

BANK OF AGRICULTURE FINANCIAL INCENTIVES AND COMMERCIAL AGRARIAN NARRATIVES OF WUKARI ZONE IN NIGERIA

PRINCE UMOR C. AGUNDU PhD.
Former Dean, Faculty of Humanities,
Management & Social Sciences,
Federal University Wukari,
Taraba State,
Nigeria

And

JENNIFER DANGANA
Agricultural Finance Analyst in Wukari,
Taraba State,
Nigeria

Abstract

Financial allocation to agriculture compared to the quantum channelled to other sectors has remained deficient over the years. As agricultural engagements require long-term investments, harnessing short-term funds from Deposit Money Banks (DMBs) and other money market institutions is construed as mismatch. In this regard, incentivising interventions from the Bank of Agriculture (BOA) constitute imperative lifelines. This study examines BOA financial incentives in relation to the commercial agrarian narratives of Wukari Zone in Nigeria. Analysis of data sourced from bank officials and incentive beneficiaries are analysed using descriptive and inferential statistics, substantiated by coefficient of determination and t-statistics at the 95% confidence level, and computationally facilitated by Statistical Package for Social Sciences (SPSS). The results establish that Agricultural Credit Support Scheme has positive and significant relationship with commercial agrarian capacity (p -value = $0.002 < 0.05$); and Commercial Agriculture Credit Scheme (CACS has positive and significant relationship with commercial agrarian capacity (P -value = $0.000 < 0.05$). The study concludes that BOA financial incentives have positive and significant relationship with the commercial agrarian narratives of Wukari Zone in Nigeria. To address impending challenges and sustainably enhance the narratives, macroeconomic policies should afford DMBs an enabling environment to complement the BOA, anchoring on funds from the capital market. African countries' commitment to increase their investment in the agricultural sector to at least 10% of national budget should be conscientiously actualized. Nigeria as top member and giant of Africa should take the lead and do more with geometric progression. The time is now.

Keywords: Agrarian capacity, Bank of Agriculture, Commercialization incentives, Wukari Zone.

Introduction

In the early post-independence years of the Nigerian nation, agriculture featured as the goose that lays the golden egg, contributing massively to the sustenance of the economy in various ways, including provision of food for the teeming population, supply of raw materials (especially labour input) to grow industrial sector, creation of employment, generation of

foreign exchange earnings, and provision of market for products of the industrial sector (Zuberi, 1989; Abayomi, 2006). Nonetheless, for several years now, financial paucity has remained a major constraint in the commercial narratives of the sector in Nigeria, as it fundamentally requires critical inputs such as fertilizers, improved seedlings, feeds and protective chemicals as well as machinery (Sanusi, 2010; Olowa & Olowa, 2011). As the sector anchors on a strong rural base, the concern for innovative commercialization and rural industrialization become vitally imperative. It is contended that this drive should be strategically driven by the public sector, such that the facilitating intervention (financial incentives) would find overarching expression in agricultural research/extension, commodity marketing, input supply, and land use legislation, amongst others. These critical enablers efforts would be complemented by private sector participatory investments, not limited to local or foreign direct/portfolio investment, but also underscoring sponsorship of research and development (R&D) for resounding breakthroughs in agricultural innovation by universities. International governmental and non-governmental agencies including the World Bank, Food and Agricultural Organization (FAO), etc, also come handy by the approval/release of subventions of finance, inputs participating stakeholders and the technical capacity of associated institutions (Sanusi, 2010; Rahman & Cheng, 2011).

Economy watchers in Nigeria decry the overdependence on the oil and gas sector for national sustainability, which drastically undermine agrarian contribution to the national output. With swelling concentration on petro-dollars, which streamed heavily at the time, agriculture the erstwhile mainstay of the economy slid deeply with a long stretch of years of dwindling fortunes and passive contribution to the national output. To re-discover and re-launch the sector into macroeconomic relevance, government enunciated several financing schemes not limited to the Agricultural Credit Guarantee Scheme (ACGS), which remain frontline resort for agro-financing to critical stakeholders in Nigeria (Olaitan, 2006; Amanchi, 2018). In this regard, this study seeks to analyse Bank of Agriculture financial incentives and commercial agrarian narratives of Wukari Zone in Nigeria. The financial incentives of the Bank of Agriculture in focus relate to Agricultural Credit Support Scheme and Commercial Agriculture Credit Scheme; with livestock farming and poultry farming as critical commercial agrarian interest areas. Against this backdrop, the specific objectives of the study include to:

- i. Examine Agricultural Credit Support Scheme incentive in relation to the commercial agrarian narratives of Wukari Zone in Nigeria; and
- ii. Determine Commercial Agriculture Credit Scheme incentive in relation to the commercial agrarian narratives of Wukari Zone in Nigeria.

Progressing with these targets, the research hypotheses are:

Ho₁: Agricultural Credit Support Scheme incentive has no significant relationship with the commercial agrarian narratives of Wukari Zone in Nigeria; and

Ho₂: Commercial Agriculture Credit Scheme incentive has no relationship with the commercial agrarian narratives of Wukari Zone in Nigeria.

Literature Review

Agricultural financing underscores acquisition and utilization of funds (financial capital) to facilitate procurement and management of requisite productive inputs (land, human capital, physical capital, and entrepreneurship for efficient food and allied agricultural production in an

economy. One fundamental challenge perceived as facing Less Developed Countries (LDCs) is inadequacy of domestic capital relative to quantum of investment towards achieving sustainable growth in national and per capita income (Olowa & Olowa, 2011; Onikoya, 2012; Dangana, 2019). Finance is expected basically to stream from savings and borrowings, with the former translating to equities, and facilitating release of resources for investment in the production of goods and services for ultimate real economic growth. This, in turn, defines the quantum of disposable income not presently committed to subsistent utilization. On the other hand, the latter involves deploying other people's money for investment purposes. The former, thus, prevails as direct (internal) financing option, whilst the latter (credit) stands as indirect (external) financing option. No quantum of internal financing, nonetheless, can absolutely sustain commercialization capacity in modern economies. It is, therefore, imperative for external financing to augment internal financing in a bid to accentuate efficient and effective facilitating agricultural commercialization capacity on a sustainable basis (Agundu, 2019). The framework should essentially provide micro (and relative macro) credit facilities for small, medium and large scale producers, processors and marketers in the agricultural sector. Hence, analysts contend that robust economic growth cannot be realized in absence of articulate and well-focused scheme designed to radically reduce poverty (Central Bank of Nigeria, 2005).

Agricultural financing schemes, if well administered, are expected to visibly engage and empower the people through increased access to production-oriented facilities. In furtherance of this disposition, the Federal Government of Nigeria (FGN) established the Nigerian Agricultural and Cooperative Bank (NACB) Limited. Its core mandate was to avail affordable financial and advisory services to farm and non-farm enterprises in the economy, driven by well-trained and highly motivated staff, backed by appropriate technology, thereby fostering accelerated agricultural and rural development. It subsequently merged with the Peoples Bank of Nigeria (PBN) and harnessed the risk assets of Family Economic Advancement Programme (FEAP) to constitute the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB) Limited. This consequently profiled as the single largest Development Finance Institution (DFI) in the Nigerian economy, eventually translating into the Bank of Agriculture Limited, with share capital fully subscribed by the Federal Ministry of Finance (FMF) Incorporated and the Central Bank of Nigeria (CBN). The strategic intervention added impetus to the facilitating intensity of agricultural financing in the economy under the institutional instrumentality of the commercialization booster schemes, including the Agricultural Credit Support Scheme and Commercial Agriculture Credit Scheme.

The Commercial Agriculture Credit Scheme, in particular, is relatively construed as the most logical, ideal and relevant government anchored agricultural financing incentive, capable of aggressively driving agricultural development in the economy to the next level. Government policy initially mandated banks to channel short-term funds (from the money market) to finance agriculture, but this inadvertently mismatched long-term gestation and operational dynamics of the mechanism. Banks, being private commercial entities, having responsibility to maximize profits for their owners (shareholders), and only voluntarily demonstrating social responsibility to sundry critical stakeholders; are fully abreast of this scenario. This apparently accounts for little/no interest exhibited by most banks in the quest for greater agricultural financial incentives in the economy. Under the Commercial Agriculture Credit Scheme, the FGN through the Debt Management Office (DMO), in 2009, floated N200bn agricultural

development bonds, appropriate long-term financial market facility, in the capital market to drive large-scale agricultural commercialization. The ultimate target was to fast-track development of the agricultural sector of the Nigerian economy by providing agro-finance (credits) at single digit interest rate.

In recognition of the criticality of the above issues, numerous studies have been conducted to illuminate the impact of agricultural financing on agricultural production in both developed and developing economies. In one scholarly adventure, the flow of funds accessed by farmers was found to have boosted inputs demand towards increasing in crop production. Specifically, irrigation, elasticity of credit amount, use of chemical pesticides and fertilizer, and number of tractors, etc, with respect to agricultural income were analyzed in relation to credit facilities for production at 95% level of confidence (Siddiqi, Mazhar-ul-Haq & Baluch, 2004). Enya and Alimba (2008) ascertained the effect of commercial bank funding on the Nigerian agricultural sector from 1986 to 2005, using Ordinary Least Square (OLS) multiple regression; of which the results from consideration of agricultural sector repayment ability, cash reserve ratio and interest rate established that increase in interest rate and repayment ability sector boost the quantum of credit by commercial banks to the agricultural sector, while increase in cash reserve ratio increase undermined commercial bank funding to the sector. The effect of bank credit on economic growth both in Nigeria and some other nations has also been determined, with emphasis on credit market compositions and the degree to which financial markets have contributed to the growth of economies. With Granger causality test which was employed to ascertain if private sector credit granger-caused growth of the economy, the outcome affirmed a strong causal significant relationship between private sector credit and economic growth (Nwanyanwu, 2010; Rahman & Cheng, 2011; Udoka, 2015).

Cooray (2008) investigated the impact of financial sector efficiency on growth of the economies of middle and low income countries, using financial augmented model. The outcome revealed that there is a significant and positive effect; with the impacts of activity, size, and efficiency of the financial sector on the growth of the economy featuring highly critical in the conceptual framework. Overall, there was evidence that interaction between activity and size of the financial sector and financial sector efficiency contributed to greater productive use of financial capital resulting in higher growth in the economy. A study focusing on development of the credit market and its causality with economic growth has equally been explored; of which the outcomes revealed that development of the credit markets enhances economic growth. This affirms a significant and positive relationship between development of the credit market and economic growth over the period in focus (Anthony, 2010; Okuocha, Asogwa & Obinne, 2012). The focus of this investigation is on the relationship between Bank of Agriculture financial incentives and commercial agrarian narratives of Wukari Zone in Nigeria.

Methodology

Focusing on Bank of Agriculture (BOA) incentivising initiatives (Agricultural Credit Support Scheme and Commercial Agriculture Credit Scheme) as extended to the Wukari Zone of Taraba State in Nigeria, the accessible population for requisite data collection is 57, delineated in Table 1:

Table 1: Accessible Population Highlights

S/N	Categorization	Number	Percentage (%)
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1	BOA Component	7	12
2	Agribusiness Men	29	51
3	Agribusiness Women	21	37
	Total	57	100

Source: Research Enumeration.

The sample size is determined using the formula: $n = [N]/[1+N(e)^2]$... (1)

Where:

n = Sample size

N = Population

e = Level of significance

For this study, therefore: $n = [57]/[1+57(0.05)^2]$
 $= 57/1.1425 = 50$ (approximately).

The sample size of 50 respondents represents 88% of the accessible population. Operationalizing the above sample determination, the delineation that anchors the data collection process is presented in Table 2:

Table 2: Sample Size Highlights

S/N	Categorization	Number	Percentage (%)
1	BOA Component	3	6
2	Agribusiness Men	27	54
3	Agribusiness Women	20	40
	Total	50	100

Source: Research Enumeration.

Effectively, 50 respondents, representing BOA and agribusiness stakeholders afforded the researchers requisite data adjudged proper and adequate for analytical purposes. Advancing with the focal variables, commercial agrarian narratives (denominated by capacity) and agricultural financial incentives (profiled by Agriculture Credit Support Scheme incentive and Commercial Agriculture Credit Scheme incentive), the designated model to buttress the conceptual frame is specified thus:

$$CAC = f(AFI) \quad \dots (2)$$

$$CAC = \beta_0 + \beta_1 ACSS + \beta_2 CACS + e \quad \dots (3)$$

Where:

CAC = Commercial Agrarian Capacity

AFI = Agricultural Financial Incentives

ACSS = Agriculture Credit Support Scheme incentive

CACS = Commercial Agriculture Credit Scheme incentive

e = Stochastic Error Term

β_0 = ACC intercept

$\beta_1 - \beta_2$ = ACSS, CACS coefficients

Analysis of Variance (ANOVA) is conducted to affirm and substantiate the strength of the model to significantly determine BOA financial incentives in relation to commercial agrarian narratives of Wukari Zone in Nigeria, at the 5% level. In the ensuing proceedings, a null hypothesis is upheld if the associated probability value (p-value) is greater than the 0.05 specified level of significance; otherwise the alternate hypothesis becomes analytically dominant (Asika, 1991; Parahoo, 1997; Agundu, 2019; Dangana, 2019). The data analysis computations are facilitated by Statistical Package for Social Sciences (SPSS).

Results

The results of data analysis include descriptive and inferential statistics, with test of hypotheses anchoring on ANOVA, as featured in Tables 3 to 7:

Table 3: Instrument Administration

Description	Number	Percentage (%)
Copies returned by respondents	49	98.0
Copies retained by respondents	1	2.0
Copies released to respondents	50	100.0

Source: Research Enumeration.

Table 4: Descriptive Statistics Details

Description	N	Min	Max	Sum	Mean		Std. Dvn	Var
	Stats	Stats	Stats	Stats	Stats	S.E.	Stats	Stats
PFM	49	.00	4.00	81.00	1.6531	.21929	1.53502	2.356
STF	49	.00	4.00	81.00	1.6531	.20733	1.45131	2.106
MFP	49	.00	4.00	89.00	1.8163	.19707	1.37951	1.903
EXP	49	.00	4.00	114.00	2.3265	.21106	1.47744	2.183
Valid N (listwise)	49							

Source: Research Data (SPSS computational output).

The agrarian destinations captured in Table 4 are:

- PFM = Poultry Farming
- STF = Storage Facilities
- MFP = Market for Poultry
- EXP = Exportation of Poultry

Table 5: H₁ Test Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t-Stat	Sig.
	B	S.E	Beta		
1 (Constant)	.362	.300		1.209	.233
PFM New Hybrid	.097	.147	.112	.659	.513
PFM Boost	.280	.140	.322	1.992	.052
PFM Holding	.162	.158	.183	1.028	.310

Source: Research Data (SPSS computational output).

Table 6: H₂ Test Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t-Stat	Sig.
	B	S.E	Beta		
1 (Constant)	.291	.242		1.200	.237
PFM New Hybrid	.555	.128	.525	4.321	.000
PFM Boost	.570	.150	.512	3.808	.000
PFM Holding	-.254	.113	-.244	-2.244	.030

Source: Research Data (SPSS computational output).

Table 7: Inferential Summary

Model	R	R ²	Adjusted R ²	S.E.
1	.832 ^a	.692	.671	.88050

Source: Research Data (SPSS computational output).

The enumerations in Table 3 indicate that out of 50 copies of the data collection instrument released to respondents, 49 (98.0%) were duly filled and returned, whilst 1(2.0%) was retained (not returned). The quantum returned was deemed adequate for the purpose of analysis. The details of descriptive statistics in Table 4 indicate mean of 1.6531 for PFM, 1.6531 for STF, 1.8163 for MFP, and 2.3265 for EXP. The standard deviation is 1.53502 for PFM,

1.45131 for STF, 1.37951 for MFP, and 1.47744 for EXP. The results in Table 5 regarding test of Hypothesis One indicate t-statistic of 1.209 ($p = 0.002 < 0.05$), hence the first null hypothesis does not hold. The alternate hypothesis is, therefore, upheld, affirming that Agriculture Credit Support Scheme incentive has significant relationship with commercial agrarian capacity.

For Hypothesis Two, the results in Table 6 indicate a t-statistic of 1.200 ($p = 0.000 < 0.05$), hence the second null hypothesis does not hold. The alternate hypothesis is, therefore, upheld, affirming that Commercial Agriculture Credit Scheme incentive has significant relationship with commercial agrarian capacity. The inferential summary in Table 7 indicates correlation coefficient of 0.832, R^2 of 0.692, and Adjusted R^2 of 0.671. Fundamentally, therefore, the results indicate that 69% of changes in commercial agrarian capacity are explained by dynamics of BOA financial incentives. In composite statistical terms, the explanatory efficacy of the analytical framework is projected at 67%. This is the great extent to which commercial agrarian narratives of Wukari Zone in Nigeria is positively driven.

Discussion of Findings

This study examined BOA financial incentives in relation to the commercial agrarian narratives of Wukari Zone in Nigeria. With respect to the specific objectives of the study, the analytical findings indicate that the incentivising templates (Agricultural Credit Support Scheme and Commercial Agriculture Credit Scheme) have significant relationship with commercial agrarian narratives of the zone. Fundamentally, therefore, commercial agrarian capacity prevails as a function of the BOA financial incentives. Outcomes of some previous related investigations are quite supportive of this empirical stance. They focally project bank credit as having significant positive effect on agricultural output, ultimately translating to sustainable economic growth and development over time. They attribute about 70% of overall credit to the agricultural sector of the Nigerian economy as agro-financing intensity in the direction of fertilizer and seed purchases. To the analysts, majority of agricultural production enhancement dynamics are determined by changes in quality and quantum of the input specifications so underscored (Zuberi, 1989; Olaitan, 2006).

Furthermore, Afangideh (2006) conducted a study on the networks by which financial resources are channelled to the agricultural sector and influences of financial sector development on agricultural investment and output, utilizing relevant aggregates data pertaining to the period 1970-2005. Substantiating with the Johansen Co-integration and Engel-Granger two-Step (EGTS) approaches, the findings indicated a significant and positive relationship between bank lending to agriculture and agricultural sector real output. The study consequently elicited greater impetus in favour of investment in the agricultural sector. This was expected to be rigorously canvassed in the agenda of financial sector development and economic diversification by the FGN. In an analysis of how financial sector reform affects agricultural and manufacturing sectors of the Nigerian economy, employing annual time series data; the results revealed that credit to private sector positively impacts the agricultural and manufacturing sectors of the economy, in terms of capacity utilization output; implying that domestic investment is facilitated with increased credit to private sector, even as currency outside banks has negative impact on output of the agricultural and manufacturing sectors. Also, currency outside banks boosted agricultural and manufacturing sector capacity utilization and output in the long-run (Sanusi, 2010; Rahman & Cheng, 2011; Udoka, 2015). Meaningful

devolution and inclusion in this regard would equally do a lot more in advancing the Wukari agrarian narratives in times like this.

Conclusion and Recommendations

This study focused featured BOA financial incentives in relation to commercial agrarian narratives of Wukari Zone in Nigeria. The proxies the overarching variables were Agricultural Credit Support Scheme incentive and Commercial Agriculture Credit Scheme incentive (the explanatories) and commercial agrarian capacity (the explained). The descriptive statistics show evidence of goodness of fit, while the high coefficient of determination indicates that variance in commercial agrarian capacity is significantly explained by BOA financial incentives, anchoring on the Agricultural Credit Support Scheme incentive and Commercial Agriculture Credit Scheme incentive. Numeric features of the t-statistics provide objective basis for the null hypotheses to be rejected, hence the acceptance of their alternate dimensions; which affirm that:

- i. Agricultural Credit Support Scheme incentive has positive and significant relationship with commercial agrarian commercial narratives of Wukari Zone in Nigeria; and
- ii. Commercial Agriculture Credit Scheme incentive has positive and significant relationship with commercial agrarian commercial narratives of Wukari Zone in Nigeria.

The conclusion of the study, in the light of the above analytical revelations, is BOA financial incentives have significant relationship with commercial agrarian narratives of Wukari Zone in Nigeria. Based on the conclusion, it is the utmost expectation of beneficiaries that:

- i. The benefactor (BOA) would inject more funds into the incentivising schemes to avail greater capacity for agro-commercialization; and
- ii. Deposit Money Banks (DMBs) of similar construct should also brace up to meet the increasing agricultural financing demands from the teeming agrarian populace as more active/productive stakeholders visit and settle in the Wukari domain for gainful commercial and industrial engagements.

Governmental organizations/institutions at the state level should equally be more impressed to complement the federal government agricultural commercialization interventions, including mainstreaming strategic agencies for creation of awareness for more beneficiaries to harness and utilize the facilities with utmost efficiency and efficacy. It is high time governmental authorities came to the realization that budgetary allocations to the agricultural sector has been grossly and consistently inadequate over the years, swinging in the neighbourhood of 4% of the annual total projection since 2006 (Sanusi, 2010). The constraints/challenges bordering on facilities mismatch should be strategically fixed, such that capital market instruments would be more befitting matched with the characteristically long-term commercial agricultural activities of the Nigerian economy. No funds and indeed other critical incentivising facilities should be spared in revitalizing the agricultural sector and reinventing commercial agrarian narratives of the nation, to the massive sustainable benefit of all.

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