized Projects

To be eligible for ADF funding, the following documents must be provided (ADF 2023e):

- (a) An electronic version of an economic feasibility study that includes the technical specifications, as well as the financial and marketing analysis for the project.
- (b) A ministerial license from both the Ministry of Environment, Water and Agriculture, and the Ministry of Commerce and Investment, along with a license from the municipality if the project site is located within an urban area.
- (c) An agricultural record (registry) issued by the Ministry of Environment, Water and Agriculture. Fourthly, a copy of the national identity card, if the applicant is a Saudi citizen and
- (d) The borrower must be at least 21 years old.
- (e) Land ownership certificate, land lease (government lease) covering credit duration, and/or rent certificate covering the terms set by the ADF considering the following (ADF 2023e):

The evidence of the claim must comply with all legal procedures and regulations. Official documents issued by a notary public to divide a portion of the land described in a court-issued document, or a document obtained from another deed of transfer issued by a notary public, should ensure an understanding of the foundation on which it was built.

The lease agreement should be issued by a notary or a competent court, and be accompanied by a copy of the proof of ownership or a certificate that follows the legal procedures, proving ownership of the land on which the loan is requested for a minimum period of fifteen years, with the lessor's consent to mortgage the land in exchange for the loan.

A project land survey from an approved engineering office showing the coordinates is required.

- (a) In case of the appointment of a legitimate agency under a power of attorney, the agency must meet the ADF's criteria, as outlined in the following text "The agent will have the authority to borrow from the Agricultural Development Fund and its branches in my name, sign the contract, receive loans, and sign any documents that require my presence at the Agricultural Development Fund. Additionally, the agent is expected to jointly assume responsibility with the guarantors for payment of the full amount before signing the contract, if it is borrowed.

- (b) Evidence of the client's financial stability, such as bank account statements for the past six months, as well as proof of ownership of properties, real estate, or stock portfolios, must be submitted.
- (c) Signing the acknowledgment form and agreeing to allow the inquiry of the customer's credit report through SIMAH.
- (d) Copies of documents should be identical to the originals.
- (e) ADF's client or their guarantors should pay all due installments in case of previous transactions with the Fund.
- (f) Providing necessary guarantees, ensuring that the guarantors owe no standing debts to the fund.
- (g) Payment of the examination fee.
- (h) The submission of comprehensive engineering maps for the project.

5.7.1 Additional Terms

ADF has identified the following additional term for lending specialized projects (ADF 2023e):

- (a) Projects that involve air-cooling greenhouses must provide a certificate from a licensed laboratory confirming the quality and quantity of water used in production. Alternatively, a certificate from the Ministry of Environment, Water and Agriculture stating the same information is required to be attached. Additionally, it is required that the project be located far away from any sources of pollution.
- (b) All types of poultry projects must adhere to the distances specified by the Ministry of Environment, Water and Agriculture. Furthermore, for broiler chicken projects, a contract with a slaughterhouse needs to be submitted.
- (c) Fattening projects involving calves must have insurance coverage. For corporate applications, the following documents must be submitted, each accompanied by a matching photograph: Memorandum of Association; Commercial registry; Annual budgets for existing companies and projects for the last three years; A list of the company's board members; A letter from the company's board of directors requesting a loan, along with authorization for the representative to review the fund and conclude the contract; Saudization certificate; A letter from the General Authority for Zakat and Income; A license issued by the General Authority for Investment for foreign companies, along with passport copies of non-Saudi partners. The conditions imposed by the General Authority for Investment or the relevant authority for foreign investors must also be met. For requests from cooperative societies, the following documents must be submitted, each with a copy and an identical original:
 - (1) The last two minutes of the General Assembly meeting. The minutes of the meeting of the association's board of directors, including the loan application and authorization for the designated representative to review the application and sign the contract

- (2) A copy of the association's bylaws and articles of incorporation - Association registration certificate from the Ministry of Labor and Social Affairs
- (3) A statement of the association's capital and assets, including details of its activity in the previous period
- (4) A letter of endorsement from the Ministry of Environment, Water and Agriculture and the Council of Cooperative Societies
- (5) The last three budgets were approved by an accounting office.

Lending Terms for Short-Term Specialized Projects

The eligibility for a short-term loan for specialized projects required the farmer/investor to (ADF 2023e):

- (a) Obtain a license from the MEWA and the Ministry of Commerce and Investment for the establishment of the project. Farmers/investors must also submit a license from the municipality, in case the project is located within an urban area.
- (b) Obtain an agricultural registry from the MEWA.
- (c) Provide a copy of the national identity card, if the farmer/investor is a Saudi citizen.
- (d) The borrower must be at least twenty-one years old.
- (e) Provide the land possession certificate, ownership deed, or a government lease contract that aligns with the financing term. The lease contract should include the terms of the funding agreement. It is important to note that the following conditions must be met: Proof of ownership should comply with all legal procedures. A court or another official deed to validate the transfer of ownership must verify any land deeds issued by a notary public. The basis on which the project was built must be established. A notary public or a competent court must issue the lease contract. It should be accompanied by a true copy of the proof of ownership of the land on which the loan is requested, which should have been in the applicant's possession for at least fifteen years. Additionally, the land leaseholder must approve the mortgage of the land in exchange for the loan.
- (f) Provide a survey of the project land conducted by an approved engineering office, showing the coordinates.
- (g) If there is a power of attorney in place, ensure that it complies with the ADF's conditions. The agent has the authority to borrow from the ADF and its branches on behalf of the applicant. They can sign contracts, receive loans, waive and receive loans, and perform any actions that require the applicant's presence at the Agricultural Development Fund. The agent is also responsible for jointly paying the full loan amount with the guarantors before signing the contract.
- (h) Submit copies of all necessary documents, which should be identical to the original copies issued by the relevant authorities or the Fund.
- (i) If there have been previous dealings with the ADF, ensure that the installments on the loan requested from the applicant or their guarantors have been paid.

- (j) Provide the necessary guarantees, ensuring that there are no outstanding dues to the fund from the guarantors.
- (k) Submit proof of the client's financial stability, such as a bank statement for the last six months, property ownership documents, real estate holdings, or stock portfolios.
- (l) Sign the acknowledgment form and agree to allow the inquiry of the client's credit report through SIMAH.
- (m) Pay the examination fee.

Lending Terms for Corporate Company Applications

The investor/s must provide a copy of each of the following, along with original documents (ADF 2023e):

- (a) Memorandum of Association.
- (b) Commercial registry.
- (c) The last three annual budgets for existing companies and projects.
- (d) A list of the company's board members.
- (e) A letter from the company's board of directors, requesting a loan and authorizing the representative to review the funds and finalize the contract.
- (f) Saudization certificate.
- (g) A letter from the General Authority for Zakat and Income.
- (h) A license to practice the activity is issued by the General Authority for Investment for foreign companies. Passport copies of non-Saudi partners should accompany this. The conditions that apply to the foreign investor apply to non-Saudi partners, as issued by the General Authority for Investment or the relevant authority.

Lending Terms for Cooperative Associations

To complete the application for ADF loans, it is necessary to provide a copy of each of the following, along with original documents (ADF 2023e):

- (a) The last two minutes of the General Assembly meeting.
- (b) The minutes of the association's board of directors' meeting, including the loan application and the authorization of the individual representing the association's members to review the application and sign the contract.
- (c) A copy of the association's bylaws, articles of incorporation, and bylaws.
- (d) The association's registration certificate at the Ministry of Labor and Social Affairs.
- (e) A statement of the association's capital and assets, including an explanation of its activity in the previous period.
- (f) A letter of endorsement from the Ministry of Environment, Water, and Agriculture, as well as the Council of Cooperative Societies.
- (g) The last three budgets were approved by an accounting office.

Lending Terms for Financing Indirect Capital

The lending conditions for financing indirect capital are as follows (ADF 2023e): farmer/investor should fill out the application form, explaining the required credit facilities and the purpose; provide a comprehensive overview of the activity that requires funding and signing the acknowledgment form and undertaking to agree to inquire about the customer's credit report through SIMAH. If the applicant is a Saudi citizen, he/she must include a copy of his/her national identity card. Additionally, a commercial registry indicating the activity to be financed is necessary.

5.8 Guarantee for Credit Services

The guarantee for credit services is the last three annual budgets for established companies and projects; the prices offered or an unpaid invoice with details for the imported product; the contract agreements with suppliers and local distributors for the distribution of the product, if applicable. In addition to, other conditions in the general requirements for credit services, such as: before considering any credit service request, the existing debts of troubled companies will be addressed, especially if a partner with ownership exceeding 5% applies for credit, besides, calculating fixed costs for long-term investment credit services based on price quotes, signed contracts, and invoices. This excludes costs related to buildings and operations, which will be determined according to the lending rates, set by the Fund.

The lending areas for long-term investment credit services cover all investment costs of the project, including its different components. The stage of applying for development loans involves the ADF's client acknowledging and accepting the inquiry from the Saudi Credit Bureau, SIMAH. Additionally, the client must submit their national identity documents and official records. If necessary, the client should also provide licenses related to their business activities. It is also required to submit an Official Authorization Letter, which grants the agent the authority to borrow from the Fund in the owner's name; sign contracts, receive loans, and the right to waive and sign any necessary documents on behalf of the owner, as required by the Fund.

5.9 The ADF's Client Land Ownership Deed

The ADF's client must provide a land ownership deed that meets all legal requirements for the land on which the loan is being requested. This deed could be issued by a notary public and should confirm the boundaries set by a court-issued deed or another valid deed. It is important to ensure that the land was built on a legitimate basis, through either proper legal procedures or an order from a notary or regulations and instructions. If the original deed is lost or damaged, a replacement attested by the court or notary public must be presented. The original title deeds must be shown

in all cases. When applying for a new loan, the notary-issued documents must be up-to-date electronic deeds. Additionally, a distribution decision from the Ministry of Environment, Water, and Agriculture, as well as temporary documents according to Circular No. 2755 dated 5/2/2016, are required.

5.9.1 Government Lease

The client of the fund provides guarantees for credit services, along with proof of creditworthiness. The stage involves applying for credit services to finance working capital for operational development loans. The client of the fund acknowledges and undertakes to approve the inquiry from Saudi Credit Bureau, SIMAH. The client of the fund submits national identity documents and official records. It is necessary to be a legitimate agency (official authorization) that includes the agent's right to borrow from the fund in the owner's name, the right to sign the contract, receive loans, and the right to waive and sign anything that requires the agent's presence in the fund (ADF 2023f).

The client of the ADF must submit a land ownership deed that meets all legal procedures and requirements for the land on which the loan is being requested. This includes deeds issued by a notary public to empty a portion of a land described in a deed issued by the court, or a deed emptied from another deed issued by a notary public. It is important to determine the basis on which the land was built, whether it was based on consolidation fulfilling all legal procedures or on the discharge of a notary public, or an order granted by regulations and instructions. Lending can be done without objection if it is done in accordance with a statement issued by the notary public or the court issuing the deed. If the deed presented to the fund is a replacement for a lost deed, the court or notary public must attest it. The lease contract must comply with Circular No. 946/T/5 dated 9/2/2009. In all cases, title deeds must be examined. A distribution decision issued by the Ministry of Environment, Water and Agriculture, temporary documents according to Circular No. 2755 dated 5/2/2006, and a government lease are required. The client of the fund must provide guarantees for credit services and proof of creditworthiness (ADF 2023f).

5.9.2 Abroad Investment

The Abroad Agricultural Investment Program aims to expand and secure various foreign sources of food supplies. This program is part of the Kingdom's initiative to ensure food security through investing abroad. The loan duration is 10 years, with a grace period of two years. Loans are usually given in either Saudi riyals or US dollars. The Agricultural Development Fund can contribute up to a maximum of 60% of the project's total cost. Repayment of the loan will vary for each project, depending on the nature of its cash flow (ADF 2023f).

The following types of guarantees are usually required by ADF for abroad investment (ADF 2023f):

- (a) Bank Collateral: submission of bank collateral covering 100% of the total loans,
- (b) Mortgage of institutional or personal investments to another party (such as cash deposit, stocks, bonds, and commodities),
- (c) Project assets including stocks,
- (d) Personal real estate assets owned by another party,
- (e) Insurance licensing: transfer of various insurance certificates,
- (f) The company's assets in the Kingdom, and
- (g) Legal guarantee: full value of the insurance and the wages are according to the insurance policy. It is worth noting that, the ADF provides funds for the production of the following crops: Basic crops: wheat, maize, and green fodder, and secondary crops: red meat, barley, rice, edible oil, sugar, and soya beans.

The required documents for the abroad investment loans are as follows (ADF 2023f):

- (a) Company profile, project description, and investor background,
- (b) An official letter with a request to facilitate the ADF site from the authorized person,
- (c) The company's commercial registry in the KSA,
- (d) The license/commercial registration required from the company to operate in the country where the project is located,
- (e) The audited financial statements of the company for the last 3 years in Saudi Arabia,
- (f) Feasibility study in English. In addition to:
- (g) A title deed for the project land or a lease contract,
- (h) The project design and outline,
- (i) List of the bank credit facilities enjoyed by the company,
- (j) Proposed documents and guarantees,
- (k) A list of related projects implemented previously by the company,
- (l) Financing requirements [(a) amount of financing (b) purpose of financing (new project, expansion of an existing project, (c) refinancing of an existing project, provided that the project's life does not exceed two years],
- (m) Product Sales Agreement and Marketing Plan, and
- (n) Prices offered by the executing companies or invoices for the executed works.

Eligibilities for the investors and projects are as follows: for the investors: more than 50% of Saudi companies of all kinds should be owned by a Saudi entity/person, have a registered entity in the KSA, have experience with agribusiness in Saudi investment abroad in addition to the technical capabilities of the team. Whereas, for the projects are: funding includes new projects and expansion, the maximum contribution of ADF's not exceed 60% of the project cost, the optimal loan ranges between 30 and 75 million US dollars, exporting at least 50% of the production to KSA (to achieve food security for both the Kingdom and the host country), and economic feasibility study.

6 Conclusion and Prospects

Agricultural finance is the fundamental tool used for sustaining food security, as it affects both the supply (food availability) and demand side (food accessibility) of food. It affects the food availability (production) pillar of food security through the provision of the right quantity and quality of input, enhancement of agricultural operation and harvest, in addition to facilitating the marketing of agricultural output. Whereas, it directly affects food accessibility through the provision of funds and indirectly through the income generated from the invested loans. In this context, the ADF contributes substantially to achieving food security in the Kingdom. The total numbers and values of the distributed loans since the inauguration of the ADF until the end of the fiscal year 2021 are 124,786 and 14.67 billion US Dollars, respectively. Moreover, ADF usually liaises with MEWA in achieving food security through the provision of support and credit to agricultural investors. It is very clear that ADF has set many initiatives for achieving Vision 2030, which seeks, among others, to achieve sustainable levels of food security. Evidence showed that Saudi Arabia has reached a stable level of food security. ADF is playing a vital role in the provision of the necessary funds for local and abroad investment, in addition to imports.

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