

GENDER ANALYSIS OF MAIZE PRODUCTION IN ASA LOCAL GOVERNMENT AREA OF KWARA STATE, NIGERIA

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Abstract. This study analyzed maize production through the gender lens in Asa Local Government Area of Kwara State. The specific objectives of the research are to: determine the level of access to production assets among men and women maize farmers and; analyze the profitability of male and female-owned maize farms in the study area. These objectives were analyzed using: Descriptive statistics, Gross margin, and return on investment. The results revealed that 43% of the males had access to credit while only 30% of the females were privileged to acquire credit. Also, male farmers have greater access to land, extension contact, and other productive assets than their female counterparts. Also, the study revealed that for every ₦1 invested, ₦1.5 was gained as returns to maize production amongst the men involved in the production and ₦2.12 was made as returns to maize production by the female maize farmers involved in the production. This implied that maize farming is a profitable venture in the study area. However, female-owned farms were more profitable. It is therefore recommended that policies and programs the address farmers' access to production assets should be more inclusive.

Keywords: technical efficiency, profitability, maize farmers, gender

INTRODUCTION

Maize is a significant food crop for both humans and livestock. It helps provide energy, vitamins and a small amount of protein (Hengsholt *et al.*, 2018). In Nigeria, maize is increasingly demanded at a faster rate daily (Sadiq *et al.*, 2013). This could be attributed to the fact that it can grow well under different environmental conditions, hence the widespread production across different parts of the country. There is evidence of a constant production rate of maize in Nigeria (FAO, 2017).

Remarkably, men and women both make substantial contributions in maize-based farming systems and livelihoods, though gender roles in maize cultivation differ greatly across and within regions. Averagely, women make up 43 percent of the agricultural labor force in developing countries, they range from 20 percent in Latin America to 50 percent in East Asia and Sub-Saharan Africa (Quisumbing *et al.*, 2014; FAO, 2011). Interestingly, women and men manage complex post-harvest management systems, but in different ways, given their cultural context, social status and other influential factor resulting in different impacts. These potentially varying effects of development interventions on women or men can often be hidden or obscured. When gender is explicitly considered in such a study, the effects are revealed and previously hidden implications become known (World Bank, 2010).

Gender inequality in maize production has been a major issue for many decades. This is because access to assets like land, productive resources, and education

remains low especially for women. This has been attributed to different issues such as poverty, high rates of unemployment, an increase in the demand for agricultural land, inadequate infrastructure, and also, the lack of education as well as diseases. Gender variance in maize production remains a constraint that has characterized the Nigerian agriculture.

Remarkably, there have been several campaigns on gender consideration and equality. For example, the national gender policy that was passed in 2006. The policy focused especially on three critical areas– (i) The promotion of human rights for women with a special focus on sexual and gender-based violence (SGBV) and the help of new legislation and legal rights of women, (ii) The promotion of the empowerment of women and the integration of gender within key sectors as highlighted within the National Gender Policy (NGP) – (Agriculture/Rural Development; Environment/Natural Resource; Gender and HIV/AIDS; Health and Reproductive Health/ Rights; Education/Training; Labour/Employment) and, (iii) Women's political participation and engendered governance including gender and conflict management.

Given this, it is pertinent to analyze if the trend of access to productive assets had changed as well as consider if these assets are utilized profitably or not. Hence, there is an urgent need to answer the following research questions

- a. What is the level of access to production assets among the men and women in maize production in the study area?
- b. What is the level of profitability of maize production among men and women in the study area?

MATERIAL AND METHODS

The study was carried out in Asa local government area located in Kwara state with its headquarters in the town of Afon. The local government falls within the central senatorial district of Kwara state. The local government area covers a landmass of 1286 km² with 130.9/km². It is surrounded by Moro LGA to the north, to the east by Ilorin West and Ifelodun, to the south by Oyun local government and bounded by Oyo state to the West. There are 17 wards in the local governments. The population of Asa Local government is 124668 as of 2006 with 62,751 males and 61,917 females. There was an increase of 3.05% in the population to attain 168,300 for the last known census in 2016.

Sampling size and sampling techniques: The target populations are maize farmers in Asa Local Government Area in Kwara State. A two-stage sampling technique was used to select the study respondents. For the first stage, there was a random selection of four villages in Asa local government area. The second stage involves the use of a snowball sampling technique for the selection of 30 maize farming households each from the selected villages. A total of 120 maize farmers were chosen for the study.

Source of data: This study relies on primary data which was collected using the semi-structured interview method.

Data Analysis: The analytical tools used in analyzing the collected data are Descriptive statistics, Gross margin, Return on investment.

a. Descriptive statistics

Frequencies, means, and percentages were the descriptive statistics used to analyze the socio-economic characteristics of the exotic respondents and to identify the level of access to production in the study area.

b. Gross margin analysis

$$GM_i = \sum (TR_i - TVC_i)$$

Where: GM_i = Gross margin of the farmers in naira

TR_i = Total revenue from maize in naira per hectare (price x quantity), and

TVC_i = Total variable cost of farmers in Naira per hectare.

c. Return on Investment (ROI)

RESULTS AND DISCUSSIONS

Table 1 revealed that the average age of the male and female maize farmers was 44 and 42 years respectively. A majority of the respondents were married. The average farming experience was found to be 16 years for the males and 12 years for the females. The predominant primary occupation for both males and females was farming while they had other secondary occupations ranging from civil service to trading, bricklaying, tailoring, and carpentry. The average income from their secondary occupation was ₦47,750 for males and ₦26000 for females according to the study. Furthermore, the average household size was 12. The average credit obtained by the males in the last farming season was ₦226,275.8 while that of the female was ₦165,333.

The analysis of the data in Table 2 shows the distribution of respondents based on their level of access to production assets for maize production in the study area. The table also shows that the male farmers had more access to a larger size of land than the females. Also, about 43% of the males had access to credit while 30% of the females were privileged to acquire credit. Also, male farmers had more access to extension contacts and other production assets than their female counterparts.

Table 3 shows the analysis of the profitability of maize production amongst maize farmers in the study area. The average gross value of the output of the male respondents was ₦204,374/ha while the total variable cost incurred was ₦82,371.2. The table further shows the analysis of the profitability of maize production amongst female maize farmers as well. The average gross value of the output of the respondents was ₦250,510/ha while the total variable cost incurred was ₦83,346.5/ha. It was found that the major variable costs incurred by both genders were the costs of labor and fertilizer. Overall, a gross margin of ₦122,003.2 was obtained for the respondents. The findings as presented in the table shows that female maize farmer had more profit than the male engaged in maize production in the study area. This translates to the females operating on a higher economic efficiency as opposed to the males.

Table 2

Distribution of the socioeconomic characteristics (n=120)

Field survey, 2019

Variable	Frequency	Male Percentage	Mean	Frequency	Female Percentage	Mean
Age (Years)						
≤30	12	17.1	44	4	8.0	42
31 – 35	4	5.7		9	18.0	
36 – 40	7	10.0		11	22.0	
41 – 45	12	17.1		11	22.0	
>46	35	50.0		15	30.0	
Educational level						
No formal education	12	17.1		11	22.0	
Primary	20	28.6		10	20.0	
Secondary	27	38.6		28	56.0	
Tertiary	11	15.7		1	2.0	
Marital status						
Married	62	88.6		44	88.0	
Single	8	11.4		2	4.0	
Divorced	-			2	4.0	
Widowed	-			2	4.0	
Farming experience (Years)						
≤5	15	21.4	16	8	16.0	12
6 – 13	18	25.7		26	52.0	
14 – 21	16	22.9		12	24.0	
22 – 29	7	10.0		2	4.0	
>30	14	20.0		2	4.0	
Primary occupation						
Farming	40	57.1		20	40.0	
Self-employed	14	20		10	20.0	
Civil servant	12	17.4		8	16.0	
Traders	4	5.7		12	24.0	
Secondary occupation						
Civil servant	5	7.1		4	8.0	
Trading	8	9.9		13	26.0	
Self-employed	15	21.3		5	10.0	
Monthly Income from Secondary occupation (₺)						
≤20,000	6	8.2	47,750	11	22.0	26,000
21000 – 70000	19	27.2		10	20.0	
71000 – 120000	3	4.2		1	2.0	
Household size						
≤5	3	4.3	12	-		12
6 – 10	24	34.3		18	36.0	
11 – 15	35	50.0		26	52.0	
>16	8	11.4		6	12.0	
Amount of credit (₺)						
≤100,000			22,625.8			16,533.3
101,000 – 200,000	4	5.7		5	10.0	
201,000 – 300,000	18	25.7		10	20.0	
>400,000	3	4.3		-		
	4	5.7				

Table 3

Distribution of maize farmers by access to production assets. Field survey, 2019

Variable		Male			Female		
	Category	Frequency	Percentage	Mean	Frequency	Percentage	Mean
Land ownership	Owned land	47	67.1		29	58.0	
	Rented/leased land	23	32.9		21	42.0	
Farm size (hectares)	≤1	8	11.4	2.5	16	32.0	2.02
Credit	Access	30	42.9		15	30.0	
	No Access	40	57.1		35	70.0	
Extension Services	Access	54	77.1		32	64.0	
	No Access	16	22.9		18	36.0	
Number of contacts		34	65.4	3	23	46.0	3
	1 – 3	13	25.0		7	14.0	
	4 – 7	5	9.6		2	4.0	
	8 – 10						
Fertilizer (kg)	≤200	1	1.4	661	1	2.0	612
	201 – 700	47	67.1		39	78.0	
	701 – 1200	19	27.1		8	16.0	
	1200 – 1200	3	4.2		2	4.0	
	>1200						
Herbicide (Litres)	≤10	17	24.3	16.4	18	36.0	14
	11 – 20	41	58.6		29	58.0	
	21 – 30	10	14.3		3	6.0	
	>30	2	2.8		-	-	
Seed (kg)	≤5	4	5.7	13.2	4	8	12.2
	6 – 10	20	28.6		19	38.0	
	11 – 15	33	47.1		21	42.0	
	>16	13	18.6		6	12.0	

Table 3

Analysis of Profitability of maize production. Field survey, 2019

Variables	Male Value (₺/ha)	Female Value (₺/ha)
Total Revenue (A)	204,374.716	250,510
Variable costs		
Cost of maize seeds	1632	445.5
Cost of fertilizer	50348.4	46,658.4
Cost of Herbicide	9542.8	10,815.8
Cost of labour	20,848	22,326.7
Total variable cost (B)	82,371.2	80,246.4
Gross margin (C) = A-B	122,003.2	170,263.6
Return on capital invested (C/B)	1.5	2.12

CONCLUSIONS

This study, thus, concludes that although male farmers in the study area had more access to productive assets, their female counterparts made more productive use of these assets. The study also revealed that the effect of gender equality programs has not had a significant impact on the accessibility of production assets by women. Also, based on these findings, the study, therefore, recommended that effort should be made towards the empowerment of female maize farmers. Finally, policies that address access to productive assets should be gender smart.

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