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Proposing Islamic Blended Agriculture Financing for Sub-Saharan African Countries: Case of Senegal Groundnut Sector

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Abstract

The objective of this paper is to propose Islamic blended agriculture financing for Sub-Saharan African Countries by focusing on the Senegal groundnut sector to meet the financing need of the groundnut sector in post and pre harvesting activities. The study uses a qualitative approach to analyze the financing instrument provided by International Islamic Trade Finance Corporation (ITFC) to finance the groundnut sector in the case of Senegal. This research utilizes document analysis techniques for two ITFC reports on Agri-base programs and one Organization for Economic Cooperation and Development (OECD) document. It also deploys thematic analysis to evaluate ITFC financing modes and propose Islamic blended financing to meet the financial need of the Senegal Groundnut Sector. There are some bottlenecks, which hindered the productivity and competitiveness of the groundnut sector in Senegal. ITFC financing that consists of Murabah contract and grants do not tackle the key issues in the ground sector such as limited certified seed availability. These issues will negatively affect the quality of seed as well as the incentive of farmers to produce groundnut. As a result, there will be disruption in the supply chain. Thus, the findings of this study reveal that Islamic blended financing is an alternative instrument to address the issues of the Senegal groundnut sector by providing full value chain financing from the input market to the export market. The case study is limited to the Senegal groundnut sector and there is no interview or survey to assess the practicability of Islamic blended financing. This could be examined in subsequent research. Islamic financing offers a wide range of instruments to accommodate the financing needs of the agricultural sector. Hence, by combining these instruments, it is viable to structure Islamic blended financing to cater the need of the key players in the groundnut sector. The proposed model can extend to other agriculture sector. This research provides a new insight on financing the agricultural sector based on Islamic financing instruments. It suggested blended Islamic financing instruments to address the existing financial gap in Senegal groundnut sector.

Keywords: Blended Financing; Groundnut; Waqaf; Salam; Musharakah; Senegal

1. Introduction

1.1 Background

Agriculture is the backbone of socioeconomic development for most Sub-Saharan African (SSA) countries, because 23 percent of sub-Saharan Africa's GDP comes from agriculture (Goedde et al.,2019). Today current urge for food security, agriculture productions are vital for sustainable food security. However, the total production of agriculture in the case of many SSA countries has declined. Due to many challenges, which hurdle the development of the sector such as price fluctuation, absence of adequate infrastructure, population growth, absence of government subsidiaries and lack of private sector financing specifically for agriculture Small and Medium Enterprises (SMEs). Those obstacles are confirmed by research conducted by Birch (2018) in which he ascertained that there are numbers of the barriers of the agricultural productivity in case of Kenya such as climate change, poor fertility and inefficient subsidiary programs and these barriers lead to less commercialization of agriculture products. A study conducted by Bjornlund et al. (2020) confirmed that decline of agricultural productivity is due to 1) dependency of a single commodity 2) increase of interest rate at international level. 3) Structural adjustment Policy. 3) Unfavorable terms of trade. Keep in mind that more than 60 percent of farmers of sub-Saharan Africa are smallholder farmers. A report by the Aceli-Africa group shows that the agricultural financing gap in Sub- Saharan amounts to $180bn annually in which $65bn, or more than 35% of the total gap, is among SMEs with borrowing needs of $25k to $1.5m. Moreover, according to Kirsten et al. (2013) the main challenges which SMEs counter are: 1) insufficient agricultural support services, such as market information, credit, advisory services, and input markets. 2) Transaction costs. 3) Infrastructure gaps, particularly irrigation, electricity, roads and ICT. As a result, there is a need for collective effort to overcome those barriers.

1.2 Senegal Agricultural: Groundnut Sector

Senegal is located in West Africa. It is neighbored by Mauritania, Mali, Guinea, and Guinea-Bissau. Senegal exhibits a dry tropical climate and has a population of 16.7 million people, a quarter of whom live in the Dakar area (0.3% of the territory)[8]. Senegal is among a lower-middle-income country in Sub-Saharan African countries, its GDP stood at $24.9 billion in 2020 in current terms. Its per capita Gross National Income (GNI) was $1,430 in 2020. Real GDP growth stood at 0.87% in 2020, down from 4.4% in 2019, and 6.2% in 2018[9], this is due to the impact of COVID-19. In Senegal, the services are the main contributor to GDP, and the agriculture sector being the most dynamic engine of growth. Thus, in Senegal the agricultural production is vital for their economy as it contributes 18 % of total GDP as figure one indicates. Large portion of the population (60%) directly depend on the agriculture sector[10]. The main agricultural production is groundnut. Senegal relies on the groundnut process, specifically the groundnut oil to generate its export revenue. As a result groundnut is not only a stable food but it is also a source of revenue. As it stated in Clavel (2016, p.7) *"Senegal remains one of the world's leading exporters of refined oil. Groundnuts are also the primary fodder crop and, as a legume, are irreplaceable in crop rotation with cereals."* At a macro level, revenue from processed groundnut export in the Senegal government is used as a source to finance their import, specifically cereal import (Georges, 2016). Hence, groundnut might be an effective mechanism for income generation and job creation, which will be a driver for poverty alleviation and food security.

Nonetheless, there are many bottlenecks to efficient production and supply of the groundnut process specially the peanut and oil. Some of these obstacles are external challenges, as delineated by research conducted by World Bank (2017) the main external challenges are: 1) shifting the international demand from ground oil to whole nut. 2) Fluctuation of the price of groundnuts in the international market. 3) Market structure reform, which calls for agricultural liberalization. As elaborated by Bjornlund (2020) structural adjustment policies in the case of Africa were mostly related to agricultural pricing or trade policy such as removal of export taxes, reduction of import tariffs and removal of import restrictions. All those policies had hampered African government capability to invest in programs to increase the productivity of the agricultural sector. The internal factors that hamper the production of groundnut are: 1) aflatoxin 2) poor cultivation practice. 3) Shortcoming in input supply arrangement. 4) Insufficient operation for crops storage and lack of efficient supply chain management (Pazderka et al., 2010). In order to beat the external challenges, the government of Senegal has taken an active role to minimize or overcome the existing internal challenges. In 2010 the Senegal government adopted a market liberalization policy, hence it canceled the export ban of whole nuts. Moreover, the government privatized SONACOS, which was a public company processing mill. That policy has opened the door for competition between private process mills and SONACOS. Furthermore, the farmers were also better off, as highlighted by Ndiaye et al.,(2017, p.8) *"that liberalization has been good for farmers on at least three different levels: providing more choice of buyers, delivering prompt cash payments, and providing relatively high producer prices. On the other hand, market liberalization has had devastating consequences for local processing mills: due to the entry of new buyers who make better offers to farmers, local millers are having trouble procuring the groundnut quantities they need to operate at an optimum capacity."* Given that distributive effect, in 2017 government of Senegal introduced an exit tax on groundnut exports at the rate of 15 CFA francs per net kilogram for unshelled groundnuts and 40 CFA francs per net kilogram for shelled groundnuts (Camara et al., 2018). Since Senegal is relatively small country in the international groundnut market, the export tax has no impact on world prices of groundnuts, but rather reduces the prices paid to Senegalese producers (Camara et al.,2018). Therefore, it negatively affects income of groundnut producer as well as reduction in supply of groundnut. Reduction in supply of groundnut leads to higher price of procurement of groundnut, and this adversely affects domestic processors production of groundnut oil. In short, the exit tax has negatively affected the groundnut sector. In February 2016, the government of Senegal issued an innovative 75$ Shariah compliant trade financing facilities[11]. The purpose of Islamic structure trade financing is to support Senegal National Groundnut Company (SONACOS) for purchasing of groundnut seed and to mobilize funds for processing the groundnut into groundnut oil and cake for export. This financing was based on Murabaha financing and for the first time Islamic tolling agreement. The instrument was pre-export structure commodity financing. The Government of Senegal as beneficiary and Senegal National Groundnut Company (SONACOS) as an executing agent of the government and International Islamic Trade Finance Corporation (ITFC) as arranger or facilitator. This financing scheme has contributed to the overall development of the groundnut sector and it gives

[8] www.worldbank.org/en/country/senegal/overview#1
[9] www.worldbank.org/en/country/senegal/overview#1
[10] https://www.fao.org/in-action/agrisurvey/news-and-events/detail-events/en/c/1372696/
[11] www.islamicfinancenews.com

an incentive to the local Islamic banks to participate in the groundnut sector. However, in the groundnut sector there are different participants along the value chain, which affect the overall operation of the groundnut sector. Hence, there is a need for holistic financing from pre harvest to post export financing to have an efficient supply chain financing to reduce or eliminate any disruption in supply chain. Henceforth, this study is proposing Islamic blended financing.

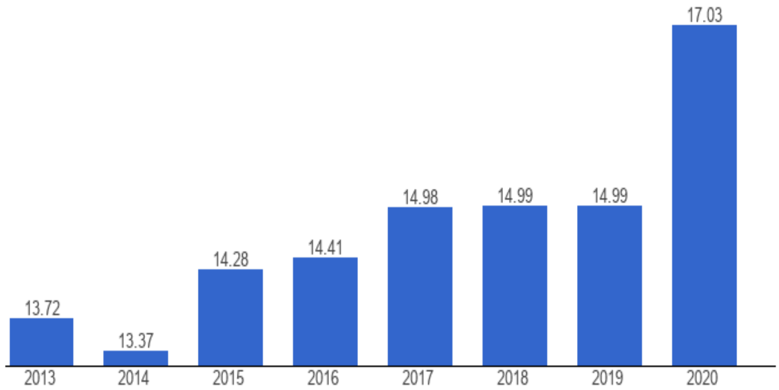

Figure 1. Source: The globaleconomy.com

1.3 Problem Statement

Groundnut is considered a stable food, national revenue and foreign earning for Senegal. As it alluded earlier, there are many obstacles, which negatively affected the productivity and competitiveness of the groundnut sector in Senegal. Government has developed techniques, programs and strategies to overcome those obstacles such as liberalization policy, exit tax, acceleration program in Senegal and plan of emergency Senegal. It also finances the sector through concessional loans from international organizations. In addition, the government of Senegal has entered into a strategic partnership with ITFC to finance the groundnut sector. Prevailing literature have discussed the approaches used by the government of Senegal to develop the ground sector, and they ascertained that these public finance approaches used by the government are not efficient (Camara et al., 2018, Ndiaye et al., 2017). However, none of the studies has proposed Islamic blended financing approach as an instrument to overcome all the bottlenecks, which hinder the competitiveness of the groundnut sector. Moreover, the existing researchers did not assess the efficiency of supply chain financing provided by ITFC. Henceforth, this study is assessing the efficiency of financing instruments provided by ITFC and it is proposing Islamic blended financing instruments based on Salam, Musharakh and Waqaf to enhance productivity of the ground sector.

1.4 Objectives

1. To assess the efficiency of financing instruments provided by ITFC in case groundnut sector.
2. To propose Islamic blended financing instrument based on (SMW) for financing the groundnut sector.

1.5 Scope of the Study

The main focus of this study is about the obstacles, which hurdle the productivity of the groundnut sector in Senegal. Groundnut sector is a stable food and source of revenue for Senegal. Therefore, it is a crucial sector for income generation and job creation, which will be a driver for poverty alleviation and food security. It also includes different strategies, policies and financing approaches adopted by the government of Senegal to make the ground sector a tool for poverty alleviation, particularly the strategic partnership between the government of Senegal and international Islamic trade financing cooperation.

1.6 Significance of the Study

The present research as explained above intends to propose Islamic blended financing based on Salam, Musharakh and Waqaf. The present study will add to existing literature on Islamic agriculture financing instruments by proposing innovative instruments to enhance agricultural productions. If this proposed mechanism is equipped with effective government policy, it will generate a lot of benefit to a large group of stakeholders in the groundnut sector such as farmers, customers, processors and exporters. Moreover, the current study highlights the effectiveness of combining different Islamic financing instruments to address a diverse financing need for different groups in the groundnut sector.

2. Literature Review

2.1 Introduction

Literature review provides a fundamental basis for study; it enables the researcher to identify the current issues, related theories, concepts as well as research gaps. Thus, the researcher will be aware of the status quo of the intending topic. Consequently, the literature review of this study will consist of three sections: 1) defining the key concepts 2) overview of Islamic Banking and finance in Senegal. 3) Reviewing related literatures to identify the issues and gaps.

2.2 Key Concepts in Agriculture Financing

2.2.1 Bay Al-Salam

"Shafiis define salaam contract as the selling of something that is specified and owed. They see it as a debt and therefore do not make it a condition that the period (within which the sale object is to be delivered) be defined. The Hanbalis see Salam as that which is handed over in exchange for something defined that is owed for a known period" (Al Zaabi, 2011, P3). Therefore, Bay Salam is selling products that do not exist during contract and payment of the price should be on the spot even though Maliki holds the idea that payment of the price could occur after three days from the executing date of the contract. In addition, as far as the delivery date is concerned, it can be customized between the parties. There are two types of Bay Al Salam: classical Bay Al Salam and parallel Bay Al Salam. The principle and conditions of Bay Al Salam have a positive impact on production and distribution of wealth. As clearly demonstrated by Ali al-Fijawi (2016) firstly, Salam eases the financial burden relative to the burden the borrower bears in case of a loan. Secondly, and most importantly, it meets the instant financing need for sellers. Thirdly, it promotes just distribution of wealth through sharing risk and return. Lastly, it boosts production units, because Salam provides a complete supply chain financing solution.

2.2.2 Musharakh

Mejella (as cited by Noraziah & Ghafar ,2010) defines it as an "Agreement for association on the condition that the capital and its benefit be common between two or more persons". Meantime, Ibn Arfa (1984) defined it as an "agreement between two or more persons to carry out a particular business with the view of sharing profits by joint investment". Another Muslim jurist, Mohammad Khan (1990) defines Musharakah as "A contract between two persons who launch a business of financial enterprise to make profit." From the above definitions, we can derive some basic principles of Musharakh: 1) contribution of capital from the parties in new business ventures or existing on a permanent or for a short -term basis. 2) To share profit and loss 3) Parties also share the liabilities and management of the investment. "Musharaka can take the form of an unlimited, unrestricted, and equal partnership; another more limited investment partnership is also available" (Rammal, 2004,p.4). As cited by Moriguchi et al.,(2016) Musharakh is used in the context of working capital to purchase input or goods as well as export and import financing. Moreover, it is used for transactional banking services in the form of letter of credit (LCD) (Ahmed, 2008; Usmani, 1999). Musharakh plays a significant role in Islamic capital market, it is used for issuing SUKUK. Lately, some researchers consider the application of Musharakh for value chain, supply chain and block chain financing.

2.2.3 Agricultural Financing

Murray (1953) defined agricultural finance as "an economic study of borrowing funds by farmers, the organization and operation of farm lending agencies and of society's interest in credit for agriculture." Tandon and Dhondyal (1962) defined agricultural finance "as a branch of agricultural economics, which deals with financial resources related to individual farm units." Agricultural sector consists of a wide range of activities starting from small-scale farming to infrastructure projects to research and development. Consequently, agricultural financing approaches differ in terms of catering to the needs of particular groups in sectors, such as the needs of farmers and entrepreneurs, the transactions between the key players along the value chain, infrastructure needs and research and development. There are also different financial instruments to address the need of a particular sector in agriculture, for instance there are direct financing, value chain financing, infrastructure financing and R&D financing. Looking at the diverse system of agricultural finance there are a wide variety of actors to be financiers, like Cooperatives and credit unions, government, local commercial banks, insurance and international organizations (FAO, IFM) (Ruete,2015). In the case of Senegal groundnut sector as delineated by World Bank report (2019), Input market, market for groundnut and market for vegetable oil shape the market outcome, for farmers, customers and employees. There are different issues revolving along those three markets, which are limited certified seed availability, limited fertilizer availability, low farmer incomes, ensuring throughput for local processors and lack of competitiveness of the local oil industry does not allow processors to compete with prices paid by exporters even with subsidies. For Senegal's government to enhance the groundnut sector it should pay close attention to the bottlenecks of the value chain (World Bank report 2019). Thus, whenever it develops a policy or mechanism it will not hamper the interest of the particular participant. For example, the export tax was designed to stimulate the local groundnut processing industry and has not encouraged local value addition of whole nuts for export, contrary to reducing the income of the farmer. Similarly, ISRA (Institut Sénégalais de Recherches Agricoles), which is the sole producer of pre-base seed, is not currently able to produce sufficient pre-base seed to satisfy demand and the limited of high-quality seeds contributes to Senegal's low yields (World Bank report ,2019). As a result, the report of World Bank (2019, p.38) proposed that the *"Government should encourage private investment along the value chain to optimize public resources and invest them in public goods that contribute to increasing productivity, such as research and development".*

2.2.4 Blended Financing

There are three different definitions for blended financing. First, the United Nations (UN) in 2015 at the Addis Ababa Action Agenda (AAAA) defines it as "*Financing that combines concessional public finance with non-concessional private finance and expertise from the public and private sector."* Second definition is adopted by (OECD-DAC)[12] it is defined as "*The strategic use of development finance for the mobilization of additional finance towards the SDGs in developing countries."* Meanwhile the development financial institution refers to blende financing as a "*Combining concessional finance from donors or third parties alongside DFIs' normal own-account finance and/or commercial finance from other investors, to develop private-sector markets, address the SDGs, and mobilize private resources[13]"*. These three definitions outline key concepts in blended financing, which are: 1) Mobilizing the fund. 2) Using systematic measures to assess the impact of the investment on social, environment and economy.3) Adopt market-based risk-adjusted returns for private investors. There are several instruments for blended financing such as, direct debt or equity investment, guarantees insurance, insurance, hedging, securitization and grant. The combination of the above instruments depends on the needs of a particular group or investment. Blended financing is not a new concept; many historical transactions utilizing a blended financing approach might not have been categorized as such. "*Currently, approximately USD 140 billion worth of transactions have been identified and these types of structures have grown steadily over the past few years"* (Havemann et al., 2020, P.5). Based on that ground, many researchers have proposed a blended financing approach for the agriculture sector, because the existing investment approaches are not efficient to fill the agricultural financing gap. Hence, there is a need for multiple funding modalities to achieve agricultural investment at a meaningful level and encourages greater exploration of the range of blended financing structures to increase SDG-related agriculture investments (Havemann et al., 2020). There are some cases where the application of blended financing takes place, and it has a positive spillover on production and financial inclusion of Agri-SMEs. For instance, "*the Program for Rural Outreach of Financial Innovations and Technologies (PROFIT) in Kenya incentivizes commercial and microfinance banks to increase the volume of their agricultural lending, diversify their services and products to rural areas, and increase their focus on innovation to reduce the cost of services and technical assistance to producer groups*". (OECD, 2021, p.8). Nonetheless, blended financing in the case of Senegal is absent, and Islamic blended financing is yet to be considered.

2.3 Overview of Islamic Banking and Finance in Senegal

The majority (96%) of population in Senegal are Muslim. Even though the country is first Islamic financial institution was the Islamic Bank of Senegal, created in 1982 and incorporated as a limited company under Senegalese law, it took more than three decades for Senegal to recognize Islamic financial services (journal time 2022). In 2012, the Dakar government authorized financial transactions and Islamic financial services, and it became a pioneer of Islamic banking and finance. Hence, in 2018, the Central Bank of West African States (BCEAO) has put in place a legal framework under which banks, financial institutions and micro-institutions in each member state of the West African region may execute Islamic financing operations. That legal frame outlines the parameters of Islamic finance in member countries. These initiatives are consequences of Senegal's support for the acceptance of Islamic financing in the region's economic bloc (Kebe, 2022). Currently there four Islamic

[12] (OECD-DAC) refers to Organization for Economic Co-operation and Development - Development Assistance Committee
[13] https://www.idfc.org/wp-content/uploads/2019/10/blended-finance-a-brief-overview-october-2019_final.pdf

banks in Senegal[14]: 1) Faisal Islamic bank of Senegal, 2) Islamic investment company of Senegal 3) Sosar Al Amane. 4) Islamic bank of Senegal. Senegal also became leading in Sukuk, it even beat economic giants Nigeria and South Africa. Senegal issued a 100bn CFA franc ($168m) sovereign Islamic bond in June 2014. The private sector of Senegal has started to enter Islamic Finance. GCF Burse Company established its first Islamic common fund in 2017.[15] Despite the fact that Senegal is the hub of Islamic banking and finance in West African countries, the Islamic financial institutions do not offer financing product for agriculture sector. Agricultural sector is mainly finance by government (World Bank, 2019).

2. 4 Related Literatures on Islamic Agricultural Financing Instruments

Plethora literatures consider Bay Al Salam as a viable model in the context of agriculture, manufacturing, SMEs and international trade financing**.** For instance, a study by Wardayati et al., (2016) introduced hybrid Salam financing to solve the obstacles faced by Bumi Rinjani Probolinggo SR to implement Salam financing. Such as operational risk, moral hazard risk and government regulation. The study used constructive qualitative methods to assess the feasibility of this suggested model. An article written by Sunuwati et al,. (2021) suggest Salam financing as a best alternative financing for agriculture, SME's, and medical industry during COVID-19 pandemic. In order to mitigate the relative risk of Salam financing, the research proposes a hybrid Salam financing model. It uses constructive qualitative methods. In addition research done by Aishath et al,.(2019) investigate the viability of Bai Al Salam in social finance to reduce poverty and to attain the UN goal of sustainable development. Therefore, they proposed Salam as an alternative mode of agriculture financing. They have come up with three different models under Salam financing (centralize, decentralize and decentralized Wakalah Salam model) all models were based on one Parallel Salam model. The article also indicated the possibility of implementing Salam financing in non-farming industries such as manufacturing.

Ahmed & Fida (2020) also introduced Bay Al Salam as an alternative financing product for the agriculture sector in Oman. In their study, they used a quantitative method to assess the determinants of Salam financing products. Based on their findings, operational cost, profitability and risk mitigation techniques are the factors that influence the Islamic banking to adopt Bay al Salam financing products. Relative to their findings, they propose different risk mitigation techniques such as collateral and mortgage security as well as hiring Agricultural specialists. Hence, application of Bay al Salam in the agriculture sector is a feasible financing product. Moreover, research done by Manoor et al,. (2018) assess the potential of Bay Al Salam in the agriculture sector of Pakistan. Their finding reveals that given the market condition, kind of crop, and personal security of the farmers and educational background of the farmers' application of Bay Al Salam for agriculture financing is viable. In contrast, Ishtiaq et al.,(2015) investigate the issue of Parallel Salam in the context of SMEs and international trade, their findings confirm that Salam financing is visible for the two areas. Henceforth, Bay Al Salam is a viable financing product in the agriculture sector.

Suayb (2010) was based on a real case of cotton production in West Africa. The purpose of the paper was to show the practical application of Bay Al Salam for pre and post- harvest production activities. The current practice of Islamic structure trade financing (STF) in case of SOFTTEX, a state controlled agro-industrial and commercial entity in Burkina Faso is Mudarabah and Murabaha. Financier who has the liquidity will enter Mudarabah contract with an expertise in field of agricultural sector. Then the Mudarab will enter Murabha contract with beneficiary (SOFTTEX). Unlike other Murabaha contract selling to the beneficiary occur at time of export with pre-determine market price. However, the author argued that the current operation is only financing post- harvest, thus there is a need of Salam instead of Murabaha to provide a complete supply chain financing solution. This is because the farmers need liquidity for financing their inputs until the final processing of their products. Hence, Salam can be used for import / input financing. Mudarab on behalf of Rabal Al mal can use Musharakah for post-harvest financing. However, the above literature did not propose blended financing as a tool to finance the agricultural sector; henceforth this study is filling that gap by proposing Islamic blended financing as an instrument to tackle the prevailing issues in the groundnut sector of Senegal.

3. Research Methodology

3.1 Introduction

"Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation." (Research methodology,Ch3,P.1). Thus, Research methodology simply means designing systematic ways to ensure valid and reliable results that address the research aims and objectives. In this section,

[14] https://www.globalbankingandfinance.com/list-of-islamic-banks-in-senegal
[15] https://journaltime.org/?s=sukuk

the study will elaborate on the type of research used, data collecting method, sampling strategy and data analysis techniques.

3.2 Methodology of the Study

There are three types of methods to answer the research questions, which are qualitative, quantitative and mixed methods. Quantitative approach *"involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion"* (Kothari 2004,P.18). In other words, quantitative methods assess the relation between variables as well as the impact of one variable to another. Therefore, the common research philosophy in quantitative method is positivism, which indicates that the researchers observe the reality objectively and there is only one single reality that exists independently to the observer (C. I. Kothari2004). Hence, the quantitative method is explanatory in nature and it can be replicated. In contrast, qualitative methods are defined as "*subjective assessment of attitudes, opinions and behavior"* (Kothari,2004 ,P.18). The common research philosophy in the qualitative method is interpretivism , which indicates that the researchers observe the reality subjectively and it is unique to the observer (Kothari,2004). Thus, the qualitative method is exploratory in nature and it cannot be replicated. As defined by Shorten and Smith (n.d, p.1) "*Mixed methods is a research approach whereby researchers collect and analyze both quantitative and qualitative data within the same study"*. This study will adopt a qualitative method, because the main objective of this study is to explore the efficiency of the existing schema of groundnut financing provided by ITFC and I am going to propose blended financing. Thus, the qualitative method will assist me to address the research problem.

3.3 Research Design

As mentioned above, qualitative research is scientific research that is concerned with answering the 'what' and 'how' aspect of particular phenomena. Consequently, it focuses on collecting the data through conservational communication or referring to documents. Referring to the problems in hand which are: 1) how efficient are the instruments provided by ITFC for the groundnut sector? 2) Is there an alternative financing instrument that addresses the existing drawback of current financing schema in the groundnut sector? I adopt a qualitative method as a systematic way to ensure valid and reliable results. Given the fact that this study concerns how efficient the ITFC financing instrument is, it does not analyze determinants of the efficiency. Furthermore, it is proposing Islamic blended financing, not testing the viability of the structure. There are different techniques to collect qualitative data such as interviews, grounded theory, observation, and documents. This study will use documents as a means to collect the data. "*Document analysis is a systematic procedure for reviewing or evaluating documents—both printed and electronic (computer-based and Internet-transmitted) material."* (Bowen, and Glenn. 2009, P.2). I use document analysis technique, because it provides more description on one single phenomena or program, and it is mostly applicable to qualitative case study. Therefore, pertaining to issues that I intend to discuss in this research, document analysis technique is the most suitable instrument. I will utilize secondary data, because I will analyze already existing reports, which I download from the official website of ISDB and OECD. In qualitative research, there are several techniques to analyze the data, such as theoretical analysis, narrative analysis, content analysis and thematic analysis. The researcher can select any techniques depending on research questions and articulated problem statements. In the following section, I will elaborate my data analysis process.

3.4 Process of Data Analysis

The study used the World Bank report (2019) and Ruete (2015) report to develop the themes and based on these themes I framed codes. Then in the following step, the study reviewed two ITFC reports on Agri-based programs dedicated to a most vibrant agricultural sector in West Africa. In the third step, the researcher started the coding process, in which the researcher selected the significant information based on already framed code, and arrange the codes alphabetically. In the fourth step, the researcher tally the code and bring them into their respective themes. Then the researcher analyzed the data using thematic analysis. Furthermore, the researcher reviewed and synthesized the OECD report to draw the structure of Blended financing and on that theoretical basis I formulate Islamic blended financing by combining (Salam, Mursharakh and Waqaf).

Table 1: Efficiency Indicators

Issues	Participants	Markets	Financial instrument	Financier
• Limited certified seed availability. • Limited fertilizer availability • Low-income farmer • Lack of quality seed • Lack of competitiveness of local oil industry *The ITFC financing instrument did not tackle any of the above issues (0)*	• Farmers • Entrepreneur • Processors public • Processors private • Exporter *Financing operations of ITFC are solely allocated to a public processor namely SONACOS (6)*	• Input Market • Groundnut market • Oil exporter market *ITFC financing instrument addressed the need of participants in oil export market (SONACOS)(4)*	• Supply chain • Value chain • Aid • Grant • Export financing *ITFC provides financing to SONACOS Through Aid, Grant and Export financing (4)*	• Private • Public • International • Regional group • Non-governmental organization *ITFC is a non-governmental organization (6)*

4. Finding and Discussion

After reviewing the World Bank document, as well as Marina Ruete report, the study structured the above table, which consist of four themes to assess the efficiency of ITFC financing approach. This framework indicates the efficiency of any financing approach, it determines based on its capability to tackle the prevailing issue in that particular sector. As far as the groundnut sector of Senegal is concerned, the key issues are low yield due to the lack of quality seed, as well as limited fertilizer, and low income of the farmers who are not able to acquire their input. Moreover, there is an absence of private sector involvement in the groundnut sector. Thus, any financial approach that does not tackle the issues revolving around the value chain is not efficient.

How efficient are financing instruments provided by ITFC for the groundnut sector?

International Islamic trade financing cooperation (ITFC) committed to finance the agricultural sector of Senegal since its inception, particularly the groundnut sector. In 2013/2014, ITFC injected a 30 million facility to the Government of Senegal for financing the 2013/2014 groundnut season. In 2016/2017, it provided pre-export financing, which was based on Murabaha financing and Islamic tolling for SONACOS. In 2020/2021, it provided grant US$44.88mn financing to Senegal National Groundnut Company SONACOS. As for the year 2022, ITFC provides an aid for technical assistance to train the employees at SONACOS to utilize the new machine for producing quality oil to meet the international standard of groundnut oil. This is because there is a decline of the demand of groundnut oil due to its low quality. The finding revealed that ITFC provides the procurement of input, technical assistance, working capital and pre-export financing for public limited company SONACOS. Therefore, the impact of their financing is limited on the employees at SONACOS as well as the income of farmers who are partners with SONACOS. However, it will not eliminate disruption in the supply chain due to the limited certified seed availability and limited fertilizer availability as well as lack of proper infrastructure in rural areas. As mentioned in the World Bank report, efficient financial instruments or government policy should address key issues that hinder the productivity and competitiveness of the groundnut sector. Hence, efficient financing instruments focus on "*development of adequate quality and standards irrigation systems, and contract farming as well as risk mitigating measures for farmers, such as crop insurance and measures for social protection" (*World Bank*, P.14)*. Nonetheless, with ITFC current financing instruments, it further strengthens the financial aid and protection of SONACOS at the expense of a wide range of participants along the value chain. Therefore, there should be an equitable opportunity to access finance to ensure competitively neutral markets. In short, ITFC financial instruments can generate foresight outcomes, which are meeting SDG1 and SDG2 as well as enhancing overall social economic development, if it allocates funds efficiently along the participants in the value chain.

Is there an alternative financing instrument that addresses the existing drawback of current financing schema in the groundnut sector?

There is an alternative financial instrument, which can efficiently tackle the pertaining issues within the groundnut sector. Blended financing is an innovative approach that creates a pool of funds through a combination of different instruments. Based on nine case studies on blended financing across Agri-SEMs, OECD (2020) came up with the following conclusions: first**,** guarantee schemes can help de-risk investments for financial institutions, and hence, increase their willingness to lend to Agri-SMEs. Second, liquidity instruments such as credit lines can help to construct new products with high development potential. Third, guarantees would be more effective in leveraging commercial finance when combined with technical assistance for capacity development. Moreover, blended financing is a flexible financing approach that gives a room for tailor-made blended financing structures. In the following section, the research will demonstrate the structure of Islamic blended Financing.

Table 2: Islamic blended financing

INSTRUMENTS	MECHANISM	BARRIER ADDRESS
SALAM(DEBT)	Input financing to help smallholder farmers to acquire the input needs such as (fertilizer and seed) to ensure quality and timely delivery of agriculture product. This could be done through issuing Salam Sukuk by government	It provides pre-harvest financing. This would assure on-time delivery of input to farmers. Providing financing at the beginning, it is a powerful mechanism for poverty alleviation.
Musharak(Equity)	Partnership between ITFC and Islamic investment company of Senegal to create SPV to mobilize the fund through inviting other local and international investors to invest in the value-add groundnut market.	Creating a pool of investment funds to meet the working capital for participants in value-add groundnut. To secure quality production and competitiveness. Therefore, it solves the disruption in the supply chain.
Waqaf (philanthropy or, grant)	Providing technical assistance such as (training, operational assistance, and enhancing the knowledge of Farmers.	It will facilitate capital accessibility, cost effectiveness and reduce operational risks. It will encourage the private investors to invest in the sector.

To meet the current urge to develop sustainable food security, the Islamic blended financing provides low cost financing through mobilizing Islamic instruments particularly Waqaf. Senegal is among few African countries that construct a legal framework for Waqaf. However, so far Senegal did not use Waqaf resources in the agricultural sector. Waqaf is a powerful tool for capacity building and enhancing the knowledge, skills and expertise of the farmers as well as the producers. Moreover, Salam is the most suitable financing instrument to finance the agriculture sector as many researches have proposed Salam as an alternative for agricultural financing. As mentioned in literature Salam eases the financial burden relative to the burden the borrower bears in case of loan. It also meets the instant financing need for sellers. Furthermore, it promotes just distribution of wealth through sharing risk and return. Lastly, it boosts production units, because Salam provides a complete supply chain financing solution. Musharakh is an equity-based financing model, it will be a vehicle for creating a pool of investment and it is a mechanism for securitizing through asset pooling and risk sharing. Consequently, combining those instruments in agricultural developing projects will ultimately resolve the pertaining issues in the agricultural sector, especially in the groundnut sector.

5. Conclusion & Recommendation

The agriculture sector is the main economic driver for most Sub-Saharan African Countries. However, there are many challenges, which hurdle the production capacity of agriculture production. Such as climate change, increase of interest rate at international level, structural adjustment Policy, and unfavorable terms of trade. In the case of the Senegal groundnut sector the key pertaining issues are limited certified seed availability, limited fertilizer availability, and export tax and minimum price, which reduce the income level of farmers. However, the strategy, policy and financing approaches adopted by the government did not succeed in tackling the key issues in the agriculture sector. The finding of the study revealed that ITFC financing is mainly providing working capital for SONACOS, but it did not address the key issues in the agricultural sector, as a result the overall impact on the groundnut sector is minimal. Consequently, the financing approach offered by ITFC is inefficient. Henceforth, this study proposed Islamic blended financing based on Musharakah, Salam and Waqaf. This approach is efficiently addressing issues along the value chain. Given the fact that it provides complete value chain financing. This would assure the timely delivery of input to farmers. Providing financing in pre harvest, it is an effective tool for reducing poverty. It will also enable Islamic investment banks and ITFC to create a pool of investment funds to meet the working capital for participants in value-add groundnut. Waqaf resources will facilitate access to capital, reduce transaction costs, operational risks and it will encourage the private investors to invest in the sector.

In line with the findings, this study proposes the following: 1) I suggest that the government of Senegal to assist further the development of Islamic finance industry. 2) The government should adopt a balanced policy to foster the competitiveness and productivity of the sector. 3) The government can offer incentives to encourage the private sector to incorporate agriculture particularly in the groundnut sector. 4) Government can establish an Agri-SEMs program and apply Islamic blended financing based on (SMW).

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