



## Farmers' Gender and Their Awareness of Green Marketing in Calabar Education Zone of Cross River State, Nigeria

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### Abstract

This study examined farmers' gender and their awareness of green marketing in Calabar education zone of Cross River State, Nigeria. The purpose of the study was to ascertain whether differences exist between male and female farmers in terms of their awareness of green marketing in Calabar Education Zone of Cross River State. From the purpose of the study a research question was raised which was transformed into a research hypothesis. Literature review was carried out based on the variable under study. The study adopted a descriptive survey research design. The population of the study was made up of registered farmers across the study area which was 4,513. From the population, a sample of 573 respondents was drawn using purposive and simple random sampling techniques. The data collected for the study was analyzed using independent t-test technique and tested at .05 level of significance. The result shows that the t-value of -3.54 obtained is less than the accepted 0.05 level of significant. This means that the F-value of 18.32 is significant at the 0.05 level of significant with 571 degrees of freedom. Therefore, the HO: That, there is no significant difference between male and female farmers in terms of awareness of green marketing was rejected and the alternative H1: that, there is a significant difference between male and female farmers in terms of awareness of green marketing was uphold. This means that the female farmers with mean score of 25.33 are more aware of green marketing than the male farmers with mean score of 22.46 in Ikom Education Zone of Cross River State. The study concluded that, there is a general low level of green marketing awareness though the female farmers seem to be more aware of green marketing than the males because the female seems to be closer to nature than the males. The study recommended that, there is need for gender sensitization and education on green marketing to encourage more environmentally friendly marketing which will help to prevent pollution of the environment.

**Key words:** Famers, awareness, green marketing.

### Introduction

The advent of sustainable development is tending towards the concept of greenness as being environmentally friendly. This is evident in the consistent introduction of everything green ranging from green technology, green economy, green living, green regulations, green labels, green policy etc.

According to Egboniyi, et al (2020) green policy implies principles of behaviors or necessary conduct expected of people in a given geographical domain to make the environment remain green, adding that green environment is a sustainable environment. In line with the tendency towards green, green marketing as a

concept is being proposed to respond to the challenges of needs' satisfaction while at the same time, giving due consideration to the environment's sustainability. Given its close ties to environmental conservation, green marketing is in recent times regarded as a very effective strategy for promoting goods, services, and company concepts (Oyekunle, Dixon-Ogbechi & Rahim, 2024). It is becoming increasingly popular, with many organizations and individuals embracing it for various reasons. These reasons range from the need to save natural resources to the need of responding to competition of sustainable production among



organizations. The green issue has positively cultivated a change in how consumers have behaved in contemporary times (Edeh, 2020). This change has prompted a huge upset in the perceptual experience of consumers with a rising worry for conservation and anticipation of any further harm to the planet because unsustainable anthropogenic activities are observed to inflict harm on the environment. Green marketing is a push to reduce these upsetting effects on our environment through the introduction of courses on green concepts by designing and redesigning, producing and reproducing, packaging and repackaging, labeling and relabeling, and consuming goods and services that are eco-friendly (Edeh, 2020).

According to Justice (2016), green marketing not only encompasses a broad range of activities, which include product modification changes, production process, changes in packaging, modification and advertising, but also include terminologies like environmental marketing and ecological marketing which are used to refer to green marketing. For Unukpo (2017), green marketing consists of developing and promoting products and services that satisfy consumers want and need for quality, performance, affordable pricing and convenience without bringing a harmful effect on the environment. It is the production and promotion of goods and services that are friendly to the environment (Oyekunle *et al.*, 2024). It is perhaps based on the last definition that scholars are in agreement that green marketing mix model contains all the 4 main marketing mix elements namely, product, price, place and promotion (Justice, 2016). The obvious assumption of green marketing is that potential consumers will view a product or service's "greenness" as a benefit and base their buying decision accordingly but while its not-so-obvious assumption is that consumers will be willing to pay more for green products than they would for a less-green comparable alternative product (Surya & Banu, 2014).

The term green marketing came into prominence in the late 1980s and early 1990s and has evolved over time through three phases (Surya & Banu, 2014). The first phase was termed "Ecological" green marketing, and during this period all marketing activities were concerned to help environmental problems and provide remedies for environmental problems. The second phase was "Environmental" green marketing in which the focus shifted to clean technology that involved designing of innovative new products, to taking care of pollution and waste issues. The third phase was the "Sustainable" green marketing

era which came into prominence in the late 1990s and early 2000s. This was the result of the term sustainable development which ushered in the era of environmental sustainability. It is worthy of note that individuals/firms that apply green marketing must ensure that their activities are not misleading to consumers or industry, and do not breach any of the regulations or laws dealing with environmental marketing (Surya & Banu, 2014).

From green marketing is the concept of green products which are regarded as items that are intentionally designed and manufactured to minimize environmental pollution throughout their entire life cycle, including production, distribution, and consumption (Oyekunle *et al.*, 2024). These products offer advantages to consumers, such as being environmentally friendly, non-toxic to human health, and recyclable, while also providing social benefits. According to Ugbohmeh and Adamu (2023), green products are recyclable, reusable, and biodegradable and are produced with natural ingredients and containing recycled contents, non-toxic chemical. They are originally grown and manufactured under the approved chemical and do not harm or pollute the environment. They are referred to as environment friendly. Their product functions and ideas deal with the process of material retrieval, production, sales, utilization, reduced pollution, and waste treatment available for recycling, reduced pollution, and energy saving. Green product development addresses environmental issues through product design and innovation. Green products can be described as those that offer environmental benefits. Reduction of harmful waste possibly leads to substantial waste saving. Sometimes, many firms develop symbiotic relationships whereby waste generated by one company is used as cost-effective raw materials by another company (Ihemeje, Adeleke, Okpara & Zwingina, 2020). Additionally, some firms use green marketing to solve cost or profit related issues.

Green marketing plays a very pivotal role in creating vast awareness on issues concerning the environment and helps in communicating the drives of customer demand for greener products (Akerele-Popoola, Adegboyega & Binuyo, 2024). Green and sustainable marketing appeals to new and niche markets, lowers production costs through renewable energy and recycling and helps the environment by reducing climate-harmful practices. However, with all these benefits, the Nigerian market is still notably behind in the creation and marketing of eco-friendly goods. As a result, there seems to be low awareness and



only a restricted number of elite customers direct their purchasing behavior towards products that may be deemed environmentally friendly in Nigeria. In Nigeria, people are aware of the environmental issues that directly affect them, but they often seem to be unaware of the impact of their actions on the global environmental changes (Ihemeje *et al.*, 2020). According to research, only 5% of Nigerians purchase green goods, despite the global widespread awareness of environmental issues and green marketing because of low environmental consciousness, lack of green knowledge/awareness, and absence of governmental policies and control (Akerlele-Popoola, *et al.*, 2024).

The Nigerian market system particularly in the area of agricultural-related businesses according to Ihemeje *et al.*, (2020) has adversely been influenced by the environment and has equally failed to deal with negative environmental externalities and undervaluing natural resources which has led to its non-sustainability and low performance. The business activities of agro-allied businesses in Nigeria are not without some inhibiting problems emanating from their various environmental factors such as land degradation, soil erosion, deforestation, industrial toxins, ozone depletion, climate change, nuclear radiation, and the destruction of biodiversity (Ihemeje *et al.*, 2020). These problems pose serious challenges to the operational capabilities, survival, and performances of agro-allied businesses in Nigeria. The environmental factors in the agro-allied industry in Nigeria tend to be harsh on indigenous firms and their operational activities nowadays. This has brought such consequences as low productivity, increasing risks, low profitability, and tensed competition, heavy investment on equipment, increased operational cost, and a high rate of business failures with many other threats (Ihemeje *et al.*, 2020).

Within Calabar Education Zone, it appears that the magnitude or degree of environmental problems arising from agro-allied processes and businesses like soil erosion, land degradation, deforestation, bush burning, flooding among others is higher and more destructive in southern senatorial zone of Cross River State than any other part of the state (Effiong, Inameti, Pepple & Ernest, 2018). Additionally, Otiwa, Ojie and Marshal-Agbe (2024) observed that within Calabar Education Zone, the viability of the animal protein-based industries faces numerous challenges, which leads to overall low productivity. Being that most of them are not strategically driven and are not governed by any strategic orientation, goals or plan, they are

susceptible to vulnerability arising from environmental problems.

As understanding grows about the impact of human activity on the earth's ecosystems, customers concern about the environment and its connection to health and safety will intensify (Unukpo, 2017). At the same time, mankind's passion for consumption will persist. The challenge for companies will be to devise business operations and products that are friendly to the environment while also meeting the needs of consumers. Hence, the concern for awareness of green marketing as it incorporates a large range of activities, consisting of changes to the production process, packaging changes, product modification, as well as modifying advertising (Ihemeje *et al.*, 2020). Since people are increasingly so much particular about the usage of green products, and are ready to pay any price for a green product, any company or individual especially in the agricultural industries that is producing green products will be creating more brand awareness for their organization/personal business (Oyekunle *et al.*, 2024).

Ater, Aye and Daniel (2018) analyzed maize value addition among entrepreneurs in Nigeria. Maize farmers across Taraba State composed the population. An investigation of socio-economic characteristics of maize processors not having a significant effect on their choice of maize value-added enterprise was one of the study's hypotheses. The result indicated that sex had a negative coefficient with male respondents preferring only grain production enterprise while women went a step further to process the grains into akamu, corn flour, massa and boiled maize. Ayinde, Ibrahim, Salami and Yusuf (2019) investigated the determinants and efficiency of maize crops marketing in Ilorin Metropolis, Kwara State of Nigeria. Maize crop farmers in the area under investigation made up the population and their responses were collected with a questionnaire. The study's aims included examining the socio-economic determinants of the farmers' marketing efficiency. The result revealed that gender had an insignificant effect on their farmers' marketing efficiency.

Economic determinants of rice marketing decisions among smallholder rural farming households in Federal Capital Territory, Nigeria was researched upon by Anthony, Alabi, Ebukiba and Gamba (2021). Rice farmers within the area formed the population and responses were elicited from them using a questionnaire. One of the study's objectives was to verify the effect of gender on rice marketing strategies.



The finding showed that gender had no significant effect on rice marketing strategies among the farmers. Determinants of farmers' perception and adoption of improved legume varieties among farming households in Northern Nigeria were investigated by Egwuma, Siéwé, Mohammed and Angara (2022). With a population made up of legume farmers from both Benue and Kano States, the study sought to investigate the influence of gender on the farmers' adoption of improved crop varieties for improved marketing of the crops. Analysis of obtained data revealed that gender insignificantly influenced adoption of improved crop varieties for improved marketing of the crops.

Influence of socio-economic factors on the use of information dissemination channels for improved agri-based marketing among groundnut farmers in Northwest Nigeria was conducted by Abu, Haris, Hamzah, Hassan, Mustapha and Shah (2023). All groundnut farmers within the area made up the population and one of the study's enquiries was to ascertain the effect of sex on farmers' use of mobile phone information for improved agro-based marketing. The result revealed that sex did have a significant effect on use of mobile phone information for improved agri-based marketing with males utilizing the information more than females. Egbetokun and Amao (2023) examined factors influencing tomato farmers' market participation and constraints in production in Oyo State, Nigeria. Tomato farmers across the state constituted the population and inclusive in the inquiries for the study was an assessment of the influence of sex on farmers' participation in improved marketing of agro-based products. The result showed that sex was an insignificant factor.

Socioeconomic determinants of crop production strategies adopted by organic farmers in Onicha Local Government Area of Ebonyi State, Nigeria were examined by Chinenye, Chukwu, Osuafor, Uba and Eze (2023). Crop farmers across the state composed the population. Data collection was with a questionnaire and the study's objectives included verifying the influence of gender on the farmers' crop production strategies adopted. The result showed that gender insignificantly influenced the farmers' adopted crop production strategies. Adedigba, Jatto, Olaitan and Oke (2024) verified determinants of market outlet among catfish farmers based on empirical evidence from Kwara State, Nigeria. Catfish farmers across the state served as the population. Inclusive in the study's posers was an enquiry of the influence of gender on marketing outlet of the fish. The result revealed that

gender significantly influenced marketing outlet among the farmers with males preferring urban markets while females preferred local markets.

From research-based evidence, gender is most often investigated as a determining factor of individual's awareness of environmental-related innovations. As it concerns farmers and their activities, the process of gender role socialization most often assigns differing responsibilities to men and women. This role differentiation could possibly serve to influence their awareness of green marketing. Having perceived gender as being capable of determining awareness of green marketing, this study investigated the differences in gender between male and female farmers on their awareness of green marketing in Calabar Education Zone of Cross River State.

### **Justification of the study**

Green marketing is a strategy through which environmental problems can either be mitigated or managed due to its benefits. Human activities that have direct impact on the natural environment such as farming can possibly serve to benefit from adopting green marketing strategies as it could help increase yield while at the same time minimizing adverse impacts on the environment. Adopting green marketing strategies could also make farmers and their businesses more resilient to environmental problems. Yet, despite the widespread awareness of environmental issues, there appears to be an equal and opposite widespread lack of adoption of green marketing strategies. This is evidenced by agro-allied processes and practices serving as a sustained source for the continuous unchecked issues of land degradation, soil erosion, deforestation, and increased use of agro-chemicals/emission of industrial toxins, which all culminate in the destruction of biodiversity. This has brought such consequences as low productivity, increasing risks, low profitability, and tensed competition, limited market access, gender disparities, food insecurity, heavy investment on equipment, increased operational cost, and a high rate of business failures. The consequences in turn then make most agro-allied processes and business very vulnerable to arising environmental problems. Thus, this study examined farmers' gender and their awareness of green marketing in Calabar Education Zone of Cross River State. Identifying the influence of gender on the awareness of green marketing would direct and improve efforts towards the advocacy for gender equality in agriculture and environmental sustainability.

### Purpose of the study

The purpose of the study was to ascertain whether differences exist between male and female farmers in terms of their awareness of green marketing in Calabar Education Zone of Cross River State.

### Research question

How does males differ from female farmers in terms of awareness of green marketing?

### Statement of hypothesis

HO: There is no significant difference between male and female farmers in terms of awareness of green marketing.

HI: There is a significant difference between male and female farmers in terms of awareness of green marketing.

### Methodology

The study adopted a descriptive survey research design because the issue of green marketing is on-going in the field and survey allows the generalization of results finding on the general population from studying a given sample of the population. The population of the study was made up of registered farmers across the study area which was 4,513 (Cross River Agricultural Development Programme (CADP), 2025). From the population, a sample of 573 respondents was drawn using purposive and simple random sampling techniques. The purposiveness was in line with selected LGAs and communities therein being accessible for investigation while the randomness was in order to give each and

every member of the population an equal and zero chance of being selected. Four LGAs and two communities each therein were sampled for the study. The data collection instrument is tagged the “Awareness of Green Marketing Questionnaire” (AGMQ). It has sections A and B. Section A is designed to obtain data of the respondents’ gender while Section B elicited responses concerning the respondents’ awareness of green marketing with [12 items on a response rubric of very well (VW), not too well (NTW), somehow (SH) and not at all (NAA)].

The instrument was validated by two experts in Measurement and Evaluation in the Department of Educational Management and two experts in the Department of Geography and Sustainable Development Education who ascertained the degree to which the items on the instrument measured what it was expected to measure. The reliability of the instrument was ascertained by conducting a trial test with 30 respondents from communities who were not part of the actual study sample. The obtained data was analyzed using the Cronbach Alpha reliability method. The reliability coefficient for awareness of green marketing was 0.77. The data collected for the actual study was analyzed using independent t-test technique and tested at .05 level of significance.

### Results and discussion

The results of the study were presented based on the research question and the hypothesis.

Research question; How does males differ from female farmers in terms of their awareness of green marketing? This research question was answered using the calculated mean in table 1.

**Table 1**

**Mean and standard deviation score of males and females’ green marketing awareness by farmers in Calabar Education zone. (N=573)**

Gender	N	Mean	SD
Male	250	22.46	8.78
Female	323	25.33	10.25

Significant at 0.05 level, df = 2, 571

The result in table 1 shows that, the mean score of males’ awareness of green marketing is 22.46 while that of female farmers is 25.33. This indicate that, the female farmers have more awareness of green marketing than the male farmers.

### Hypothesis

HO: There is no significant difference between male and female farmers in terms of awareness of green marketing.



HI: There is a significant difference between male and female farmers in terms of awareness of green marketing.

To ascertain whether the difference between male and female farmers in their awareness of green marketing is significant, an Independent T-test analysis was carried out as shown in table 2.

**Table 2**

**Independent t-test analysis of the difference in gender between male and female farmers on their awareness of green marketing in Calabar Education Zone. (N =573)**

Gender	N	Mean	SD	F-value	t-value	sig
Male	250	22.46	8.78	18.32	- 3.54	<.001
Female	323	25.33	10.25			

Significant at 0.05 level, df = 2, 571

The result in table 2 shows that the t-value of -3.54 is less than the accepted 0.05 level of significant. This means that the F-value of 18.32 is significant at the 0.05 level of significant with 571 degree of freedom. Therefore, the HO: That, there is no significant difference between male and female farmers in terms of awareness of green marketing was rejected and the alternative HI: that, there is a significant difference between male and female farmers in terms of awareness of green marketing was uphold. This means that the female farmers are more aware of green marketing than the male farmers in Ikom Education Zone of Cross River State.

**Discussion of Findings:**

The finding of the study is in tandem with Ater,et al (2018) who reported that, sex had a negative coefficient with male respondents preferring only grain production enterprise while women went a step further to process the grains into akamu, corn flour, massa and boiled maize. The finding is in line with Adedigba, et al (2024) that, gender significantly influenced marketing outlet among the farmers with males preferring urban markets while females preferred local markets. Since the rural or local markets are environmentally friendly especially because they are close to nature it is therefore obvious that the females who prefer local markets are more aware of green marketing than the male farmers. However, the finding is not in agreement with Anthony, et al (2021). Who reported that, gender had no significant effect on rice marketing strategies among farmers.

**Conclusion**

There is a general low level of green marketing awareness though the female farmers seem to be more

aware of green marketing than the males because the female seems to be closer to nature than the males.

**Recommendation**

There is need for gender sensitization and education on green marketing to encourage more environmentally friendly marketing which will help to prevent pollution of the environment.

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