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Sex-Based Constraints in Accessing Agricultural Resources in Ebonyi State, Nigeria

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Abstract

The study assessed gender-based constraints in accessing agricultural resources in Ebonyi State, Nigeria. A multi-stage sampling procedure was used in selecting 120 respondents. Data were collected from the respondents through interview schedules and analysed using means, and regression analysis. Results revealed that male respondents faced constraints such as lack of collateral ($\bar{x} = 2.62$), inadequate finance ($\bar{x} = 2.60$), unfavourable government policies ($\bar{x} = 2.80$), and lack of access to credit (3.08). Female respondents encountered constraints such as lack of collateral ($\bar{x} = 2.82$), land tenure system ($\bar{x} = 3.00$), inadequate finance ($\bar{x} = 3.20$), discriminatory social norms ($\bar{x} = 3.22$), and lack of access to credit ($\bar{x} = 3.14$). Males exhibited high accessibility to information ($\bar{x} = 3.52$), labour ($\bar{x} = 2.94$), land ($\bar{x} = 3.80$), agrochemicals ($\bar{x} = 3.36$), improved cuttings/seedlings ($\bar{x} = 3.40$), and credit ($\bar{x} = 3.80$), while females demonstrated high accessibility to information ($\bar{x} = 3.26$), labour ($\bar{x} = 4.00$), agrochemicals ($\bar{x} = 2.80$), and improved cuttings/seedlings ($\bar{x} = 3.28$). The study concluded that gender-based discrimination exists in resource access and government, NGOs, and community leaders recommended interventions to address social norms, tenures, and barriers. Therefore, implementing these recommendations is crucial to promoting equal access and control over agricultural resources for both genders.

Keywords: Gender-based, constraints to agricultural resources.

Introduction

Agriculture is a vital sector in Nigeria's economy, and both men and women play crucial roles in its development. Gender-based constraints hinder the access of both men and women to agricultural resources, with varying degrees of inequality (Apeh et al., 2023; Ukwuaba et al., 2023; Osuagwu et al., 2022; Nwajiuba et al., 2020). Despite their contributions, women face more significant barriers in accessing land, credit, extension services, tractors, and insurance, which are essential for agricultural productivity (Apeh et al., 2023). Access to agricultural resources is critical for enhancing productivity and improving livelihoods in rural communities. In Ebonyi State, Nigeria, the dynamics of gender play a significant role in shaping how individuals engage with and benefit from these resources. While much of the discourse has historically focused on the challenges faced by women, it is essential to adopt a more balanced perspective that examines the roles and constraints experienced by both men and women in the agricultural sector. This approach not only provides a more comprehensive understanding of the issue but also highlights any prevailing inequalities, thereby framing the problem more effectively.

Agriculture in Ebonyi State, like in many parts of Nigeria, is characterised by gender-specific roles and responsibilities. Men often dominate in activities such as land clearing, ploughing, and large-scale farming operations, while women are typically more involved in planting, weeding, harvesting, and processing agricultural products. These gendered roles influence access to and control over critical resources such as land, credit, extension services, and agricultural inputs. Recent studies conducted in Nigeria reveal significant disparities in resource access between men and women, which can adversely affect overall agricultural productivity and economic development. For instance, Agada and Igbokwe (2021) highlighted that women in Ebonyi State faced greater difficulties in accessing land due to traditional land tenure systems that favour male inheritance. Similarly, Okoye, Ume, and Nnadi (2022) found that men have better access to credit facilities and agricultural inputs, largely due to higher levels of education and ownership of collateral.

Edeh and Eze (2020) discussed how cultural norms and practices further exacerbate these disparities, with women often being excluded from decision-making processes related to agricultural planning and resource allocation. Furthermore, Nwankwo and Nwachukwu (2023) emphasised that women's access to extension services is significantly lower than that of men, limiting their ability to adopt improved agricultural practices and technologies. However, the constraints faced by men cannot be overlooked. In some cases, men encounter challenges related to labour shortages and inadequate mechanisation, which can hinder their farming efficiency. Additionally, both genders often experience limited access to modern agricultural technologies and extension services, which are crucial for improving farming practices and productivity (Osuagwu et al., 2022).

The problem addressed by this study is the lack of understanding of how gender-based constraints affect access to agricultural resources in Ebonyi State, Nigeria, thereby hindering the effectiveness of agricultural development initiatives aimed at improving resource allocation and productivity among farmers.

The broad objective of this study was to assess gender-based constraints in accessing agricultural resources in Ebonyi State, Nigeria. The specific objectives were to:

- assess gender-based accessibility level to agricultural resources;
- identify gender-based constraints in accessing agricultural resources, and;
- ascertain the determinants of gender-based accessibility to agricultural resources.

Methodology

The study was conducted in Ebonyi State, Nigeria. Ebonyi State is located geographically between latitude 6.26490°N and longitude 8.01370°E, with an estimated population of 3,398,177 persons (National Bureau of Statistics (NBS), 2020). Ebonyi State is known for significant gender disparities in access to vital productive assets, with illiteracy, poor access to credit, and insufficient government support (Apeh et al., 2023).

The study employed a cross-sectional survey design with a multi-stage sampling procedure for selecting respondents. Data were collected using a structured questionnaire. The first stage involved the purposive selection of two agricultural zones in the state, based on their active involvement in agricultural activities. In the second stage, two Agricultural Development Programme (ADP) blocks were selected from the eight blocks that made up each of the zones, giving a total of four blocks. The third stage involved the selection of three circles from each of the blocks, resulting in twelve circles. At the final stage, a proportionate sampling procedure was used, where seventy-five per cent of male and female farmers actively involved in agricultural activities were selected from each of the circles, resulting in a total of 120 respondents participating in the study. Primary data were collected through structured interviews.

Data were collected from respondents on the level of accessibility to agricultural resources, constraints to agricultural resources, and determinants of gender-based accessibility to agricultural resources. A 5-point Likert scale was used to measure accessibility to agricultural resources, assigning scores as follows: 5 (Very Accessible), 4 (Accessible), 3 (Neutral), 2 (Limited Access), and 1 (Very Limited Access). Respondents rated their access to information, labour, land, agrochemicals,

improved cuttings/seedlings, and credit using this scale. For each variable, the average (mean) score was calculated. A mean score of 3.00 or higher indicated high accessibility, while mean scores below 3.00 indicated low accessibility. A 5-point Likert scale was used to measure constraints in accessing agricultural resources, ranging from 'Strongly Agree' (5) to 'Strongly Disagree' (1), with 'Agree' (4), 'Neutral' (3), and 'Disagree' (2) in between. Respondents rated their agreement with various constraints, such as lack of collateral, tenure system issues, inadequate finance, unfavourable government policies, discriminatory social norms, and lack of credit. The total mean agreement for each constraint was calculated. A mean score of 3.00 or greater was regarded as indicating a significant constraint, while scores below 3.00 indicated no significant constraint.

Results and Discussions

Gender-Based Accessibility Level to Agricultural Resources

Table 1 shows the mean rating of the level of accessibility to agricultural resources, with a critical mean score (\bar{x} = 2.5). Male respondents had a grand mean (\bar{x} = 3.47), indicating a high level of accessibility to agricultural resources. Their access to land (\bar{x} = 3.80) and capital (\bar{x} = 3.80) were rated highest. This revealed that male farmers have substantial access to agricultural resources, enabling them to enhance their productivity levels.

Female respondents had a grand mean (\bar{x} = 2.70), indicating a moderately high level of accessibility to agricultural resources. Results also showed that women had high access to information (\bar{x} = 3.26), labour (\bar{x} = 4.00), agrochemicals (\bar{x} = 2.80), and improved cuttings/seedlings (\bar{x} = 3.28) respectively. However, their access to land (\bar{x} = 1.60) and credit (\bar{x} = 1.30) was notably low. This suggests that female farmers face considerable discrimination in accessing agricultural resources compared to their male counterparts. These findings align with previous research by Agada & Igbokwe (2021) and Okoye et al. (2022), which revealed gender disparities in access to agricultural resources. Furthermore, studies by Edeh & Eze (2020) and Nwankwo & Nwachukwu (2023) found that empowering women in agricultural decision-making and improving their access to productive resources is essential for achieving gender equality and sustainable development goals. These findings have significant implications for agricultural policy and development programmes.

The high level of accessibility to agricultural resources among male farmers suggests that they are well-positioned to increase their productivity and contribute more significantly to agricultural output. However, the substantial low accessibility faced by female farmers highlights a critical area of concern. The limited access to land and credit for women implies that women are at a distinct disadvantage, which can perpetuate cycles of poverty and limit their ability to invest in and improve their farming practices.

Table 1: Level of sex-based accessibility to agricultural resources

| Agricultural resources | Male | | Female | |
|-------------------------------|-------------|------------|---------------|------------|
| | Mean | S.D | Mean | S.D |
| Information | 3.52 | 0.76 | 3.26 | 1.67 |
| Labour | 2.94 | 0.87 | 4.00 | 1.02 |
| Land | 3.80 | 1.70 | 1.60 | 0.65 |
| Agrochemicals | 3.36 | 0.36 | 2.80 | 0.85 |
| Improved cuttings/seedling | 3.40 | 1.01 | 3.28 | 1.67 |
| Credit | 3.80 | 2.00 | 1.30 | 0.56 |
| Grand Mean | 3.47 | | 2.70 | |
| Decision rule | 3.00 | | 3.00 | |

Source: Field Survey, 2024.

Gender-Based Constraints in Accessing Agricultural Resources

Table 2 shows that, generally, both male and female farmers face significant gender-based constraints in accessing agricultural resources, with grand mean scores of 2.63 and 2.79, respectively, indicating low accessibility. Both male and female farmers agreed on the significant challenges posed by lack of collateral ($\bar{x} = 2.62$, $\bar{x} = 2.82$), inadequate finance ($\bar{x} = 3.20$, $\bar{x} = 2.60$), and lack of credit ($\bar{x} = 3.08$, $\bar{x} = 3.14$). The results show that men face significant constraints in adequate finance ($\bar{x} = 3.20$) and lack of credit ($\bar{x} = 3.08$). In contrast, women face constraints in lack of collateral ($\bar{x} = 2.82$), tenure system ($\bar{x} = 3.00$), unfavourable government policies ($\bar{x} = 3.22$), and lack of credit ($\bar{x} = 3.14$). While male farmers tend to disagree with the constraints imposed by these factors, female farmers agree, particularly concerning discriminatory social norms. These findings align with previous research (Nwajiuba et al., 2020) that identified a lack of collateral and inadequate finance as major constraints for women farmers. Also, Apeh et al. (2023) identified significant gender disparities in women's access to vital productive assets, citing illiteracy, poor access to credit, and insufficient government support as major barriers.

Table 2: Gender-based constraints in accessing agricultural resources

| Constraints in accessing agricultural resources | Male | | Female | |
|--|-------------|------------|---------------|------------|
| | Mean | S.D | Mean | S.D |
| Lack of collateral | 2.62 | 1.20 | 2.82 | 2.01 |
| Tenure system | 2.26 | 1.11 | 3.00 | 1.72 |
| Inadequate finance | 3.20 | 0.82 | 2.60 | 0.98 |
| Unfavourable government policies | 2.80 | 0.89 | 2.00 | 0.52 |
| Discriminatory social norms | 1.84 | 1.43 | 3.22 | 0.74 |
| Lack of credit | 3.08 | 0.69 | 3.14 | 1.67 |
| Grand Mean | 2.63 | | 2.79 | |
| Decision rule | 3.00 | | 3.00 | |

Source: Field Survey, 2024.

Determinants of Sex-based Accessibility to Agricultural Resources

Table 3 presents the determinants of accessibility to agricultural resources, along with their coefficients and t-ratios. The R-squared values indicate that 56.7% of the variation in accessibility can be explained by the independent variables for male farmers, and 52.1% for female farmers. Education (β_2) has a significant positive impact on accessibility to agricultural resources for male farmers, with a coefficient of 0.0119 and a t-ratio of 1.94*, indicating that every unit increase in education leads to a modest but significant increase in accessibility. In contrast, education has a highly significant positive impact on accessibility for female farmers, with a coefficient of 2.0210 and a t-ratio of 0.852***, suggesting that education plays a crucial role in enhancing accessibility for female farmers.

Household size has a significant positive impact on accessibility for male farmers, with a coefficient of 2.0279 and a t-ratio of 1.80***, indicating that larger household sizes are associated with greater accessibility. However, household size has a non-significant impact on accessibility for female farmers, with a coefficient of 0.2301 and a t-ratio of 0.070, suggesting that household size does not significantly influence accessibility for female farmers. Income (β_6) does not have a significant impact on accessibility for both male farmers, with a coefficient of 6.1578 and a t-ratio of 0.72, and female farmers, with a coefficient of 1.1100 and a t-ratio of 0.991, indicating that income does not significantly influence accessibility for either gender. These findings are consistent with the study by Apeh et al. (2023), which found that age and education are significant determinants of access to agricultural resources among male farmers. Similarly, Ukwuaba et al. (2023) found that cooperative membership is an important determinant of access to agricultural resources among female farmers. However, the

findings on income and credit are surprising. Recent studies have consistently shown that income and credit are significant determinants of access to agricultural resources (Nwajiuba et al., 2020; Osuagwu et al., 2022). The lack of significance in this study may be due to the specific context of the study area.

Table 3: Determinants of sex-based accessibility to agricultural resources

| Variables | Male | | Female | |
|------------------------|-----------------|----------|-----------------|----------|
| | Coefficient | t-ratio | Coefficient | t-ratio |
| Intercepts | -45.4605 | -1.84*** | -28.1001 | 3.311*** |
| Age | -0.0075 | -1.68* | 0.5061 | 1.003*** |
| Education | 0.0119 | 1.94* | 2.0210 | 0.852*** |
| Household size | 2.0279 | 1.80*** | 0.2301 | 0.070 |
| Income | 6.1578 | 0.72 | 1.1100 | 0.991 |
| Credit | -19.1923 | -1.64 | -0.2062 | 0.291 |
| Cooperative membership | 23.0527 | 1.68*** | 0.0705 | 7.200*** |
| R² | 0.5670 | | 0.5211 | |
| R⁻² | 0.5290 | | 0.5071 | |
| F-ratio | 7.726*** | | 6.000*** | |
| No | 50 | | 50 | |

Sources: Field Survey, 2024 (*P ≤ 0.10, **P ≤ 0.05, ***P 0.01)

Conclusion and Recommendations

The study reveals significant sex disparities in access to agricultural resource and constraints in accessing agricultural resources. It was also found that male had better access to agricultural resources compared with their female counterparts. Moreover, the findings show that females faced more constraints than males in accessing land, credit, and other resources, which is consistent with previous studies. Also, age, education, household size, and cooperative membership were identified as significant factors affecting the accessibility of agricultural resources for both male and female farmers. However, income and credit were not significant factors, possibly due to the specific context of the study area.

Targeted interventions should be implemented to address the sex gap in access to agricultural resources. Such interventions include providing training and education programmes for female farmers, promoting cooperative membership among male and female farmers, implementing gender-sensitive land reform policies, and providing financial services tailored to women's needs given that these factors influenced gender access to agricultural resources. Additionally, addressing discriminatory social norms and unfavourable government policies is crucial to promoting gender equality in accessing agricultural resources. These recommendations can help promote sustainable agricultural development and gender equality in, Ebonyi State Nigeria.

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