

## FACTORS INFLUENCING WOMEN PARTICIPATION IN AGRO-ENTREPRENEURSHIP ACTIVITIES IN KOGI STATE, NIGERIA

<sup>1</sup>Pelemo, J. J., <sup>2</sup>Adeyemi, O. A., <sup>3</sup>Evwierhurhoma, F. E., <sup>1</sup>Yakubu, S., <sup>4</sup>Usman, N. S. and <sup>5</sup>Isah, A. O.

<sup>1</sup>Department of Agricultural Technology, Kogi State Polytechnic Lokoja (Itakpe Campus)

<sup>2</sup>Westernhaven, Orange, 2800 New South Wales, Australia

<sup>3</sup>Department of Agricultural Extension and Rural Development, Dennis Osadebay University, Delta State

<sup>4</sup>Department of Agricultural Extension and Management, Niger State College of Agriculture, Mokwa

<sup>5</sup>Department of Horticultural Technology, Kogi State Polytechnic Lokoja

Correspondence details: jacobpelemo@kogistatepolytechnic.edu.ng; 07069400942

### ABSTRACT

The role of women in agricultural production can never be over emphasised. If the problem of food insecurity is to be tamed, women entrepreneurs must be empowered to compete effectively with their male counterparts. The study analysed factors influencing women participation in agro-entrepreneurship in Kogi State, Nigeria. Three-stage sampling procedure was used to select 433 rural women. Structured questionnaire complimented with interview schedule was used for data collection. Information was garnered on agro-activities of rural women, level of participation in agro-entrepreneurship activities, factors influencing women participation in agro-entrepreneurship and constraints facing women agro-entrepreneur. Data were analysed using descriptive statistics (frequency, percentage, and mean) and Ordered Logit Regression Model. The result showed that the mean age and mean households of women agro-entrepreneurs were 46.3 and 10.0 years respectively. The main agro-entrepreneurship activities performed by woman were crop farming (97.2%) and poultry farming (55.7%). Also, 89.4% of rural women had low level of participation in agro-entrepreneurship activities. Age ( $\beta=-0.05$ ), household size ( $\beta=0.03$ ), farming experience ( $\beta=0.03$ ) and membership of association ( $\beta=0.43$ ) influenced women participation in agro-entrepreneurship activities. The major constraints facing women agro-entrepreneurship were limited access to resources ( $\bar{X}=2.65$ ), insufficient funds ( $\bar{X}=2.53$ ) and lack of access to infrastructure ( $\bar{X}=2.50$ ). It is recommended that women should venture into other agro-entrepreneurship activities apart from farming for improved livelihood. Also, women should have the same access to incentives and other resources like men to boost their interest in agro-entrepreneurship.

**Keywords:** Women participation, Agro-entrepreneurship, Activities

### INTRODUCTION

Agricultural is a key sector in Nigeria, employing a significant portion of the population and contributing to national development (Pelemo *et al.*, 2022). Entrepreneurship is a dynamic process of creating incremental wealth for the betterment of the populace (Esiobu *et al.*, 2024). Women entrepreneurship is one of the fastest growing enterprises worldwide, and this has received maximum attention from scholars and academicians on their roles in economic development (Giuseppina, 2020). Agro-entrepreneurship combines elements of agriculture and entrepreneurship for better development. The goal of agro-entrepreneurship is to create value, generate income, and enhance agricultural development. Women agro-entrepreneurs are those involved in agricultural activities through risk-taking in the effective utilisation of human and material resources in a unique way by taking advantage of the opportunities identified in their immediate environment in the production of goods and services for the benefits of mankind (Egwuonwu and Iwunwanne, 2020). Women in Nigeria contribute substantially to agriculture through food production, processing, marketing, and distribution. Okezie *et al.* (2023) revealed that the role of women entrepreneurs in the economic and social development of a nation cannot be overemphasised for various reasons. Women entrepreneurs have

been recognised as an important untapped source of economic growth and national development. Women entrepreneurs create new jobs for themselves and others, and by being different, also provide society with different solutions to management, organisation, and business problems, as well as to the exploitation of women entrepreneurial opportunities (Okezie *et al.*, 2017). Participation of women in agro-entrepreneurship activities in Nigeria has skyrocketed in recent years due to the federal government initiatives to promote women's economic empowerment, and changing the social norms has been one of the motivating factors. The role of women in Nigeria over the years has not been limited to domestic activities alone. Women have contributed amazingly to economic and social development like their male counterparts. Women farmers and those involved in agro-entrepreneurship have played active roles in addressing the problem of food insecurity in Nigeria. However, despite the contribution of women in shaping the economy of rural and urban centres in Nigeria, they have been traditionally involved in agricultural activities but have been often marginalised and excluded in decision-making and access to production resources. Nigerian government efforts at empowering women have not yielded positive results. Women continue to face barriers such as limited land, inadequate access to finance, lack of adequate training, cultural and social norms. It is therefore necessary to

consider the factors influencing women's participation in agro-entrepreneurship activities. The main objective of the study is to determine factors influencing women's participation in agro-entrepreneurship activities Kogi State, Nigeria. The specific objectives are to:

1. describe the socio-economic characteristics of women agro-entrepreneurs;
2. identify the agro-entrepreneurship activities performed by women;
3. determine factors influencing women's participation in agro-entrepreneurship; and
4. identify the constraints facing women agro-entrepreneurs.

**METHODOLOGY**

The study was carried out in Kogi state of Nigeria. The State is between latitude 6° 33' and 8° 44' N and longitude 5° 22' and 7° 49' E. Kogi has a total population of 3,278,487 in (NPC, 2006) and with growth rate of 7.7%, the state is projected to be around 4,809,743 in 2025. The state has land area of about 30,354.74 square kilometres (Kogi State Ministry of Information Working Document, 2016).

It is blessed with 2 million hectares of cultivable land with 0.5 million hectares currently under cultivation (Kogi State Ministry of Information working document, 2016). The state is well endowed with river valleys and swamp lands for dry season farming. The major food crops grown in the State are yam, cassava, maize, sorghum, rice, millet, cowpea, pigeon pea, groundnut, Bambara nut, cocoyam, sweet potato, benniseed, melon, banana, plantain and cotton. The major agro entrepreneurship activities performed by women in the state include poultry, farming, processing, fishery, snail farming, livestock production, and organic farming. Three-stage sampling procedures were employed for this study. The first stage involved random selection of one Local Government Area (LGAs) each from the four agricultural zones in the State. The second stage involved a random selection of five villages, each from the selected LGAs making a total of 20 villages. The third stage involved the use of proportional sampling to select 10% of rural women from the sampling frame which now gave a total of 433 respondents.

**Table 1: Sample of women entrepreneurs in Kogi State**

Agricultural Zones	LGA	Villages	Sample population	Sample size
A	Ijumu	Aiyetoro Gbede	251	25
		Ekinrin Adde	200	20
		Iffe	153	15
		Iyara	225	23
		Okoro	150	15
B	Dekina	Abocho	302	30
		Adokolo	205	26
		Ajiyolo	180	18
		Egume	168	17
		Ojodu	280	28
C	Adavi	Nagazi	262	26
		Karaworo	276	28
		Ogaminana	165	17
		Kuroko	280	28
		Adavi-Eba	207	21
D	Idah	Ichala	293	29
		Akpo	151	15
		Akuta	150	15
		Icheke	162	16
		Nwajaba	210	21
Total			4270	433

Primary data was employed for this study. Objectives i, ii, iii and v were achieved using descriptive statistics (frequency, percentages and mean).

**Level of participation in agro-entrepreneurship activities**

Level of participation in agro-entrepreneurship (Objective III) was measured based on number of activities performed by women. The agro-entrepreneurship activities include poultry farming,

selling farm produce, organic farming, fishery, fruit farming, fertiliser application, selling of herds, selling of seeds, bee keeping, crop farming, agricultural supplies, snail farming, farm consultant, livestock and mushroom farming. A total number of 15 activities were categorised into high medium and low. The respondents fell into the range of 1 and 5=low, 6 and 10=medium, and more than 10=high. Constraints facing women agro-entrepreneurs was measured using a 3-point Likert type scale of very

severe 3, severe 2 and not severe 1. The overall constraint was classified into severe when the score is more than or equal to 2 and not severe when it is less than 2.

**Ordered Logit Regression**

Ordered Logit Regression was employed to achieve Objective IV: that is factors influencing women participation in agro-entrepreneurship. Both the implicit and the explicit forms of the models are specified below:

Level of participation in agro-entrepreneurship (Y) is a function of =f (X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>4</sub>, X<sub>5</sub>, X<sub>6</sub>, X<sub>7</sub>,.....X<sub>n</sub>)

The model is explicitly expressed as:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_n X_n + U$$

Y = Level of participation in agro-entrepreneurship (1-5=low, 6-10=medium, >10=high),

X<sub>1</sub> = Age (years),

X<sub>2</sub> = Household size (number)

X<sub>3</sub> = Experience (years)

X<sub>4</sub> = Education (years)

X<sub>5</sub> = Annual income (naira)

X<sub>6</sub> = Agro-entrepreneurship activities (number)

X<sub>7</sub> = Membership of association (number)

**RESULTS AND DISCUSSION**

**Socioeconomic characteristics**

Table 2 shows that the mean age of respondents was 46.3 years. This implies active and productive year where passions for agro-entrepreneurs are activated for better livelihood status. This finding is

in agreement with Egwuonwu and Iwunwane (2022) who reported that a mean age of 37 years among women agro-based entrepreneurial in Imo State, Nigeria. Table 2 indicates that the mean household size of the respondents was 10.0 persons. This implies large household size that supply households with unpaid family labour for entrepreneurs' activities. Table 2 reveals that the mean farming experience of respondents was 8 years. This indicates many years in farming which is expected to enhance women involvement in agro-entrepreneurs activities. Table 2 indicates that 75.8% were literate while 24.2% had non-formal education. This shows that larger proportion of women were literate. High level of education is expected to influence women participation in agro-entrepreneurs for better opportunities. Table 2 shows that 42.6% of the respondents had annual income of > N300,000 while 33.5% had annual income of between N201000- N300000. The man annual income of the respondents in the study area was N226,000. This finding agrees with Egwuonwu and Iwunwane (2022) who reported that women participation in agro-entrepreneurs are influence by their income level. Table 2 indicates that 66.7% of the respondents belong to cooperative while 33.3% did not belong to cooperative society. This shows that larger proportion of the respondents belong to cooperative society. Membership of cooperative is expected to affords members opportunities to access information and incentives and capital that will enhance their standard of living

**Table 2: Distribution of respondents according to socio-economic characteristics (n=433)**

Categories	Variables	Percentage	Mean
<b>Age</b>	<30	17.8	46.3
	31-40	39.9	
	41-50	28.9	
	51-60	13.4	
	>15	3.7	
<b>Household size</b>	1-5	22.9	10.0
	6-10	61.4	
	11-15	12.1	
	>15	3.7	
<b>Experience</b>	1-5	36.5	8.0
	6-10	58.9	
	>10	4.6	
<b>Educational status</b>	Non formal	24.2	
	Primary	20.7	
	Secondary	48.9	
	Tertiary	6.0	
<b>Annual income</b>	<100000	5.1	226,000
	101000-200000	19.2	
	201000-300000	33.5	
	>300000	42.6	
<b>Membership of cooperative</b>	Yes	66.7	
	No	33.3	

Sources: Field survey, 2023

**Agro-Entrepreneurship Activities Participated by Women**

Table 3 reveals that crop farming (97.2%) and poultry farming (55.7%) were the agro-entrepreneurship activities in which most of the respondents participated in the study area. This shows that most of the women produce crops and poultry. This might be attributed to the fact that farming and poultry were the common activities among rural dwellers in Nigeria. This finding aligns with that of Egwuonwu and Iwunwanne (2020) who reported that crop farming and poultry are few of the most participated agro-based entrepreneurial activities in Imo State, Nigeria. Also, 51.7% and 44.3% of women engaged in marketing of agricultural produce and organic farming. This

finding concurs with that of Odebode *et al.* (2023) who reported that marketing of farm produce is one of the most participated agro-entrepreneurship activities in Lagos State, Nigeria. Other agro-entrepreneurship activities in which women involved include; fruit (28.9%), agricultural supplies (13.6%), and selling of seeds (12.2%). The least agro-entrepreneurship activities they participated were mushroom farming (0.9%) and bee keeping (0.6%). This shows that women do not participate as such in some activities other than farming in the study area. This finding contradicts that of Odebode *et al.* (2023) who reported active involvement of women in fishery, livestock farming, fruit selling, snail farming and input dealers in Lagos State, Nigeria.

**Table 3: Agro-entrepreneurship activities participated by women (n=433)**

Variables	Percentages	Ranking
Crop farming	97.2	1 <sup>st</sup>
Poultry farming	55.7	2 <sup>nd</sup>
Marketing of farm produce	51.7	3 <sup>rd</sup>
Organic farming	44.3	4 <sup>th</sup>
Fruit selling	28.9	5 <sup>th</sup>
Agricultural supplies	13.6	6 <sup>th</sup>
Selling of seeds	12.2	7 <sup>th</sup>
Fertilizer	7.6	8 <sup>th</sup>
Fishery	7.1	9 <sup>th</sup>
Selling of herbs	6.2	10 <sup>th</sup>
livestock farming	3.2	11 <sup>th</sup>
Snail farming	2.8	12 <sup>th</sup>
Farm consultant	2.3	13 <sup>th</sup>
Mushroom farming	0.9	14 <sup>th</sup>
Bee keeping	0.6	15 <sup>th</sup>

Sources: Field survey, 2023

**Level of participation of women in agro-entrepreneurship activities**

Table 4 indicates that 86.4% of the respondents had low participation in agro-entrepreneurship activities while 10.5% had medium participation. This signifies that larger proportion of women had low participation in agro-entrepreneurship activities. Low participation is expected to negatively affect the wealth creation and livelihood

status of the women agro-entrepreneurs in the study area. This finding is in consonance with that of Egwuonwu and Iwunwanne (2020) that women were not adequately involved in agro-based entrepreneurial activities in Imo State, Nigeria. This finding contradicts that of Odebode *et al.* (2023) who reported that women were actively involved in fish production, livestock farming, snail farm and bee keeping in Lagos State, Nigeria.

**Table 4: Level of participation of women in agro-entrepreneurship activities (n=433)**

Variables	Percentage
High	3.2
Medium	10.5
Low	86.4

Sources: Field survey, 2023

**Factors influencing women participation in agro-entrepreneurship**

Table 5 shows the results of factors influencing women's participation in agro-entrepreneurship using the Ordered Logit Regression Model. The

result indicated that pseudo R<sup>2</sup> is 0.269. This signifies that 26.9% of the variation in women's participation in agro-entrepreneurship was explained by the independent variables included in the model, while the remaining 73.1% was due to

external factors not captured. Table 3 reveals that age (-0.05) was negatively significant at the 10% level of probability, indicating that as women advance in age, their level of participation in agro-entrepreneurship reduces. This shows that older women may likely have less interest in agro-entrepreneurship activities unlike younger ones. This finding agrees with that of Okezie *et al.* (2017), who stated that age influences women's participation in entrepreneurship in Abia State. Household size (0.03) was positively contributed to women's participation in agro-entrepreneurship activities in the study area, which was significant at the 10% level of probability. This implies that an increase in household size will increase women's participation in agro-entrepreneurship activities in the study area. Women with large households have a high probability of participating in agro-entrepreneurship activities. This might be because of the need to cater for their wards. This finding is in consonance with Abdi (2014), who stated that household size is one

of the factors influencing women's participation in agro-entrepreneurship. Experience (0.03) was found to significantly contribute to women's participation in agro-entrepreneurship activities at the 10% level of probability. This shows that women with many years of experience are likely to participate in agro-entrepreneurship activities. Years of experience is very vital because it represents practical knowledge gathered over many years. Membership of cooperative (0.43) also positively contributed to women's participation in agro-entrepreneurship activities, which was significant at the 1% level of probability. This shows that women who are members of associations are likely to participate in agro-entrepreneurship activities. The interaction with members of the cooperative can encourage their agro-based business and expand their business. This finding agreed with that of Egwuonwu and Iwunwanne (2020), who reported that cooperative membership influences participation in agro-entrepreneurship in Imo State.

**Table 5: Factors Influencing Women Participation in Agro-Entrepreneurship (n=433)**

Variables	Coefficient	Z-value
Age	-0.0474204	-1.95**
household size	0.0290101	1.81*
Experience	0.0258905	1.87*
Years in education	-0.0173825	-0.92
Annual income	2.29e-07	1.17
Numbers of agro-entrepreneurship activities	-0.0654102	-1.03
Membership of cooperative	0.4333091	3.53***
Log likelihood	-419.4067	
Chi <sup>2</sup>	23.17***	
Pseudo R <sup>2</sup>	0.269	

Sources: Field survey, 2023

\*\*\* Significant at 1% level of probability, and \*—Significant at 10% level of probability

**Constraints facing women agro-entrepreneurs**

Table 6 reveals that limited access to resources ( $\bar{X}$ =2.65), insufficient funds ( $\bar{X}$ =2.53), and lack of access to infrastructure ( $\bar{X}$ =2.50) were the most significant constraints facing women's participation in agro-entrepreneurship. Women in Nigeria have been discriminated against in access to resources due to custom and traditional beliefs and are at major disadvantages when it comes to access to resources. The finding is in agreement with that of Esiobu *et al.* (2015) who stated that inadequate access to resources and funds is one of the problems facing women entrepreneurs in Imo State of Nigeria. Family responsibilities ( $\bar{X}$ =2.49) and gender discrimination ( $\bar{X}$ =2.31) were constraints facing women agro-entrepreneurs. Women in some families are the ones shouldering the responsibilities of care for their wards and the overall livelihood of the family. This is common among the single mothers and widows. Also, gender discrimination is a common problem affecting women in Nigeria, which led to situation where women do not have

access to productive resources and supports like men. This is attributed to culture and tradition that most times limited women to domestic activities. This finding is in consonance with of Sasa *et al.* (2022) who reported that gender discrimination is one of the constraints to women's participation in agriculture and economic development in Nigeria. Other constraints facing women agro-entrepreneurs were cultural norms ( $\bar{X}$ =2.21) and climate change ( $\bar{X}$ =2.09). The cultural norm that does not recognise women as decision-makers and prevents equitable access to resources is a major constraint facing women. Also, climate change issues such as excessive rainfall, drought, high temperature, and floods are part of the problem facing women agro-entrepreneurs in the study area. This finding agrees with that of Musafiri *et al.* (2022) who stated that climate change is a serious factor affecting the farming populace in Sub-Saharan Africa. Lack of networking ( $\bar{X}$ =2.05) and lack of technical skills ( $\bar{X}$ =2.00) were part of the severe constraints facing women agro-entrepreneurs.

**Table 6: Constraints facing women agro-entrepreneurs (n=433)**

Variables	Very severe	Severe	Not severe	Weighted score	Mean	Ranking
Limited access to resources	74.1	17.1	8.8	1149	2.65	1 <sup>st</sup>
Insufficient funds	59.4	34.6	6.0	1097	2.53	2 <sup>nd</sup>
Lack of access to infrastructure	65.8	18.7	15.5	1084	2.50	3 <sup>rd</sup>
Family responsibilities	58.4	32.6	9.0	1080	2.49	4 <sup>th</sup>
Gender discrimination	50.6	30.0	19.4	1001	2.31	5 <sup>th</sup>
Cultural norms	39.3	42.9	17.8	959	2.21	6 <sup>th</sup>
Climate change	32.1	44.8	23.1	905	2.09	7 <sup>th</sup>
Lack of networking activities	35.1	34.4	30.5	886	2.05	8 <sup>th</sup>
Lack of technical skills	30.9	36.9	33.0	867	2.00	9 <sup>th</sup>
Lack of access to incentives	22.4	53.1	24.5	857	1.97	10 <sup>th</sup>
Limited access to market	29.8	24.0	46.2	795	1.83	11 <sup>th</sup>

Sources: Field survey, 2023

**CONCLUSION AND RECOMMENDATIONS**

It can be concluded that crop farming and poultry farming were the activities participated in by most women in the study area. The women had low participation in agro-entrepreneurship activities. Age, household size, farming experience, and membership of association had an influence on women's participation in agro-entrepreneurship. Limited access to resources and insufficient funds were the most severe constraints facing women agro-entrepreneurs. It is recommended that women should venture into other agro-entrepreneurship activities apart from farming for improved livelihood. Also, women should have the same access to incentives and other resources like men to boost their interest in agro-entrepreneurship. Lastly, the government should make provisions for infrastructures that will assist women in the study area.

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