SOCIO-ECONOMIC FACTORS AS DETERMINANTS OF FOOD SECURITY IN EKITI STATE, NIGERIA

ADEYI Moruf Olugbenga
Department of Socio Science Education
Ekiti State University, Ado-Ekiti, Nigeria
olugbenga.adeyi@eksu.edu.ng

Abstract

This study examined socio-economic factors as determinants of food security in Ektit State, Nigeria. This study specifically determined the level of food security as well as the major socio-economic factor that determined food security in Ekiti State. Descriptive survey research design was adopted with the population comprising all household adults in Ekiti State, Nigeria. The sample consisted of 120 respondents selected through multistage sampling procedure. A questionnaire designed by the researcher titled 'Socio-economic Factors and Food Security Questionnaire' (SFFSQ) was used to collect data for this study. The face and content validity of the SFFSQ was ascertained by experts in Agricultural Science as well as tests and measurement, while the reliability was established through Cronbach Alpha reliability testing method that yielded of 0.78. Copies of the questionnaire were administered by the researcher and one research assistant in each of the selected LGAs. Data collected were analysed using descriptive statistics of frequency count, mean and standard deviation for the research questions while the hypotheses were tested using regression analysis at 0.05 level of significance. This study found that the overall level of food security in Ekiti State, Nigeria was low and income level was considered the major socio-economic factor that determined food security in Ekiti State. Based on these findings, this study recommended that government at all levels should consider establishing a monitoring system for the control of food prices which could help households anticipate seasonal fluctuations and plan accordingly.

Keywords: *Food security, Income level, Educational attainment, Access to market, and Gender dynamics*

Introduction

Food security as a critical aspect of human welfare involves the availability, accessibility, utilization, and stability of food. The concept of food security, as defined by the Food and Agriculture Organization (FAO) (2021), refers to the situation where all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs for an active and healthy life. This definition emphasizes four key dimensions: availability, access, utilization, and stability of food. The issue of food security has become increasingly important in Nigeria due to the country's rapidly growing population, urbanization, and climate change, and Ekiti State, located in Southwest, Nigeria is not immune to these challenges. According to Adeshua (2024), Nigeria is grappling with a high prevalence of chronic undernourishment. Between 2019 and 2021, an estimated 22 million people in the country experienced persistent hunger. Within Sub-Saharan Africa, Nigeria stands out as one of the countries with the highest levels of severe food insecurity. The World Food Programme (WFP) (2024) in its report alerted on the deterioration of food security in Nigeria with 33.1 million people expected to face high levels of acute food insecurity in 2025. There a sons for this have been attributed to economic hardship, coupled with record high inflation, the effects of climate change and persistent violence in some states in the northern region of the country.

In addition, socio-economic factors tend to play significant roles in determining food security at the household level. These factors include income levels, educational attainment, access to markets, and gender dynamics. For instance, rural households, which form a significant part of Ekiti State population, are often dependent on agriculture as their primary source of livelihood. However, due to the influence of economic instability, inflation, land ownership structures, and limited access to agricultural inputs, the capacity of these households to secure food is frequently threatened. Similarly, households with low income or that live below the poverty line are often unable to afford sufficient food. Poverty rates are particularly high in rural Nigeria, including Ekiti State, where subsistence farming is prevalent. Household income primarily determines purchasing power, which directly influences food access. Families with higher incomes can afford to buy

sufficient and diverse food items, leading to better nutritional outcomes. Conversely, households with low or unstable incomes often face significant challenges in meeting their food needs. Research indicates that as household income increases, food insecurity decreases, highlighting the importance of economic stability for ensuring adequate food availability (Ojo et al., 2020).

Educational attainment as one of the factors considered in this study seems to influence food security in two primary ways. First, education enables individuals to access better employment opportunities, which in turn raises income levels and improves food security. Second, education plays a crucial role in improving knowledge of nutrition and health, which can lead to better food utilization. As argued by Afolabi et al. (2020), the economic status of household heads, including their level of education and employment status, significantly influences food security. Educated household heads are more likely to secure stable employment and engage in productive economic activities, contributing to higher household income levels.

Ekiti State is heavily reliant on agriculture, but the productivity of this sector is often hindered by outdated farming techniques, poor infrastructure, and limited access to modern agricultural inputs. These challenges, combined with climate change negatively affect food availability and stability. Furthermore, the lack of investment in food storage facilities leads to post-harvest losses, which further exacerbate food insecurity. Access to food markets, both in terms of proximity and economic affordability, is another critical determinant of food security. In Ekiti State, rural areas often experience challenges in accessing markets due to poor infrastructure, including bad roads and transportation. The impact of gender dynamics cannot be overemphasized, as women are often responsible for food production and preparation in rural households. However, women in rural areas, including Ekiti State, often face barriers such as limited access to land, credit, and inputs, which seem to constrain their ability to contribute to food security effectively. Adeshua (2024) noted that women make up a significant portion of the agricultural labour force but face barriers that hinder their full participation.

There appears to be a significant gap in understanding the role of socio-economic factors such as education, gender dynamics, and market accessibility in shaping food security outcomes in the state. For example, limited access to education and the marginalization of women in agricultural activities further restrict opportunities for improving food security. The lack of reliable data on how these socio-economic determinants impact food security in Ekiti State complicates the development of effective, evidence-based interventions aimed at mitigating food insecurity. Hence this study addressed the socio-economic factors as determinants of food security in Ekiti State, Nigeria. Specifically, this study assessed the level of food security in Ekiti State, and identified the major socio-economic factor that determined food security in Ekiti State.

Research Questions

To achieve the above objectives, the following questions were raised to guide this study:

1. What is the level of food security in Ekiti State?
2. What is the major socio-economic factor that determine food security in Ekiti State?

Research Hypotheses

The following hypotheses were formulated for this study:

1. Income level will not significantly determine food security
2. Educational attainment will not significantly determine food security
3. Gender dynamics will not significantly determine food security
4. Access to market will not significantly determine food security
5. None of the socio-economic factors best determined food security in Ekiti State.

Methodology

Descriptive survey research design was adopted for this study with the population comprising all household adults in Ekiti State, Nigeria. The sample consisted of 120 respondents who were selected through multistage sampling procedure. The first stage involved the use of simple random sampling technique to select one Local Government Area (LGA) in each of the senatorial districts in the state, while the second stage involved the use of stratified sampling technique to select two towns (urban and rural) in each of the selected LGAs. At the third stage, purposive sampling technique was used to select 20 household adult members in each of the selected towns. It is expected that household adults would have attained certain level of life experience to be able to understand the impact of food security on human wellbeing. A questionnaire designed by the researcher titled 'Socio-economic Factors and Food Security Questionnaire' (SFFSQ) was used to collect relevant data for this study. The SFFSQ was made of

three sections A-C. Section A elicited the demographic information of the respondents such as age, location, gender, and employment status, while section B comprised 10 items worded on a 4-point likert type rating scale of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). The items in this section measured the level of food security in Ekiti State. The third section consisted of 16 items that measured the determinant capacity of each of the independent variables on food security. The items in this section was rated on a 4-point likert type rating scale of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). The face and content validity of the SFFSQ was ascertained by experts in Agricultural Science as well as tests and measurement, while the reliability was established through Cronbach Alpha reliability testing method that yielded a reliability coefficient of 0.78. Copies of the questionnaire were administered by the researcher and one research assistant in each of the selected LGAs. Data collected were analysed using descriptive and inferential statistics. The research question raised were answered using the descriptive statistics of frequency count, mean and standard deviation while the hypotheses were tested using regression analysis. All hypotheses were tested at 0.05 level of significance.

Results

Research Question 1: What is the level of food security in Ekiti State?

To determine the level of food security in Ekiti State (high or low), scores of item 1-10 in section B of the SFFSQ were subjected to statistical analysis involving frequency count, percentage, and mean rating. The low level was determined by scores below the mean cut off point ($x < 2.50$ i.e $x = 1.00$-2.49) while the high level was determined by the mean cut off point and scores above the mean cut off point ($x \geq 2.50$ i.e $x = 2.50$-4.00). The result is presented in Table 1

Table 1: Frequency Count and Mean rating on the Level of Food Security in Ekiti State

Items	*SA*		*A*		*D*		*SD*		*Mean*	*Remark*
	f	*%*	*f*	*%*	*f*	*%*	*f*	*%*		
My household consistently has enough food throughout the year.	9	7.5	38	31.7	38	31.7	35	29.1	2.42	***Low***
There are times when my household can afford enough nutritious food.	19	15.8	30	25.0	46	38.3	25	20.8	2.34	***Low***
My household often relies on nutritious foods and balanced diet.	3	2.5	9	7.5	58	48.3	50	41.7	1.35	***Low***
Access to a variety of food items is generally available to my household.	11	9.2	25	20.8	72	60.0	12	10.0	2.23	***Low***
My household oftentimes experience food surplus during specific seasons.	21	16.7	37	31.2	44	36.7	18	15.0	2.31	***Low***
I am confident in my household's ability to secure food in the coming months.	26	21.4	35	28.9	46	38.7	13	11.1	2.61	***High***
My household has experienced an increase in food availability in recent years.	11	9.2	36	30.0	53	44.2	20	16.6	2.43	***Low***
My community has adequate access to local markets for purchasing food.	31	26.0	46	21.0	25	38.2	18	14.4	2.77	***High***
Price increases in basic food items have affected my household's food security.	12	10.2	27	22.3	45	37.1	36	29.6	2.20	***Low***
My household has to rely on individuals' effort to meet our food needs.	15	12.6	36	29.7	38	31.9	31	25.8	2.29	***Low***

Key: f = frequency; % = percentage of respondents; SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree

The result as revealed on Table 2 showed the level of food security in Ekiti State, Nigeria. Considering the grand mean score of 2.30 that fall within the mean cut off point 1.00-2.40, the overall level of food security in Ekiti State, Nigeria was considered low.

Research Question 2: What is the major socio-economic factor that determined food security in Ekiti State?

To determine the major socio-economic factor that determined food security in Ekiti State, scores of item 1-16 of section C in SFFSQ were subjected to statistical analysis involving mean rating and standard deviation. The result is presented in Table 2

Table 2: Mean rating on the major socio-economic factor that determined food security in Ekiti State

Items	*Mean*	*Std. Deviation*
Income Level	***12.97***	***3.305***
Household income level significantly affects the ability to purchase sufficient and nutritious food.	3.64	0.530
Low-income households in Ekiti State are more likely to experience food shortages.	3.52	0.549
Households with higher income levels have better access to diverse food options.	3.13	0.856
Income stability is crucial for maintaining food security in my household.	3.16	0.922
Educational attainment	***12.88***	***2.070***
Higher educational attainment improves household knowledge about nutrition and food security.	3.20	0.909
Households with more educated members are less likely to experience food insecurity.	3.54	0.605
In rural areas, education plays a crucial role in improving agricultural practices, enhancing food security.	3.67	0.569
Educational attainment has a greater impact on food security in urban areas compared to rural areas.	3.39	0.611
Gender dynamics	***12.39***	***2.307***
Women's participation in agriculture significantly contributes to household food security in Ekiti State.	3.46	0.741
Gender dynamics within households influence decisions on food production and distribution.	3.52	0.636
Households where women actively participate in farming are more likely to be food secure.	3.38	0.778
Gender inequality in access to agricultural resources affects food security in Ekiti State.	3.31	0.805
Access to market	***12.78***	***2.599***
Poor market accessibility in rural areas reduces households' ability to purchase enough food.	3.49	0.727
Households in rural areas with better access to markets are more food secure.	3.28	0.881
Transportation challenges to markets negatively affect food availability in rural areas.	3.58	0.625
Market accessibility significantly influences the affordability of food in rural communities.	3.13	0.961

The information contained in Table 2 showed the major socio-economic factor that determined food security in Ekiti State. Considering the mean score of 12.97, income level was considered the major socio-economic factor that determined food security in Ekiti State. This was closely followed by educational attainment with the mean score of 12.88, and access to market with the mean score of 12.78. While the mean score of 12.39 indicated that gender dynamics was considered the least socio-economic factor that determined food security in Ekiti State

Testing of Hypotheses

Hypothesis 1: Income level will not significantly determine food security

In order to test the hypothesis, scores relating to the income level and food security were computed and subjected to statistical analysis involving regression analysis at 0.05 level of significance. The result is presented in Table 3.

Table 3: Regression Analysis showing income level as determinant of food security in Ekiti State, Nigeria

Model	*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
	B	*Std. Error*	*Beta*		
(Constant)	42.045	1.029	.129*	40.872	.000
Income Level	.288	.067		4.316	.000

R=0.129; R^2= 0.017; Adjusted R^2= 0.016; F = 18.629; P=0.000 < 0.05 (Significant)

Table 3 revealed that there was positive correlation between income level and food security in Ekiti State, Nigeria (R = 0.129). The value of coefficient of determinant (R^2 = 0.017) indicated that income level accounted for 1.7% of the total variance in the level of food security in Ekiti State, Nigeria. The F-ratio (18.629) was significant at 0.05 level of significance. This implies that the determinant variable provided a significant explanation for the variation in the level of food security in Ekiti State, Nigeria. Thus, the hypothesis that income level will not significantly determine food security was not accepted.

Hypothesis 2: Educational attainment will not significantly determine food security

In order to test the hypothesis, scores relating to educational attainment and **food security** were computed and subjected to statistical analysis involving regression analysis at 0.05 level of significance. The result is presented in Table 4.

Table 4: Regression Analysis showing educational attainment as determinant of food security in Ekiti State, Nigeria

Model	*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
	B	*Std. Error*	*Beta*		
(Constant)	42.412	.920	.133*	46.099	.000
Educational Attainment	.319	.072		4.449	.000

Dependent Variable: Food Security

R=0.133; R^2= 0.018; Adjusted R^2= 0.017; F = 19.792; P=0.000 < 0.05 (Significant)

Table 4 revealed that there was positive correlation between educational attainment and food security in Ekiti State, Nigeria (R = 0.133). The value of coefficient of determinant (R^2 = 0.018) indicated that educational attainment accounted for 1.7% of the total variance in the level of food security in Ekiti State, Nigeria. The F-ratio (19.792) was significant at 0.05 level of significance. This implies that the determinant variable provided a significant explanation for the variation in the level of food security in Ekiti State, Nigeria. Thus, the hypothesis that educational attainment will not significantly

determine food security was not accepted.

Hypothesis 3: Gender dynamics will not significantly determine food security

In order to test the hypothesis, scores relating to gender dynamics and **food security** were computed and subjected to statistical analysis involving regression analysis at 0.05 level of significance. The result is presented in Table 5.

Table 5: Regression Analysis showing gender dynamics as determinant of food security in Ekiti State, Nigeria

Model	*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
	B	*Std. Error*	*Beta*		
(Constant)	44.866	.894	.052	50.173	.000
Gender Dynamics	.143	.083		1.733	.083

Dependent Variable: Food Security

R=0.052; R^2= 0.003; Adjusted R^2= 0.002; F = 3.003; P=0.083 > 0.05 (Not Significant)

Information contained in Table 5showed that there was no significant correlation between gender dynamics and food security in Ekiti State, Nigeria (R = 0.052). The value of coefficient of determinant (R^2 = 0.003) indicated that gender dynamics accounted for 0.3% of the total variance in the level of food security in Ekiti State, Nigeria. The F-ratio (3.003) was not significant at 0.05 level of significance. This implies that the determinant variable did not provide significant explanation for the variation in the level of food security in Ekiti State, Nigeria. Thus, the hypothesis that gender dynamics will not significantly determine food security was accepted.

Hypothesis 4: Access to market will not significantly determine food security

In order to test the hypothesis, scores relating to access to market and **food security** were computed and subjected to statistical analysis involving regression analysis at 0.05 level of significance. The result is presented in Table 6.

Table 6: Regression Analysis showing access to market as determinant of food security in Ekiti State, Nigeria

Model	*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
	B	*Std. Error*	*Beta*		
(Constant)	44.326	.857	.074*	51.726	.000
Access to Market	.177	.072		2.474	.014

Dependent Variable: Food Security

R=0.074; R^2= 0.006; Adjusted R^2= 0.005; F = 6.120; P=0.000 < 0.05 (Significant)

Result in Table 6 revealed that was positive correlation between access to market and food security in Ekiti State, Nigeria (R = 0.074). The value of coefficient of determinant (R^2 = 0.006) indicated that access to market accounted for 0.6% of the total variance in the level of food security in Ekiti State, Nigeria. The F-ratio (6.120) was significant at 0.05 level of significance. This implies that the determinant variable provided a significant explanation for the variation in the level of food security in Ekiti State, Nigeria. Thus, the hypothesis that access to market will not significantly determine food security was not accepted.

Hypothesis 5: None of the socio-economic factors best determined food security in Ekiti State.

In order to test the hypothesis, scores relating to socio-economic factors and food security were computed and subjected to statistical analysis involving regression analysis at 0.05 level of significance. The result is presented in Table 7.

Table 7: Regression Analysis showing thesocio-economic factors that best determined food security in Ekiti State

Model	*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
	B	*Std. Error*	*Beta*		
(Constant)	43.138	1.336		32.295	0.000
Income Level	.216	.086	.097*	2.508	0.012
Gender Dynamics	.140	.106	.051	1.322	0.186
Educational Attainment	.512	.083	.213*	6.143	0.000
Access to Market	.338	.127	.142*	2.662	0.008

Dependent Variable: Food Security

R=0.298; R^2= 0.089; Adjusted R^2= 0.083; F = 15.204; P=0.000 < 0.05 (Significant)

Table 7 showed that educational attainment was the socio-economic factor that best determined food security in Ekiti State ($\beta = 0.213^*$, $p < 0.05$). The null hypothesis is therefore not accepted. The information in Table 7 revealed further that there was a significant positive multiple correlation between the socio-economic factor (income level, gender dynamics, educational attainment, access to market) and food security in Ekiti State (R=0.298, $p < 0.05$). This implies that all the determinant variables are factors that can determine level of food security in Ekiti State. The single best contributor to the total variance in the level of food security in Ekiti State was educational attainment ($\beta = 0.213$). This was closely followed by access to market ($\beta = 0.142$), and income level ($\beta = 0.097$). The variable with the least contribution to level of food security in Ekiti State

was gender dynamics (β = 0.051).Thus, the hypothesis that none of the socio-economic factors best determined food security in Ekiti State was not accepted.

Discussion

A substantial proportion of respondents were reportedly experiencing food insecurity, with 51.7% indicating that their households face food shortages during specific seasons. This seasonal variability in food availability suggests that agricultural practices and climatic conditions play a critical role in food security. The reliance on cheaper, less nutritious food options, as reported by 90.1% of respondents further underscores the economic constraints that limit access to healthier food choices.This finding affirmed the submission of Adeshua (2024) that Nigeria is grappling with a high prevalence of chronic undernourishment. Also, the observation ofthe World Food Programme (WFP) (2024) in its report on deterioration of food security in Nigeria with 33.1 million people expected to face high levels of acute food insecurity in 2025 was established through the findings of this study.

This study further found several socio-economic factors to be responsible for food security, among which were income level, educational attainment, access to market and gender dynamics. This finding aligns with existing literature that emphasized the importance of economic stability in achieving food security. This study equally found that access to modern farming inputs and infrastructural facilities is vital for enhancing food security. It is evident that improving agricultural productivity through better resources can lead to more stable food availability. However, the challenges of transportation costs, which limit access to local markets for majority of the respondents indicated that infrastructural improvements are necessary to facilitate better access to these inputs.

In addition, findings from this study showed that all the socio-economic factors determined level of food security in Ekiti State except gender dynamics. However, educational attainment was considered the socio-economic factor that best determined the level of food security. This implies that the educational attainment is a vital factor that tend to determine the ability to survive unpleasant economic situation through innovative ideas that could stimulate wholesome ways of living.

Conclusion

Based on the findings of this study, it was concluded that the level of food security in Ekiti State was low. It was also concluded that, ensuring food security transcends increasing food availability, it equally encompasses fostering an environment where all individuals have the means to access, afford, and consume sufficient, safe, and nutritious food.

Recommendations

It was therefore recommended based on the findings that:

1. Establishing a monitoring system for the control of food prices can help households anticipate seasonal fluctuations and plan accordingly. Additionally, creating food assistance programs during periods of high prices or food shortages can provide a safety net for vulnerable households.
2. It is crucial to implement and expand programs that provide farmers with access to modern farming inputs such as fertilizers, improved seeds, and training on sustainable agricultural practices. This will not only improve crop yields but also enhance the overall productivity of the agricultural sector, thereby contributing to food security.
3. To reduce transportation costs that limit access to affordable food, administrators of Local Government Areas should prioritize the development and maintenance of rural roads and transportation networks. This will facilitate easier access to markets and improve the distribution of food products.
4. Given the influence of gender roles on food security, it is important to promote gender-sensitive policies that empower women in agricultural production and decision-making processes. Training programs aimed at women can enhance their skills and increase their contributions to household food security.

References

Adeshua V. (2024). Understanding food security challenges in Nigeria and the path to progress https://lagosfoodbank.org/understanding-food-security-challenges-in-nigeria-andthepath-toprogressbyadeshuavictoria/#:~:text=Within%20Sub%2DSaharan%20Africa%2C%20Nigeria,the%20magnitude%20of%20the%20challenge.

Afolabi, A. A., Ojo, J. A., & Bimbola, I. O. (2020). Education and food security among households in Ekiti State, Nigeria. *Journal of Agriculture and Food Security*, 9(1), 1-10

Food and Agriculture Organization(FAO) (2021). The state of food security and nutrition in the world. Retrieved on 20/01/2025 from http://www.fao.org/3/cb4476en/cb4476en.pdf

Ojo, J. A., Ogunleye, O. J., &Bimbola, I. O. (2020). Household income and food security status of rural households in Ekiti State, Nigeria. *Journal of Food Security*, 8(3), 120-128.

World Food Prograame (2024). Economic hardship, the climate crisis and violence in the northeast projected to push 33.1 million Nigerians into food insecurity in 2025. https://www.wfp.org/news/economichardshipclimatecrisisandviolencenortheastprojected-push331millionnigerians#:~:text=Nationally%2C%20the%20number%20of%20people,a%20worrying%2080%20percent%20rise.