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Credits seeking and sourcing for agribusiness firms in developing countries: An empirical review of Nigerian experience

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Abstract

Credit is one of the crucial resource capable of accelerating revolutionary transformations Credit stands out as a vital source of funding among the numerous ones that are essential for agribusiness firms. Agribusiness includes all aspects of farming and allied business ventures with the overall goal of increasing aggregate agricultural output and promoting general economic development. Agribusiness has been recognized as a key driver of the world economy Banks, nonbank financial organizations, stock exchanges, and other sources are only a few of the places where credit can be obtained for agribusiness. One of the difficulties limiting Nigerian agribusiness performance in developing nations is credit finance. While the government of developing nations are trying to assist farmers, their efforts frequently fail to reach the intended targets. Most times, only farmers with strong political ties or allegiances typically have access. These loan facilities occasionally get into the hands of people who are not real farmers, diverting government efforts away from their primary goal. Credit seeking and sourcing behaviours involves the frequency of credit application within a short period of time. This behavior can be viewed evaluated by lenders as it may indicate that the borrower is in serious financial distress and is seeking credit to address it. There `has been a discernible rise in the amount of money going to the agriculture industry throughout time. It was concluded that both in the short and long terms, bank loans had no discernible effect on agribusiness performance due to high interest rate charged. It was recommended that monetary authorities should make a concerted effort to close the growing gap between the lending rate and savings rate so that people will be completely encouraged to save in order to access credits for agribusiness investment in Nigeria.

Keywords: Credits seeking behavior; Credit sourcing; Agribusiness; Firms; Developing countries; Credit mobilization

1. Introduction

In order to facilitate overall advancement of an economy, finance is essential. When effectively accessed and distributed across many sectors, credit is one of the crucial resource capable of accelerating revolutionary transformations (Udoka, Mbat, and Duke, 2016; Mellor and Dorosh, 2010). Credit stands out as a vital source of funding among the numerous ones that are essential for firms. Banks, nonbank financial organizations, stock exchanges, and other sources are only a few of the places where credit can be obtained. But banks still have a commanding position as the main source of credit for both people and businesses. Credit allocation becomes a crucial factor in the setting of a developing country like Nigeria, where the agriculture sector gains vital importance in promoting economic growth and development. Currently, agriculture accounts for one-third of Nigeria's GDP and employs around two-thirds of the working force, making a major contribution to the country's GDP. In actuality, the country's population depend heavily on the agriculture sector for both their livelihood and that of the nation as a whole (Mellor and Dorosh, 2010). Achoja (2019) views credit mobilization as a precursor for saving mobilization model for agribusiness entrepreneurial groups. Credit well invested enhances profitability and savings in agribusiness.

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Specifically by maintaining food security for a growing population and acting as the main supplier of raw materials needed for production in many economic sectors, agriculture plays a crucial role in society. Additionally, the agriculture industry produces agro-allied goods essential for the expansion and development of the industrial sector through the raising of cattle. It creates job opportunities, especially in rural regions, serves as a market for industry, and forges an important connection between conventional and contemporary economic activity (Obilor, 2013). Therefore, it is impossible to overestimate the importance of agriculture as a driver of global economic growth. Given that agricultural financing is essential to the modernization of agriculture and the commercialization of rural economies, the lack of credit availability to the agriculture sector raises significant issues. The most efficient way to increase agricultural productivity is to offer simple, reasonable finance. As a result, successive administrations have constantly pushed policies meant to satisfy the farming community's credit needs. Nwankwo (2013) points out that despite these efforts, a number of programs designed to close the gap between agricultural output and the nation's demand for agricultural products have had only patchy success in giving farmers the credit they so desperately need to invest in their farming operations (Udensi, Orebiyi, Ohajanya, and Eze, 2012).

There are two main types of funding that are designated for assisting the agricultural sector: micro and macro sources of finance. The use of capital from deposit money institutions to finance agricultural activities is referred to as micro-financing. Macro sources, on the other hand, involve the government raising money and allocating it through organizations like the Central Bank of Nigeria (CBN), rural banking development programs, and the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB) in order to finance the agricultural sector.

There has been a discernible rise in the amount of money going to the agriculture industry throughout time. According to data from the Central Bank of Nigeria (CBN), commercial bank credit to the agricultural sector has increased significantly over time, increasing from \$4.22 billion in 1990 to \$41.03 billion in 2000, \$128.41 billion in 2010, and \$1,457.82 billion in 2021 (CBN, 2022). Similar to this, the amount of loans covered by the Agricultural Credit Guaranty Scheme Fund (ACGSF) have increased significantly in value, rising from 98,494.40 in 1990 to 361,450.40 in 2000, 4,425,861.84 in 2007, and 5,786,729.88 in 2021 (CBN, 2022). However, despite these growing financial investments in the agriculture industry, food insecurity has continued to expand across the nation. A troubling rise in the incidence of food insecurity is revealed by statistics from the World Development Indicators (WDI), as reported by the Census and Economic Information Center (CEIC). It climbed to a concerning 57% of the population in 2019 (CEIC, 2022) from 14% of the population in 1992 and 35% in 2009, respectively. Therefore, despite significant financing contributions from both the government and the business sector, the primary issue supporting this study is the nation's growing problem of food insecurity.

2. Concept of Agribusiness

Agribusiness includes all aspects of farming and allied business ventures with the goal of increasing agricultural output and promoting general economic development. Simply described, it is the union of agricultural and investment operations intended to promote a nation's economic development. John Davis and Ray Goldberg's research helped popularize the word "agribusiness" in 1957. Its origins can be found in the Davis and Goldberg economic model of 1957, which starts with farmers purchasing crops and cattle and ends with the manufacture of consumable items. Modern times have seen agribusiness gain recognized as a key driver of the world economy (Phiri, 2018). The significance of agribusiness becomes evident in several key aspects:

- *Food Security:* Agribusiness plays a crucial role in meeting a nation's food demand, ensuring that its population is adequately nourished.
- *Foreign Exchange Earnings:* It serves as a prominent source of foreign exchange earnings, contributing to a country's economic stability.
- *Poverty Alleviation:* The growth of agribusiness translates into increased incomes for farmers, thereby aiding in the alleviation of poverty.
- *Rural-Urban Migration:* By promoting agribusiness, it helps control the influx of rural populations into urban areas, mitigating issues related to overcrowding in cities.
- *Industrial Raw Materials:* Agribusiness provides essential raw materials for industrial production, supporting the manufacturing sector.

Nwachukwu and Shisanya (2017) specifically point out that reviving the agriculture is essential to achieve the projected 10 percent annual economic growth rate established in "Vision 2030." Recognizing the significant advantages of agribusiness, UNCTAD (2015) states that bridging the resource gap between less developed and developed countries depends on the production level of agribusiness. Nigeria, although having enormous agricultural resources like highly

diverse arable land and excellent agro-ecological conditions, has struggled to thrive in agribusiness despite the critical role it plays in a country's economic existence. Nigeria's economy historically relied largely on agribusiness prior to gaining political independence, indicating that sector's position as the engine of the nation's economy. However, during the oil boom in the middle of the 1970s, Nigeria turned its attention primarily to producing crude oil as its main source of foreign income, which resulted in a relative neglect of agribusiness (Uremadu and Onyele, 2016).

3. Concept of Credit in Agribusiness

Utilizing or having access to financial resources and services without having to pay for them right away is referred to as having credit. It can come in a variety of shapes, including loans and agricultural credit that includes trade credit and bank credit. Deferred payments for seeds and fertilizer, the use of machinery like tractors, labor services, and storage facilities are just a few examples of how agricultural credit may appear. The ability to borrow is also included in the concept of credit (Mgbakor, Patrick, and Divine, 2014). Credit is essential for furthering agricultural modernization and encouraging farmer involvement in economic growth. In addition to easing financial restrictions, it encourages the adoption of innovative technologies that could otherwise proceed more slowly (Mohsin, Ahmad, and Anwar, 2011).

Small-scale farmers, many of whom live in rural areas and have little formal education, are the main drivers of agriculture in Nigeria. These farmers deal with issues such as restricted access to markets, credit financing, and useful information. Due to their inability to obtain necessary inputs, Nigerian farmers' general well-being, expected income, and output are all reduced, which in turn restrains agricultural development (Davis, 2020). These farmers' ongoing lack of access to credit has significant repercussions for their homes. It has an impact on the uptake of technology, agricultural production, food security, dietary habits, health, and general well-being (Eyo, Nwaogu and Agenson, 2020). Despite making significant investments, Nigeria's numerous smallholders continue to rely on inadequate informal funding. Because peasant smallholders cannot obtain credit, poverty among these individuals continues to be a significant problem with agricultural financing. They become stuck at a low equilibrium level as a result, unable to pay for the components and inputs required for their farming operations. In order to fulfill immediate family requirements or to improve their agricultural operations, such as by investing in storage, transportation, and processing facilities, they are frequently obliged to sell their surplus produce at cheap prices. According to some arguments, one important obstacle to the adoption of novel technology is the lack of suitable agricultural financial facilities (Ater, 2013).

While the government tries to help farmers, their efforts frequently fail to reach the average citizen. And when they do, only farmers with strong political ties or allegiances typically have access. These loan facilities occasionally get into the hands of people who are not real farmers, diverting government efforts away from their primary goal. Farmers typically have unique traits including poor income, little savings, and subsistence agricultural methods. Many of them struggle to create even enough to provide for their families and are unable to get the funding required for production and development with their meager resources. Unfavorable weather worsens their plight, furthering their descent into destitution. (Mohsin, Ahmad and Anwar, 2011).

Loans, notes, bills of exchange, and bankers' acceptances are only a few of the credit instruments used to finance agricultural operations under the umbrella of "farm credit." These financial tools are designed to accommodate the unique financial needs of farmers while also taking into account the varied planting, harvesting, and selling cycles. Ordinarily, operating expenses are covered by short-term credit, farm equipment is covered by intermediate-term credit, and real estate finance is covered by long-term credit (Eyo *et al*, 2020). A vital financial lifeline, farm credit enables farmers to close the gap between their revenue and the costs associated with their agricultural undertakings. It serves as a crucial tool, enabling farmers to take back control of their working capital and raise their levels of productivity and profitability. Consequently, credit assumes a pivotal role in the growth strategy of the agricultural sector, contributing significantly to its development and prosperity (Mgbakor, Patrick and Divine, 2014)

4. Individual Mobilization of Credits in Agribusiness

An essential element of agricultural development and food security is private sector involvement in agricultural finance. This involvement includes a range of private sector investors, companies, and financial institutions that offer finance, credit, and financial services to assist agricultural activities. This relates to the significance, difficulties, and essential components of private sector involvement in agricultural financing. The individual mobilization of credits in agribusiness is highly patronized among poultry agribusiness practitioners in Nigeria (Achoja, 2013; Achoja, 2018).

5. Private Sector Mobilization of Credits in Agribusiness

The private sector entrepreneur needs credits in agribusiness. The importance of private sector participation in mobilization of credits includes:

- *Increased Access to Capital:* Private sector entities, such as commercial banks, microfinance institutions, and agribusiness investors, contribute to expanding access to capital for farmers, agribusinesses, and rural communities. This access is critical for agricultural growth and development.
- *Innovation and Technology:* Private sector participants often introduce innovative financial products and digital technologies that enhance the efficiency of agricultural finance. These innovations can include mobile banking, e-payment systems, and blockchain-based solutions.
- *Risk Management:* Private sector involvement in agricultural finance can help in better risk management through the diversification of financial products and risk-sharing mechanisms, reducing the vulnerability of farmers to crop failures and price fluctuations.
- *Increased Productivity:* Adequate financing allows farmers to invest in modern agricultural practices, technologies, and inputs, ultimately increasing productivity and yields. This, in turn, boosts food production and security.

The private sector relies on Commercial banks, Microfinance institutions, Agribusiness Investors and supply chain financing. To promote agricultural growth, improve food security, and reduce rural poverty, the private sector must participate in agricultural finance. Governments, financial institutions, and agricultural stakeholders must collaborate to address difficulties, create an appropriate regulatory environment, and promote cutting-edge financial solutions specifically suited to the agricultural sector if they are to realize the industry's full potential. Private sector involvement can make a substantial contribution to the development of sustainable agriculture in this way.

6. Cooperative Mobilization of Credits in Agribusiness

Cooperative credit mobilization is critical in Agribusiness prospect. Gbigbi, Achoja and Temile (2019) reported that cooperative funding improved the agribusiness development in the aquaculture sector of the Nigerian economy. No matter how many people there are in the world, food is still necessary for human life in its whole and goes beyond merely giving us energy. As a result of its basic requirement, the importance of food security cannot be understated. Before the discovery of oil, agriculture used to be the backbone of the nation's economy and a significant source of foreign exchange revenues. Although the economy gradually switched its focus after the discovery of oil, this led to a drop in agricultural production because of a lack of government attention. Challenges brought on by this change include youth restlessness, unemployment, and food insecurity. Over time, the economy's core engine of agriculture has been neglected, which has led to poverty and other social problems.

Food insecurity is still a significant issue for public policy, particularly in developing countries. The Food and Agricultural Organization (FAO) estimates that more than one billion people globally are undernourished, and many more suffer from micronutrient deficiencies. Particularly in Sub-Saharan Africa, these figures are still rising (FAO, 2018). As a result, both developed and developing nations are working hard to increase their capacity for producing food (Oluwasanmi, *Ikechukwu, Nebechi, and Ichaba*, 2021). Undoubtedly, Nigeria's agricultural sector possesses enormous potential, which, if properly harnessed, could lead to increased income for farmers, food and nutritional security, employment opportunities, and position the country as a major player in the global food market (Oluwasanmi *et al.*, 2021). To revive Nigeria's agricultural economy, there are a number of obstacles. These include a lack of investment, corruption, access to credit and high-quality agricultural inputs, poor policy execution, restricted market access, and national instability (Key, 2022; Downie, 2017). Infrastructure and access to financial facilities are important elements that affect food security in addition to the problem of insecurity (Mubaraq, 2021; Nakazi and Nathan, 2020; Osabohien *et al.*, 2020). The significance of having enough credit for any venture has also been stressed by Adejoh (2021), Bello *et al.* (2021), and Okhankhuele (2021). As a result, numerous initiatives and policies have been implemented by various Nigerian governments over time to address these issues. Notable among these programs include the National Accelerated Food Production project (NAFPP) established in 1972, the National Cereals Research Institute (NCRI) in 1974, the Agricultural Credit Guarantee Scheme Fund in 1978, the Abakaliki Rice Project in 1978, the Green Rice Project in 1986, the Agricultural Development Project (ADP) in 1987, and the Nigeria Agricultural Cooperative Bank (NACB) in 1988

The Agricultural Credit Guarantee Scheme (ACGS), run by the Central Bank of Nigeria, was founded in 1977 as a result of the Nigerian Agricultural and Cooperative Bank's inability to properly carry out its mandate. By providing assurances against the inherent risks involved in agricultural output, the main goal of this scheme was to encourage banks to increase their lending activity in the agricultural sector. It is the largest and most comprehensive financial endeavor the government has ever taken to support the agriculture sector.

The Federal Government also took the initiative to form the Nigerian Agricultural Insurance Corporation (NAIC) in 1987 after realizing the necessity to reduce the risks associated with agricultural activity. This institution's primary goal was to protect farmers from risk (Ngong, Thaddeus and Onwumere, 2020). The insurance corporation was specifically established to promote agricultural production by increasing confidence in the use of cutting-edge farming techniques. It simultaneously sought to enhance investment and raise agricultural sector productivity. The organization also played a significant role in providing farmers with financial assistance when they suffered losses as a result of natural disasters. Additionally, it was anticipated to lessen or completely eliminate the need for emergency government aid during crises by facilitating a smoother flow of agricultural finance from financial institutions to farmers. However, as correctly stated by Uzor (2011), Nigeria continues to have a severe food supply shortfall despite the numerous initiatives and policies that have been put in place over the years to revive agriculture.

The Central Bank of Nigeria (CBN) (CBN, 2013) found that the lack of primary production credit was a significant factor in the drop in agricultural productivity. Banks' unwillingness to grant credit for real sector activity, notably agricultural output, was the main cause of this shortage. The Federal Government, together with the Central Bank of Nigeria (CBN), took decisive action in 1977 by founding the Agricultural Credit Guarantee Scheme Fund to solve the aforementioned issues. The first fund's capital was Naira (N) 100 million, with N 85 million in subscription and paid-up capital. This creative plan was created to offer guarantee coverage for bank loans made to the agriculture industry. According to the provisions of the plan, it agrees to reimburse banks 75% of any unpaid balance due to borrower default, provided that the pledged collateral has been realized and applied to the pertinent account.

The Fund is managed by the Central Bank of Nigeria, which is answerable to a governing Board. The CBN built Agricultural Finance Offices, later renamed Development Finance Offices, in its branch offices across 22 states of the federation at the time to operationalize the scheme. These departments keep an eye on the plan's daily operations. In actuality, the CBN provides the lending bank with a Guarantee Certificate that guarantees payment of 75% of any outstanding balance in the case of borrower default, less the amount realized from the security provided by the borrower. Once the necessary conditions have been satisfied, the lending bank may then submit a claim to the Fund.

7. Empirical studies

According to Mubaraq (2021), one of the difficulties limiting Nigerian agriculture's performance is credit finance. To investigate the effect of the Agricultural Credit Guarantee Scheme Fund (ACGSF) on agricultural performance in Nigeria between 1981 and 2019, the author used threshold regression analysis in response to this worry. Real agricultural GDP was used to assess the performance of the agricultural sector. The World Development Indicators (WDI) and the Statistical Bulletin of the Central Bank of Nigeria (CBN) provided the data for this analysis. Real agricultural GDP and ACGSF were shown to have a U-shaped connection, according to the findings. Furthermore, ACGSF significantly increased real agricultural GDP at two thresholds: 1060389 ('000) and 5951809 ('000).

Similar to this, Reuben *et al.* (2020) used the Ordinary Least Squares (OLS) method to evaluate the effect of ACGSF on agricultural output in Nigeria from 1998 to 2017. Their conclusions showed that the ACGSF had a sizable positive impact on agricultural productivity.

Using the OLS method, Eyo *et al.* (2020) examined the impact of the Agricultural Credit Guarantee Scheme (ACGSF) on agricultural output in Nigeria. Their findings highlighted the ACGSF's sizeable beneficial effect on agricultural productivity.

In a different study, Okafor (2020) used the Augmented Dickey Fuller test, Phillip-Perron test, and OLS approach to investigate the impacts of commercial bank loan and ACGSF on agricultural development in Nigeria. The results showed that neither ACGSF nor bank loans to agriculture had any discernible effects on agricultural output.

A study in bank loans on agricultural performance by Vietnam from 2004 Q4 to 2016 Q4. They used Toda-Yamamoto Granger causality tests, ARDL limits tests, and Indicator Saturation (IS) break tests. The findings showed that agricultural finance significantly increased agricultural output over the long and short terms. Additionally, there was a one-way causal relationship between agricultural financing and agricultural output.

In the Central African Economic and Monetary Community (CEMAC), from 1990 to 2018, Ngong et al. (2020) investigated the connection between the growth of the banking sector and agricultural productivity. They used techniques such as the Panel Autoregressive Distributed Lag Model (PARDL) and the Vector Error Correction Model (VECM). The results showed that there is a long-term association between the banking industry and agricultural productivity in the CEMAC region, with bi-directional causality between these two variables. However, the PARDL results demonstrated that bank credits did not significantly add to agricultural productivity in CEMAC, in contrast to the findings in Vietnam (2020).

Additionally, Bahsi and Cetin's (2020) study in Turkey from 1998 to 2016 indicated a considerable positive influence of agricultural financing on agricultural output. This analysis used the Ordinary Least Squares (OLS) method. Credit had a considerable positive impact on agricultural productivity in the long run, but not in the short run, according to a comparable study done in Nigeria using the Autoregressive Distributed Lag (ARDL) technique by Nakazi and Nathan (2020).

On the other hand, using the ARDL method, an examination of Uganda's quarterly time series data from 2008 Q3 to 2018 Q4 did not support Nazaki and Nathan's (2020) conclusions. It was determined that both in the short and long terms, bank loans had no discernible effect on agricultural productivity.

Moreover, using an Error Correction Model, Emenuga (2019) investigated the effect of commercial banks on real sector development in Nigeria over a 37-year period (1981-2017). The results indicated a long-run relationship between bank credit and agricultural development in Nigeria. The study further revealed that the Error Correction Mechanism (ECM) was negative and statistically significant at the 5% level, with commercial banks' credit to agriculture and ACGSF positively related to agricultural development. However, the interest rate was found to be negatively related to agricultural development in Nigeria.

In a supportive study, Osabohien *et al.* (2018) employed the ARDL technique to examine the potential of agricultural credit facilities, including commercial bank credit to agriculture and the Agricultural Credit Guarantee Scheme Fund (ACGSF), along with their corresponding interest rates, in increasing agricultural production. The study revealed that the contributions of commercial banks' credits and ACGSF were not statistically significant but contributed positively to improving food security in Nigeria.

Similarly, Anyanwu *et al.* (2017) used the Ordinary Least Squares (OLS) technique to analyze the impact of commercial banks' credit on agricultural productivity in Nigeria. The study concluded that there was no positive relationship between commercial banks' credit and ACGSF on agricultural productivity

In a study published in 2013, Awe (2013) examined how to increase domestic financial resources for Nigerian agriculture. Numerous financial resources were found by the investigation, including credit facilities from the Nigerian Bank for Commerce and Industries (NBCI) and credit from commercial and merchant banks. The study's findings suggested a link between these financial resources and Nigeria's agricultural productivity. Ayegba Adeyinka, Daniel and Olukotun (2014), who evaluated the impact of agricultural financing on rural farmers in Nigeria through the administration of questionnaires, provided a different viewpoint. According to their findings, the sector's productivity had not been sufficiently increased by agricultural credits.

In a study published in 2014 by Zakaree, the ordinary least squares method was used to analyze the effect of the Agricultural Credit Guarantee Scheme Fund (ACGSF) on Nigeria's domestic food supply. The study showed that the credit program had a favorable and considerable effect on the domestic food supply.

Through the distribution of questionnaires, and Offor (2013) investigated the effects of credit supply from the International Fund for Agricultural Development (IFAD) on rural farmers in River State, Nigeria. Their findings showed that the IFAD financing program has made a considerable impact on agricultural income and output. Similar to this, Chisasa and Makina (2015) used cointegration and error correction models (ECM) to perform a recent study on bank loan and agricultural output in South Africa. Their findings suggested that the availability of financing has a long-term, considerable impact on agricultural productivity. However, the ECM analysis showed that bank loans had a short-term adverse effect on agricultural productivity.

In a research published in 2020, Akinrinola and Okunola assessed the effectiveness of the Federal Government of Nigeria's key credit program, the Agricultural Credit Guarantee Scheme (ACGS). The plan was created in 1977, and it started operating in 1978. The study used time series data from the National Bureau of Statistics' 2014 issue, which covered the years 1978 through 2014. The strength of the plan was measured by the total loan volume and the number

of loans provided, while the productivity of agriculture was measured by the share of agriculture in the GDP. In order to look at both the long-run and short-run dynamics of ACGS and agricultural expansion, the study used the ARDL (Bounds) test approach. The estimated results indicated a long-term relationship among the total loan volume, the total number of loans, and agricultural productivity. Notably, the long-run elasticity suggested that the total loan volume would not significantly influence productivity in the long run, whereas the total number of loans exhibited a significant long-term relationship with productivity. In terms of short-run elasticity, the total loan volume was not significant with productivity in the current year but was significant in the previous four years. The total number of loan beneficiaries exhibited a negative yet significant relationship with productivity in the past two and three years, while the relationship in the past year was also negative but insignificant. However, there was a positive and significant relationship between the total number of loans issued and productivity in the current year. The speed of adjustment, represented by the ECT(-1) value of -0.1991, suggested that the model would return to long-run equilibrium at a speed of 19.91% from a state of short-run disequilibrium.

8. Appraising Agribusiness Credit Support by Financial Banks

There are two primary sources of agricultural credit: formal and informal channels. In the formal credit sector, institutions act as intermediaries between depositors and lenders, offering farmers loans at relatively lower interest rates, often subsidized by the government. In the informal credit sector, private individuals provide loanable funds (John and Osondu, 2015). Among the various programs and policies, with the exception of the Nigerian Agricultural Insurance Corporation (NAIC), which provides indemnification to farmers in the event of insured losses, only the Agricultural Credit Guarantee Scheme (ACGS) and the Bank of Agriculture (BoA) continue to provide credit facilities to farmers for agricultural production. The BoA is the result of a transformation of the former Nigerian Agricultural Bank (NAB), established in 1972. In 1978, it was renamed the Nigerian Agricultural and Cooperative Bank Limited (NACB) to encompass cooperative financing in its broader mandate. Later, in 2001, it merged with the People's Bank of Nigeria (PBN) and absorbed the risk assets of the Family Economic Advancement Programme (FEAP) due to overlapping functions. Subsequently, in 2010, the institution underwent a rebranding to reflect its institutional transformation program and adopted the new name "Bank of Agriculture." (Bello, Anfofum and Farouk (2021).

A significant impediment to the achievement of agricultural development goals is the insufficient availability of funds that agro-entrepreneurs can utilize throughout the agricultural value chain (Awe, 2013). To address this challenge and break the barrier of inadequate funding for agricultural production and processing, the Federal Government, in collaboration with the Central Bank of Nigeria, established the Commercial Agricultural Credit Scheme (CACS) in 2009. This initiative aimed to facilitate timely and sufficient funding for agricultural projects through commercial banks. The government raised a substantial sum of N200 billion through a seven-year bond, managed by the Debt Management Office, and allocated it to designated commercial banks for lending to stakeholders in the agricultural sector (Olomola and Yaro, 2015).

Additionally, the Nigerian Incentive-Based Risk Sharing for Agricultural Lending (NIRSAL) was introduced in 2011 to address the funding challenges in agro-business development, particularly in enhancing the value chains of six major crops commonly grown across Nigeria's six agro-ecological zones. These crops include cassava, tomato, soya beans, cotton, maize, and rice. NIRSAL's mandate is to provide sufficient credit lines to participants along the value chain of these crops, catering to various scales and sizes of production. Despite the implementation of these comprehensive programs, schemes, projects, policies, and incentives, along with substantial financial resources, the agricultural sector continues to perform poorly. It struggles to meet the nation's food requirements, provide essential inputs (raw materials) for industrial production, and generate significant foreign exchange reserves across various agroclimatic regions with comparative and competitive advantages (Awe, 2013; Olomola and Yaro, 2015; Anector *et al.*, 2016). The primary obstacle to sector development, as emphasized by these researchers, remains underfunding, as target beneficiaries of various programs, schemes, and projects often struggle to access sufficient and timely financial resources to operate at optimal production levels.

9. Failure and Success Stories of Agribusiness Credit Dynamics

Credit worthiness and repayment contributes to either the failures or successes in agribusiness (Okonkwo-Emegha, Achoja, and Anarah 2018). It was furthered concluded that failures or successes in agribusiness is a nexus among loan award criteria, credit recovery performances and survival of Micro Finance Banks in Nigeria (Achoja and Ebewore (2016).

9.1. Failure Stories

9.1.1. Lack of Development

The absence of comprehensive development is a major obstacle for Nigerian agriculture. The various aspects of this lack of development include social development (related to the welfare of the people and the country), economic development (related to the financial prosperity of the nation), environmental development (related to the quality of the air, water, soil, etc.), and political development (related to the political system). The Nigerian agriculture system's developmental obstacles must be accurately identified and addressed. By doing this, you'll not only foster a climate that will improve agricultural performance, but you'll also encourage and hasten the sector's expansion. (Oni, 2013).

9.1.2. Marketing problem

Marketing in agriculture encompasses the process of moving agricultural products from farmers to consumers. Several challenges within the Nigerian agricultural system affect marketing, including inadequate transportation infrastructure, subpar packaging, and issues with product quality. Packaging plays a critical role in making products visually appealing and attractive to customers. When a product has inferior packaging compared to a competitor offering a better presentation, customers are more inclined to choose the latter, even if the product qualities are identical. The existence of well-maintained and efficient road networks is crucial for the effective transportation of goods from one location to another. Regrettably, Nigeria's overall marketing infrastructure remains underdeveloped. Government agencies responsible for constructing roads and railways for transportation often encounter lengthy delays, sometimes spanning up to a decade, largely due to issues related to corruption. Even the limited infrastructure that does get built often deteriorates rapidly due to inadequate maintenance practices (Oni, 2013).

9.1.3. Storage and Processing

The absence of adequate storage and processing facilities has significant repercussions for both national food security and household food security. Even when there is an abundance of harvest and ample farm produce, the absence of proper storage facilities can result in food scarcity because the food may not be available or in good condition when needed for consumption. To ensure that food remains accessible and in optimal condition whenever required, efficient storage and processing methods are essential. It is worth noting that in Nigeria, compared to grains, there is a relative lack of well-developed and widely known simple and effective methods for storing perishable foods such as tubers, fruits, and vegetables (Oni, 2013). This deficiency in storage infrastructure poses a significant challenge, as a substantial amount of food produce goes to waste due to the absence of adequate storage and processing facilities. Traditional storage methods employed often have inherent weaknesses, including a low base that makes it easily accessible to rodents, wooden flooring that is susceptible to termite damage, and non-moisture-proof surfaces that can be compromised by water. Consequently, farmers experience substantial losses, particularly during periods of abundant harvests. The existing storage facilities are insufficient and inefficient, providing inadequate protection for farm products. Although experts from various institutions have developed improved storage systems and techniques, these innovations have not been widely adopted by farmers and, in some cases, are not even known to them. Therefore, the adoption and dissemination of these improved storage methods remain a challenge in addressing the issues related to storage and food preservation in Nigeria

9.1.4. Lack of Good Infrastructure

In this context, infrastructure encompasses physical structures such as healthcare and educational facilities, social services (reliable access to electricity and clean water), and an efficient communication system. The agriculture sector in Nigeria faces significant challenges due to the underdevelopment of essential infrastructure. This issue is particularly pronounced in rural areas, where the majority of farmers operate, and it has far-reaching effects on investment, trade, and agricultural production. The primary driver of this infrastructure deficit is often attributed to government policies and priorities that tend to favor urban development at the expense of rural areas. This situation has persisted due to factors like ineffective governance, government neglect of rural regions, poor maintenance practices, and insufficient funding. For instance, access to electricity, clean water, and healthcare facilities is often inadequate in rural areas, as urban areas receive more favorable treatment from the government. In practical terms, people in rural areas may experience prolonged periods without electricity, lasting up to a week or more on a regular basis. Even in urban areas, a stable supply of electricity is often elusive. Moreover, access to clean water can be limited, with some rural villages having only one water source that may not always function due to power shortages. Consequently, both household and agricultural water needs are frequently met by fetching water from rivers, which can be a time-consuming task, particularly when these water sources are distant from homes and farms (Census and Economic Information Center, 2022).

9.1.5. Unstable prices

One of the challenges impacting both foreign and domestic investments in Nigeria is the rising cost of essential agricultural equipment and machinery. Over the years, the prices of crucial tools and machines like cutlasses, hoes, tractors, and combine harvesters have been on an upward trajectory. These fluctuations in prices are primarily driven by the country's unstable macroeconomic policies, which, in turn, contribute to inflationary pressures, elevated interest rates, and a volatile exchange rate (Oni, 2013). Consequently, this chain of events tends to result in higher prices for fuel, transportation, and agricultural inputs, ultimately leading to increased production costs.

9.1.6. Agricultural Labour

In Nigeria, the traditional agricultural system heavily relies on manual labor due to the limited use of machinery. This reliance on human labor accounts for approximately 90% of farm operations in the country. Even in a semi-mechanized system, human labor still contributes to about 70% of the farm operations (Oni, 2013). However, this labor-intensive approach faces challenges stemming from the continuous migration of capable young men to urban areas. Consequently, there is a shortage of labor, particularly during critical periods such as land preparation and harvesting. The primary driver of this rural-to-urban migration is the perception among young men that farm labor cannot adequately support themselves and their families (Oni, 2013)

9.2. Success Stories

9.2.1. Passage and Assent of the Nigerian Agricultural Seeds Council Bill

AGRA, an organization dedicated to advancing agricultural productivity in Africa, places a strong emphasis on seed system security. When President Muhammadu Buhari declined to give assent to the Nigerian Agricultural Seeds Council Bill, AGRA took action by partnering with NESG to adopt a systems approach for advocating the passage and approval of three critical Bills aimed at creating a conducive business environment within the agriculture sector. This advocacy process involved conducting economic impact assessments of the three Bills, which informed the development of evidence-based policy briefs and various digital and traditional advocacy materials.

To effectively navigate this advocacy effort, stakeholders were carefully categorized into policy clusters, operational clusters (implementers), and beneficiaries who possessed the influence to support the passage and approval of the three Bills. Sensitization efforts were carried out across Nigeria's five geo-political zones to educate smallholder farmers about the importance and potential impact of these Bills. Support and alignment with the cause were garnered from various sectors, including agro-allied companies and both private and public development organizations with a vested interest in the Bills.

Traditional and social media campaigns were initiated in November 2018, and this momentum is actively maintained. To enhance engagement with both the Legislature and the Executive, NESG-National Assembly Business Environment Roundtable (NASSBER) conducted one-on-one consultative advocacy meetings with the Clerks of the Committees overseeing the Bills. Additionally, the Chairman of the Nigerian Governors Forum and the Attorney General to the Federation were engaged by NESG's Senior Policy Advisors. NESG collaborated with several implementing partners, including NASC, AFEX, FSS 2020, NIRSAL, FEPSAN, NPFS, FMARD, SMEDAN, Contact Consulting, Federal Ministry of Industry, Trade and Investment, and the Securities Exchange Commission.

Significant progress was made when the National Agricultural Seeds Council Bill was passed by the House of Representatives on December 11, 2018, and by the Senate on April 17, 2019. A conference was convened between the House of Representatives and the Senate Committees to harmonize the National Agricultural Seeds Council Bills on April 30, 2019. The finalized versions of the National Agricultural Seeds Council Bill were transmitted to the Presidency before the Presidential Inauguration day on May 29, 2019. Finally, on June 24, 2019, the President assented to the National Agricultural Seeds Council Bill.

9.2.2. Passage and Assent of the National Fertilizer Quality Control Act, 2019

The National Agricultural Seeds Council Bill, the Nigerian Independent Warehouse Receipt System Bill, and the Fertilizer Quality Control Bill were all the targets of an advocacy campaign launched by the Nigerian Economic Summit Group (NESG) and Contact Consulting Limited. An Inception meeting with stakeholders from the public and private sectors of the agricultural value chain marked the start of the project. A roadmap for evidence-based advocacy was created to involve the public, agricultural industry stakeholders, and the government in conversations about the economic benefits of passing the agribusiness bills and the losses that would result from their failure to do so. At the Inception meeting, the Technical team, Advocacy team, and Contact team were established.

9.2.3. Effort to tackle counterfeit seeds in Nigeria receives renewed boost through the introduction of NASC SEEDCODEX with support of the PIATA

Nigeria is introducing the NASC SEEDCODEX electronic seed authentication tag to address illegal seed practices, such as counterfeit and fake seeds. The initiative aims to enhance tracking, traceability, and quality assurance for farmers who pick seeds from agro dealers. The tag will be stocked on every class of seeds to be marketed in Nigeria, complementing existing statutory tags. The initiative has been well-received by Nigerian small holder farmers who currently lose hundreds of millions of naira annually to sub-standard quality or fake seeds. The SEEDCODEX tag will provide farmers with a scratch-off code to verify the seed's validity, allowing them to plant with confidence. The system, supported by AGRA, is expected to bring in better harvests for Nigerian farmers and eliminate crop failure due to fake seeds.

9.2.4. Up scaling of safe pesticide application in Kaduna State

In Makarfi local government, Kaduna state, Nigeria, a new league of spraying enterprises has emerged. The Alliance for a Green Revolution in Africa (AGRA) and the United States Agency for International Development (USAID) have trained about 50 individuals from three cooperative groups to handle pesticides effectively and protect themselves from poisonous chemicals. The youth, who previously wore without protective equipment, now understand the types of pesticides and their potential risks. Smallholder farmers dominate Nigeria's agricultural sector, creating a profitable market for sprayers. The up scaling of spraying activities in the Gimi community is empowering youth and changing the narrative for households. With the help of AGRA, some sprayers have been able to fund their studies at tertiary institutions, such as Kaduna State University. Investing in Africa's youth will help solve challenges such as food security and create a more secure future for the continent.

9.2.5. Partnership for Change: Catalyzing and Agricultural Revolution in Kaduna State

The Alliance for a Green Revolution in Africa (AGRA), in partnership with the United States Agency for International Development (USAID), has significantly improved the rice industry in Kaduna state. Previously, smallholder farmers and rice processors in the state used manual methods to harvest and process soybean and maize seeds. AGRA's intervention led to improved planting techniques, such as using recommended spacing, Fertilizer First application, and hoe harvesting. This led to increased yields, with some farmers even planting improved varieties of soybean and maize. The Giwa Idanchi group, supported by AGRA, has also been instrumental in improving the rice processing industry, providing training in processing, milling, packaging, and distribution.

9.2.6. Stepping Up the Process: Wushishi's Aggregation Centre

Another success story in Nigeria is the subsistence farming remains the primary source of economic livelihood in rural areas. To reduce poverty and other barriers to agricultural development, the Wushishi community in Niger state has participated in the rice value chain programme supported by the Alliance for a Green Revolution in Africa (AGRA). The program aims to aggregate farmers around cooperatives and private service providers who provide production, postharvest, and marketing services. The Wushishi aggregation center has established a large aggregation center, stocked with paddy, and has raised demand for off-takers from Kano and Kaduna to off-take their paddy at more appreciable market prices. The processors now secure N1,500/bag as net profit.

The AGRA consortium partner focused on improving farmer access to markets without compromising the quality of rice. Key areas addressed include access to seeds and fertilizers, extension and advisory services, mechanization services, last mile inputs distribution system, and the evolution of functional farmer groups. The Wushishi aggregation center has a strong presence of women and youth engaged in production, processing, marketing, and management, achieving a unique synergy within the state (AGRA, 2019).

Wushishi LGA is also practicing dry season farming, which has the potential to double or triple the present figure of rice produced in the state. The community-based production and processing in places like Wushishi are bringing stable crop production and cutting-edge food security methods closer.

9.3. Some Challenges of Private Sector credit seeking and mobilization

- *High Risk:* Agriculture is inherently risky due to factors like weather, pests, and market fluctuations. Private sector participants often perceive it as a high-risk sector, leading to limited lending or higher interest rates.
- *Lack of Infrastructure:* In many developing regions, agricultural infrastructure, such as roads and storage facilities, is inadequate. This lack of infrastructure can deter private sector investment in the sector.

- *Information Asymmetry*: There is often a lack of reliable data and information about farmers and their creditworthiness. This information asymmetry can make it challenging for financial institutions to assess risk accurately.
- *Regulatory Hurdles*: Regulatory frameworks in some countries may not be conducive to private sector participation in agricultural finance. Complex regulations and bureaucratic processes can hinder private sector engagement.

Firms that report no need for credit are significantly less levered, more liquid, older, and of higher credit quality than are firms that report a need for credit, and their owners are older, are more likely to be white, are more creditworthy, and have fewer bank and nonbank relationships. Firms reporting that they were discouraged from applying for credit significantly outnumber and are significantly different from firms that applied for and were denied credit on a number of dimensions such as size, profitability, owner age, and the number of sources of financial services (Rebel, and Tatyana,2016).

10. Conclusion and Recommendations

It is resolved that bank credits significantly boost Nigeria's agriculture sector's output. Based on the success stories in credit mobilization and utilization, the deduction that can be drawn from the study is that, despite the low level of bank credit that Nigerian farmers have access to compared to worldwide standards, it has been proven to be productive in some agribusiness. This is based on the fact that agricultural bank credit has a large positive effect on agricultural output. The growth of agricultural output has been supported by the exchange rate and bank lending rate in credit management.

- The government's policy priorities should be focused on agricultural credits and the implementation of various comprehensive agribusiness strategies, including reliable credit empowerment as a key component in agriculture.
- To encourage savings and bank credit, the government must work to improve the financial institutions.
- The monetary authorities should make a concerted effort to close the growing gap between the lending rate and savings rate so that people will be completely encouraged to save in order to access credits for agribusiness investment in Nigeria.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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