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AGRO-PARTNERSHIPS' CAPITALIZATION AND AGRIBUSINESS DEVELOPMENT IN BENUE STATE, NIGERIA

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Abstract
This study examined the effect of agro-partnerships' capitalization on agribusiness development in Benue State, Nigeria. Descriptive survey research design was adopted in conducting the study. The population of the study comprise stakeholders in the agricultural value chain. These include commercial farmers, academic accountants and agriculturists, civil servants working in relevant government ministries, departments and agencies; agro-processors and manufacturing firms. A sample size of 305 representative population elements was purposively and conveniently selected from the population. Structured questionnaire were used to collect the primary data that were analysed in the study. The reliability of the instrument was tested using Cronbach's alpha tool. Both descriptive and inferential statistics were used in analysis of the collected data, with linear regression statistic serving as inferential statistic. Findings from the study revealed a significant effect of superior assets base of agro-partnerships on agro inputs production and supply, processing and value addition. The study therefore concludes that partnerships' capitalization has significant effect on agribusiness development in Benue State, Nigeria. It recommends the formation of agro-partnerships by smallholder agripreneurs, as well as inter-governmental and religious bodies, as a deliberate steps towards raising substantial capital for agribusiness operations.

Key words: Agro-Partnerships, Capitalization, Agribusiness, Development, Benue State

1.0 Introduction

Benue State is celebrated as the food basket of Nigeria (Oklo, et al., 2021; Charles, 2024; Agubata, 2025). The State is reputed for substantial engagement in agricultural value chain, especially the upstream sub-sector. It is characterized by high-level production of high quality food and cash crops such as yam, cassava, rice and sesame. Others are groundnut, soybean, sorghum, maize, millet, cowpeas, potatoes, tomatoes, pepper, oranges, mangoes, cashew, grapes and flax, sunflower, iron-tree and locust beans, to mention just these (Ogbe & Ogali, 2022). Also produced in the area in substantial quantity are livestock such as pigs, poultry, ducks, goats, rabbits and turkeys. However, there is palpable dearth of mechanized integrated farms, medium and large scale agro inputs and

equipment producers, agro-processors and manufacturing firms in the State.

Over 80% of agro-produce in the state emanate from the efforts of resource-poor smallholder farmers (Sabo et al., 2017; Akano et al., 2018; Ritchie, 2021; United Nations Development Programme [UNDP], 2021). However, their operations are not attractive to financial institutions for financing purposes. Currently, a significant number of these farmers are languishing in internally displaced persons' (IDPs) camps located in urban areas as a result of armed herders' attacks. This has practically worsen youth unemployment situation in the state. The result is acute endemic hunger and poverty with unprecedented wave of kidnapping, banditry and terrorism. This contrast with the case in industrialized and other emerging economies where farmer partnerships are veritable tools for agro-produce exports (Astuti et al., 2022). The need therefore arises for an assessment of the effect of agro-partnership firms' financing on agribusiness development in the state.

Partnership is a form of business organization that encourages team work, whereby two or more people contribute the needed operating capital and capabilities to establish and operate a firm with a view of sharing profits (Omuya, 1982; Wood and Sangster, 2005; Adejola, 2012; Ibrahim and Kazeem, 2015; Tech Universes, 2019; Garg, 2020; Laurence, 2023). Capitalization of partnership is the act of contributing to the capital of a partnership firm by the partners in such a way as to raise higher capital and capability that would have been impossible for any one of the partners (Food and Agricultural Organization [FAO] of the United Nations, 2016). This is, indeed, one of the advantages of partnership over sole proprietorship firms (Tech Universes, 2019). In this study, assets base of partnership firms stands as proxy for partnerships' capitalization.

Agribusiness is the elevated perception of agriculture as a business. It delineates farming, agro-processing, agricultural machinery manufacturing and inputs and logistics supply, agro-financing and other agricultural service delivery, agro-produce merchandizing and agricultural research and development (Yusuff, 2017; Times Agriculture, 2023; Supermony, 2024). Agribusiness is a veritable tool for food security, economic growth, rural development and favourable balance of international trade.

The United Nations Industrial Development Organization, [UNIDO] (2024) has identified seven pillars of agribusiness development. Among these are enhancement of agricultural

productivity, upgrading value chains, exploiting and attracting local, regional and international demand for products. Others are strengthening technological effort and innovation capabilities, promoting effective and innovative financing, stimulating private sector participation; and improving infrastructure and energy access. A county or any unit thereof that has erected these pillars is said to have fully developed its agribusiness sub-sector. Doing this requires upgrading both the crop and livestock value chains from mere subsistence level, whereby reliance is placed on traditional inputs, equipment and extensive use of human labour, to a technologically enhanced level. Proxies of agribusiness development for the purpose of this study are agro-inputs production; food production and agro value-addition.

Empirical evidence suggests that agro-financing has a significant positive effect on food production, employment opportunities and rural development in Benue State (Osabohien et al., 2020; Daum et al., 2020). This implies that an increase in agro-financing translates to increase in agricultural output in the state. It further suggests that farm input innovation has significant effect on agribusiness productivity, while production innovation has insignificant effect (Yusuff, 2017; Lawan, 2017). Additionally, process innovation has significant effect on agro-productivity, while marketing and distribution innovation has insignificant effect (Gbande & Lawan, 2017). A careful analysis of this evidence points to the fact that non-finance related innovations in traditional agricultural practices have significant effect on certain activities in the value chain, whereas those that are finance related have insignificant effect. The evidence further suggests that agribusiness also engenders negative socio-economic consequences in form of increased tension between crop farmers and pastoralists (Oraka et al., 2017; Daum et al., 2020). A research gap therefore, exists on the effect of higher capital on agribusiness development. This study seeks to close the identified gap with an empirical assessment of the effect of agro-partnerships' capitalization on agribusiness development, with evidence from Benue State, Nigeria.

The main objective of this study is to assess the effect of agro-partnerships' capitalization on agribusiness development in Benue State. In specific terms, the study seeks to:

i. Assess the effect of superior assets base of agro-partnerships on agro-inputs production and supply in Benue State.

ii. Examine the effect of superior assets base of agro-partnerships on food production in Benue State.
iii. Assess the effect of superior assets base of agro-partnerships on agro-produce value addition in Benue State.

2.0 Literature Review

Relevant extant literature was reviewed in this study, with focus on conceptual issues and the supporting theoretical framework. The review extended to recent seminal empirical studies, from which existing gap has been identified.

2.1 Conceptual Framework

2.1.1 Agro-partnership capitalization

An agro-partnership is any firm other than a limited or unlimited liability company that is operated by two or more owners, technically called partners, in an agricultural value chain with a view of making and sharing profits (International Fund for Agricultural Development [IFAD], 2017; United States Agency for International Development [USAID], 2017; PKF Smith Cooper, 2022; Shopify, 2023). Many agro-partnerships are formed by private and public sector organization, and so referred to as private-public partnerships [PPPs] (FAO, 2016; Mangeni, 2019). Partners in PPPs usually include research institutes, tertiary educational institutions, and core and supporting agribusiness industries (Mangeni, 2019). Capitalization on the other hand has two connotations. In business finance, it refers to the long-term funds with which an enterprise operates. The term is also used in accounting to refer to the gradual expensing of a capital expenditure over a period longer than one accounting year (Finance Strategists, 2023). For limited and unlimited companies such long-term funds comprise equity, preference shares and debentures. One can therefore, refer to agro-partnerships' capitalization as the total funds contributed to the capital of the firms plus any long-term borrowings. The funds are usually higher compared to those of sole proprietorship firms, all things being equal. For this reason, higher capitalization is considered as one of the advantages of partnerships over sole proprietorship firms (Shopify, 2023).

It is not legally mandatory for partnerships to publish their annual financial statements in Nigeria. This makes the statements not easily accessible, hence the firms' assets base is used as proxy for capitalization in this study.

2.1.2 Agribusiness development

Agribusiness is the aggregation of all the value chains in the agricultural sector. It delineates farm inputs production and supply; food production and agro-value

addition (Hassanzoy, 2019; Corporate Finance Institute, 2021; Indeed, 2024). Johan Davis and Ray Goldberg brought about the construct as a coinage from two concepts: 'agriculture' and 'business' in 1957 (Hassanzoy, 2019). This definition pre-supposes that any individual or organization that consciously engages in any aspect of the food value chain with profit motive is in agribusiness. Conversely, any entity engaged in farming, for instance, for mere subsistence purpose will not be viewed as being engaged in agribusiness (Astuti et al., 2022). Agribusiness is made up of core and supporting industries. The core industries are inputs production and supply, farm production and agro-value addition industries (Baregheh et al., 2012; Hassanzoy, 2019), while the supporting industries are banking, insurance, agro-extension services, etc. Figure 1 presents a bird-eye view of agribusiness sector.

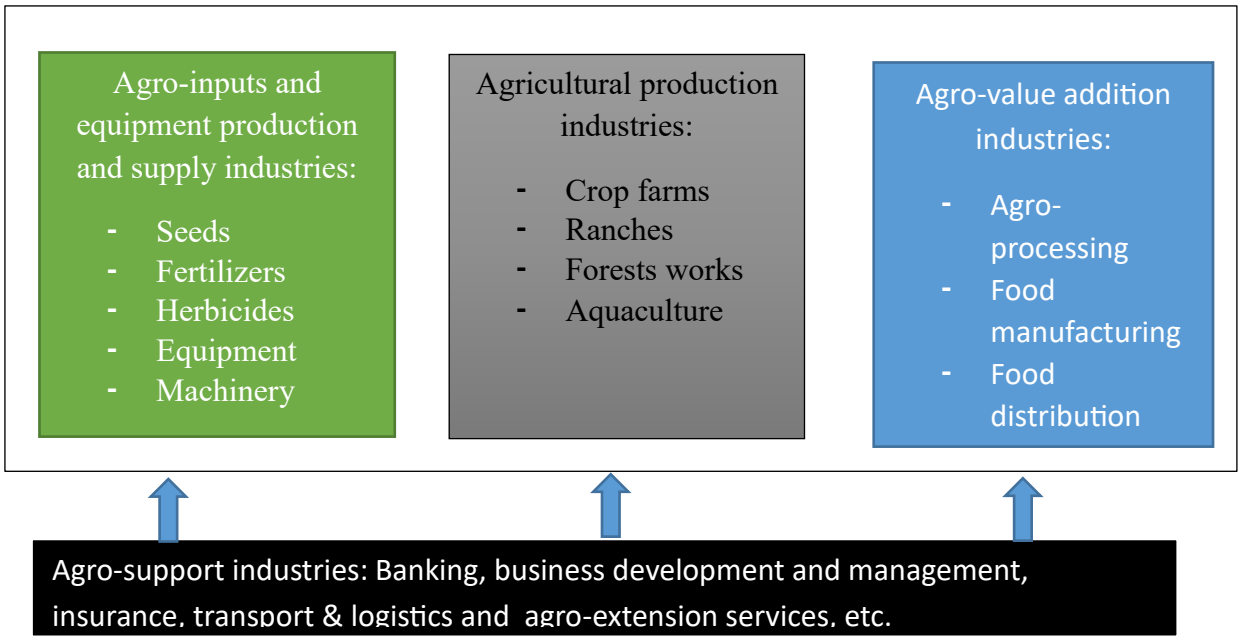

Figure 1: Core and Supporting Agribusiness Industries

Source: Munonye et al. (2016) and Hassanzoy (2019)

It is clear from Figure 1 that agribusiness comprises three core and numerous supporting industries. The core industries are inputs and equipment production and supply; Agricultural production and agro value-addition industries. Inputs and equipment production and supply industries are concerned with making agro inputs, including seeds/seedlings, fertilizers, herbicides, pesticides, rodenticides, equipment and machinery, available to agro producers, who are crop and livestock farmers.

Agricultural producers are industries engaged in crop and livestock, or food, production. They are farmers. However, livestock farmers are otherwise referred to as herders or pastoralists. Products of these industries include crops of all types, such as yam. Cassava, paddy rice, beans cabbage, sesame, just to mention a few of that category. Others are cattle, goats, sheep and poultry and their derivatives. This list is also endless. The products are consumable at this level, but also supplied to value-adding industries as raw materials for processing into semi-finished and finished products.

Agro value-addition industries are agro-processors, manufacturers and distributors, as also presented in Figure 1. They use agro-produce as raw materials in their operations. Milk, for instance, is a commodity and outcome of agro production industries. However, when further processed by value-addition industries, it turns into cheese or ice cream (IFAD, 2017). Similarly, furniture is manufactured by firms in the value-addition industries using timber, a product of agro-processors, also in the value-addition agribusiness subsector. However, it is the logs of wood produced by forest workers that are processed into timber. Other products of agro value-adding industries are canned meat, leather belts, shoes, biscuits, canned and bottled fruit juice, fabrics, suits, just to mention these. The operations of these three core agro industries can never be smooth without activities of certain entities, referred to in agribusiness circles as agro-support industries. These include banking; government ministries, departments and agencies (MDAs); insurance companies, agro educational services, and transport and logistics.

FAO (2016) viewed agribusiness as a food system with its industries as subsystems. However, Maziya-Dixon et al. (2021) considered it a subsystem within the broader food and nutrition system. From these perspectives, agribusiness development is seen as the evolution and continued provision of both ‘hard’ and

'soft' wares that facilitate transition from smallholder subsistent farming to more dynamic agro enterprises, which render effective, equitable, sustainable and inclusive business services for the needs of current and future global food consumers and players in the value chains (Munonye & Esioba, 2017; Maziya-Dixon et al., 2021). Hardware in this context refers to modern agricultural machines and equipment; while software has to do with technological capabilities or skills (Galvez et al., 2016).

Agribusiness development is anchored on seven pillars (UNIDO, 2024). These are enhancing productivity in all the value chains; upgrading value chains and exploiting local, regional and international demand for agro products. Others are strengthening technological efforts and innovative capabilities; promoting effective and innovative financing, stimulating organized private sector participation, and improving infrastructure and energy. These pillars present opportunities for agro-partnerships' intervention in agribusiness development (FAO, 2016) globally, and Benue State in particular. Figure 2 presents the conceptual model for this study

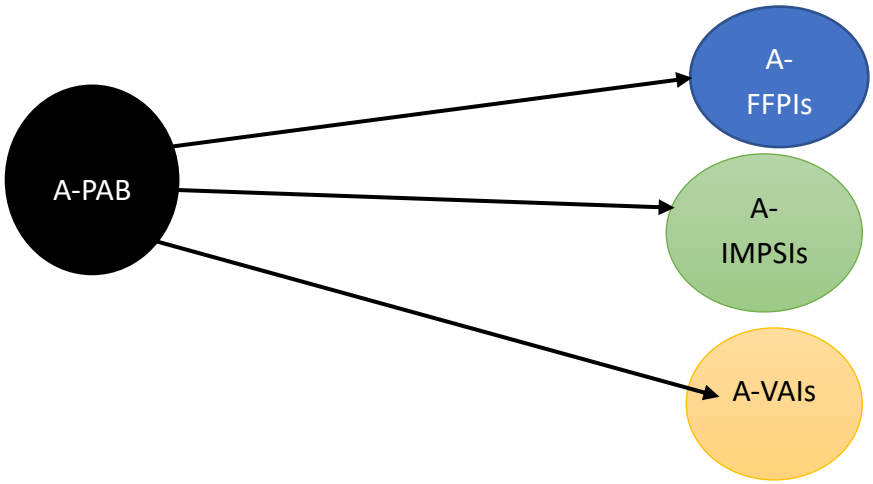

Figure 2: Model for the conceptual framework of the study

Key: A-PAB: Agro-Partnerships' Assets Base

A-IMPSIs: Agro inputs & machinery production and supply industries

A-FFPIs: Agro food and fibre production industries

A-VAIs: Agro value-addition industries

Source: Researcher's conceptualization

How agro-partnerships fared with their acclaimed higher capitalization compared to individual smallholder players in agribusiness development globally and in Nigeria, Benue State inclusive, is the reason for empirical review as presented in the last subsection of this chapter

2.2 Theoretical Framework

The Resources-Based View (RBV) theory supports the conceptual framework for this study. Although Penrose (1959) formulated the hypothesis, Wernerfelt (1984) popularized its 'Resource-Based View coinage' (Wang, 2014). RBV postulates that a firm acquires competitive advantage through strategic deployment of its core competencies, which its resources and capabilities engender (Barney, 1991; Hill & Jones, 2009; Alipour et al, 2010; Mahdi et al, 2011; Wang, 2014; Ounga, 2017). To be able to generate the needed competencies, firms' resources need to be valuable, rare, imperfectly imitable and non-substitutable (VRIN) (Barney, 1991, Ounga, 2017).

Otherwise called strategic assets, firm resources have physical, human and technological variants (Wang, 2014). Other researchers (Barney, 1991; Al-Rfou & Trawuneh, 2009; Hill & Jones, 2009; Wang, 2014), however, categorized the assets into tangible and intangible resources. There is a consensus among researchers that intangible or knowledge resources are less susceptible to imitation, and hence more important for competitive advantage.

RBV theory is actually an aggregation of knowledge-based view (KBV) and capabilities-based view (KBV) theories (Wang, 2014). The KBV theory asserts that 'knowledge, know-how, intellectual assets and competencies are the main drivers of superior performance' (Wang, 2014). Additionally, Kim et al (2012) found training and retraining of staff most invaluable for knowledge build up. One interesting feature of knowledge is that, unlike material resources, it increases with usage (Evans, 2003). Perhaps this explains the much reference to 21st century as the information or knowledge age.

Various forms of knowledge exist in strategic management literature (Wang, 2014). However, of interest to the current study is the thought that knowledge comprises core knowledge, advanced knowledge and innovative knowledge. According to Zack (1999), firms require core or basic knowledge to withstand short-term market shocks; advanced knowledge to replicate what competitors do; and innovative knowledge or cutting-edge ingenuity to outclass rivals and gain

competitive advantage. Agro-partnerships in Benue State in particular, and in general require these forms of knowledge for sustainable agribusiness development.

The Capability-Based View (CBV) component posits that firm capabilities, not resources, generate the firm's competitive advantage. Simply called capacity, capabilities delineate knowledge and all the processes with and through which firms deploy resources most efficiently (Amit & Shoemaker, 1993; Teece, Pisano & Shuen, 1997). There is no doubt that it takes knowledge to drive a physical resource. Nevertheless, certain driving forces are indispensable for such knowledge application. For instance, no vehicle (a resource) and driving skills (knowledge) can be useful without electricity current. Electricity current represents capability in this case.

Research evidence suggests that information and communication technology (Hazen & Byrd, 2012) and human resources management have positive effect on competitive advantage. These are possible effects of innovation. This exemplifies the importance of innovation to capabilities or capacity utilization. Resources, however, build capabilities (Amit & Shoemaker, 1993). RBV theory is thus relevant to the current study because it stresses the importance of innovative and efficient use of tangible and intangible resources, with underlying processes, in generating competitive advantage of firms.

2.3 Empirical Review

There are research project reports on partnerships and agribusiness. However, many of the works are reviews on experiences of efforts towards using private-public partnerships for accelerated agribusiness development (FAO, 2016; Ladele et al., 2016; IFAD, 2017; Daum et al., 2020). Thus, few empirical studies on the relationship between, or association of partnership with agribusiness development (Astuti et al., 2022; Olanitori et al., 2022; Gbande & Lawan, 2017; Lawan, 2017) were reviewed in this study.

Astuti et al. (2022) examined the impact of farmer partnerships on Arabica coffee farmers' performance in Simalungun Regency of North Sumatra, Indonesia. The study has not disclosed the sample size, method of its determination as well as sampling techniques used. There is also no mention of the method of data collection. However, it is clear that the study used the propensity score matching (PSM) technique for data analysis. This was applied in order to determine the influence of coffee farming on agricultural

productivity, revenue and income. Findings revealed that farmers' partnerships increase agricultural productivity and income. This corroborates earlier submission that smallholder farmer clusters benefit smallholder farmers in the Philippines through risk and innovation sharing, cost reduction, increased productivity and profits (Oakeshott, 2018). It also gives credence to findings by Mukaila et al. (2021) that 72.3% of rural smallholder farmers' income is derivable from agriculture and is driven by education, farm size, and access to agricultural extension and credit services. One may also add technological infrastructure and capabilities. Partnerships are, indeed, in a better position to enhance these drivers with the higher capitalization at their disposal compared to that of individual smallholder farmers.

Olanitori et al. (2022) examined the impact of partnership business on economic development and growth in Ondo State, Nigeria. The study collected primary data from undisclosed population sample elements through the instrumentality of questionnaires. There is also no mention of the sampling technique used. Nonetheless, findings from analysis collected data using chi squire revealed that partnership business has impact on the life of ondo State Citizens. It is doubtful if this finding is in tandem with the main objective of the study. One thing is however, clear. The findings aligns with those of Astuti et al. (2022) that partnerships improves the income level and living conditions of the less privileged.

Additionally, Lawan (2017) examined the effect of adopting farm inputs and production innovation on agribusiness processes. Using multistage sampling technique, the study selected 67 agripreneurs from Benue State, Nigeria for participation in a survey in which primary data were collected through interview schedules, and analyzed using regression model. The study found that farm input innovation has statistically significant effect on agribusiness productivity, while production innovation has insignificant effect. It therefore concluded that significant changes occur in agribusiness productivity in Benue State from farm input innovation. This finding aligns with that of Gbande and Lawan (2017) that processing innovation had significant on agribusiness productivity. It should be noted that the independent variable here is overtly not partnerships. However, partnership businesses can as well bring innovation to bear on farm inputs production and supply, and production. This is an indication more

resources, be they capital, infrastructure or capabilities in form of innovative skills translate to higher productivity in agribusiness.

Gbande and Lawan (2017) examined the effect of processing, marketing and distribution innovation on agribusiness productivity in Benue State. Apart from research variables, the study is a replica of that of Lawan (2017). It found significant and insignificant effects of processing, and marketing and distribution innovations on agribusiness productivity respectively.

It is apparent from the empirical review that there are few studies on the effect of agro-partnerships' capitalization on agribusiness development in Benue. A preponderance of studies in the have focused on agricultural productivity: catalysts for, and debilitating factors. This study therefore seeks to close the gap.

3.0 Methodology

A cross-sectional survey design was adopted for this study, the population of which delineates all knowledgeable stakeholders in the operations of partnerships and agribusiness sector of the agricultural value chain in Benue State. The population elements were commercial farmers and academic staff in the Departments of Accounting in three selected universities and six polytechnics. Others were staff of Ministries of Agriculture, Commerce & Industries, and Rural Development and Cooperatives. Also in the population were agro-inputs supply and agro-processing and value-adding firms. The sampling frame of the population was however, inaccessible for absolute figure determination. Nonetheless, the population elements were sampled and sample size of 305 obtained as presented in Table 1. A combination of purposive and convenience sampling techniques was used in the process.

The data analyzed in this study were primary in nature, and collected from representative population elements using structured questionnaires. These were structured into sections A and B for demographic and topical data respectively. Five-point Likert scales were used to measure the items in section B using a continuum from 1 (least) to 5 (maximum) values.

Table 1: Composition of Sample Size for the Study

S/N.	Population Cadre	Sample
1	Commercial farmers	40
2	Academic staff in Accounting Departments of selected tertiary institutions	140
3	Academic staff in relevant Departments of Agriculture at JOSTUM	20
4	Staff of Ministries of Agriculture, Commerce & Industries, and Cooperatives	60
5	Staff of Agro-inputs supply firms	15
6	Staff of Agro-processing firms	15
7	Staff of Agro produce value-adding firms	15
	TOTAL	**305**

Source: Researcher's judgment

To ensure the consistency and reliability of the collected data, a reliability test was conducted before proceeding with further analyses. The test employed Cronbach's alpha, a statistical measure used to evaluate internal consistency across survey items. A coefficient value of 0.5 or above is typically considered acceptable, implying sufficient construct reliability (Warimu & Mwilaria, 2017). The result of the reliability test is summarized in Table 2.

Table 2: Result of the Reliability Test

Metric	Alpha Value
Cronbach's Alpha	0.522

Source: STATA Output (2025)

The result in Table 2 indicates that the Cronbach's alpha value is 0.522, surpassing the minimum acceptable threshold of 0.5 (Hair et al., 2006). Here is an indication that the data was reliable and could be used for subsequent analyses within this study.

Both descriptive (mean scores and percentages) and inferential statistics (Linear regression models) were used to analyse collected data. In the models, proxies of the dependent variable were regressed against the independent variable as specified below:

$A\text{-}IMPSTs = \alpha \log + \beta_1 \log A\text{-}PAB + ei$

$A\text{-}FFPIs = \alpha \log + \beta_1 \log A\text{-}PAB + ei$

$A\text{-}VAIs = \alpha \log + \beta_1 \log A\text{-}PAB + ei$

Where:

A-PAB = Agro-partnerships' assets base (capital employed)

A-IMPSIs = Agro-inputs and machinery production and supply industries

A-FFPIs = Agro-food and fibre production industries

A-VAIs = Agro value-addition (Manufacturing) industries

α = Regression constant

β_1 = Regression coefficients

ei = Stochastic or error term

4.0 Results and Discussions

This section presents the results obtained from the field survey and discusses the findings in line with the research objectives and hypotheses. The analysis is on the data collected from key stakeholders in the agricultural sector of Benue State, including commercial farmers, academic professionals, ministry staff, agro-input suppliers, agro-processors, and agro-produce value adding firms. The results provide insights into how the superior caoital base of agro-partnerships contribute to agribusiness productivity, efficiency, and growth in Benue State.

4.1 Presentation of Respondents Groups

The respondents in this survey were categorized into seven groups as presented in Figure 1.

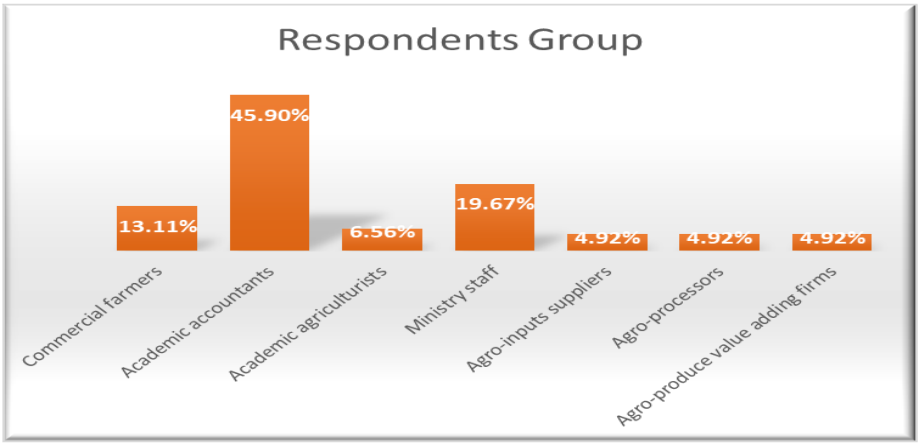

Figure 3: Bar Charts of Respondents Groups

The data presents the distribution of 305 respondents across various stakeholder groups involved in agro-partnerships. Academic accountants constituted the largest proportion, accounting for 45.90% of the respondents. This indicates a strong representation from the academic finance community, reflecting the study's emphasis on financial and partnership models within the agricultural sector. Ministry staff followed with 19.67%, highlighting the relevance of governmental or policy-oriented perspectives in the discourse on agro-partnerships. Commercial farmers

made up 13.11% of the respondents, providing practical insights based on direct agricultural experience. Academic agriculturists accounted for 6.56%, contributing technical and research-based knowledge to the subject matter. The remaining groups agro-inputs suppliers, agro-processors, and agro-produce value-adding firms each represented 4.92% of the sample. Although these categories had smaller representations, they are critical players in the agricultural value chain and offer important perspectives on production support, processing, and product enhancement. Overall, the diversity of respondents ensures a balanced and multifaceted understanding of agro-partnerships in the context of the study.

4.1 Data Analysis

The collected data were analysed in form of test of hypotheses that were derived from te stated research objectives; using simple linear regression statistic. The tested hypotheses were as reproduced here.

Ho_1: There is no significant effect of superior assets base of agro-partnerships on agro-inputs production and supply in Benue State.

Table 3: Presentation of Regression Analysis of effect of Superior Assets Base of Agro-partnerships (APAB) on Agro-inputs Production and Supply in Benue State

Model	R	R^2	Adj. R^2	Std. Error	F	Sig. (ANOVA)	B (Unstd.)	Std. Error	Beta (Std.)	T	Sig. (Coeff.)
Superior Assets Base of Agro-partnerships	0.438	0.192	0.189	2.72272	71.770	0.000	1.064	0.126	0.438	8.472	0.000
Constant	—	—	—	—	—	—	11.693	0.476	—	24.551	0.000

The regression analysis presented in Table 4.1 evaluates the effect of the superior assets base of agro-partnerships on agro-inputs production and supply in Benue State. The results show a correlation coefficient (R) of 0.438, indicating a moderate positive relationship between the superior assets base and agro-inputs production and supply. The coefficient of determination (R^2) is 0.192, which implies that approximately 19.2% of the variance in agro-inputs production and supply can be explained by the superior assets base of agro-partnerships. The Adjusted R^2 value of 0.189 confirms the model's goodness of fit after adjusting for degrees of freedom.

The ANOVA result yields an F-statistic of 71.770 with a significance level (p-value) of 0.000, indicating that the model is statistically significant and that the superior assets base of agro-partnerships has a significant effect on agro-inputs production and supply. Furthermore, the regression coefficient (B) for the independent variable is 1.064, with a standard error of 0.126, and a t-value of 8.472 (p = 0.000), showing a strong and significant positive effect.

Implication:

These findings suggest that the superior asset base of agro-partnerships plays a critical role in enhancing the production and supply of agro-inputs in Benue State. The significant and positive relationship indicates that when agro-partnerships are well-capitalized and possess superior assets—such as infrastructure, machinery, and financial resources—they are better positioned to support and sustain the agro-inputs sector. This underlines the need for policies that encourage investment and asset growth within agro-partnerships to boost agricultural productivity and input availability across the state.

H_{O2}: There is no significant effect of superior assets base of agro-partnerships on Agro-food and fibre production industries in Benue State.

Table 4: Presentation of Regression Analysis of Agro-partnerships' Assets Base (APAB) on Agro-food and Fibre Production Industries in Benue State

Model	R	R^2	Adj. R^2	Std. Error	F	Sig. (ANOVA)	B (Unstd.)	Std. Error	Beta (Std.)	t	Sig. (Coeff.)
Superior Assests Base of Agro-partnerships	0.742	0.551	0.549	4.11729	371.275	0.000	4.275	0.720		5.936	0.000
Constant	—	—	—	—	—	—	3.659	0.190	0.742	19.268	0.000

The regression analysis result hypothesis 2, which examines the effect of the superior assets base of agro-partnerships on agro-food and fibre production industries in Benue State, reveals a strong and statistically significant effect of assets base of agro-partnerships on food and fibre production in Benue State. The model yielded an R value of 0.742, indicating a strong positive correlation. The R^2 value of 0.551 shows that approximately 55.1% of the variance in agro-food and fibre production industries is explained by the superior assets base of agro-partnerships. The Adjusted R^2 of 0.549 confirms the robustness of this explanatory power, accounting for the number of predictors in the model.

The F-statistic of 371.275 with a p-value of 0.000 indicates that the overall regression model is statistically significant, meaning that the independent variable (superior assets base) significantly predicts the dependent variable (performance of agro-food and fibre industries). The unstandardized coefficient (B) for the superior assets base is 4.275, with a standard error of 0.720, and the corresponding t-value of 5.936 is also statistically significant ($p = 0.000$). This implies that for every unit increase in the superior assets base of agro-partnerships, there is an estimated 4.275 unit increase in the performance of agro-food and fibre production industries in the state.

Implication:

These findings suggest that the possession of superior assets such as infrastructure, technology, equipment, and capital by agro-partnerships plays a critical role in enhancing productivity and efficiency in the agro-food and fibre sectors. The implication is that stakeholders and policymakers should encourage the development and capitalization of asset-rich agro-partnership models as a strategic approach to improving agricultural output and industrial

performance in Benue State. This reinforces the need for supportive policies, investment incentives, and collaborative frameworks that bolster asset accumulation and utilization within agro-partnerships.

Ho_1: There is no significant effect of superior assets base of agro-partnerships on agro value-addition (Manufacturing) industries in Benue State.

Table 5: Presentation of Regression Analysis of Agro-partnerships' Assets Base (APAB) on Agro Value-addition (Manufacturing) Industries

Model	R	R^2	Adj. R^2	Std. Error	F	Sig. (ANOVA)	B (Unstd.)	Std. Error	Beta (Std.)	t	Sig. (Coeff.)
Superior Assests Base of Agro-partnerships	0.766	0.587	0.586	3.51391	431.412	0.000	6.075	0.615		9.883	0.000
Constant	—	—	—	—	—	—	3.366	0.162	0.766	20.770	0.000

The regression analysis conducted to assess the effect of the superior assets base of agro-partnerships on agro value-addition (manufacturing) industries in Benue State reveals a strong and statistically significant relationship. The model shows a high correlation coefficient (R) of 0.766, indicating a strong positive relationship between the superior assets base of agro-partnerships and performance in agro-manufacturing industries. The R^2 value of 0.587 suggests that 58.7% of the variation in agro value-addition can be explained by the superior asset base of agro-partnerships, while the adjusted R^2 of 0.586 confirms the model's robustness and predictive accuracy.

The F-statistic of 431.412 with a significance level of 0.000 confirms that the overall regression model is statistically significant, meaning the predictor variable (superior asset base) contributes meaningfully to explaining changes in the dependent variable (agro value-addition). Furthermore, the unstandardized coefficient (B) of 6.075 implies that for every unit increase in the asset base of agro-partnerships, there is a corresponding increase of 6.075 units in agro value-addition performance, holding other factors

constant. The t-value of 9.883 and significance level of 0.000 further validate the significance of this predictor.

Implication:

The findings imply that strengthening the asset base of agro-partnerships—such as land, equipment, infrastructure, and financial resources—has a substantial and positive impact on the growth and productivity of agro value-addition industries in Benue State. This underscores the need for targeted policies and investments to enhance the physical and financial capacities of agro-partnerships to catalyze industrialization and economic development through agro-manufacturing

Discussion of Findings

The result showed a significant significance level which indicated that the model is statistically significant and that the superior assets base of agro-partnerships has a significant effect on agro-inputs production and supply. This outcome aligns with the findings of Ryan et al. (2024), who argued that resource-endowed agricultural partnerships are more capable of financing innovation, maintaining input supply chains, and sustaining mechanized operations. Their study emphasized that well-capitalized agro-partnerships lead to greater availability of fertilizers, seeds, and agrochemicals, thereby improving agricultural productivity. They concluded that the physical and financial strength of agro-firms plays a critical role in rural agricultural transformation. Similarly, Awotodunbo et al., (2025) found in their study on agribusiness development in Nigeria that partnerships with a strong asset base can scale production and stabilize input supply even during seasonal disruptions. According to them, robust infrastructural and financial backing enables agro-enterprises to stockpile and distribute inputs efficiently, minimizing risks of shortages and price volatility. This supports the present finding that superior assets in agro-partnerships contribute directly to consistent agro-input availability. However, this finding contrasts with Glover and Kusterer (2016), who cautioned that asset-heavy partnerships may not always translate to improved agro-input production if institutional weaknesses and poor governance persist. They noted that while some partnerships have the physical and financial means to operate efficiently, the absence of regulatory oversight, extension services, and infrastructure (like roads and electricity) can limit their actual impact on smallholder access to inputs. Hence, they argue that

asset sufficiency must be complemented by enabling environments to be effective.

In addition, the regression analysis for objective two which examined the effect of the superior assets base of agro-partnerships on agro-food and fibre production industries in Benue State, revealed a strong and statistically significant relationship between the variables. This suggests that agro-partnerships with a well-established asset base positively influence production efficiency, expansion, and sustainability in the agricultural value chain. This finding was supported by Pingali et al. (2019), who emphasized that asset-rich agribusiness ventures tend to adopt better technologies and scale production, resulting in improved outcomes across agricultural sectors in developing economies. Their work confirms that tangible assets like machinery, land, and infrastructure play a pivotal role in agricultural transformation, particularly when partnerships are involved. Further support comes from Dethier and Effenberger (2012), who assert that investment in productive agricultural assets is crucial for sectoral growth and improved agro-industrial linkages. They argue that superior asset bases lead to increased efficiency and value-added production, especially when aligned with private-sector partnerships. Their study highlights the importance of access to productive resources in achieving agricultural diversification and food security goals. Similarly, Fan and Chan-Kang (2005) provide empirical evidence that agricultural productivity improves significantly with access to physical and financial assets. Their cross-country analysis shows that asset-based partnerships can strengthen market linkages, expand rural employment, and enhance production volumes, particularly in food and fibre sectors. These scholars affirm the positive influence of well-capitalized partnerships on agro-industrial performance, thereby supporting the outcome of the current study.

However, some scholars present contrasting views. Yamin et al. (2024) argue that while asset-based models offer potential for growth, they may also marginalize small-scale farmers if not equitably structured. Their research cautions that such partnerships can concentrate wealth and productive resources among elite groups, thereby exacerbating inequality within the agricultural system. They suggest that an overemphasis on assets without inclusive policy safeguards may undermine broader

development goals. Likewise, Scoones (2015) contends that large-scale agro-partnerships often prioritize commercial outcomes over social welfare. His study warns that superior assets may lead to land dispossession, restricted access to inputs, and exclusion of indigenous farming communities. In such scenarios, the productivity gains may be offset by socio-economic disruptions and resistance from local stakeholders. Additionally, Oya (2013) criticizes the assumption that asset-driven partnerships are inherently beneficial. His work reveals that without regulatory oversight and transparent benefit-sharing mechanisms, these models can reproduce exploitative labor relations and limit long-term sustainability. He argues that the effectiveness of agro-partnerships should be evaluated not only on productivity but also on social justice and rural empowerment metrics.

Further result confirmed that the overall regression model is statistically significant, meaning the predictor variable (superior asset base) contributes meaningfully to explaining changes in the dependent variable (agro value-addition). This aligns with the findings of Dorward et al. (2004), who assert that access to assets is a critical driver of agricultural value chain development. They emphasize that capital-intensive agribusinesses are more capable of processing raw materials, maintaining quality standards, and reaching premium markets. Thus, asset ownership becomes a core determinant of value-addition outcomes. In support of this view, Jayne et al. (2010) argue that the accumulation and deployment of agricultural assets such as irrigation systems, tractors, and cold-chain infrastructure significantly improve value chain efficiency. They conclude that superior asset bases enable agro-enterprises to reduce post-harvest losses, improve processing capabilities, and enhance packaging, all of which contribute to higher value-added outputs. This provides empirical reinforcement for the current study's findings on the positive role of assets in value addition. Another supporting perspective is the study of Kaplinsky and Morris (2000), who emphasize that firms with advanced production assets are better positioned to integrate vertically into processing and distribution, thereby increasing their value-addition potential. They note that agro-industrial growth is often correlated with capital investment in machinery and technology, which facilitates innovation and product differentiation. This perspective reinforces the study's conclusion about the significant

explanatory power of superior asset base in agro value addition.

On the other hand, some scholars challenge this positive relationship, arguing that superior assets alone do not guarantee value addition if not accompanied by effective institutions and equitable policies. For instance, Poulton et al. (2006) argue that while assets are important, the absence of enabling markets and policy frameworks can limit their productivity. They highlight cases where well-funded agro-firms underperform due to regulatory bottlenecks, inadequate rural infrastructure, and fragmented supply chains. Thus, the explanatory power of assets might be overestimated in certain contexts. Similarly, Binswanger-Mkhize and McCalla (2010) critique asset-centric approaches by pointing out that social capital, knowledge networks, and governance structures are equally important. They argue that agro value-addition is a multi-dimensional process that requires not only physical and financial capital but also institutional alignment, skilled labor, and inclusive value chain governance. Hence, relying solely on asset accumulation may lead to incomplete or misleading conclusions. Another dissenting view is presented by Hall et al. (2009), who observe that large asset-driven partnerships sometimes result in enclave economies, where value-addition occurs in isolation from local communities. They argue that unless there are deliberate linkages with smallholder farmers and local markets, the presence of superior assets may fail to contribute meaningfully to broader value chain development. This suggests that while the regression model may be statistically significant, the social impact and inclusivity of asset-driven value addition should also be critically examined.

5. Conclusion and Recommendations

5.1 Conclusion

Findings from this study reveal that the superior assets base of agro-partnerships have significant effect on agro-inputs production and supply, and agro processing and and value-addition or manufacturing. One can therefore conclude that agro-partnerships' capitalization has significant effect on agribusiness development in Benue State, Nigeria.

5.2 Recommendations

The study therefore recommends:

1. The formation of agro-partnerships by smallholder farmers in Benue State through which substantial capital can be raised and used to acquire modern agricultural machines and equipment for enhanced crops and livestock farming operations.
2. The establishment of agro-inputs production and supply firms in Benue State using the public-private

partnership (PPP) model to ensure adequate and timely supply of qualitative agro-inputs in the State. Such arrangements may involve federal state and local governments, as well as local faith-based organizations and individuals as partners.

3. The encouragement of stakeholders in the agricultural value chain in Benue State to float manufacturing companies that can be used to better harness agro produce in the State, for local consumption and exports.

4. The institutionalization of agricultural credit guarantee schemes by the state and local governments to enable players in the agricultural value chain have access to loanable funds from financial institutions.

5.3 Contribution to Knowledge and Limitations

The study has uniquely enriched the existing literature on agribusiness in Benue State. It has beamed searchlight on the effect of superior capital base of partnerships over sole proprietorships on agribusiness development. Existing literature on agribusiness has focused more on the processes and challenges.

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