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GENDER ROLES IN OFF-FARM INCOME GENERATING ACTIVITIES AMONG YOUTHS IN RURAL ENUGU STATE, NIGERIA

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ABSTRACT: Nigeria is predominantly rural, with high poverty levels and a populace primarily engaged in agriculture. However, agriculture alone cannot alleviate poverty due to its seasonality. This study analyzed gender differences in youth engagement in off-farm income-generating activities in rural areas of Enugu State, Nigeria. A multistage random sampling technique was used to select 360 respondents. Data were collected using semi-structured questionnaires and analyzed with descriptive and inferential statistics, including a logit regression model. The results showed a deviation from conventional agricultural means of livelihood among youths, with 98.3% engaged in off-farm activities. Key activities included wage-earning in civil service (31.9%), artisan work (12.8%), and customer service (12.8%). Significant gender differences were observed: males contributed an average of ₦72,800.00, while females contributed ₦54,108.10. Motivating factors for engagement included income diversification, financial risk mitigation (33.9%), and access to new skills (24.4%). Barriers included lack of access to resources such as land and capital (35.3%), cultural norms (30.6%), and gender-specific constraints like childcare responsibilities (16.1%). Higher educational attainment and income levels positively influence youth participation in off-farm activities, emphasizing the role of socio-economic empowerment. Based on the findings, the study recommends the development and implementation of policies and programs that address the gender disparities observed in off-farm income generation. This could include initiatives aimed at providing equal access to resources such as land, capital, and technology for both male and female youths. Additionally, gender-sensitive training programs and mentorship opportunities can help empower young women to overcome barriers and actively participate in off-farm economic activities.

Keywords: Gender, Roles, Off-Farm, Income, Youths, Rural

INTRODUCTION

Nigeria experiences an ongoing population surge, which forces arable land quantities to decrease. As noted by Adelodun (2015), non-agricultural entrepreneurship activities have become prevalent among households since they can no longer survive solely through farming. The evidence shows that non-farm income through wage-paying activities and self-employment in commerce and

manufacturing supports farm households and rural and urban residents (Ajibola et al., 2014). According to the African Development Bank (AfDB), the Organisation for Economic Co-operation and Development (OECD), and the United Nations Development Programme (UNDP) (2017), non-farm enterprises (NFEs) have become significant employers and sources of income for farms in developing nations. Farm households in Nigeria frequently engage in non-farm pursuits to augment their earnings. For households, this extra money is a valuable source of credit. Furthermore, the Alliance for a Green Revolution in Africa (AGRA) (2016) observed that non-farm income might be used as collateral, making lending more accessible. Access to financing allows households to make riskier but potentially profitable agricultural investments (Babu, Manvatkar, & Kolavalli, 2015). Households can grow their investments and raise agricultural expenditures when more credit sources are used to buy durable assets and farm supplies (Flynn & Sumberg, 2017). Accordingly, non-farm income increases agricultural production, improves farm productivity, and increases farm income over the long and short terms (Giuliani et al., 2017). As stated by Gyau et al. (2016), non-farm businesses (NFEs) consequently have the potential to significantly contribute to increased farm income, farm commercialization, agricultural modernization, diversification into higher-value activities, and intensification of agricultural production. The importance of non-farm revenue streams to rural households' livelihoods in developing nations is becoming more widely acknowledged (Islam, 1997; Reardon et al., 1998; Escobal, 2001; Lanjouw et al., 2001).

Off-farm employment and agricultural production activities have been shown to have complementary and substitutive impacts in numerous studies. (Tittonell et al., 2010; Kirk et al. 2017). However, because of environmental risks and market price fluctuation, this income is largely seasonal and frequently unpredictable (Hindeya, 2017). To lessen negative shocks, household members consequently devote a portion of their working hours to pursuits that offer more reliable sources of income (Ellis, 2000). Farming and the non-farm economy are usually the two primary sources of income in rural communities. The majority of households in rural Nigeria work in agriculture, but many additionally make money from non-farm businesses (Holden & Tilahun, 2018). As a result, rural households that are entirely dependent on farming are uncommon. Households with limited labor resources may engage in off-farm employment, affecting agricultural production through the substitution effect (Djanibekov and Gaur 2018; Mondal et al. 2021). According to Kruuse et al. (2016), Nigeria is primarily distinguished by a large number of rural areas with notable levels of poverty. In this regard, rural communities continue to work primarily in agriculture (Scoones et al., 2016). However, off-farm activities are an essential requirement because agriculture alone is not enough to reduce poverty in these areas.

Non-farm income-generating activities encompass all economic undertakings in rural areas other than farming, raising livestock, fishing, and hunting. In rural villages, this category includes off-farm activities such as processing, marketing, manufacturing, carpentry, running neighbourhood coffee shops, shoe repair, petty trading, beauty salons (for men and women), small transportation businesses, mini-markets, and wage or part-time local jobs. These operations, in essence, encompass all commercial endeavours other than conventional agricultural production and animal husbandry. Off-farm employment enhances dietary diversity by providing stable income and promoting food consumption, known as the income effect (Owusu et al. 2011; Gartaula et al. 2016). Off-farm employment increases rural inhabitants' knowledge and awareness of the

necessity of a nutritious diet, described as the capacity accumulation effect (Li et al., 2021). The major contribution of farm, and of course non-farm economic activities to rural poor's livelihood, is often ignored by policy makers. Both are performed by rural households to buffer income short falls. The farming is seasonal and rain fed and thus the off season needs to meet economic responsibilities of rural youths, which they could do by diversifying income generating activities. Nigerian society uses established gender roles to determine the economic choices available to its young male and female members.

Most business fields requiring substantial investments and operational capital belong to male ownership while women focus on low-income alternative sectors including trading and food processing and small-scale creative industries. All policy frameworks must include gender-inclusive strategies because this will optimize the benefits derived from young people. National success extends into the future as the economy becomes more productive when female and male economic equality exists. A functional strategy must be established to develop sustainable economic advancement through policy reforms that focus on gender sensitivity in off-farm income production. However, there is a dearth of empirical data regarding young people's participation in off-farm revenue-generating activities with reference to gender, despite their substantial contributions to agriculture. Consequently, there is no scientific evidence to support the amount of their involvement in these activities, especially when considering gender. This knowledge gap has hampered the creation of focused policies for improvement. Also, there are notable failures in the operations of several youth programs on agriculture as a result of inadequate data and information on what drives youths' engagement in off-farm income-generating activities for the design of appropriate intervention strategies.

Several studies related to youth engagement in off-farm income activities (Umunnakwe ,2014; Akintunde et al., 2023; Daudu, et. al, 2023; Owutuamor and Ukpong 2021; Waje, 2019; Baumüller, 2018; Yaye et al., 2017, Mwaura, 2017; Daum & Birner, 2017; Badiru & Akande, 2017; Berckmoes, & White, 2016; Amanor & Chichava, 2016; Banson, et al., 2015; Allen, et al., 2016; Boone, 2015; Ajibola et al., 2014) have been carried out, but have not expressively explored youth engagements in off-farm income generating activities in Enugu State, Nigeria with a focus on gender differences. This study intends to fill this knowledge gap by looking at off-farm income contributions across genders in the state of Enugu.

Objectives of the Study

The broad objective of the study is the assessment of gender analysis of youth engagement in off-farm income-generating activities in rural areas of Enugu state, Nigeria. The specific Objectives of the study were to:

i. describe the socio-economic characteristics of youths engaged in off-farm income-generating activities;
ii. ascertain the level of engagement in off-farm income-generating activities between male and female youths;
iii. examine the income contribution by off-farm activities across gender;

iv. determine the motivating and demotivating factors for engagement in off-farm income generating activities across genders in the study area
v. analyze socioeconomic factors influencing engagement in off-farm income-generating activities by youths in the study area.

LITERATURE REVIEW

Gender consists of socially constructed differences between men and women that exist separate from biological distinctions because it stems from societal interpretations of feminine and masculine traits along with the ensuing power structures (Olaomo, 2021). The concept of "youth" varies between cultures, civilizations, and countries, and even within equivalent age groups (Latynskiy & Berger, 2016). The African Youth Charter (2006), for instance, defines youth as individuals who are between the ages of 15 and 35. Nigeria's National Youth Development Policy defines youth as citizens between the ages of 18 and 35, according to AGRA (2016). According to this study, "youths" are defined as those under 50 who still depend on others for their livelihood (Borda-Rodriguez et al., 2016; Simpasa et al., 2015). Every country may benefit greatly from its youth, especially when it comes to maintaining agricultural productivity, which is a crucial area for growth. Regretfully, policy and program considerations frequently overlook this demographic (Tchamyou, 2017). For instance, according to a United Nations (UN) analysis by Fox and Thomas (2016), the global unemployment rate for youths was 12.6% in 2010, while it was only 4.8% for adults. In pursuit of better employment prospects, this discrepancy frequently prompts a large number of young people to relocate, particularly to urban areas (Gebremariam, 2017).

Off-farm income in developing countries is often viewed as a means to reduce poverty, but it primarily serves as a survival strategy rather than a sustainable solution (Otsuki et al., 2017). Young people face significant obstacles in starting businesses or entering the workforce (Lyocks et al., 2018). Poverty, defined by insufficient resources for essential needs, continues to be a significant challenge (World Bank, 2003). Young women face particular difficulties in securing funding for business growth (Girard, 2016). Often, their non-farm earnings are allocated to support agricultural projects or for self-insurance (Matenga & Hichaambwa, 2017). The capability to buy inputs is contingent on the income derived from these non-farm enterprises (Moore, 2015). Young women play a vital role in economic development, particularly in West Africa, where they are key contributors as farmers, traders, and entrepreneurs (World Bank, 2005; NEPAD, 2016). Their participation in farm and non-farm enterprises varies by region due to cultural factors, with Nigerian women producing 80% of the country's food and contributing 60–80% of agricultural production in Enugu State (Yami et al., 2017). Despite their significant contributions, young women in rural areas face long working hours and rely on primitive tools (Yami et al., 2017). Engagement in non-farm businesses is influenced by wealth (Escobal, 2001) and constrained by limited education and capital (Yeboah et al., 2017). Traditionally, they have been seen as primarily focused on farming and less involved in Rural Non-Farm (RNF) activities compared to men (Daum & Birner, 2017; Boone, 2015).

Empirical Literature

Both men and women play a crucial role in household income through agro-based enterprises (Kayode et al., 2024). However, recent studies continue to highlight significant gender disparities in off-farm income contributions in Nigeria, with a preference often given to male participants. For instance, Owutuamor and Ukpong (2021) conducted a comparative examination of income differentials between men and women in urban and rural households in Bayelsa State, Nigeria. They found that men earn more than women in both contexts. Umunnakwe (2014) discovered several socio-economic factors influencing rural youth's participation in non-agricultural income-generating activities in India. Gender disparities in economic opportunities and resource access have also been examined in studies such as Boone (2015), which analyzed land tenure systems and state structures in rural Africa. Additionally, Berckmoes and White (2016) explored socio-cultural factors influencing gender disparities in off-farm income generation in rural Burundi. In Nigeria, Daudu et al. (2023) reported unadjusted salary differences between male and female farmers, with men earning higher wages. However, Gbigbi et al. (2017) found no significant difference in male and female youth engagement in aquaculture in Delta State. Studies indicate that when women have equal access to opportunities and resources, their income can match or even surpass that of men. Akintunde et al. (2023) demonstrated that female household managers generated higher annual incomes than their male counterparts following livelihood diversification. This suggests that women have significant potential for economic growth, provided they receive adequate education, access to resources, and credit facilities.

Theoretical Framework

This research is based on farm household models and the theory of rural household economic behaviour (Singh et al., 1986; de Janvry et al., 1991), which suggests that rural households divide labour between on- and off-farm tasks to maximize utility subject to constraints. When imperfect labour markets prevent households from hiring labour at a fixed wage, they resort to self-employment in off-farm activities using family labour (Pfeiffer et al., 2009). A key premise is that household labour is first allocated to the farm until the marginal return from farm work equals the marginal return from off-farm work. Excess family labour is then supplied to off-farm activities (Madhavan, 2001; Reardon et al., 2006). The theoretical model looks at socioeconomic factors that affect rural youth's involvement in off-farm income creation, emphasising the ways in which location, education, asset ownership, and credit availability affect labour allocation.

METHODOLOGY

The study was conducted in Enugu State, Nigeria, a diverse region with a population of 3,267,837 people, spread across urban and rural areas. The investigation utilized a multi-stage random sampling technique, selecting six Local Government Areas and twelve communities randomly from Enugu State for the first and second stages. Three villages from twelve communities were selected for the third stage, resulting in 36 villages. Finally, ten households with equal male and female youths were purposefully selected, resulting in a total sample size of 360 youths. The study relied on primary data, which were collected through a structured questionnaire from a cross-section of youths involved in off-farm income-generating activities. The data were analysed using

both descriptive and inferential statistics. Descriptive statistics, including mean, frequency tables, and percentages, were used to address objectives (i), (ii), (iii), and (iv). These were compared across gender using t-tests, Chi-square tests, and Z-tests, respectively. Objective (v) was achieved using a Binary logit regression model.

Model specifications

Binary logistic regression analysis

The examination of the impact of socioeconomic determinants on off-farm income-generating activities participation of male and female youths was made using logistic regression. This approach was chosen because of the binary nature of the dependent variable (youth engagement). High number of activities in off-farm income-generating activities are said to be 1 if a youth decides to do so but is given a value of 0 otherwise. The analysis is placed in a context of binary choice models; $Zi= ß_0+ ß_1X_1 + ß_2X_2=+ß_3X_3+ ----------+ß_kXki+£_i$

Where K is the variable number of explanatories

Z_i = off-income-generating activities

$ß_0$ = intercept

$ß_1$ = slope

x_1 = age of the respondents (years)

x_2 = level of education (number of years spent in school)

x_3 = Off-farming job experience (number of years in off-farm business)

x_4 = household size (number of people in a household)

x_5 = type of non-farm enterprise (wage earning =1, others=0)

x_6 = membership of cooperative society (member=1, otherwise=0)

x_7 = primary occupation (Off-farm activities=1, otherwise=0)

X_8 = frequency of engagement in off-farm activities (daily=1, otherwise=0)

ei_c = stochastic error term

RESULTS AND DISCUSSION

Socio-economic characteristics of youths engaged in off-farm income-generating activities

Table 1 shows the distribution of respondents according to their Socio-economic characteristics.

The results show that most participants were aged 20-30. Female youths (59.7%) outnumbered males (40.3%), highlighting gender disparities. Tertiary education was attained by 32.2%, while 3.3% lacked formal education. These disparities necessitate gender-sensitive policies and equitable education opportunities. The study reveals diverse household structures: 19.4% of youths live in homes with 1-3 members, while 44.4% have 4-6.

Table 1: Distribution of respondents according to their Socio-economic characteristics

Socio-economic characteristics	Frequency	Percentage	Mean
Age (years)			
20 – 30	157	43.6	
31 – 40	127	35.3	
41 – 50	76	21.1	33.68 years
Gender			
Male	145	40.3	
Female	215	59.7	
Level of education			
No Formal Education	12	3.3	
Primary education	36	10.0	
Secondary education	180	50.0	
Tertiary education	116	32.2	
Post-graduate studies completed`	24	6.7	
Household size			
1 – 3	70	19.4	
4 – 6	160	44.4	
7 – 9	80	22.2	
10 – 15	50	13.9	6 years
Membership in a cooperative society			
Yes	156	43.3	
No	204	56.7	
Primary occupation			
Off-farm activities	354	98.3	
Others	6	1.7	

Source: Field Survey (2024)

Youth cooperative participation (43.3%) indicates engagement in entrepreneurship and community development. Most youths (98.3%) rely on off-farm activities, emphasizing the need for diverse employment and vocational training opportunities.

Level of engagement in off-farm income-generating activities by youths

Table 2 shows the distribution of respondents according to level of youth engagement in off-farm income-generating activities.

This study indicates that 96.8% of youths in Enugu State engage in off-farm wage-earning activities, with 69.2% participating occasionally and 28.9% daily; only 3.2% abstain. Prominent sectors include civil service (31.9%), artisan work (12.8%), and customer service (12.8%).

Table 2: Distribution of respondents according to level of engagement in off-farm income-generating activities

Level of youth Engagement	Frequency	Percentage
Engage in wage-earning activities outside of farming		
Yes	349	96.8
No	11	3.2
Frequency of engagement in off-farm activities		
Daily	104	28.9
Occasionally	249	69.2
Never	7	1.9
Type of off-farm income-generating activities		
Agro-processing	17	4.7
Artisan	46	12.8
POS	29	8.1
Salesperson	29	8.1
Hunting	11	3.1
IT professional	29	8.1
Chef	29	8.1
Construction worker	6	1.7
Customer service representative	46	12.8
Civil service	115	31.9
Years of off-farming job experience		
Less than 10	282	78.3
11 – 20	40	11.1
21 and above	38	10.6

Source: Field Survey (2024)

Notably, 8.1% are involved in agro-processing, IT professions, and sales, suggesting potential for entrepreneurship. With 78.3% of youths having less than 10 years of off-farm job experience, continuous interventions like internships, apprenticeships, and vocational training are crucial. Enugu State's urbanization likely provides diverse job opportunities beyond traditional agriculture, attracting youths to urban-based employment. Educational institutions and training facilities in the state equip youths with skills pertinent to non-agricultural sectors. Government programs focused on youth employment and public-sector recruitment may contribute to the high (31.9%) rate of civil service employment among youths. Additionally, 53% of youths belong to cooperative

societies, facilitating group business ventures and enhancing off-farm income generation. Ongoing support through targeted skills development, vocational training, and supportive policies is essential to sustain this trend and promote economic growth within the community.

Off-farm income contributions across gender

Table 3 shows the comparative analysis of off-farm income contributions across gender

Table 3: Comparative analysis of off-farm income contributions across gender

Independent T-test	**Levene's test for equality of variances**			
Income	**F ratio**	**Sig.**	**t-ratio**	**Degree of freedom**
Equal variances assumed	3.113***	0.003	-2.384	60
Equal variances not assumed			-2.263	35.919
Gender	**Mean**	**Std. dev**	**Std. EM**	
Female	54,108.11	40155.796	6601.572	
Male	72,800.00	66249.528	13249.906	

Source: Field Survey (2024); Std.EM = Standard Error of Mean

Table 3 presents a comparative analysis of off-farm income contributions across gender: The Independent T-Test was used to compare the mean off-farm income contributions between male and female respondents. Levene's test for equality of variances assesses whether the variance of the off-farm income contributions is equal across genders. When assuming equal variances, the F ratio is 3.113 with a significance level (Sig.) of 0.003, indicating that there is a significant difference in the variances of off-farm income contributions between genders. When not assuming equal variances, the T ratio is -2.384 with 60 degrees of freedom, or -2.263 with 35.919 degrees of freedom, depending on the analysis method used. These values indicate that there is a significant difference in the mean off-farm income contributions between genders. This supports the result of Owutuamor and Ukpong (2021) who discovered that men make more money than women in both rural and urban areas of Bayelsa State. Also, the work of Daudu, et. al. (2023) shows that there is a ₦9,170.83 unadjusted gender wage disparity between male and female farm workers, meaning that the former earns substantially more than the latter. These may be because males have been found to engage in off-farm income -generating activities than female as recorded by Daum & Birner, (2017) and Boone, (2015). The often-cited explanation for these differences is that women in these communities have been deprived of structural factors such as lack of access to education and credit, and social conventions that prevent them from taking up jobs that pay better.

Motivating and demotivating factors for engagement in off-farm income-generating activities across gender in the study area

Table 4 presents a comprehensive analysis of motivating and demotivating factors influencing engagement in off-farm income-generating activities across gender in the study area. The data

elucidates various factors impacting individuals' decisions to participate in such activities, with corresponding frequencies and percentages providing insight into their relative significance.

Motivating Factors

Among the motivating factors identified, the need to diversify income sources and mitigate financial risk emerges as particularly salient, acknowledged by 33.9% of respondents.

Table 4: Motivating and demotivating factors for engagement in off-farm income-generating activities across gender in the study area

Motivating and Demotivating factors	Frequency	Percentage
Engagement in off-farm activities impacts the income levels of men and women differently within rural communities.		
No significant gender-based income differences	122	33.9
Unsure/No opinion	134	37.2
Main Barriers Preventing Women's Access		
Lack of access to land and property rights	46	12.8
Limited access to financial resources and credit	127	35.3
Cultural or societal norms restricting women's participation	64	17.8
Limited educational opportunities and skills training	104	28.9
Unsure/No opinion	19	5.3
Access to Resources Influence on Income		
Men have better access leading to higher income	145	40.3
Women have better access leading to higher income	12	3.3
Equal access leads to similar income	81	22.5
Unsure/No opinion	122	33.9
Role of Supportive Policies and Programs		
Policies and programs effective in promoting gender equity	17	4.7
Improvement needed for better gender equity promotion	197	54.7
Little to no impact on gender equity	64	17.8
Unsure/No opinion	82	22.8
Motivating Factors for Engagement		
Desire to supplement agricultural income	46	12.8
Access to new skills and learning	88	24.4
Better earning opportunities compared to farming	16	4.4
Need to diversify income sources	122	33.9
Improvement in living standards	16	4.4
Unsure/No opinion	72	20.0
Demotivating Factors for Engagement		
Lack of access to resources	127	35.3
Cultural or societal norms	110	30.6
Limited local opportunities	54	15.0
Gender-specific barriers	58	16.1
Lack of awareness	11	3.1

Demotivating Factors Impacting Women More		
Lack of access to resources	92	25.6
Cultural or societal norms	84	23.3
Gender-specific barriers	110	30.6
Limited local opportunities	74	20.6
Government Policies and Programs Effectiveness		
Effectively addressed demotivating factors	17	4.7
Improvement needed for better addressing	244	67.8
Little to no impact on demotivating factors	46	12.8
Unsure/No opinion	53	14.7
Gender-specific barriers such as childcare responsibilities or mobility constraints	19	30.6
Limited availability of off-farm opportunities in the local area	12	19.4
The effectiveness of government policies and programs in addressing the demotivating factors and promoting engagement in off-farm income-generating activities across gender		
Government policies and programs have effectively addressed demotivating factors and promoted engagement.	17	4.7
Government efforts need improvement to better address demotivating factors	244	67.8
Government policies and programs have had little to no impact on addressing demotivating factors.	46	12.8
Unsure/No opinion	53	14.7

Source: Field Survey (2024)

Access to new skills and learning opportunities follows closely, by 24.4 % of participants, while the desire to supplement agricultural income during lean seasons is expressed by 12.8%. Moreover, 4.4% perceive off-farm activities as offering superior earning opportunities compared to traditional farming, with a similar percentage viewing them as a means to improve living standards and access basic amenities.

Demotivating factors

Conversely, several demotivating factors hinder engagement in off-farm income-generating activities. The lack of access to resources such as land, capital, and technology stands out, cited by 35.3% of respondents. Cultural or societal norms discouraging participation in non-traditional activities are closely followed, affecting 30.6% of participants. Gender-specific barriers such as childcare responsibilities or mobility constraints are mentioned by 16.1%, while 15.0% highlight the limited availability of off-farm opportunities in the local area. Lack of awareness about available off-farm income options is considered a demotivating factor by 3.1% of respondents.

Comparative analysis across gender

The results also illuminate perceived differences in the impact of off-farm activities on income levels between men and women. While 33.9% of respondents believe there are no significant

gender-based income differences, 37.2% are unsure or have no opinion on this matter. Regarding the effectiveness of government policies and programs, 67.8% of respondents feel that government efforts need improvement to address demotivating factors better and promote engagement in off-farm income-generating activities. Only 4.7% believe that supportive policies and programs have effectively addressed demotivating factors and promoted engagement, while 12.8% feel they have had little to no impact. Additionally, 14.7% are unsure or have no opinion on the matter.

Socio-economic factors influencing engagement in off-farm income-generating activities in the study area

Table 5 presents the results of a binary regression model examining the socio-economic factors influencing engagement in off-farm income generating activities by youths' farmers in the study area. For every variable, the z-statistics, probabilities, standard errors, and coefficients are given. A number of socioeconomic characteristics significantly predicts participation in off-farm revenue-generating activities.

Table 5: Socio-economic factors influencing youths' engagement in off-farm income-generating activities in the study area

Variables	Coefficient	Std. Error	z-Statistic	Prob.
Constant	-4.227551	2.189509	-1.930821	0.0535
Age	0.024737	0.043778	0.565043	0.5720
Monthly income	3.47E-06***	9.05E-06	4.383556	0.0013
Years in off-farm income activities	0.055006	0.218580	0.251653	0.8013
Cooperative membership	0.415264	0.625575	0.663811	0.5068
Gender	-0.011677***	0.608495	-3.019190	0.0047
Educational level	0.470233***	1.187902	3.395852	0.0022
Household size	0.205024	0.131861	1.554853	0.1200
McFadden R-squared	0.143383	Mean dependent variance		0.483871
S.D. dependent variance	0.503819	S.E. of regression		0.476741
Akaike information criterion	1.444696	Sum squared resid		12.27322
Schwarz criterion	1.719165	Log likelihood		-36.78557
Hannan-Quinn criterion	1.552459	Deviance		73.57115
Restricted deviance	85.88572	Restricted log likelihood		-42.94286
LR statistic	12.31457***	Avg. log likelihood		-0.593316
Prob (LR statistic)	0.000677			

Source: Field Survey (2024)

Higher monthly income positively impacts off-farm activities, as indicated by a significant monthly income coefficient ($p = 0.0013$), indicating increased participation in income-generating activities outside farming. The gender coefficient is statistically significant ($p = 0.0047$), and its negative value suggests that women are less likely than men to participate in off-farm activities.

Males are more likely than females to participate in off-farm income creation, highlighting gender differences in this area. This conclusion might be supported by the study conducted by Waje, (2019) that more male than female youths participated in off-farm income activities. However, this contradicts the findings of Gbigbi et. al. (2017) whose study identified that the level of engagement in aquaculture between male and female youths in Delta state was the same.

Furthermore, higher educational attainment (with the coefficient, p = 0.0022) positively influences engagement in off-farm activities, suggesting more participation in off-farm income generating activities by individuals with higher levels of education. This contradicts the findings of Umunnakwe, (2014) that education negatively influences engagement in off-farm activities. Socio-economic factors significantly influence youth engagement in off-farm income-generating activities, with higher income and education increasing participation while being female reduces the tendency to participate. The study emphasizes the necessity of targeted interventions to tackle gender disparities and enhance economic prospects for women in rural areas.

Model Fit and hypothesis testing

The model is well-fitting, as indicated by the McFadden R-squared value of 0.143383. Model fit is measured by the Hannan-Quinn Criterion, the Schwarz Criterion, and the Akaike Information Criterion (AIC); lower values denote better fit. The model as a whole is a substantial predictor of participation in off-farm activities, as evidenced by the statistical significance of the LR statistic (Likelihood Ratio) (p = 0.000677). As a result, the alternative hypothesis is accepted and the null hypothesis is rejected.

Conclusion and Recommendations

The study indicates that 98.3% of youths aged 20-30 in Enugu State engage in off-farm income-generating activities, marking a significant shift from traditional agriculture to diversified economic pursuits. However, gender disparities persist, with males contributing more to off-farm income than females. Higher educational attainment and income levels correlate with increased participation in these activities, suggesting that socioeconomic empowerment positively influences youth involvement. To address the existing gender gap, the study recommends implementing policies that empower young women. These include mentorship programs, financial literacy courses, microlending schemes, initiatives providing market access and business development services, vocational training facilities for various off-farm trades, and the promotion of women-led cooperatives. Facilitating access to modern technologies can also enhance productivity in non-farm activities. Implementing these measures is expected to increase the economic participation of young women in rural Enugu State, improve their living standards, and boost overall economic growth. This study contributes to broader discussions on gender equity, economic diversification, and rural youth employment, providing a foundation for further research and policy development aimed at enhancing off-farm income opportunities in Nigeria.

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