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# Profitability and Employment Prospects in Cassava Value Chain Enterprises: A Youth-Centred Analysis in Anambra State, Nigeria

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**Abstract**

This study investigates the income-generating potential of youth engaged in the cassava value chain under the Value Chain Development Programme by focusing on production, supply, harvesting, postharvest handling, processing, value addition, and marketing & distribution. Primary data were obtained through a well-structured questionnaire administered to 387 respondents, using a Taro Yamane sample size formula. An inferential statistical analysis was conducted using t-tests to assess differences in income across the nodes. Results indicate that the mean incomes at all stages of the cassava value chain: production (₦504,275.21), supply (₦2,750,555.00), harvest (₦56,613.94), post-harvest (₦117,425.55), processing (₦1,015,606.50), value addition (₦35,100.06) and marketing & distribution (₦192,603.48) were statistically significant at the 1% level, with t-ratios ranging from -15.47 to -94.79. The processing (₦1,015,606.50) and supply (₦2,750,555.00) chains recorded the highest mean incomes. Although variations exist, the persistent statistical significance observed across stages highlights the potential of cassava-based enterprises as sustainable income-generating opportunities for young people. The study concludes that income differences between nodes are significant, suggesting that youths can strategically select entry points within the value chain based on profitability. It recommends sustaining the programme as a pathway for youth employment and entrepreneurship.

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## 1. Introduction

Despite government agricultural programmes and youth empowerment initiatives aimed at engaging youth and reducing unemployment, Nigeria's youth unemployment rate stood at 7.2% in the second quarter of 2022, up slightly from 6.9% in the first quarter of 2022 (NBS, 2023) [11].

Many young people in Nigeria struggle to find gainful employment, leading to frustration, poverty, and a sense of hopelessness. The limited availability of jobs especially contributes to dissatisfaction and restiveness among the youth (Ezemenaka, 2021) [7]. There is no quick way to generate employment opportunities for youth in Nigeria and to create an environment conducive to innovation and economic growth, except through targeted policies and investments, such as in job hubs and agricultural

programmes (Teumola, 2021) [18]. Wendy *et al*. (2023) [22] noted that the Value Chain Development Programme can provide youth with opportunities to acquire skills and knowledge in agriculture and agribusiness. This can empower them to start businesses, generate income, and reduce youth unemployment. Also, Suresh *et al*. (2021) [17] noted that Value Chain Development can create platforms for the youth to connect with potential market partners, investors, and mentors. This will enhance their networking and relationship-building skills, opening up opportunities for collaboration and partnership. This can help them overcome challenges such as limited market access and limited visibility. The Programme can promote the use of innovative technologies and modern farming methods among the youth. This will not only increase productivity but also make the agricultural sectors more attractive to the younger generation. It can also bridge the digital divide by providing access to digital tools and training. The Value Chain Development Programme can emphasise the importance of value addition in cassava. This will encourage the youth to invest in the processing, packaging, and branding of their products, thereby increasing their market value and profitability (Oruonye *et al*., 2021) [16].

Empirical research on youth involvement in value chain development programmes in Anambra State, Nigeria, remains insufficient. Some general studies examine youth involvement in agriculture and value chains in Nigeria. Uchemba *et al*. (2025) [19] analysed only the demographic characteristics of youths involved at different stages of the cassava Value Chain Development Programme in Anambra State, Nigeria, without considering income generation across these stages. Furthermore, Uchemba *et al*. (2025) [20] in their study on extension programmes and rural livelihoods under Climate change: evidence from rice and cassava farmers in South East Nigeria provided valuable insights into adaptation strategies and extension participation among rice and cassava farmers; they fall short in addressing profitability and employment prospects within the cassava value chain. This gap is particularly critical given the rising youth unemployment in Nigeria and the strategic role of cassava enterprises under the Value Chain Development Programme. The present study, therefore, advances the discourse by offering a youth-centred approach to cassava enterprises as viable pathways for employment and income generation in Anambra State.

While Okeke *et al*. (2022) [13] analysed rural youth engagement in IFAD Value Chain Development as a panacea for unemployment in Southeast Nigeria, the study provides valuable insights into youth engagement in the IFAD-assisted VCDP, but frames participation mainly as a solution to unemployment; it does not go deeper into income levels in the cassava value chains. This inability has created a gap in the examination of income levels and employment prospects, particularly within the cassava value chain.

Adeoye and Olorunfemi (2018) [1] examined agribusiness and rural entrepreneurship among Nigerian youth as part of an assessment of the value chain development programme. The study assessed the impact of value chain development programmes on the promotion of agribusiness and rural entrepreneurship among Nigerian youth, with a focus on the challenges and opportunities they present. The research did not consider youth involvement in the cassava value chain. The lack of evidence on these crucial aspects limits the scope for discussion of how to improve young people through their participation in the cassava value chain.

It is important to involve youth in the planning, design, and implementation of the Value Chain Development Programme to ensure their unique needs and perspectives are considered. Previous studies have noted the need for recent empirical evidence on the profitability and employment prospects of cassava value chain enterprises in Anambra State, Nigeria. This academic article aims to provide new empirical evidence and contribute to the existing literature on profitability and employment by examining income generation at the different stages of the cassava value chain.

## 2. Review of Related Empirical Studies

### 2.1. Income generation of the Youths involved in the Programme

Okeke *et al*. (2022) [13] reported a mean income difference of N9,960.38 (a 37.7% increase in monthly income for rural youths in Southeastern Nigeria attributable to the programme's impact). The mean (diff. = 0) was assumed equal for monthly income before and after the engagement, but the t-value of 10.5386** was significant at the 0.000 level. This implies a difference in the monthly income of rural youth in Southeast before and after the IFAD engagement.

Okeke *et al*. (2021) [14], in their study on the assessment of youths' participation in activities of the value chain development programme in Anambra State, Nigeria, reported that respondents experienced an increase (88.0%) in their income.

Okonkwo *et al*. (2024) [15], in their study on the value chain development programme and agricultural enterprise growth in Anambra State, Nigeria, found that the Value Chain Development Programme (VCDP) employs a comprehensive, demand-driven strategy to address limitations in the rice and cassava value chains. It accomplishes these through an inclusive approach that builds the capacity of all participants in the supply chain, including producers and processors. The study revealed a positive coefficient for the marketing programme (0.061; p = 0.072). This indicates that the marketing programme has a positive effect on agricultural enterprise growth in Anambra State, Nigeria, but is statistically insignificant at (5%) as the probability value of (0.72) is greater than 0.05. This indicates that the marketing programme has contributed less to the growth of agricultural enterprises in Anambra State, Nigeria.

Vivian *et al*. (2020) [21] in their study on the effect of Value Chain Development Programme (VCDP) on income and food security of rice farmers in Yewa North and Ijebu North-East, Ogun State, Nigeria, revealed that the annual income of the beneficiaries on their farming occupation before VCDP was 6718.18%, and the mean and standard deviation were ₦297,826.92 and ₦133764.20. During VCDP, the mean and standard deviation were ₦477,230.77 and ₦288,698.35, respectively; the percentage increase was 133,233.0 %. In their secondary occupation, the percentage increase in annual income for the beneficiaries before VCDP was 900%, with a mean and standard deviation of ₦207,688.07 and ₦93,315.54. During VCDP, the mean and standard deviation were

₦308,548.62 and ₦131,171.98, respectively; the percentage increase was 44,344.4%. The implication is that the IFAD-VCDP intervention has significantly increased beneficiaries' incomes in both their primary and secondary occupations. Their involvement in the programme has resulted in a substantial change in their income. Additionally, the Food and Agriculture Organisation (FAO) (2017) [10] reports that rice and cassava generate more income for Nigerian farmers than any other cash crops.

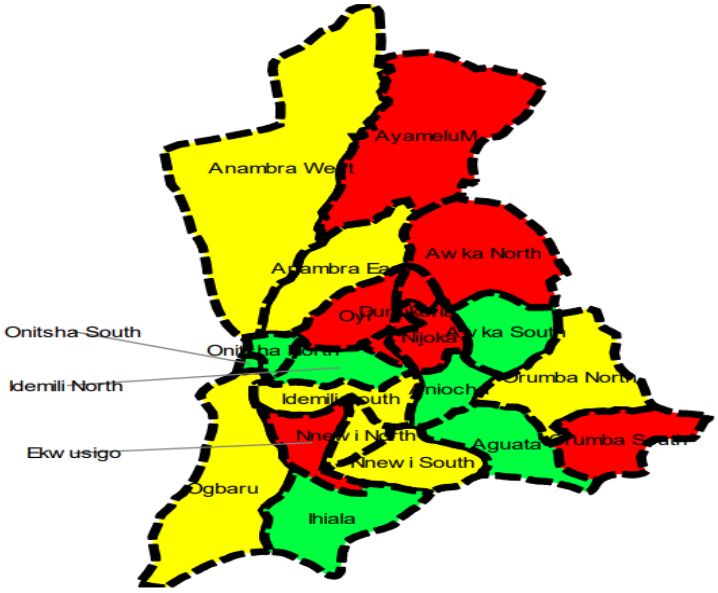
## 3. Research Methodology

### 3.1. Study Area

The study was carried out in Anambra State, Nigeria. Delta State bounds the State to the West, Imo State to the South, Enugu State to the East, and Kogi State to the North. Anambra State comprises 21 Local Government Areas. It is located between latitude 5º 32$^1$ and 6º43$^1$N and longitude 6º43$^1$ and 7º22$^1$E of the area within the Greenwich meridian (Chukwuma *et al*., 2016) [4]. According to the National Population Commission (2016) [12], Anambra State's population was estimated at 5,527,809, while more recent projections suggest it will reach 6,358,311 in 2025 (Xplorer.ng, 2025) [23]. This increase is driven by an annual growth rate of approximately 2.84%, fuelled by urbanisation, migration, and the state's thriving economy in commerce and agriculture.

Anambra State is one of the nine states participating in the Value Chain Development Programme (VCDP). The VCDP was initiated to enhance the productivity and profitability of smallholder producers, processors, and marketers of rice and cassava crops. The VCDP pilot project in Anambra State covered five LGAs and their environs, while the additional financing (AF) added 3 new LGAs, bringing the total number of LGAs covered by the VCDP to 8 (FGN/VCDP-AF, 2024) [8]. These LGAs, with their participating farmer populations, include Ayamelum (2,760), Awka North (2,198), Anambra East (1,622), Anambra West (1,580), Orumba North (904), Orumba South (1,074), Ogbaru (892), and Ihiala (1,007). These summed to 12,060 farmers participating in the rice and cassava value chain of the VCDP in Anambra State as of March 2020 (FGN/VCDP, 2020) [9]. As of May 2024, the population of youth cassava farmers across the VCDP's cassava value chain is 11,812. For producers, it is spread thus Ayamelum (161), Awka North (735), Anambra East (1,030), Anambra West (629), Orumba North (630), Orumba South (872), Ogbaru (720) and Ihiala (870). For processors, it is distributed as follows: Ayamelum (190), Awka North (646), Anambra East (380), Anambra West (494), Orumba North (760), Orumba South (456), Ogbaru (532), and Ihiala (342). For marketers, it is spread thus Ayamelum (118), Awka North (472), Anambra East (236), Anambra West (307), Orumba North (472), Orumba South (283), Ogbaru (331) and Ihiala (213) (FGN/VCDP-AF, 2024) [8].

### 3.1.2. Map of Anambra State




***Source:*** Anambra State Bureau of Statistics (ASBS) (2009) [3]

**Fig 1:** Map of Anambra State

The map of Anambra State (Figure 3.2) shows all 21 local government areas in the State. From the map, the Value Chain Development Programme is in the following agricultural zones present in the local government areas: Anambra East, Anambra West and Ayamelum (Anambra Agricultural Zone), Awka North (Awka Agricultural Zone), Orumba North and Orumba South (Aguata Agricultural Zone), Ogbaru, and Ihiala (Onitsha Agricultural Zone) (Anambra State Agricultural Development Programme [ASADEP], 2020) [2].

### 3.2. Technique Procedure

The study population comprised all 11,812 youths involved in the various segments of the cassava value chain of the IFAD/VCDP in Anambra State, Nigeria, since the Additional Finance Phase I. The study utilised a Taro Yamane sample size calculation, adapted from Uchemba *et al*. (2025), to determine the sample size. The formula is defined as:

$$n = \frac{N}{1+N(0.05)^2}$$

Where:
$n$ = sample size
$N$ = Total population of cassava farmers
$e$ = error term at 0.05 level of probability
$1$ = constant
However, the sample size was calculated as:
$n$=118121+11812∗ (0.0025)
≈ 387 youths
This study employed a multistage sampling design that combined purposive and random selection.
In the first stage, the eight LGAs (Orumba North, Orumba South, Awka North, Anambra West, Anambra East, Ayamelum, Ogbaru, and Ihiala) of the programme were purposively selected to ensure equal opportunities for all cassava value chain actors participating in the programme. During the second stage, the stratum formula, adapted from Uchemba *et al*. (2025) [19], was used to determine the appropriate purposive sample size for each LGA. The formula is stated as:

$$n_{th} = \frac{n_i * n}{N}$$

Where:
$n_{th}$ = LGA strata
$n_i$ = LGA-specific population
$n$ = study sample size
$N$ = population sample size
The stratum formula was applied to populate Table 3.1 as:

**Table 1:** Sample representation of cassava value chain actors in the 8 VCDP LGAs

| LGA | Producers (Pop.) | Marketers (Pop.) | Processors (Pop.) | Total Pop. | Producers (Stratum) | Marketers (Stratum) | Processors (Stratum) | Total Stratum |
|---|---|---|---|---|---|---|---|---|
| Orumba North | 630 | 472 | 760 | 1863 | 21 | 15 | 25 | 61 |
| Orumba South | 872 | 283 | 456 | 1612 | 29 | 9 | 15 | 53 |
| Awka North | 735 | 402 | 646 | 1783 | 24 | 13 | 21 | 58 |
| Anambra West | 629 | 307 | 494 | 1430 | 21 | 10 | 16 | 47 |
| Anambra East | 1030 | 236 | 380 | 1646 | 34 | 8 | 12 | 54 |
| Ayamelum | 161 | 118 | 190 | 469 | 5 | 4 | 6 | 15 |
| Ogbaru | 720 | 331 | 532 | 1583 | 24 | 11 | 17 | 52 |
| Ihiala | 870 | 213 | 342 | 1425 | 29 | 7 | 11 | 47 |
| Total | 5647 | 2362 | 3802 | 11812 | | | | 387 |

***Source:*** Researcher's Computation

In the third stage, all communities participating in the VCDP intervention were randomly selected, and only youths (18–35 years, as specified in the programme) involved in the cassava value chain were randomly selected within each stratum, according to the stratum values in Table 3.1. This brought the sample size to three hundred and eighty-seven (387) value chain participants.

### 3.3. Methods of Data Collection

The structured interview schedule that was designed to obtain information from the respondents was validated by one (1) lecturer in the Department of Agricultural Economics and Extension of Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. One (1) enumerator was adequately trained for data collection.

#### 3.3.1. Reliability

Reliability is the ability of a data collection process to provide consistent results within an expected range. To ensure the reliability of fact-based questions, Cohen *et al*. (2013) [5] proposed including internal checks, such as a logical test in the questionnaire. To evaluate the reliability of the research instrument, a test-retest method was used. Twenty (20) cassava youth farmers received the questionnaire, and their responses were analysed using Cronbach's alpha to assess internal consistency at the 5% significance level. From Table 3.2 and 3.2.1, it was revealed that the instruments were reliable.

**Table 2:** Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|---|---|---|
| 0.806 | 0.817 | 10 |

***Source:*** Field Survey Data, 2026

**Table 3:** Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|---|---|---|
| 0.811 | 0.823 | 10 |

***Source:*** Field Survey Data, 2026

### 3.4. Model specification

The t-test, as adopted from Elegbede *et al*. (2018) [6], is specified as:

$$H_0: \mu_{prod} = \mu_{node} \text{ vs. } H_1: \mu_{prod} \neq \mu_{node}$$

Where:
$\mu_{prod}$= mean income of cassava producers
$\mu_{node}$= mean income of cassava participants in another node (supply, harvesting, post-harvest, processing, value addition, marketing & distribution)

$$t = \frac{\bar{X}_{prod} - \bar{X}_{node}}{\sqrt{\frac{s^2_{prod}}{n_{prod}} + \frac{s^2_{node}}{n_{node}}}}$$

Where:

$\bar{X}_{prod}$= sample mean income of production node
$\bar{X}_{node}$= sample mean income of comparison node
$s^2_{prod}, s^2_{node}$= sample variances of each node
$n_{prod}, n_{node}$= sample sizes of each node

## 4. Results and Discussion

### 4.1. Income generation of the youths involved in the programme

#### 4.1.1. Production

Table 4.1 presents the t-ratios for income generation among respondents across the different stages of the cassava value chain. From the findings, it can be deduced that the mean value of production (₦504,275.21) and supply (₦2,750,555.09) differed significantly by -34.62. This implies that the production and supply chain was significant at 1% and a promising opportunity for youth participation. The mean values of production (₦504,275.21) and harvest (₦56,613.94) indicate that the stage is statistically significant at the 31.19% and 1% levels, respectively, implying that it is a promising venture for youth participation. The mean values for the production (₦504,275.21) and post-harvest (₦117,425.55) stages are statistically significant at the 26.97% and 1% levels, respectively. The implication is that this stage benefits youth and others who are not involved; however, participation is voluntary. The mean values for the production (₦504,275.21) and processing (₦1,015,606.51) stages indicate that the production stage is statistically significant at -29.64 (p = 1%). This implies that this enterprise benefits youth. More youths can decide to join. The mean values for the production (₦504,275.21) and value addition (₦35,100.06) stages indicate that these stages are statistically significant at the 32.76% and 1% levels, respectively. The implication is that this stage is beneficial to the youth. More youth can choose to participate. Finally, the mean values for the production (₦504,275.21) and marketing & distribution (₦192,603.48) stages indicate that these stages are statistically significant at the 20.82% and 1% levels, respectively. The implication is that this stage is beneficial to the youth. More youth can choose to participate. This corroborates Okeke *et al*. (2022) [13], who report a 37.7% increase in monthly income among rural youths in the southeast attributable to the programme's impact.

**Table 4:** Income generation of the youths involved in the programme

| Stage Compared with Supply | Mean (Supply) | Mean (Stage) | Variance (Supply) | Variance (Stage) | t-stat |
|---|---|---|---|---|---|
| Harvest | 2,750,555 | 56,613.94118 | 1.56E+12 | 38,680,304.7 | 42.37 |
| Post-harvest | 2,750,555 | 117,425.5506 | 1.56E+12 | 249,066,204.9 | 41.46 |
| Processing | 2,750,555 | 1,015,606.514 | 1.56E+12 | 392,248,569.8 | 26.85 |
| Value Addition | 2,750,555 | 351,000.5740 | 1.56E+12 | 10,731,407.09 | 42.74 |
| Marketing & Distribution | 2,750,555 | 192,603.484 | 1.56E+12 | 619,378,229.3 | 40.28 |

***Source:*** Field Survey Data, 2026. *** significant at 1%

#### 4.1.2. Supply

Table 4.2 presents the t-ratios for income generation among respondents across the different stages of the cassava value chain. From the findings, it can be deduced that the mean value of supply (₦2,750,555.00) and harvest (₦56,613.94) differed significantly by 42.37. This implies that the supply and harvest stages of the cassava value chain were significant at the 1% level and a promising opportunity for youth participation. A mean value of supply (₦2,750,555.00) and post-harvest (₦117,425.55) reveals that the stage is statistically significant at 41.46 and 1%, respectively, indicating that it is a promising venture for youth participation. The mean values for the supply (₦2,750,555.00) and processing (₦1,015,606.51) stages indicate that both stages are statistically significant at the 26.85% level (p < 0.01). The implication is that this stage benefits youth and that others who are not involved can join. The mean values for the supply (₦2,750,555.00) and value addition (₦35,100.06) stages indicate that these stages are statistically significant at the 42.74% and 1% levels, respectively. The implication is that this enterprise benefits youth. More youths can decide to join. Finally, the mean values for the supply (₦2,750,555.00) and marketing & distribution (₦192,603.48) stages indicate that these stages are statistically significant at the 40.28 and 1% levels, respectively. The implication is that this stage is beneficial to the youth. More youth can choose to participate. This study aligns with Okeke *et al*. (2021) [14], who reported that respondents experienced an increase (88.0%) in their income.

**Table 5:** Income generation of the youths involved in the programme

| Comparison | Mean (Supply) | Mean (Stage) | Variance (Supply) | Variance (Stage) | t-stat |
|---|---|---|---|---|---|
| Supply vs Harvest | 2,750,555 | 566,13.94118 | 1.56E+12 | 38,680,304.7 | 42.37 |
| Supply vs Post-harvest | 2,750,555 | 117,425.5506 | 1.56E+12 | 249,066,204.9 | 41.46 |
| Supply vs Processing | 2,750,555 | 1,015,606.514 | 1.56E+12 | 392,248,569.8 | 26.85 |
| Supply vs Value Addition | 2,750,555 | 351,000.5740 | 1.56E+12 | 10,731,407.09 | 42.74 |
| Supply vs Marketing & Distribution | 2,750,555 | 192,603.484 | 1.56E+12 | 619,378,229.3 | 40.28 |

***Source:*** Field Survey Data, 2026. *** significant at 1%

#### 4.1.3. Harvest

Table 4.3 presents the t-ratios for income generation among respondents across the different stages of the cassava value chain. The findings indicate a statistically significant difference between harvest (₦56,613.94) and post-harvest (₦117,425.55) of -22.31 (p < 0.001). This implies that the harvest and post-harvest stages of the cassava value chain were important at the 1% level and a promising opportunity for youth participation. The mean values for harvest (₦56,613.94) and processing (₦1,015,606.51) indicate that the stage is statistically significant at -94.79 and 1%, respectively, implying that it is a promising venture for youth participation. The mean values for the harvest (₦56,613.94) and value addition

(₦35,100.06) stages indicate that these stages are statistically significant at the 18.82% and 1% levels, respectively. The implication is that this stage benefits youth and that others who are not involved can join. Finally, the mean values for the harvest (₦56,613.94) and marketing & distribution (₦192,603.48) stages indicate that these stages are statistically significant at -33.26 and 1%, respectively. The implication is that this stage is beneficial to the youth. More youth can choose to participate. These findings align with the study by Vivian *et al*. (2020) [21], who reported that the IFAD-VCDP intervention significantly increased beneficiaries' income in both their primary and secondary occupations. Their involvement in the programme has resulted in a substantial change in their income.

**Table 6:** Income generation of the youths involved in the programme

| Comparison | Mean (Harvest) | Mean (Other Stage) | Variance (Harvest) | Variance (Other Stage) | t-stat |
|---|---|---|---|---|---|
| Harvest vs Post-harvest | 56,613.94 | 117,425.5506 | 3.87E+08 | 2,490,662,049 | -22.31 |
| Harvest vs Processing | 56,613.94 | 1,015,606.514 | 3.87E+08 | 39,224,856,958 | -94.79 |
| Harvest vs Value Addition | 56,613.94 | 35,100.05749 | 3.87E+08 | 107,314,070.9 | 18.82 |
| Harvest vs Marketing & Distribution | 56,613.94 | 192,603.484 | 3.87E+08 | 6,193,782,293 | -33.26 |

***Source:*** Field Survey Data, 2026. *** significant at 1%

### 4.1.4. Post-Harvest

Table 4.4 presents the t-ratios for income generation among respondents across the different stages of the cassava value chain. The findings indicate a statistically significant mean difference of -85.31 between postharvest (₦117,425.55) and processing (₦1,015,606.51) This implies that the post-harvest and processing stages f the cassava value chain were important at the 1% level and a promising opportunity for youth participation. The mean values for post-harvest (₦117,425.55) and value addition (₦35,100.06) indicate that the stage is statistically significant at 32.22 and 1%, respectively, implying that it is a promising venture for youth participation. Finally, the mean values for the post-harvest (₦117,425.55) and marketing & distribution (₦192,603.48) stages indicate that these stages are statistically significant at -15.47 and 1%, respectively. The implication is that this stage is beneficial to the youth. More youth can choose to participate. The study agrees with the Food and Agriculture Organisation (2017) [10] report that rice and cassava generate more income for Nigerian farmers than any other cash crops.

**Table 7:** Income generation of the youths involved in the programme

| Statistic | Post-harvest | Processing |
|---|---|---|
| Mean | 117425.5506 | 1015606.514 |
| Variance | 2490662049 | 3922485698 |
| t-stat | | -85.31 |

***Source:*** Field Survey Data, 2026. *** significant at 1%

### 4.1.5. Processing and Value Addition

Table 4.5 presents the t-ratios for income generation among respondents across the different stages of the cassava value chain. From the findings, it can be deduced that the mean values for processing (₦1,015,606.50) and value addition (₦35,100.06) were statistically significant at the 97.21 level. This implies that the post-harvest and processing stages of the cassava value chain were important at the 1% level and a promising opportunity for youth participation. Also, the mean values for processing (₦1,015,606.50) and marketing & distribution (₦192,603.48) indicate that these stages are statistically significant at 76.27 and 1%, respectively, implying that participation in this venture is beneficial for youth. Finally, the mean values for the value addition (₦35,100.06) and marketing & distribution (₦192,603.48) stages indicate that these stages are statistically significant at the -39.20 and 1% levels, respectively. The implication is that this stage is beneficial to the youth. More youth can choose to participate. These findings contradict the earlier predictions of Okonkwo *et al*. (2024) [15], who found that the marketing programme has a positive effect on agricultural enterprise growth in Anambra State, Nigeria, but is statistically insignificant at (5%) as the probability value of (0.72) is greater than 0.05. They further noted that the marketing programme has contributed less to the growth of agricultural enterprises in Anambra State, Nigeria.

**Table 8:** Income generation of the youths involved in the programme

| Comparison | Mean (A) | Mean (B) | Variance (A) | Variance (B) | t-stat |
|---|---|---|---|---|---|
| Processing vs Value Addition | 1,015,606.5 | 35,100.05749 | 3.922E+10 | 107,314,070.9 | -39.20 |
| Value Addition vs Marketing & Distribution | 35,100.05749 | 192,603.484 | 107,314,070.9 | 6,193,782,293 | -39.20 |
| Processing vs Marketing & Distribution | 1,015,606.5 | 192,603.484 | 3.922E+10 | 6,193,782,293 | 76.27 |

***Source:*** Field Survey Data, 2026. *** significant at 1%

## 5. Conclusion and Recommendation

This study examined the profitability and employment prospects of youth participation in cassava value chain enterprises under the Value Chain Development Programme (VCDP) in Anambra State, Nigeria. Using inferential statistics (t-tests), the findings revealed statistically significant differences in mean incomes across all nodes of the cassava value chain: production, supply, harvesting, post-harvest handling, processing, value addition, and marketing & distribution. The supply (₦2,750,555.09) and processing (₦1,015,606.51) stages recorded the highest mean incomes, indicating that these

nodes offer the most lucrative opportunities for youth engagement. The persistent statistical significance across all stages underscores the robustness of cassava-based enterprises as sustainable income-generating ventures.

However, the study recommends sustaining the value chain development programme, which is a viable pathway for youth employment, entrepreneurship, and poverty reduction in Anambra State.

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