



EFFECT OF INTERNATIONAL FUNDS FOR AGRICULTURAL DEVELOPMENT-VALUE CHAIN DEVELOPMENT PROGRAMME ON WOMEN EMPOWERMENT IN BENUE AND NIGER STATE, NIGERIA

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Abstract

The research was aimed at examining the effects of international funds for agricultural development - value chain development programme on women empowerment in Benue and Niger States, Nigeria. Multi-stage sampling technique was used for the study. First stage was purposively selection of Benue and Niger States in North central. At the second stage, women (producers, processors and marketers of rice) beneficiaries in the programme was purposively selected from three (3) LGAs from each of the state making a total of 6 LGAs, The third and fourth stage involved a purposive selection of LGAs and communities in each

State respectively. In all, a total of 330 respondents were selected from the LGA as the sample size for the study. The results showed that the mean age of the respondents in the study

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area was 49 years in Benue and 47 years in Niger state while the average family size was 7 and 9 person in Benue and Niger states respectively, and 79% and 89% were married in Benue and Niger states respectively, with almost 33% in Quranic education in Niger and also 33% with primary education in Benue state. 96% and 97% of participating women has access to extension agents in both Niger and Benue states respectively. The result in Table 3 revealed that in Benue State, the majority of the women (98.0%) were able to employ more labourers to work for them in

their various enterprises also majority of the women (83.6%) reported they were now able to pay their children's school fees in Niger state. The distribution according to women perception in VCDP activities in Table 4 shows that in the study areas, the women respondent perceived that IFAD-VCDP was a good project. Factors influencing participation in income-generating activities within the Value Chain Development Programme (VCDP) include socio-economic characteristics, access to inputs and credit, and extension services. This study has also identified and analyzed the various factors influencing women's participation in rice value chain of production, processing

and marketing activities under the IFAD Value Chain Development Programme (VCDP). The study recommends that financial institutions and lending agencies should work out modalities for easy access to credit facilities to small holder farmers especially women to expand their agri-business in the study area.

Introduction

For years, the International Fund for Agricultural Development (IFAD) has been financing projects that seek to develop value chain with the specific aim of improving smallholder livelihoods and seeking to achieve gender equality, youth and women empowerment. Value chain development programme (VCDP) is one of such projects by the Federal Government of Nigeria (FGN) and IFAD which aims at enhancing productivity, promotion of agro-processing, access to markets and opportunities to facilitate improved engagement of the private sector and farmer's organization in the development of effort. This programme takes a holistic and demand-driven approach to addressing constraints along the cassava and rice value chains, also aiming at poverty alleviation in the rural areas focusing more on the vulnerable group of which youths and women are part and in order to lift these set out of the poverty line, entrepreneurs trainings become important components in IFAD programmes (NBS, 2022).

While the FGN/IFAD assisted VCDP programme has continued to invest in rural people, most programmes benefits have always skewed in favor of men with the men being more visible than the females. This is because empowering women and girls can lead to the health and social development of families, communities, and countries as well as achieving gender equality. Value Chain Development Programmne (VCDP) has earmarked thirty-five percent of the matching grants for women, enabling them to upgrade their production and processing technologies and capacities. In addition, the programme has applied the Gender Action Learning System, a community-led methodology for rural livelihood development and gender equality (VCDP supervision report 2024). FAO has also been working to strengthen rural women's engagement and leadership in agri-food

systems. FAO has also engaged with farmers' organizations to ensure that rural women's voices are heard and promotes gender-transformative approaches to challenge unfair socio-cultural norms in rural communities. Evidence has shown that one in every 10 women is living in extreme poverty (10.3%). Empowering women and girls can lead to the health and social development of families, communities, and countries as well as achieving gender equality. These things are important to create an equal world where all gender is safe. In addition, women living safe, fulfilled, and productive lives can reach their full potential and contribute their skills to the workforce. They can fuel sustainable economies and benefit societies and humanity (FAO, 2022).

The broad objective is to critically examine the effect of the programme in improving the income-generation of the women in study area. Specifically, objectives of the study are to:

- i. describe the socio-economic characteristics of the women in the study area.
- ii. examine the effect of IFAD-VCDP on income and welfare of the beneficiaries
- iii. examine the attitude of the women beneficiaries towards the programme in the study area.
- iv. Identify the constraints faced and the strategies put in place that influence women participation in programme at the study area.

Methodology

Study Area

The study was conducted in two States, namely: Benue and Niger in north central, Nigeria, concentrating on cassava and rice value chains including rural infrastructure, capacity building, advisory services. Benue state lies between latitudes 6° 25' and 8° 8'N and longitudes 7° 47' and 10° 0'E. it occupies an area of 33,955 km². Having a population of 4,253,641 people in 2006 while the projected population is 6,141,300 (National Bureau of Statistics, 2022). Niger state is a state in the North Central region of Nigeria and the largest state in the country by area, it lies between latitude 09°61', 09°37' north of the equator and longitude 06°56', 06°32' east of the Greenwich meridian. The town shares boundary with the Federal Capital Territory from the north-west direction (Mohammed et al., 2025). The population was 201,429 at the 2006 while the projected population is 6,783,300 (National Bureau of Statistics, 2022).

Sampling Procedure and Sample Size

The primary data was obtained through the use of pre-tested structured interview schedule. The instrument was designed to gather relevant information on the socio-economic characteristics of the women that participated in the Programme, identified the

income-generating activities of the respondents, determined the specific agribusiness women were involved before the programme and identified the constraint faced by women and strategies put in place that influenced women participation in the study area. Multistage sampling procedure was used to obtain sample from the study area. Other stages involved. Purposive sampling technics was used in selection of beneficiaries which depends on high population of women in production, processing and marketing along rice value chains.

First stage, Benue and Niger States was purposively selected in the zone.

Second stage, women (producers, processors and marketers of rice) beneficiaries in the programme was purposively selected from three (3) LGAs from each of the state making a total of 6 LGAs, based on high population of women into production, processing and marketing along rice value chains. This gave a total of 6 LGAs that are selected.

Third stage, Kwande, Gwer west and Logo were selected from Benue. Those from Niger State were Bida, Katcha and Kontagora.

Fourth stage involved a purposive selection of communities in each State respectively.

Fifth stage, Random sampling technics was used to select women respondents that is programme beneficiaries based on percentage and interviewed. Giving a total of 330 women respondents as the sample size for the study. The list of the beneficiaries was obtained from the IFAD-VCDP office

Table 1: Sampling procedure and sample size

| S/N | STATE | LGA | VILLAGES SELECTED | NUMBER OF WOMEN SELECTED @ 15% |
|-----|-------|-----------|----------------------|-----------------------------------|
| 1 | Benue | Kwande | Jato | 12 |
| | | | Adaji | 8 |
| | | | Ikyogen | 14 |
| | | | Anwase | 13 |
| | | | Adikpo | 13 |
| | | | Agbagbe | 13 |
| | | | Agana | 11 |
| | | Gwer East | Agano | 12 |
| | | | Ugba | 12 |
| | | | Nanev | 11 |
| | | | Abeda | 5 |
| | | | Akpajir | 4 |
| | | | Anyin | 12 |
| | | | Naka | 13 |

| | | Logo | Ikpe Nagi | 6 |
|---|-------|-----------|--------------|------------|
| 2 | Niger | Bida | Edogifu | 12 |
| | | | Mansaba | 12 |
| | | | Zukogi | 15 |
| | | | Esozhi | 15 |
| | | | Efu chiroma | 2 |
| | | Katcha | Tsadoyagi | 15 |
| | | | Kataeregi | 11 |
| | | | Shabawoshi | 15 |
| | | | Badeggi | 16 |
| | | | Kakakpangi | 5 |
| | | Kontagora | Ung/yamma | 12 |
| | | | Nasara | 4 |
| | | | Adarawa | 15 |
| | | | Ung/Tukura | 18 |
| | | | Usubu | 4 |
| | | | TOTAL | 330 |

Source: Field survey, 2025

RESULTS AND DISCUSSIONS

The socio-economic characteristics of the respondents under consideration include age, contact with extension agent, marital status, household size, level of education. The result in table 2 revealed that the average age of women participating in the Value Chain Development Programme (VCDP) was 49 years in Benue State with 45.8% and 47 years in Niger State with 43.5%. This implies that a majority of the respondents are in their economically active and productive years. This finding is consistent with the research conducted by Damisa *et al.* (2024), which reported a mean age of 36 years among women involved in rice processing under the IFAD-VCDP in Nasarawa State, Nigeria. The distribution of marital status for Benue State, as presented in Table 2, indicates that a significant proportion (79.7%) of the respondents were married. A smaller percentage (7.2%) were single, while (13.1%) were widows. Notably, there were no respondents reported as divorced. In Niger State, the marital status distribution revealed that the majority of the respondents, (89.8%), were married, followed by (6.8%) who were widowed, and only (3.4%) were single. Also, there were no divorced individuals among the respondents in this state. This finding aligns with the study by Yelwa *et al.* (2025), which emphasized that active involvement in such programmes leads to increased productivity, creativity, self-worth, and empowerment among women. The results on household size

in Benue State revealed that a significant proportion (45.1%) of the respondents had a family size ranging from 1 to 5 persons while only a very small proportion, (0.7%), reported having 16 persons or more in their households. In Niger State, the distribution followed a slightly different pattern. The majority of respondents (59.3%) had a household size between 6 and 10 persons, indicating a tendency towards moderately large families. A minimal (0.6%) had households of 16 persons and above. The findings further showed that the average household size in Benue State was 7 persons, while in Niger State, it was 9 persons. This suggests that, on average, respondents in both states had fairly large household sizes. This finding aligns with the results of Ahmad (2023), who identified that large family sizes can serve as a source of unpaid or family labour, reducing the cost of hiring external labour and increasing the capacity for farming and processing activities. Key motivations for women's engagement in income-generating activities include improving their standard of living, providing for their families and achieving financial independence. The results on the level of education, as presented in Table 2 below, reveals that women in both Benue and Niger States had one form of education or another, although the distribution varied across the states. In Benue State, the educational distribution indicates that (11.8%) of the respondents had no formal education, while (7.2%) of the women had tertiary education, and (5.9%) reported receiving Qur'anic education. In Niger State, findings show that (14.1%) of the respondents had no formal education, while another (14.1%) had only primary education. Interestingly, the highest proportion of respondents in this state, (33.9%), reported Qur'anic education, which reflects the socio-cultural and religious context of the region. This agrees with the assertion by Usman (2025) that education equips rural women with the necessary knowledge to manage resources, adopt technology, and contribute meaningfully to agricultural development. However, the overall educational level of respondents in both states remains relatively low, especially in Benue State. This could pose a limitation in their ability to maximise the benefits of training and capacity-building programmes provided under VCDP. When women lack sufficient educational background, it can hinder their comprehension of technical information and restrict their entrepreneurial growth. The results in Table 2 below show that the majority (97.4%) of the respondents in Benue State had access to extension agents, while only (2.6%) reported having no contact with extension agents. Similarly, in Niger State, the majority of respondents (96.6%) had access to extension services, and only a small fraction (3.4%) had no contact with extension agents. This high frequency of extension contact is a strong indication of the active presence of extension services in the study areas. The findings imply that agricultural extension services are well established and relatively effective in delivering critical support to women farmers involved in VCDP activities in both Benue and Niger States. This result aligns with the

findings of Lawson *et al.* (2024), who emphasized the critical role of extension contact in promoting the adoption of new agricultural innovations among rural women.

Table 2: Socioeconomic Characteristics of Respondents in Niger and Benue States

| Variables | Niger (n=177) Freq (%) | Benue (n=153) Freq (%) |
|------------------------------|-------------------------------|-------------------------------|
| Age (years) | | |
| 15-25 | 6 (3.4) | 3 (2.0) |
| 26-36 | 71 (40.1) | 38 (24.8) |
| 37-47 | 77 (43.5) | 41 (26.8) |
| 48-58 | 20 (11.3) | 70 (45.8) |
| 60 and above | 3 (1.7) | 1 (0.7) |
| Mean | 47 | 49 |
| Marital Status | | |
| Married | 159 (89.8) | 122 (79.7) |
| Single | 6 (3.4) | 11 (7.2) |
| Widow | 12 (6.8) | 20 (13.1) |
| Household Size | | |
| 5-Jan | 48 (27.1) | 69 (45.1) |
| 10-Jun | 105 (59.3) | 66 (43.1) |
| 15-Nov | 23 (13.0) | 17 (11.1) |
| 16 and above | 1 (0.6) | 1 (0.7) |
| Mean | 9 | 7 |
| Contact with Extension Agent | | |
| Yes | 171 (96.6%) | 149 (97.4%) |
| No | 6 (3.4%) | 4 (2.6%) |
| Primary education | 25 (14.1) | 51 (33.3) |
| Qur'anic education | 60 (33.9) | 9 (5.9) |
| Secondary education | 36 (20.3) | 64 (41.8) |
| Tertiary education | 31 (17.5) | 11 (7.2) |

Source: Field survey, 2025

Effect of IFAD-VCDP on income and welfare of the beneficiaries in Niger and Benue States

Women participating in Value Chain Development Programme (VCDP) activities in Niger and Benue states have shown improvements in their welfare, including increased income, better living conditions, and access to resources. The result in Table 3 revealed that in

Benue State, the majority of the women (98.0%) were able to employ more labourers to work for them in their various enterprises. This outcome was largely due to the increased income generated through their participation in VCDP activities. Furthermore, (91.5%) of the women in Benue State confirmed they could now pay off their medical bills with ease, showing improved access to healthcare services, while (89.5%) reported being able to settle their house rent and utility bills, which indicates better housing security. About (77.8%) of the respondents also acknowledged that they were now able to pay their children's school fees, ensuring continuity in education for their families. The same percentage of women (77.8%) confirmed they could now purchase household equipment necessary for domestic and productive use, while (66.7%) reported an increase in their annual income. These findings are consistent with the report by Damisa *et al.* (2024) in the study on the "Impact of Value Chain Development Programme (VCDP) on the Farmers in Ardo-Kola Local Government Area of Taraba State", which established that VCDP had positively influenced the livelihoods of (75.0%) of the farmers in the study area. In Niger State, the results from Table 3 revealed that majority of the women (83.6%) reported they were now able to pay their children's school fees, a critical indicator of improved household welfare and investment in future generations. Furthermore, (74.6%) of the women confirmed they could afford to pay their medical bills, which points to enhanced health outcomes and improved access to healthcare services. About (72.9%) were also able to employ additional labourers for their enterprises due to the increased income generated from participation in the VCDP. This research agrees with Daniel *et al.* (2025) on "Effect of Women's Development Projects in Improving the Social Welfare of the Beneficiaries: A Case of Mother and Child Development Center in Gakenke District" that Women's development projects have had a number of positive effects on the socio-welfare of beneficiaries in Rwanda.

Table: 3 Income & Welfare Status of Respondents in Niger and Benue States

| Variables | Niger (n=177) Freq (%) | Benue (n=153) Freq (%) |
|--|-------------------------------|-------------------------------|
| Increase in Income Annually | 119 (67.2) | 102 (66.7) |
| Purchase of Additional Land for Rice Farm | 83 (46.9) | 50 (32.7) |
| Employing of More Laborers | 129 (72.9) | 150 (98.0) |
| Financial Support for the Needy | 104 (58.8) | 125 (81.7) |
| Increase in Laborer Wages/Salaries | 88 (49.7) | 94 (61.4) |
| Having Savings for Future Occurrence | 92 (52.0) | 134 (87.6) |
| Eating Three Square Meals a Day | 75 (42.4) | 53 (34.6) |

| Variables | Niger (n=177) Freq (%) | Benue (n=153) Freq (%) |
|---|------------------------|------------------------|
| Ability to Consume Grains and Proteins | 84 (47.5) | 54 (35.3) |
| Participation in Programmes for Family | 108 (61.0) | 125 (81.7) |
| Adoption of Innovative Crop Practices | 116 (65.5) | 99 (64.7) |
| Access to Clean Water | 119 (67.2) | 115 (75.2) |
| Payment of Children's School Fees | 148 (83.6) | 119 (77.8) |
| Access to Modern Education | 89 (50.3) | 90 (58.8) |
| Pursuing Further Education in Agriculture | 69 (39.0) | 82 (53.6) |
| Participation in Educational Support | 67 (37.9) | 82 (53.6) |
| Payment of House Rent and Bills | 113 (63.8) | 137 (89.5) |
| Purchase of Mobility | 77 (43.5) | 126 (82.4) |
| Purchase of Household Equipment | 72 (40.7) | 119 (77.8) |
| Payment of Medical Bills | 132 (74.6) | 140 (91.5) |
| Change of Residence | 66 (37.3) | 61 (39.9) |

Source: Field Survey, 2025

Attitude of the Women Beneficiaries towards the Programme in the study area

The distribution according to women perception in VCDP activities in Table 4. below shows that in Benue and Niger State, the women respondent perceived that IFAD-VCDP was a good project for women and less privileged in rural areas, that is one of the best rural development programme in Nigeria, they are satisfied with the quality of their contribution to the programme and it has helped in improving their income generation and living standards in both States respectively this implies that majority of the women in study areas of value chains agrees but at varying degree of their interest (Mohammed, *et, al.*, 2025). This is in line with IFAD emphasis on the importance of capacity building through training and education (IFAD, 2025). The result presented in Table 4. showed the perception of the respondents on the impact of IFAD-VCDP intervention on their livelihood and specifically on their financial status. However, after receiving the intervention, the majority of them indicated that they had become comfortable and very comfortable, respectively. This could be attributed to the positive impact of IFAD-VCDP on the processing activities. Similarly, the major source of water for most of the respondents was stream/river (47.50%) and protected well (50.63%), respectively, before IFAD intervention. After the intervention, an overwhelming majority of the respondents (99.38%) had access to borehole water because IFAD provided boreholes provided at a

distance less than 100m from the processing plants in both study areas. This implies a positive impact of IFAD-VCDP intervention on the respondents.

Table 4 Distribution of Attitude of the Women Beneficiaries towards the Programme

| Variable | A | D | SA | SD |
|---|---------------|------------|---------------|------------|
| IFAD-VCDP was a good project for women and less privileged in rural areas | 61 (18.5) | 2 (0.6) | 257 (77.9) | 9 (2.7) |
| IFAD-VCDP is one of the best rural development programmes implemented in Nigeria that effectively impacted women | 94 (28.5) | 4 (1.2) | 223 (67.6) | 8 (2.4) |
| Are you satisfied with the quality of your contribution to the programme? | 112 (33.9) | 6 (1.8) | 200 (60.6) | 5 (1.5) |
| IFAD-VCDP helped in improving the income generation capacity and living standards of women | 103 (31.2) | 4 (1.2) | 214 (64.8) | 8 (2.4) |

Source: Field Survey, 2025

A- Agree, **D-** Disagree, **SA-** Strongly Agree, **SD-** Strongly Disagree

Constraints faced and the Strategies put in place that influence women participation in programme

In Benue and Niger States, factors influencing participation in income-generating activities within the Value Chain Development Programme (VCDP) include socio-economic characteristics, access to inputs and credit, and extension services, as well as program-specific factors like the provision of matching grants and the focus on specific crops like rice and cassava. Strategies for increasing participation involve addressing constraints like poor extension ratios, inadequate capital, and market linkages, and promoting cooperative membership and functional groups to facilitate credit and dynamism. The distribution of Strategies and factors influencing participation in income-generating activities in VCDP activities in Benue States is shown in Table 5 below. In Benue State, results shows that very serious factors influencing participation of women in the VCDP activities show that majority (79.7%) of the women said Prioritizing women participation, (76.5%) Regular and prompt training, (75.8%) Capacity building, (73.2%) Form and strengthen more women-only groups were some of the factors that influenced the participation of women in the VCDP. This is in line with Marcel and Suleiman (2024) Women training and development have a number of positive effects on the social welfare of the beneficiaries, programme can help women to improve their economic status, health and empowerment, which can lead to a number of benefits for families and communities. In Niger State, results shows that very serious factors influencing

participation of women in income generating activities in the VCDP activities show that majority (83.6%) of the women said Regular and prompt training, (81.9%) Prioritizing women participation, (79.7%) Forming and strengthen more women-only groups, (75.7%) Capacity building, (75.1%) Taking cognizance of women in various roles as actors in the rice value chains, (71.8%) Empower women to leverage on opportunities were among some of the factors that influenced the participation of women in the VCDP. The results again, shows that some of the serious strategies and factors among others influencing participation of women were (29.9%) Access to land, (28.8%) access to water, (27.7%) price subsidy (input, equipment) and some of the factors influenced participation of women that are not serious but also important among others are (32.2%) Access to market stalls and store, (25.4%) Access to processing center, (18.6%) Access to financial services/credit. This is in line with Marcel and Suleiman (2024) who posited that Women training and development have a number of positive effects on the social welfare of the beneficiaries, programme can help women to improve their economic status, health and empowerment, which can lead to a number of benefits for families and communities. This implies that women in the study area had high level of participation in a lot of VCDP activities but at varying degree of interest to them.

Table 5: Distribution of constraints faced and the strategies put in place that influence women participation in programme at the study area.

| Variable | B/VS (Freq) | B/S (Freq) | B/NS (Freq) | N/VS (Freq) | N/S (Freq) | N/NS (Freq) |
|--|----------------|---------------|----------------|----------------|---------------|----------------|
| Taking cognizance of women in various roles as actors in the rice value chains | 109(71.2) | 44(28.8) | 0(0.0) | 133(75.1) | 44(24.9) | 0(0.0) |
| Access to land | 36(23.5) | 112(73.2) | 5(3.3) | 120(67.8) | 53(29.9) | 4(2.3) |
| Access to production and processing machines/equipment | 92(60.1) | 60(39.2) | 1(0.7) | 121(68.4) | 45(25.4) | 11(6.2) |
| Access to financial services/credit | 56(36.6) | 84(54.9) | 13(8.5) | 99(55.9) | 45(25.4) | 33(18.6) |
| Access to water | 61(39.9) | 77(50.3) | 15(9.8) | 119(67.2) | 51(28.8) | 7(4.0) |
| Access to processing center | 96(62.7) | 34(22.2) | 23(15.0) | 110(62.1) | 22(12.4) | 45(25.4) |
| Access to market stalls and store | 54(35.3) | 41(26.8) | 58(37.9) | 94(53.1) | 26(14.7) | 57(32.2) |

| Variable | B/VS (Freq) | B/S (Freq) | B/NS (Freq) | N/VS (Freq) | N/S (Freq) | N/NS (Freq) |
|--|----------------|---------------|----------------|----------------|---------------|----------------|
| Empower women to leverage opportunities on | 112(73.2) | 39(25.5) | 2(1.3) | 127(71.8) | 42(23.7) | 8(4.5) |
| Capacity building | 116(75.8) | 37(24.2) | 0(0.0) | 134(75.7) | 42(23.7) | 1(0.6) |
| Price subsidy (Input, equipment) | 108(70.6) | 45(29.4) | 0(0.0) | 120(67.8) | 49(27.7) | 8(4.5) |
| Prioritizing women participation | 122(79.7) | 30(19.6) | 1(0.7) | 145(81.9) | 29(16.4) | 3(1.7) |
| Regular and prompt training | 117(76.5) | 36(23.5) | 0(0.0) | 148(83.6) | 29(16.4) | 0(0.0) |
| Form and strengthen more women-only groups | 112(73.2) | 41(26.8) | 0(0.0) | 141(79.7) | 36(20.3) | 0(0.0) |

Source: Field Survey, 2025

B= Benue, N=Niger, VS=very serious S= serious, NS=not serious, WS=weighted sum, WM=weighted Mean

CONCLUSION AND RECOMMENDATIONS

The study revealed that there is high level of participation of women in VCDP agricultural activities. The majority (83.3%) of the respondents were better- off after participating in the project as it evidently improved their welfare status, This study has also identified and analyzed the various factors influencing women's participation in rice value chain of production, processing and marketing activities under the IFAD Value Chain Development Programme (VCDP) in Benue and Niger State, Nigeria with 97 percent women participation. It was found that while the VCDP has positively impacted in the lives of the women in the agricultural value chain, women's participation in rice value chain is still limited by several socio-economic, cultural and structural barriers. Difficulty in accessing capital and loan was a serious constraint to women' participation in VCDP activities due to high interest rate in the study area the study recommends that financial institutions and lending agencies should work out modalities for easy access to credit facilities to small holder farmers especially women to expand their agri-business in the study area

REFERENCES

- Ahmad, K. (2023). The impact of climate change adaptation strategies on income and food security – A critical appraisal. *Journal of Food Science and Technology*. 1(2): 27-32.
- Damisa, J., Charles, E. and Emem, U. (2024). The effect of information sources on technology adoption and modification. *Journal of Agriculture and Economics Research*. JAER 7(2) 15 - 22.

- Daniel, J. E., Robinson, M., & Mathew, H., K. (2025). Economic analysis of Agricultural derivatives. NY: Ecological Economics and Management, Cornell University Press Ithaca: Pp. 37-61
- Federal Republic of Nigeria Value Chain Development Programme (VCDP) Supervision report. (2024).
- Food and Agricultural Organization (2022) of the united states. <https://www.fao.org/news/story/en/item/460267/icode/>
- IFAD (2025). Federal Republic of Nigeria Value Chain Development Programme (VCDP) Supervision report.
- Lawson, E. N., Ekene, M., John, K. J. (2024). Evaluation of IFAD VCDP programme impact on rural dwellers in Gboko LGA of Benue State. Nigeria. Proceedings of the 21st International Conference of Agricultural Economists (ICAE). NASC Complex, New Delhi, India. August, 2024. Pp 67-73.
- Marcel, K., H., & Suleiman, Y. (2024). Agricultural Credit: challenges and solutions for smallholder farmers. *International Journal of Agricultural Finance and Risk Management*, 2(4), 50-51.
- Mohammed, U., Umar, I. S., and Ahmad, B. S. (2025). Determinants Of Women Involvement And Adoption on Improved Methods of Groundnut Processing Technologies in Three (3) Local Government Areas of Niger State, Nigeria. *Journal of Agriculture and Veterinary Science*, 1(2),
- NBS (2022). Key indicator: 2018 Unemployment/Underemployment. National Bureau of Statistics. Retrieved from <https://www.nigerianstat.gov.ng> on 21/1/2023.
- Usman S. (2025). The Nigerian Rice Economy in a Competitive World: Constraints, opportunities, and Strategic Choices Rice Processing in Nigeria: A survey. 3: 6- 20.
- Yelwa, A., Aminu, S., and Musa, H. (2025). The Adoption of Innovative Techniques by Women Processors in Value Chain Development Programme in Niger State, Nigeria. Semantic Scholar. March 2025. <https://pdfs.semanticscholar.org/>