



ISLĀMIC AGRICULTURAL FINANCING (IAF): AN OPTION FOR DEVELOPING AGRICULTURAL SECTOR IN NIGERIA

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ABSTRACT

Nigeria has great land, water, labor, and market potentials. But the perceived failure of the existing credit facilities to meet the demand-supply gap of agricultural sector credit inhibits the sector's performance. This causes serious concern to The Federal Government's policy making, owing to some technical, resource, socio-economic, organizational, and religious constraints. It calls for policy shift toward economic diversification. This paper aims at underscoring the potential of *Islāmic* agricultural financing as an innovative mechanism for enhancing agricultural performance. The paper uses secondary data covering 2013 to 2018 sourced from the Central Bank of Nigeria (CBN) and other relevant sources to analyze the trends of conventional agricultural credit performance. The paper, using qualitative method with exploratory content analysis, finds that conventional agricultural credit falls short as it fails to bridge the demand-supply gap of financial resources which adversely cause food price inflation and high food imports, which increases poverty, hunger and unemployment owing to the above-mentioned constraints. Hence, the paper recommends that Nigeria as an Islamic Development Bank (IsDB) member country operating the Non-Interest (*Islāmic*) financial system, should properly fully implement the integrated *Islāmic* agricultural financing modes of its newly introduced agricultural intervention schemes 2020, supported with effective legal and regulatory framework, vibrant market structure for enhancing financial inclusion and economic diversification for achieving micro and macroeconomic optimum growth and steady development of the sector in Nigeria, as successfully implemented in Malaysia, Indonesia, and Sudan.

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1. INTRODUCTION

Nigerian agriculture has a great land, water, labor and market potential capable of feeding not only Nigeria, but the whole African population and developing industrial and manufacturing sectors. The sector also increases export and foreign currency earnings, which improves Gross National Product (GNP) and per capita earnings for optimum economic growth. Other potentials include reducing poverty, unemployment and inequality for steady development of the sector; hence, agricultural financing is equally important as agriculture itself, without which the said potential could not be achieved. Using *Islāmic Islāmic* Agricultural Financing (IAF) modes and principles will help Nigeria to harness these potentials for developing the sector and entire economic landscape in the country. IAF refers to any form of financing extended to agricultural sector activities using *Islāmic* modes of financing (State Bank of Pakistan, 2014). Given the perceived failure of conventional interest-based credit supply to satisfy the demand-supply gap of funds for agricultural financing, owing to problems related to government policy to fully integrate IAF in financial system policy making, despite the recent interventions incorporating *Islāmic* financing. IAF deserves investigation as a viable alternative.

The underlining ethical principles of IAF are prohibition of interest, excessive risk (*gharar*) and exploitation in credit supply; and instead sharing risk and return for justice, mutual cooperation and participation. Using *sharī'ah* compliant contracts such as, *muzāra'ah*, *mushārah*, *mudhārah*, *ijārah*, *salam*, and so forth, the IAF will help Nigerian landless and smallholder rural farmers to access more land from the surplus landowners in a bid to maximize food production and alleviate hunger and poverty. This is because agriculture is the mainstay of the Nigerian economy; historical trends had shown the sector's performance providing 95% of food supply, contributing to almost 70% to the country's GDP and employing over 70% of the labor force before national independence. At that time Nigeria was one of the largest exporters of cotton, groundnuts, hide and skin from the northern and cocoa, palm oil and rubber from the southern region (Paul, 2018). Meanwhile, the discovery of oil in 1956 shifted the trend

as Nigeria started importing food, the real sector and the GDP performance over the years started declining. The recent performance in four years stands at 24.0%, 23.4%, 23.9%, and 23.3% in 2010, 2011, 2012 and 2013 respectively. The Nigerian agricultural sector contribution to the Gross Domestic Product (GDP) up to 2018 could not exceed 21% (Statista, 2018).

Consequently, the government since the 1960s to date had launched many agricultural policies in the shape of programs, Schemes, projects and strategies such as; Operation Feed the Nation (OFN-1976), Green Revolution (1980), Agricultural Credit Guarantee Scheme Fund (ACGSF-1978), Commercial Agricultural Development (CADP-2000), Commercial Agricultural Credit Scheme (CACS-2009) and National Economic Empowerment and Development Strategy (NEEDS-2000) aimed at providing adequate sources of financing. But the rural farmers are not getting the funds and always harvest very little crop that cannot even satisfy their annual consumption let alone provide surplus to the market. Accordingly, the broad objective of agricultural financing policy is to achieve the agro-socio-economic well-being of farmers both at micro and macro levels. But many problems continue to derail agricultural sector performance. Food insecurity, hunger and poverty are escalating. Also, underutilization of land with only 34 million hectares (40%) of the total 82 million hectares is under cultivation in Nigeria. Other problems include climate variability, technological inefficiency, rural-urban wide income gap, the ever-growing population in a less productive economy and over-dependence on dwindling crude oil economy (PwC, 2018).

According to Vaughan et al. (2014), however, Nigeria is importing an average of ₦1.923 Trillion on commodities per annum translated to approximate ₦1.0 Billion (\$ 9.28 Million) worth of food per day in the period 1990-2011. The annual food import bill was five times of export in which the country loses almost its equivalent ₦1.6 Trillion (\$10 Billion) annual export opportunity from groundnut, palm oil, cocoa and cotton alone due to continuous decline and stagnation in exports. As the food imports grow at an insurmountable rate of 11% per annum Nigeria became the world's largest importer of United States wheat (with an annual import of ₦635 billion), the second largest importer of rice (₦356 billion), sugar (₦217 billion) and fish (₦97 billion). Perhaps, this trend increases the unemployment rate especially among the youths in the country and inflation of prices which retard growth (PwC, 2017; Adesina, 2013).

Nigerian government conventional credit policy has not succeeded in providing financial resources through the annual budget; the amount is always meager, untimely and mostly diverted, hence inadequate funding and corruption are the greatest constraints in the Nigerian agricultural sector. Eventually, farmers face many problems such as scarcity of inputs, poor extension and mechanization services, inadequate road access to market and lack of storage facilities causing over 70% or \$9billion in post-harvest crop loss annually (Nwaoguji, 2017). Other issues are lack of proper organization in distributing credits and strict procedure including high interest rate, a requirement of collateral and or guarantor which a rural farmer cannot afford, and most importantly, corruption in the inputs distribution, and subsequently, the credit fails to reach the rural farmers as the target beneficiaries. These prove that the conventional credit policy, over the years, fails miserably to provide the desired objective of transforming the agriculture sector in Nigeria as opined by Umana (2019), PwC (2017), Okoro and Nwali (2017), Ayegba and Ikani (2013) among others.

Owing to this, the financial sector could not serve its role; it lacks incentive to finance agriculture as it is not covered by government policy. This lack of incentive makes financial institutions remain reluctant to venture into different types of financing such as farm, inputs, value chain, microfinance, subsidy and rural financing and risk management financing. As a result, the Nigerian financial institutions' role of funding the agricultural sector becomes minimal. This implies the existence of inadequate financial resources and strict procedures for loan application; it means a high number of farmers are being excluded from the mainstream financial system. The situation worsens in the absence of an alternative financing in Nigeria, as the financial institutions operate the conventional banking system which dominates the government policy on agriculture financing. In the same vein, people lack awareness on the working of IAF and how to operate modern agricultural finance without interest. In fact, prior to 2011 when Jaiz Bank, the first full-fledged *Islāmic* bank, was established there was no experience of practicing IAF in the whole Nigerian financial system. The expected contribution only comes from the three *Islāmic* banks which are at their infant stage of operation. Jaiz bank, the oldest started operation in 2012, Taj Bank in 2019 and Lotus Capital, opened in June 2021, is yet to start operations.

Furthermore, the agricultural policy development in Nigeria took a new turn on July 16, 2020. In its effort to increase access to finance and enhance financial literacy and inclusion, the Nigerian

government through the CBN issued eleven intervention schemes for Non-Interest Financial Institutions (NIFIs), which are mainly agricultural related. The NIFI is the *Islāmic* financial sector alternative to the conventional system as part of the country's whole financial system policy (CBN, 2020). The objective is to increase finances to the sector and enhance financial inclusion and literacy. But prior to this recent development, the 2009 banking and financial sector reforms to address the global financial meltdown, paved the way for establishing *Islāmic* banks. Now, all the three (3) full-fledged *Islāmic* banks in Nigeria operate *Islāmic* agricultural financing products and services. Jaiz Bank Plc and Taj Bank Plc operate *murābahah*, *ijārah*, *ijārah muntahiya bit-tamlīk*, *ijārah service* and *salam*. While the recently established Lotus Bank Plc employs only *salam* but is yet to start operation. These modes are operated on individuals and corporate institutions as well (Lotus Bank, 2021).

In this regard, this paper therefore, owing to the perceived failure of conventional credit performance in meeting its desired objective, aims at exploring the potentials of IAF modes as an alternative and innovative source of financing for agricultural sector development in Nigeria. The IAF mode is also an opportunity for all Nigerian citizens, particularly the majority Nigerian *Muslims* who are religiously prohibited from access to any credit involving interest, similar to the Christians also. IAF is relevant to all humans regardless of their faith because of the spiritual and ethical nature of its universal principles such as redistributive justice and equality. The paper draws successful lessons from Malaysia, Indonesia, and Sudan to help the Nigerian government's policy on economic diversification for poverty and hunger reduction, increasing income and employment generation for optimum growth and steady development.

2. THEORETICAL AND CONCEPTUAL REVIEWS

2.1 CONVENTIONAL AGRICULTURAL CREDIT

In conventional agricultural financing, credits, loans and borrowings are synonymous concepts. The word credit is a derivation of "credo" a Latin word which means "I believe". Thus, credit is based upon belief, confidence, trust and faith; hence, borrowing is the ability to use somebody's capital, products and services on the spot with a promise to repay at maturity time (Pandey, 2008). Credit is a device for facilitating the temporary transfer of purchasing power from an individual, public or private organization to another. Credit is the

overall arrangement through which inputs (in cash or in kind), are made available to farmers who repay such inputs as stated in the repayment schedule with due interest and different criteria, types and sources (Subba Reddy and Raghu Ram, 2005). Agricultural credit as an important instrument for channeling funds from savers to borrowers, is broadly classified based on time/period of loan repayment which is either short-term loans (6 to 18 months) or long-term. This is primarily meant to meet farming expenses such as: seeds, fertilizers, pesticides and payment of labor wages. The medium-term loans (18 months to 5 years) for improving farms through purchasing of implements and machinery. And the long-term loans (5 years and above) are for permanent improvements such as infrastructure, drainage for irrigation, and orchard development. The second is the classification loan based on purpose. This includes investment, production, marketing and consumption purposes, and the third classification is based on security which includes collateral, guarantor, mortgaging of land and hypothecation of crops as a security. The sources of financing agriculture can be formal, semi-formal or informal; the borrower can be assessed to justify his or her worthiness. But in formal sources the five C method is applied which refers to character, capacity, capital, condition and collateral before giving out loans (Pandey, 2008).

The whole theory of credit revolves around the need for financial access. This is only achieved in the absence of constraints to financial institutions or the financial environment. The formal financial credit constraints include application cost, high fees, education barrier, credit size, collateral and interest rate which inhibit financial access to rural farmers, in addition to rural population density and risk management of agribusiness and investment (Askari et al., 2012). The theory of exchange of money, capital or commodity for credit implies that the spot exchanged value is preferred against the future repayment for the forgone opportunity cost of the deferred money or commodity payable in future time. Therefore, the Time Value of Money (TVM) and Positive Time Preference (PTP) are two underpinning concepts used to justify reward for the delayed repayment in the conventional credit system. This further explains why the conventional credit system is inherently interest based. Similarly, in Nigeria, the government since independence has two distinct approaches to agricultural financing policy namely; i) Old paradigm approach, a direct government approach of maximum government intervention which started from independence and ended in the 1980s. ii) New paradigm approach, popularly known as indirect

government approach with minimum government intervention to agricultural policy, it was also called financial system policy with credits being channeled through financial institutions, financial market and intermediaries. The system, which advocates effective financial system use, started from the 1980s to date (Meyer, 2011).

Accordingly, in achieving its policies, the Nigerian government since independence was able to establish some institutions upon which the key policy areas of agricultural development strategies rested:

- a. Agricultural Commodity Marketing and Pricing Policy was established in 1954.
- b. Input Supply and Distribution Policy for the supply of inputs such as fertilizers, agrochemicals, seeds, machinery and equipment. Also, the Agricultural Input Subsidy Policy was established in the 1950s.
- c. Agricultural Co-operative Policy for mobilization and orientation through agricultural co-operatives.
- d. Water Resources and Irrigation Policy which established eleven River Basin Development Authorities in 1977 for developing Nigeria's land and water resources.

Among the programs, schemes and strategies the Nigerian government over the years had introduced for financing agriculture and credit supply, are the following:

- a. Agricultural Credit Guarantee Scheme Fund (ACGSF, 1978 to date). Established by Act No. 20 of 1978, it offers a 75%3 guarantee backed by the Central Bank of Nigeria (CBN) on agricultural credit in default with 40% interest pay back. The target beneficiaries are small scale farmers and credits at ₦50,000 to ₦100,000. The scheme has, however, suffered bureaucratic and administrative bottlenecks. For instance, the application and claim processing has been slow such that at end 2005, there was an accumulated backlog of 4,064 unprocessed claims, the oldest of which dated back to 25 years (Ayegba and Ikani, 2013).
- b. Commercial Agriculture Credit Scheme (CACCS, 2009 to date) Introduced by Central Bank of Nigeria (CBN) in collaboration with the Federal Ministry of Agriculture and Water Resources (FMA & WR) in 2009 to provide finance, increase production output and generate employment through agricultural value

chain (production, processing, storage and marketing) and diversify the country's economy.

- c. Bank of Agriculture (BOA) Formally: Nigerian Agricultural, Cooperative and Rural Development Bank (NACRDB, 1972 to date). Formerly the Nigerian Agricultural and Cooperative Bank (NACB), it was jointly established by the Federal Government of Nigeria (FGN) and the Central Bank of Nigeria. The NACRDB was renamed after a merger between People's Bank of Nigeria, Family Economic Advancement Program and Nigerian Agricultural and Cooperative Bank in 2002, to dispense credit to cooperatives, agribusiness and individual smallholder farmers at a subsidized interest rate. Although it now collects deposits, it has not lived up to expectations due to poor funding.

On the whole, these policies and others proved unsuccessful in providing the Nigerian government's desired achievement in its policy making, owing to some technical, resource, socioeconomic, organizational and of course religious constraints.

2.2 CRITICS OF CONVENTIONAL AGRICULTURAL FINANCING IN NIGERIA

Ogbalubi and Wokocha (2013) in their work titled "Agricultural Development and Employment Generation: The Nigerian Experience", after observing many studies of past researchers, suggest that conventional agricultural financing in Nigeria has been crippled by the following constraints:

- a. Technical Constraint: Technical constraints include the high incidence of pests and diseases, inadequate infrastructural facilities, high cost of improved varieties of seedlings, dependence on unimproved inputs and rudimentary method as well as lack of modern techniques to improve agricultural productivity (Sulaiman et al., 2021). Others are inadequate extension services and poor mechanization (Umana 2019; Boroh and Nwakamma, 2018).
- b. Resources Constraints: These include inadequate funds and financial resources, shortage of labor caused by high level of rural-urban migration, high demand on land due to increasing population and industrialization, coupled with a high rate of

land degradation caused by oil exploration activities in Niger Delta Region. Others are climate variability, desert encroachment, drought, flood and insecurity especially in North-east Nigeria (Umana 2019; Okoro and Nwali, 2017; PwC, 2017). In addition, there is a need for best management practices.

- c. **Socioeconomic Constraints:** These include scarcity and high cost of improved farm inputs, inefficient marketing arrangement characterized by diversion of fund, food import, volatility of marketing price of crops, irregularity of legal tenure and land ownership as well as extension services and credit accessibility, poor road network as well as lack of storage facilities and high environmental hazards in existent transportation networks for agricultural products (Umana 2019; Ayegba and Ikani. 2013).
- d. **Organizational Constraints:** Agricultural production is predominantly in the hands of a multitude of small-scale unorganized and unregistered farmers, scattered across the country. Lack of coordination, coupled with the dispersed nature of farm settlements, hinders farmer participation in agricultural and rural development. It also curtails the supply of extension service, farm credit, and other vital inputs to farmers (Umana 2019; PwC, 2017).

However, from the critical glance at the above four constraints given by Ogbalubi and Wokocha (2013), one posits the fifth constraint, namely:

- e. **Religious Constraints:** This is also a very critical constraint because the majority *Muslims* in Nigeria are Maliki school adherents, who vehemently prohibit the use of any element of interest in loan giving, and since the conventional credit is associated with interest, they desist from it, and abhor any transaction that involves interest, also exploitation of the loan and shifting risk to the rural farmer is unethical. In this regard the IAF can suitably be accepted if it replaces the interest-bearing loans with equity financing such as *muzāra'ah*, *musāqah*, *mughārasah*, leasing such as *ijārah* or trading contracts such as *Salam* and *murābahah* to boost agriculture financing in the land.

2.3 ISLĀMIC AGRICULTURAL FINANCING

Islāmic Agricultural Financing (IAF) refers to any form of financing extended for agricultural sector activities under *Islāmic* modes of financing (State Bank of Pakistan, 2014). Agriculture (*filāhah/zirā'ah*, in Arabic language) is a sector of great importance in the *Islāmic* economic system. To buttress this assertion, over five hundred (500) verses in the *Qur'ān* were used to describe environment, nature and its relationship with human beings and environmental care which stress the importance of agriculture in enhancing economy “It is He who has spread out the earth for His creatures. Therein, are fruit and date palms, with spatters and husked corn and scented herbs. Then which of the favors of your Lord will you deny?” (*Qur'ān* 55:10-13). “Then let man look at his food, how we pair forth water in abundance, then we split the earth into fragments and produce therein corn and grapes and nutritious plants (*Qur'ān* 80: 24-28)”. Other verses affirm the importance of land, water and seeds in food production “And a sign for them is the dead land. We give it life, and we bring forth from it grains, so that they eat thereof. And we have made therein gardens of date palms and grapes, and we have caused springs of water to gush forth therein. Glory be to Him (The Almighty Allah) who has created all the pairs of that which the earth produces, as well as themselves and of that which they knew not” (*Qur'ān*: 33-6).

However, provisions of *Sunnah* emphasize more on irrigation and redemption of a barren land to enhance agriculture “Whoever brings dead land to life, for him is the reward in it and whatever any creature seeking food eats of it, shall be considered as charity (*sadaqah*) for him” (*Musnad Ahmad, Vol. 2, Hadith No. 14271*). This is a collective obligation (*Fard al-Kifāyah*) upon the entire community; this implies that a number of people must embark on agricultural production in order to ensure ample food supply for the entire society at large. The function of agricultural production was based on earning livelihood (*al-Rizq*) through lawful means (*halal*) only. Early contributions to agriculture were seen in the Prophet’s lifetime and the rightly guided caliphs’ time. Subsequently, during the Umayyad and Abbasid period *Muslims* developed a sophisticated system of irrigation using water mills and irrigating machines. Farming manuals and encyclopedias on botany were produced by different scholars such as Ibn al-Baitār. Cookbooks such as the *Kitab al-Tabikh* (The Book of Dishes) of Muhammad bin Hasan al-Baghdadi (1226) and many others were also written. *Muslims* introduced new crops which transformed private farming into a new

global industry exported everywhere including Europe through Spain and North Africa such as sugar cane, rice, cotton, saffron lemons, oranges, almonds and bananas (Yahuza, 2015).

On the whole, the theory of *Islāmic* finance in agriculture aims for justice, fairness, trust, honesty, integrity and a balanced society by promoting *halal* permissible and prohibiting *haram* impermissible such as *ribā'*, *gharar*, *maisir*, unethical and unlawful products, goods and services “Verily Allah enjoins *al-Adl* (justice) and *al-Ihsan* (benevolence) and giving to kinsfolk” (*Qur’ān* 16:90). *Sharī’ah* also applies legal maxims theory built upon enhancing welfare (*falāh*) and preventing harm to achieve its underlining *maqasid* of protecting religion, life, intellect, progeny and property as necessities. *Islāmic* Worldview refers to man’s perceptions, ideas, attitudes and beliefs toward the world life, material resources and his role in exploiting them. This establishes the philosophical foundation of man’s role in relation to material resources in this world as a trust (*amānah*) subject to Allah’s accountability in the afterlife. Thus, all economic and financial matters are required to be in line with Allah’s call for justice, equity and fair play to achieve the basic goals of *Islāmic* moral philosophy, that is, socio-economic justice and equitable income distribution.

Therefore, theoretical dimensions of the *sharī’ah* principles maintain that any contract should be free from coercion/duress, monopoly, hoarding and detriment (*Dharar*), it should also be free from price control (except for government intervention to stabilize markets) and free from price manipulation. This implies that the parties to a contract have right to equal and accurate information against misrepresentation, fraud or deception to trade at efficient prices and with equal bargaining power. In essence, the objective is to achieve one major principle of *Maslahah Mursalah* (Unrestricted Public Interest) which implies maximization of welfare and obstruction of detriment, corruption or mischief (Obaidullah, 2005).

2.4 ISLĀMIC AGRICULTURAL FINANCING IN MALAYSIA, INDONESIA AND SUDAN

According to Yahuza (2018), some empirical studies proved that IAF modes have been successfully practiced in Malaysia, Indonesia and Sudan citing Rahman and Othman (2012) and Shafiai and Moi (2015) saying that, sharecropping for rice farming in Malaysia was in practice since the 1950s. States such as Selangor, Kelantan, Kedah and Sabah in Malaysia have been popular in IAF. The paddy farmers practiced

five types of land tenancy ranging from long term leasing, cash rent (short term), usufruct mortgage, usufruct loan and crop sharing (*pawah*) at 1/2 or 2/3 ratio and land rent at RM90.00 to 100.00 per acre. However, the government in Malaysia through the Federal Land Consolidation and Rehabilitation Authority (FELCRA Berhad) implements the contract where FELCRA manages the land, and together with the farmer contributes seeds, fertilizers, pesticides, transport and labor costs in seeding and plowing with the agricultural output to be shared with the landowners. The practice helps the government in collecting and disbursing of *Zakāt* tax (Yahuza, 2018).

Meanwhile, in the Eastern region of Java Indonesia, IAF was conducted according to Khasanah et al. (2013) which justifies rice as a staple food for almost all of the Indonesians based on two reasons: As the landowners cannot do the land tenancy by themselves, they reasonably make a partnership with the landless for rice cultivation. The high unemployment and lack of job opportunities drive the society to adopt Agricultural Product and Loss Sharing (APLS) principle as an instrument for creating job opportunities and increasing income in line with *Qur'anic* injunction "...and help one another in Al-birr and Al-Taqwa (virtue, righteousness and piety) but help not one another in sin and transgression" (*Al-Ma'idah* 5:2). In agricultural finance, the landlord provides the land and the tenant provides the other inputs (seeds, labor, fertilizers, etc.) they share the crop based on their respective contributions. In case of risk, such as when the crop is lost, the landlord will forgo his share but not the capital because the land will be returned to him. The source of capital for rice production is either from conventional or *sharī'ah* institutions, government support programs, borrowing from crop traders and sharecropping using $\frac{1}{2}$ and $\frac{1}{3}$ ratio. Success of sharecropping in the study area made it a major occupation particularly in *Kabupaten Malang* where 60% of its population engaged in the business. The framework of *muzāra'ah* is based on equity, prosperity, participation and assistance (*ta'awun*); it is a kind of assistance to a landowner, to a sharecropper and to the poor. APLS is proven able to improve community welfare, while inflation, on the other hand, decreases welfare and retards economic growth. Furthermore, this model also shows that the government in the *Islāmic* economy can effectively coordinate fiscal and monetary policies to support funds through tithe and ownership rights.

Also, The Sudanese Islamic Bank (SIB) adopted *muzāra'ah* financing partnership in Sudan, in three different farming systems, namely canal irrigation, pump irrigation, and rain-fed irrigation. The Bank normally provides fixed assets such as tractors, plows, harrows,

water pumps, and inputs such as seeds, fertilizers, pesticides, fuel, jute sacks and co-management, marketing, storing and extension. The farmer, on the other hand, contributes with land, labor, part of the running expenses and management. From the net profit, the farmer gets 30% for management. The remaining profit (70%) is divided between the Bank and the farmer according to their equity share (Abdel Mohsin, 2005).

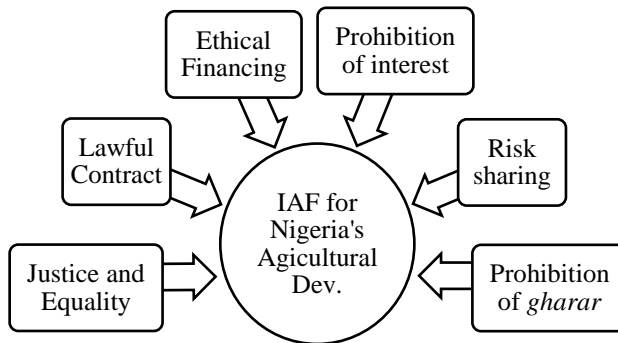
Given the abovementioned practices, if the Nigerian policy makers could take lessons from these countries and successfully implement them, I hope the result will be the same as achieved by them, thereby diversifying the Nigerian economy to achieve the desired objectives.

2.5 CONCEPTUAL FRAMEWORK OF IAF

Based on the foregoing discussion, the IAF theoretical underpinning is based on the 1) *Qur'anic* worldview of the *Tauhidic* paradigm. It underlines the position of Allāh *'azza wa jalla* as the creator and the ultimate owner of all the resources, man as the vicegerent entrusted with the environment as a trust. Humankind must diligently use environmental resources according to the dictates of its owner's commandments. 2) The legal maxims which foster attaining good (*Halal*) and rejecting harm (*Haram*). 3) The *Maqasid al-Sharī'ah* of protecting life and property as *maslahah*. This means that life of humans and all the species in the environment, wealth and the properties are sacred and to be preserved. It implies property rights, legitimate earning and application of *sharī'ah* compliant contract which signifies prohibition of interest, gharar and gambling. Unlike conventional credit, the IAF theory does not promote loan giving. Loan "*Qardh*" is generally not a profit-making product, but rather a benevolent means to help one in need. Hence, both loan and sadaqah are spiritual aspect of IAF and no monetary profit is to be gained therefrom. This paper adopts these principles as its theoretical framework. The paper develops conceptual framework using various concepts deduced from the theoretical framework. Then it integrated and applied them in the Nigerian *Islāmic* agricultural credit schemes as alternative to the conventional credit system. This enables using various contracts discussed in the paper as *Islāmic* modes of financing agriculture in Nigeria. This coincides with the ongoing operation of *Islāmic* finance and banking system, current *sukūk* issuances and recent introduction of Non-Interest Intervention Schemes by the Nigerian government, as alternative to the existing economic and

financial system. The huge untapped potential is yet to be harnessed in the country. The operation of IAF will justify Nigeria's position as an Islamic Development Bank (IsDB) member country. The flexibility and ethical nature of the theoretical principles governing *Islāmic* finance products in general, and agriculture in particular are well fitted, timely and relevant to the Nigerian context.

FIGURE 1
Conceptual Framework of IAF



Source: Author's collation

These are the guiding principles of the framework (Figure 1), for instance: 1. Justice and equality. This principle signifies equitable wealth redistribution and equality in giving opportunities in public sector policies. In this regard, equal policies should be initiated by government to allow Nigerian *Muslims* to enjoy the nation's wealth on *Islāmic* finance as they are prohibited from entertaining any *ribā'*-based banking and financial system. This helps establish solid dual banking and financial system in a plural and multi-ethnic country such as Nigeria. It also emphasizes good governance, transparency, accountability and professionalism and drives away discrimination, corruption and nepotism. Chapra (2008) rightly argues that all people in a given country should be treated equally irrespective of their race, color, age, sex or status, and share among them equitably the fruits of national development. 2. Lawful contract signifies legitimacy and sanctity of a lawful as well as *sharī'ah* compliant contract. 3. Ethical financing envisages moral responsibility to financing in terms of bringing benefit and or preventing damage to the environment and the community as a whole. 4. Prohibition of interest is the cornerstone of the whole *Islāmic* finance; *ribā'* or *usury* is the major culprit that promotes exploitation, inequality and inflation; especially in this

critical time of economic recession, currency devaluation and hyperinflation in prices of inputs and essential commodities. 5. Sharing risk is a unique principle that stresses the sharing of risk, if any, in equity contracts such as *mushārah* and its variants; the parties must share both risk and return in the venture. 6. Prohibition of *gharar*; excessive uncertainty and speculation are disallowed in *Islāmic* finance. As such, only the risk inherently associated with the nature of agricultural financing is acceptable and minimized. It is not allowed to buy and sell uncertain goods, commodities and services. In *sharī'ah* principles this is tantamount to gambling and games of chance which are prohibited by Prophetic tradition narrated by Abi Hurairah and reported by Muslim, that, the Prophet (*ṣal-Allāhu 'alayhi wa sallam*) prohibits *gharar* contracts (Al-Zuhailī, 1997).

The justification of the framework here is built upon the notion of a perceived failure of conventional credit system as a facility in not only sourcing but also in disbursing agricultural credits to meeting farmer demands. It also built on the fact that IAF proved successful in its application in countries such as Malaysia, Indonesia, and Sudan. These countries share some socio-economic, financial and religious characteristics with Nigeria. The empirical evidence of the framework in this study is restricted to these three countries, even though many other countries applied IAF.

3. MATERIALS AND METHODS

3.1 STUDY AREA

Nigeria is an independent sovereign country in the West African sub-continent. With one of the largest youth populations in the world, Nigeria has as at 2016 population projection an approximate 194 million people (NBS, 2018). Nigeria has 923, 000 square kilometers translated into 92.4 million hectares of total land mass, out of which the arable land area stood at 82 million with only 32 million hectares under cultivation (PwC, 2017; FAO, 2016). The climate in the country determines the vegetation of each region as well as the different crops cultivated in Nigeria. These crops include cereals, legumes, roots and tubers, tree crops and so on (Okoro and Nwali, 2017).

3.2 DATA TYPE AND SOURCES

Secondary data refers to published data from relevant organizations, agencies and government public departments and ministries as well as

libraries and professional bodies. For the purpose of this research, secondary data were adopted for its relevance to the problem at hand. Data were collected from Central Bank of Nigeria (CBN) reports and Price Waterhouse Coopers (PwC). Other sources were gathered from textbooks, journal articles, newspapers and international organization policy reports. These secondary data were meant to analyze the trends of agricultural credit performance through various agricultural programs, fund disbursement, annual food import bills and the challenges of accessing agricultural loans from formal sources. Data validity and reliability relied on its consistency and relevance to the context of the paper thereby satisfying the research objectives. Trustworthiness and credibility of sources were considered.

3.3 DATA ANALYSIS METHODS

Adopting qualitative method using exploratory-descriptive content analysis approach, this paper seeks to analyze the secondary data available for this research. Descriptive content analysis examines document analysis, interviews or survey types of data with the aim of summarizing the information contents of the data at hand (Rochow et al., 2012). It is a descriptive design that summarizes the content of structured data according to the study needs. The descriptive statistics were used in this paper to analyze the data presented in the form of tables, graphs, charts and figures. The tables and figures are presented in their original form as directly collected from the source not manipulated in order to maintain its originality and further justify its validity and reliability as well. This implies that analysis of the context will help in exposing the weakness of conventional agricultural credit policy in Nigeria to make a case for alternative IAF modes.

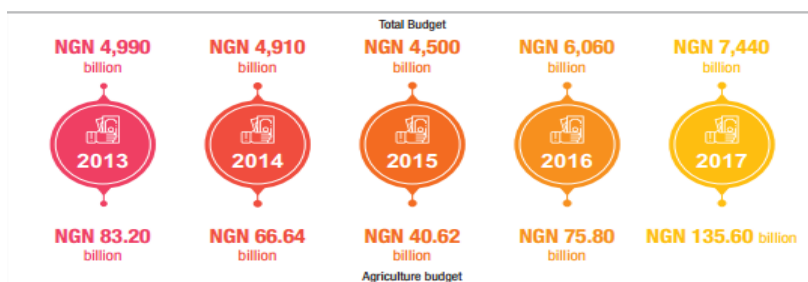
3.4 DISCUSSION OF RESULTS

This section comprises presentation of the secondary data and discussion of results to examine the supply of funds for agricultural finance in the annual budget allocation, trends of conventional credit performance in various schemes, sector's credit demand and supply and analysis of food importation rate.

Figure 2 presents the agriculture annual budget share over five years (2013 - 2017). All of them fall short of the minimum 10% Maputo Declaration standard, which is a policy adopted by the African Union in 2003 through the Comprehensive Africa Agriculture

Development Programme (CAADP) agreement to boost agriculture and address food insecurity by allocating at least 10% minimum share to agriculture by each member country’s annual budget. The Nigerian 2018 annual budget also follows suit with just 2.2% from the total budget of NGN9.12 trillion recorded as the highest ever allocation to the sector. The allocation is dramatically reducing in the preceding years with 1.5% and 1.3% in the 2019 and 2020 annual budgets respectively (Adanikin, 2020). Going by previous years’ experiences, only about 20% of the funds are being released from the capital budget while almost 100% of recurrent expenditure is used. This means that the staff salaries and emoluments do not match their outputs, thereby creating an imbalance in the system; this hampers sustainability and leads to eventual collapse (Aguyi, 2019).

FIGURE 2
Nigerian Annual Budgets Share to Agriculture



Source: PwC (2018)

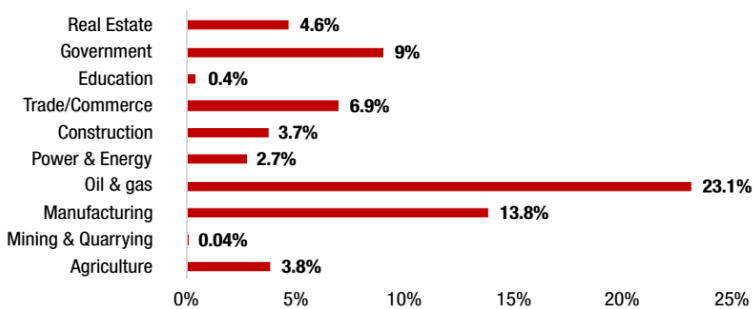
TABLE 1
Summary of the Level of Disbursement of the Intervention Scheme

Scheme	Amount Available (₦b)	Amount Disbursed (₦b)
CACS	200	199.3
SMEs Refinancing/Restructuring	200	199.7
SMECGS	200	1.26
PAIF	300	143.7
ACSS	50	19.43
Total	₦950 billion	₦563.39 billion

Source: CBN, (2014)

Table 1 shows the level of fund disbursement of five different intervention schemes of which only ₦563.39 billion (59.3%) were disbursed from the total amount of ₦950 billion. These are: 1. Commercial Agriculture Credit Scheme; 2. Small and Medium Enterprises Refinancing and Restructuring; 3. Small and Medium Enterprises Credit Guarantee Scheme; 4. Power and Aviation Intervention Fund; 5. Agricultural Credit Support Scheme. The amount is insignificantly meager and yet not fully accessed. In 2014, SAHEL estimates the minimum credit demand for agricultural financing in Nigeria is US\$4billion per annum, at the time where the commercial banks credit supply to agriculture is just 1.6% in 2009 which was increased to 3.7% in 2013 (SAHEL, 2014). This indicates the wide financing gap in the sector which required urgent and proactive Federal Government intervention.

FIGURE 3
Banking Sector Credit Share to Private Sectors (2018)



Source: PwC (2018)

Figure 3 shows the banking sector lending to the private sector in 2018, in which according to the National Bureau of Statistics, the credit to agricultural sector in spite of its immense contribution to the Nigerian economic and GDP growth was 3.26% and 3.36% of the total credit to the private sectors in 2016 and 2017 respectively (PwC, 2018). This, despite the recent activities of NIRSAL in boosting agricultural lending through commercial banks by providing risk cover and reducing interest rate to a single digit for agricultural value-chain segments to afford the loan and give incentive to banks to give out loans; still, the funding demand-supply gap is very huge. Perhaps the risky nature of agricultural lending is one factor which the NIRSAL through Anchor Borrowers' Program (ABP) and other

schemes tries to address. But the major challenges are the shortage of funds and accessibility of funds from the formal source as presented in the following table.

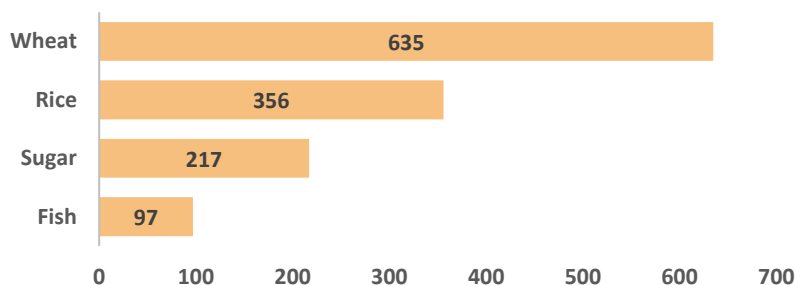
Elsewhere in their research Ayegba and Ikani (2013), however, used empirical studies to establish that the major challenges in accessing agricultural credit from formal sources as presented in Table 2 were high interest rate charges of commercial banks, strict procedure and late loan approval. The credit approval is untimely and normally comes late months after the planting season has passed, making it difficult for the rural farmers to repay the loan in due time. Hence, banks should understand that cropping is seasonal activity and depends on several climatic conditions and must endeavor to fast track the loan processing turnaround time in the best interest of the rural farmers and the growth of the Nigerian economy.

TABLE 2
Challenges in Accessing Agricultural Credit from Formal Sources

Respondents	No.	Percentage (%)
High Interest Rate	20	6.67
Bureaucratic bottlenecks	30	10.00
Late Approval	130	43.33
Guarantor	20	6.67
Collateral	50	16.67
No banks in our locality	30	10.00
Lack of awareness	20	6.67
Total	300	100%

Source: Ayegba and Ikani, (2013)

FIGURE 4
Top 4 Nigeria’s Annual Food Imports Bill (₦ Billions)

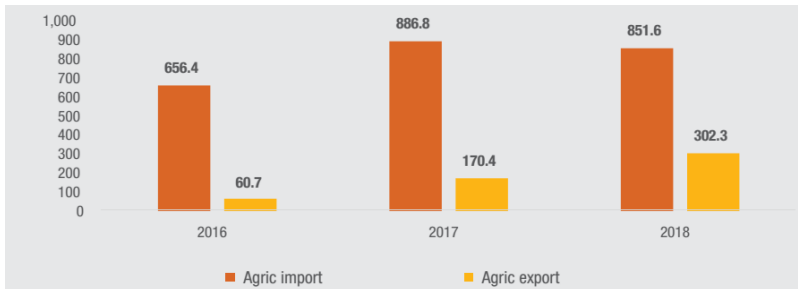


Source: Central Bank of Nigeria CBN (2014)

Figure 4 shows the top 4 annual import bill for wheat (₦635billion), rice (₦356billion), sugar (₦217billion) and fish (₦96 billion), meaning Nigeria is losing over ₦1.3trillion annually on food imports; facts also show food import growth rate at 11% per annum, putting Nigeria as the world's largest importer of US wheat and second world's largest rice importer respectively. This imbalance causes hyperinflation of essential commodity prices, increases unemployment and retards economic growth in Nigeria.

Figure 5 shows the import-export value-chain gap in three years (2016, 2017 and 2018), and in all of them, the import value outscores the export one by far. The highest value for import stood at NGN886.8billion in 2017 against the highest export which is counted as low as NGN302.3billion in 2018. This is the exact time when Nigeria is suffering economic recession. Nigeria loses these huge amounts to importing commodities which can be produced domestically, and that is a financial setback by all economic measures.

FIGURE 5
Agriculture Import-Export Value in Nigeria (NGN Bn)



Source: PwC (2019)

4. A CASE FOR *ISLĀMIC* AGRICULTURAL FINANCING IN NIGERIA

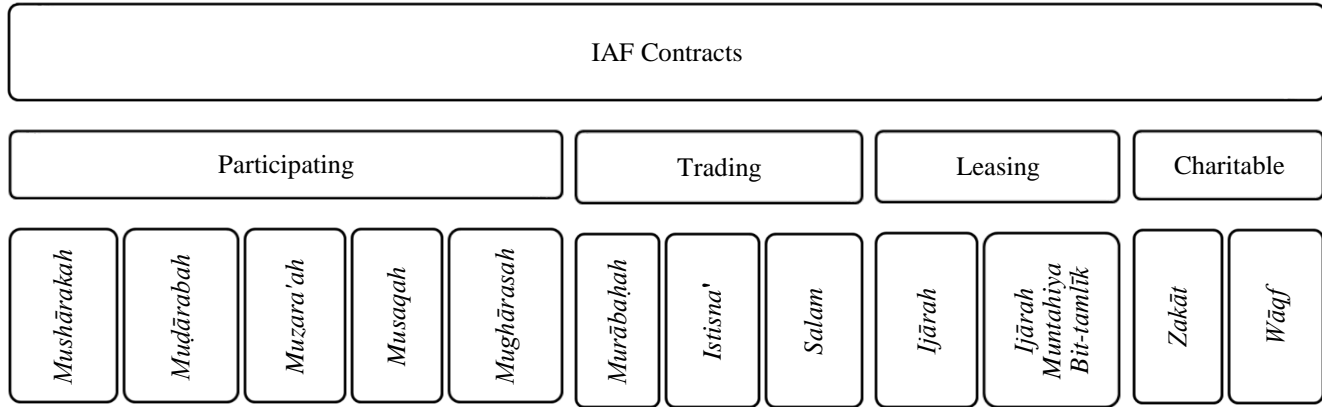
For any development policy to succeed, it must be sustainable, efficient and affordable. On this notion, the conventional agricultural credit policy alone could not succeed in Nigeria. It is unsustainable owing to inconsistent policies; it is inefficient because it fails to meet the credit demand and equitable disbursement of funds and is of course unaffordable particularly to rural farmers because of high interest and exploitation in credit supply. Regarding this from the *maqāṣid* approach, Ibn Ashur notes that the greatest *Maqāṣid* of *Sharī'ah* is

achieving well-being and integrity on one hand and preventing harm and corruption on the other hand in social policy (Kamali, 2012).

An *Islāmic* economic system requires any agricultural credit policy to be free from interest as Allāh *'azza wa jalla* deprives *ribā'* from all blessings saying, "Allah destroys *ribā* and increases (His blessings on) *ṣadaqah*, and Allah likes not the disbeliever and sinner". (*Qur'ān* 2: 276). In the same way, conventional scholars such as Okoro and Nwali (2017), Ogbonna and Osandu (2015), Ayegba and Ikani (2013) also affirm that interest rate is one major problem of agricultural credit policy in Nigeria. Thus, it should be replaced by equity financing and simple service charges such as *muzāra'ah*, (sharecropping), debt-based such as *murābahah*, *salam*, *ijārah*, agency and guarantee contracts (*wakālāh* and *kafalah*). The IAF must have its foundation on the *Islāmic* economic doctrines. The entire IAF policy should not only be pro-growth and curtail excessive profit maximization per se, but also be equity-based for socio-economic progress of all segments in society, poverty reduction and comprehensive human and social development (Haneef, 2017).

Furthermore, the nature and scope of IAF at micro level means equitable channeling of investible funds in cash or in-kind from the surplus to the deficit economic units including individual and household farmers, processors, millers, marketers, distributors and consumers for financing needs. While, at a macro level, it refers to aggregate demand and supply of funds for the entire agricultural sector with adequate rules and regulations governing fund disbursement to boost investment and enhance socio-economic growth and development. Hence, IAF prohibits interest, *gharar*, gambling, unethical and unlawful products and services; as such agricultural credit from the *Islāmic* perspective must adhere to the principles of participation, cooperation and assistance which promote socio-economic justice and equitable allocation and distribution of funds to help the weak in society, namely the peasant farmers. IAF techniques are unique in nature and structure. They are classified into profit and non-profit making finance; the former refers to purely economic and business enterprise whereas the latter refers to social financing. Similarly, IAF maintains redistributive justice in realizing needs fulfilment using voluntary and other philanthropic mechanisms (Rahim and Mohammed, 2018). The classifications are shown on Figure 6.

FIGURE 6
Typology of *Islāmic* Agricultural Financing Modes



Source: Author's Own Description

The implication for applying these IAF modes is that they provide equal access to funds and financing opportunities, thereby improving the food system supply. So also new jobs will be created and income earnings will be increased. The NIFIs sector, value-chain actors and microfinance institutions will form mutual cooperation as well. This surely relieves Muslims, ethical farmers and financiers from injustice of conventional finance which offers speculative financing, commodity market derivatives such as futures, forwards, options, swaps and short selling, involve excessive risk, games of chance and interest rate which is injurious, exploitative and unjust which not only violates *Shari'ah* principles, but also undermines public and social interest (*maslahah 'āmmah*). In IAF for instance, instead of a micro farmer hypothecating his crops to secure loan, he could do so through *Salam* contract. The farmer sells his crop to NIFIs, the marketer or financial institution in advance with known exact measure, weight and price to deliver after harvesting the crop. Or using *murābahah*, in which the bank buys the crop from the farmer at spot and sells it to the trader to pay on deferred installments (Kahf and Fahim Khan, 1992)

Also, there is a great importance of equity financing (*Muzara'ah*) where a surplus landowner; government, Kano State Agricultural and Rural Development Authority (KNARDA), Hadejia-Jama'are River Basin Development Authority (HJRBD), Federal Ministry of Agriculture and Rural Development (FMARD), bank, or any financier can provide his or her owned or rented land to a landless peasant covering all other farming cost on agreement to share the produce proportionately. In other way government in an attempt to increase land utilization, job creation and achieving food security through CBN in collaboration with FMARD can clear a large space of land and offer it to peasants on capacity basis and cover farming cost by providing improved seeds, fertilizers and pesticides to them to cultivate and share the crop among them while the government brings it to the market or consumers at a subsidized price. This will reduce farming cost, control inflation of food price in the market and facilitate access to agriculture financing which develops rural areas and reduces unemployment.

Moreover, other profit and loss sharing (PLS) contracts such as *musāqah* and *mughārasah* can also be used to justify profit for developing gardens and orchards, or even farming; for instance, HJRBD can enter into a contract with farmers to irrigate their owned lands or the farmers' land on share irrigation basis. Another *shari'ah* compliant instrument is *sukūk* which the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) defines as

certificates of equal value representing undivided shares in ownership of tangible assets, property rights, and services. International Islamic Financial Institutions (IIFM, 2013) defines *sukūk* as a commercial paper that provides an investor with ownership in an underlying asset. It is an alternative to conventional bond based on equity, lease and debt financing. There are different types of *sukūk*, such as:

- a. *Mushārahah* and *Mudhārabah Şukūk* referred to trading and venture capital partnership on agriculture production for processing, transportation and marketing.
- b. *Murābahah*, *Salam* and *Istiṣnā’ Şukūk* referred to debt-based contract on marketing agriculture produce.
- c. *Ijārah Şukūk*: for leasing purposes of land, machinery and other equipment such as tractors, threshers, irrigation and harvesting machines and so on.
- d. *Muzara’ah*, *Musāqah* and *Mughārasah Şukūk* referred to the real agricultural production partnership instruments where funds could be raised from the investors for financing agriculture through Central Bank of Nigeria (CBN), Nigeria Stock Exchange (NSE), Securities and Exchange Commission (SEC) and Kano State Exchange (KSE) guidelines and issued to the market.
- e. *Qarḍul-ḥasan Şukūk*– interest free loan can also be used as a modern innovative instrument for medium and long-term financing in the agricultural sector. It can also be used to provide subsidy to farmers on inputs distribution or to cover food price inflation.

Therefore, *Şukūk* are the modern innovative mechanisms used to finance different types of agricultural investment completely different from conventional bonds. Even though some similarities exist between them such as maturity period and return on investment, bond and *sukūk* are principally different as shown in Table 3.

TABLE 3
Şukūk vs Conventional Bonds

Bond	<i>Şukūk</i>
Fixed interest return	Non fixed interest
Based on debt	Based on Real tangible asset

TABLE 3 (continued)

Bond	Şukūk
Subject to speculation, <i>gharar</i> and uncertainty	No speculation, <i>gharar</i> and uncertainty
It includes unethical/immoral investment	No immoral and unethical investment
Subject to interest rate volatility	No interest rate
It applies derivatives	It applies <i>sharī'ah</i> compliant contracts

Source: Author’s collation

Another principle that differentiates *Islāmic* bond from conventional agricultural bond is application of contract (*Bai*) attached to underlying asset in all financial dealings and of course operation of *takaful* (which is conventional insurance equivalent) based on voluntary donation, participation and cooperation without interest. According to the practice, the farmers through their cooperatives can operate *Takaful* to hedge against uncertainty and risky nature of agricultural production; it is a kind of *Takaful* coverage for crop produce, weather instability, price volatility or post-harvest loss. *Zakāt* is another important principle as a social financing system. *Zakāt* application on agricultural produce where government takes $\frac{1}{10}$ for rain-fed and $\frac{1}{20}$ for irrigated farming production, also *wāqf* fund can be used to provide short-term financing opportunities. For instance, *wāqf* land as a factor of farming production can be accessed and used by the landless farmers to develop agriculture and rural population (Tahir and Oziev, 2018).

In short *zakāt*, *wāqf* and voluntary *sadaqah* can be used to empower weaker sections of the rural farmers, especially landless and those under vicious circle of poverty termed as *faqir* (poor) and *miskin* (needy) in the Noble *Qur’ān* (Q9: 60). Upon all these opportunities the *Islāmic* agricultural financing can restore the sector’s lost glory of developing Nigeria’s agricultural sector. It also helps in filling the gap left by conventional credits if given the chance for application. Tahir (2020) rightly argues that *zakāt* is a powerful mechanism in poverty and hunger alleviation better than the SDG2: Zero Hunger goal.

5. CONCLUSION AND RECOMMENDATION

The Nigerian agricultural sector has great land, water, labor and market potentials for agricultural development. By alleviating

poverty, hunger and unemployment in Nigeria, this sector can help to achieve maximum financial inclusion and literacy and economic diversification. Rural farmers are direly in need of credit facility for financing agriculture and the conventional system cannot meet their needs due to some technical, resource, socio-economic, organizational and religious constraints.

Islāmic Agricultural Financing (IAF) can be a better alternative and innovative mechanism to meet the sector's surplus credit demand-supply gap. Various financing contracts such as *mushārakah*, *ijārah*, *salam*, *murābahah* and so forth can be used. *Ṣukūk* should also be applied to agriculture for mobilization and channeling funds to value chain actors, rural and microfinance sectors. This will help in achieving economic diversification, growth and development as proven successful in Malaysia, Indonesia and Sudan, that can also be relevant to Nigeria as an IDB member country.

Based on the preceding discussion, the study recommends the following:

- a. Nigerian government should provide equal financing opportunities to all citizens and satisfy farmers' credit facility needs by fixing the technical, resource, socio-economic, organizational and religious constraints that impede agricultural development in the country.
- b. IAF should serve as viable option for Nigerian agriculture policy development to provide equal opportunities, enhance financial inclusion and distribute equitable resource allocation to the citizens, help financial institutions to play their intermediation and facilitation roles in financing agribusinesses, providing subsidy and implements for individuals and organizations, thereby, creating more jobs, increasing income and alleviating hunger and poverty.
- c. Nigerian government as an IDB member country operating *Islāmic* finance should implement the newly introduced agricultural intervention schemes with effective legal and regulatory framework supported with efficient market structure for developing the agricultural sector and borrow a leaf from empirical application in Malaysia, Indonesia, and Sudan.

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