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Understanding Women's Perception on Participating in Irish Potato (*Solanum tuberosum*) Marketing:

A Pathway to Gender Economic Equality in Plateau State, Nigeria

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Abstract

This study examines women's perception on participating in Irish potato marketing as a pathway to achieving gender economic equality in Plateau State, Nigeria. Women play significant role in Irish potato production, but their participation in marketing the crop remains low, despite their potential to boost local and national economies. There is the need to address this gap to avoid economic inequality and gender under participation. The study employed quantitative methods based on the philosophy of positivism. Data was collected using structured questionnaires administered to 350 respondents, measured on a five-point Likert scale. Analytical techniques such as descriptive statistics and factor analysis were applied using SPSS 23 software. Result of socio-economic profile reveals that most respondents (29.3%) were aged 41-50, with 47.6% being married, 57.3% having a household size of five to six. A significant portion (35.9%) have secondary education, 48.9% are farmers, and 61.6% have six to ten years of marketing experience. The result of factor analysis shows strong sampling adequacy ($KMO = 0.828$) and significant correlations among variables (Bartlett's Test, $p < 0.001$). Five significant factors collectively explain 67.05% of the variance in women's perceptions on participating in Irish potato marketing, with the largest contribution from forms of the market (21.81%), followed by access to markets (16.12%), marketing experience (11.78%), marketing information (10.27%), and intention (7.07%). The eigenvalues greater than 1 for all the five factors confirm their influence on women's perceptions on participating in Irish potato marketing. The study draws special attention to the need for policies aimed at improving access to market information, addressing sociocultural barriers, and providing supportive environments, in order to promote gender economic equality through greater participation of women in the Irish potato value chain.

Keywords

Irish potato, Women's economic participation, Marketing, Market access, Gender equality

INTRODUCTION

Nigeria's economic prosperity relies on long-term, harmonious relationships among different economic sectors and the equal participation of all genders in the labor force (Díaz-s & Correa, 2024). The success of long-term economic development will largely depend on the agricultural sector (Gamage et al., 2023). Plateau State, Nigeria, is the country's leading producer of Irish potatoes and plays a significant role in national food security due to its ideal environment, which makes Irish potato farming economically valuable. Irish potato is a crop that has economic and industrial values, it generates income, and it can be processed into various products, including chips, flakes, wines and starch, to meet both domestic and international market demands (Wakaba et al., 2022a).

Market participation is the involvement of both genders in agricultural markets, with certain activities often dominated by one gender. In Nigeria, gender plays a significant role in shaping agricultural market dynamics, leading to disparities between men and women (Leder, 2022). This gap is influenced by factors such as labor division, institutional constraints, socio-economic conditions, business perceptions, and socio-cultural norms (Kim, 2022). Studies highlight how household dynamics further affect these disparities, with the submission of Simba & Tajeddin (2023), noting that women are often concentrated in the informal economy, particularly marketing, in Sub-Saharan Africa. According to researchers (Mkhize et al., 2023), active market participation is essential for resolving unemployment, poverty, and food insecurity while enhancing household finances (Mkhize et al., 2023). Women's economic empowerment and gender equality are closely tied to their fair representation and participation in markets; yet women in Nigeria face numerous obstacles in agricultural marketing due to a lack of ownership of resources, socio-cultural factors, and institutional support systems (Pierotti et al., 2022). The authors added that, under-participation of women in agricultural marketing hampers economic growth, economic equality, and their well-being. Women are often stereotyped as primarily responsible for domestic duties, restricting their participation in the labor market and agricultural sector (Carrasco-santos et al., 2024). While marketing participation has been linked to financial growth and cognitive empowerment, addressing these barriers remains challenging, with limited research on perceptions of women regarding participation in agricultural marketing in Nigeria.

The production and marketing of Irish potatoes in Nigeria, especially in Plateau State, is recognized as an agricultural sector with potential for income generation, poverty alleviation, and providing a means of livelihood for rural communities (Orsango et al., 2023). Women's participation in this sector has the potential to boost economic expansion by increasing the efficiency of the agricultural value chain, as women often play pivotal roles in production and distribution. This sector also presents a significant opportunity to empower women, enhance household financial stability and community development, and advance gender equality (Zitta, 2022). However, realizing this potential requires a deep understanding of the key factors that influence the perception of women regarding participation in the marketing of Irish potatoes.

In Plateau State, Nigeria, the decline in women's participation in the labor market is persistent. This could be attributed to social and economic issues like economic disparity, social norms, culture, attitudes, beliefs, and the institutional support system. These factors limit their economic possibilities and, as a result, lessen their contribution to the economic progress of Plateau State. Therefore, there is a need to address this gap to avoid economic inequality and gender under-participation. The study examines the perceptions of women on participating in Irish potato marketing in Plateau State, Nigeria.

LITERATURE REVIEW

Women's Participation in the Marketing of Agricultural Produce in Nigeria

Women's participation in agricultural produce marketing is significant but the role they play in both the local and global agricultural economies have been underestimated (Aloun, 2024a). People and products are integrated through marketing, which guarantees their availability at the appropriate time and location to meet customer needs and raise customer satisfaction, according to Agag et al., (2024). Agricultural marketing by women makes a significant contribution to household income and societal well-being, particularly in regions such as Sub-Saharan Africa, according to (Adebayo & Worth, 2024). Inadequate market infrastructure, limited decision-making authority, and restricted access to funding are just a few of the ongoing issues that women face despite their significance (Sil et al., 2024).

Their weaknesses are increased by informal market structures and cultural norms, which always exposed them to manipulation (Widiastuti et al., 2024). Men dominate the marketing of cash crops, leaving women with subsistence crops, demonstrating the gender gap (Mgalamadzi et al., 2024). In Kenya, women are further burdened by the centralization of commercialized crops and informal taxes, which restrict their opportunities for progress (Blackmore et al., 2022). Women's access to support services and wholesale markets is hampered by obstacles such as inadequate licensing. In the opinions of Lecoutere et al., (2024), in order to increase women's perception in agricultural marketing in Sub-Saharan Africa, legislative changes and empowerment programs are recognized as important approaches.

Women's contribution to Irish potato production in Plateau State greatly enhances household income and community well-being (Obi-Egbedi & Gulak, 2020). They have a long history of participation in the Irish potato production sector, as seen by programs like Women-in-Agriculture and Youth Empowerment (WAYE), which increase female participation (Adeyanju et al., 2021). Inadequate infrastructure, gender discrimination, work-family conflicts, and financial limitations are some of the obstacles that women confront which prevent them from setting up and growing

enterprises (City & Ayinaddis, 2023). Improving the perceptions of women on market participation towards promoting gender economic equality in Plateau State need removing these obstacles.

Women Perceptions on Marketing Agricultural Produce in Nigeria: Empirical Evidence

Women are significant to agricultural marketing around the world, but a number of barriers, such as a lack of finances, societal norms, and access to education and decision-making platforms, severely restrict their participation (Ma et al., 2024a). Most of the food produced in Sub-Saharan Africa is produced by women, who make up over half of the agricultural labour force in the region. However, patriarchal customs most times do prevent them from controlling resources, owning land, or taking part in decision-making, combined weight of family duties, which makes it extremely difficult for them to be involved in agricultural marketing (Amir-ud-din & Naz, 2024).

Women in Nigeria contribute significantly to agricultural marketing, despite the challenges such as limited mobility, perishable produce, and poor storage facilities. Research shows that women tend to rely on marketing information but have difficulty accessing it, which hampers their capacity to make informed decisions and maximize what they produce (Anand et al., 2024). These obstacles must be removed in order to encourage perception of women's participation in agricultural markets and equal access to resources, information, market access, and decision-making processes. To achieve Nigeria's Sustainable Development Goal 5, which places a strong emphasis on women's empowerment, it is therefore, important to advance gender economic equality.

Women's Perception on Access to Market Information

An important factor in agricultural value chains is the availability of market information (Kumar & Agrawal, 2023). Farmers' marketing decisions are informed by a variety of variables, such as price variations, demand trends, buyer preferences, and logistical specifics (Rutsaert et al., 2024). Accurate and timely market information can lower transaction costs, lower risks, and increase profitability for smallholder farmers (Ma et al., 2024a). Women are disproportionately disadvantaged in terms of access to this information, which is frequently unequally dispersed. Inadequate extension services, technological obstacles, and sociocultural constraints all contribute to women's restricted access to market information (Lecoutere et al., 2023). Because of this, women farmers might find it difficult to make wise choices, which would hinder their capacity to successfully compete in regional and local markets.

According to Mdoda et al., (2023), Irish potatoes is one of the main staple crops grown and sold in many rural economies, giving agricultural households both food and revenue. Although women play a significant role in the production of Irish potatoes, gender-specific barriers frequently limit their ability to commercialize these products (Mayanja et al., 2024). These difficulties include limited access to market knowledge, credit, land, and inputs all of which are necessary for productive participation in agricultural value chains (Abhulimen, 2024; Jaiyeola & Modupe, 2021). Furthermore, the commercialization of Irish potatoes necessitates knowledge of buyer networks, value-added potential, and market dynamics all of which rely on accurate market information (Hameed et al., 2024). Consequently, knowing how women's perception to take part in marketing Irish potato are influenced by their access to market information

Perceptions of Women on Access to Marketplaces

Whether farmers are selling directly at the farm gate or transporting goods to markets, market access is an important factor in determining their market potential (Experiments et al., 2022). Women around the world frequently feel that their access to markets is restricted by socio-cultural norms, poor infrastructure, and discrimination based on gender, which limits their mobility and ability to (Murphy et al., 2023). Due to this lack of access, they are less able to fully participate in agricultural markets, which lowers their revenues potential and bargaining power in the agricultural value chains (Tiago et al., 2024).

Women's participation in Irish potato marketing is greatly influenced by their perceptions of their access to marketplaces (Wongnaa et al., 2024). However, difficulties still exist due to poor infrastructure, restricted credit availability, and expensive transportation, women often encounter barriers while trying to access markets (Metu & Nwogwugwu, 2024). Women in Plateau State have been generating a significant income from the production of Irish potatoes, which have grown to be the most popular crop on the plateau over time (Christopher et al., 2020). Despite the potato value chain's competitiveness, Ma et al., (2024) point out that rural farmers still have to contend with issues including low pricing, few market locations, and poor returns, which are made worse by irregularities across the supply chain. Many participants' access to profitable markets is limited by their inability to achieve market specifications due to a lack of information, resources, and experience (Sennuga et al., 2024). According to Zaccacheus et al., (2024), expanding market accessibility can increase income opportunities, allowing rural households to raise their standard of living and improve their nutrition.

Forms of Market

Globally, women's participation in the marketing of agricultural products has benefits in terms of job opportunities, and financial security, and is greatly influenced by market arrangements (Aloun, 2024). Women are often restricted to local markets due to traditional norms and limited access to resources, which prevents them from participating in more lucrative, distant marketplaces that are usually controlled by men (Nipa, 2024; Sigal, 2024). According to Pandey et al., (2024), promoting women's participation in rural places can greatly benefit agricultural economies, including improving food production and economic empowerment.

However, the participation of women in decision-making, particularly in rural areas, is often limited. Luise et al., (2024) opined that, women's engagement in producer groups has also been demonstrated to increase their ability to make decisions and participate in the market, underscoring the significance of inclusive market systems. According to Assefa & Getachew, (2023), women's perceptions on participation in the marketing of agricultural products is greatly influenced by market structure. Nomunume et al., (2023), demonstrate that, men typically predominate more profitable wholesale markets. The researchers added that women are unable to make greater revenues and more market prospects as a result of gendered nature of market separation. Women's participation in lucrative downstream nodes of food value chains is limited by cultural norms and family obligations in Sub Saharan Africa (Rasul & Gurung, 2024). Perfect competition governs the majority of agricultural markets, when a large number of producers and consumers jointly set prices with little to no influence from individual businesses (Katunar & Mrak, 2022; Muflikh, 2023). Women's engagement is facilitated by assembly markets, which are frequently situated close to transportation hubs that connect rural and urban areas. These marketplaces draw customers like dealers, collectors, and agents representing metropolitan wholesalers (Berkhout & Sovov, 2023). The authors went ahead to emphasized that, one of the important factors in sustainable development that is entwined with numerous other sectors like marketing is the rural transport infrastructure sector. Because, participation in marketing activities are mostly driven by rural transport, which also plays a significant role in the socioeconomic advantages enjoyed by rural residents worldwide. More to that, because of proximity to important transportation lines and the opportunity for direct communication with customers and middlemen, these marketplaces in Nigeria facilitate women's participation (Zhu et al., 2023). According to Obi-Egbedi & Gulak, (2020) women's perspectives of their responsibilities in Irish potato marketing in Plateau State, Nigeria, are greatly influenced by the layout of agricultural marketplaces. The production and marketing of potatoes has made many women the main breadwinners of their households who use the money to sustain their families and make investments in real estate and furnishings (Uche et al., 2020). Studies by Hudu et al., (2018) and restricted financing availability.. Addressing these obstacles, women's perceptions and participation in Irish potato marketing in the area may improve

Marketing Experience

Women's opinions and participation in agriculture marketing around the world are greatly influenced by marketing expertise (Cachero-mart, 2018). Women with greater experience can be more actively involved since they are more competent at exploring markets, negotiating better prices, and seeing possibilities (Korhonen et al., 2024). Inexperience most times restricts their participation, maintaining gender stereotypes and making women dependent on middlemen or unofficial networks (Ba & Jacquet, 2022). In Sub-Saharan Africa, experienced women often feel more prepared to bargain, obtain better prices, and investigate new marketplaces because they are more confident and skilled at negotiating the complexities of the market (Dosso et al., 2024). In a similar vein, Uthandu (2023) opined that, experience helps rural women farmers to effectively overcome institutional and cultural challenges, like restricted access to financial or informational resources. According to Mart et al., (2021), positive perceptions by women serve as a catalyst to increased experience as they are often involved in marketing participation raising hope for their economic prospects, which can contribute to larger societal transformation. In Plateau State, Nigeria, women's views on active participation in Irish potato marketing are greatly influenced by their experience in marketing (Chikhawo et al., 2024).. According to research carried out by Damilola & Akintunde (2023), examining gender variations in market participation among smallholder cassava farmers in South Western part of Nigeria, marketing experience had a favorable impact on women's willingness to participate in the market. According to the opinions of Ogbari et al., (2024), women who are experienced in agricultural marketing activities tend to have more chances of improving their financial situation, and their participation can advance the region's agricultural industry and gender economic equality. As a result, programs designed to increase women's marketing expertise may result in better market outcomes and increased participation rates (Yin et al., 2021)

MATERIALS AND METHODS

The Study Area

The study was carried out in Plateau State, Nigeria, which has 17 Local Government Areas and is located in the country's north-central region. It lies between latitudes 8°24'N and longitudes 8°32'E and 10°38'E. The two seasons of the state's tropical climate are the rainy season (April to October) and the dry season (November to March). Along with adequate rainfall and a distinctive topography that supports Guinea savannah in the north and tropical forests in the south, the temperature ranges from 15°C to 22°C. Plateau State is home to around 3.5 million people from 54 different ethnic groups and covers an area of 29,986 km². Apart from raising cattle, sheep, goats, and poultry, the main crops farmed are yam, rice, cassava, and maize, Irish potatoes, groundnut, beans fruits and vegetables which are vital for households' financial needs. The state has investment opportunities in agriculture, tourism, and mining (Owolabi, 2020; Uche et al., 2020).

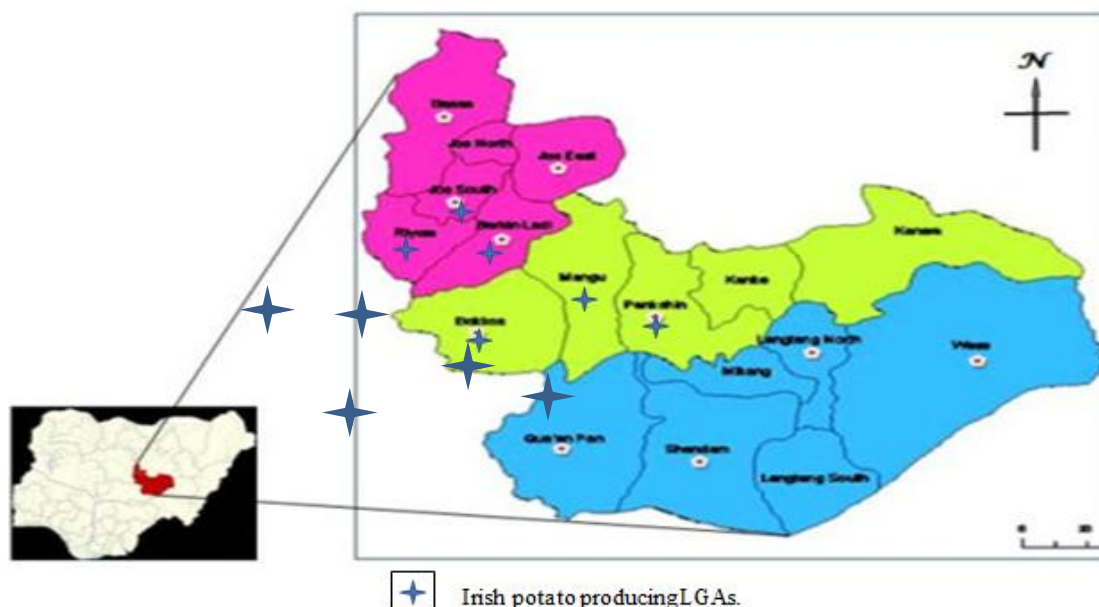


Fig. 1 Map of Nigeria and Plateau State showing Irish potato producing LGAs

Methods

The study employed quantitative methods based on the philosophy of positivism. The research targeted women with the intention or information pertinent to the subject by using purposive sampling. The researcher was able to collect detailed specific to the situation on the data using purposive strategy, which was in line with the objectives of the study. Six local government areas that are well-known for marketing Irish potatoes were selected as the study areas; three each from the Northern Zone (Barkin-Ladi, Jos-South, Riyom) and the Central Zone (Bokkos, Mangu, Pankshin). Twelve markets were chosen for comprehensive assessment, with two rural markets chosen from each of the two districts in each local government area. A precise representation of the Irish potato marketing operations in the designated zones was given by this approach. Data was collected using structured questionnaires administered to 350 respondents, measured on a five-point Likert scale. Analytical techniques such as descriptive statistics and factor analysis were applied using SPSS 23 software.

Justification for Sample Size Selection

In order to ensure reliability of the data and representation of the population under investigation, a sample size of 350 respondents was selected for the study. This size was chosen based on the availability of resources and practical possible outcomes, as well as the expected diversity of perceptions, the need for reliable results with a 95% confidence level, and a 5% margin of error. The Taro Yamane formula was used to determine the sample size at 95% confidence level and 0.5 precision level. Given that,

$$n = \frac{N}{1 + N(e)^2}$$

where,

n = Sample size

N = Population size

e = error term

1 = Constant

Given the population target as N= 2800 and e=the acceptable sampling error at 0.05.

Hence, $n = 2800 \div 1 + 2800 (0.05)^2 = 2800 \div 8 = 350$

RESULTS AND DISCUSSION

Socio-Economic Profile of the Respondents

Women between the ages of 40 and 50 make up the majority of respondents (29.3%), with women in this age 30-40 group coming in second at 28.2%. This suggests that women in this age bracket (40-50) dominate Irish potato marketing, which is indicative of their strong perception of participation in this industry (Table 1). Most of Irish potato marketing participants (47.6%) are married women. While, the combined contributions of widows (14.5%), divorced women (15.1%), and single women (22.8%) are lower, indicating that marital status may influence the level of participation and perception it has in marketing activities (Table 1). The majority (67.5%) of those surveyed live in households with four to five people. Smaller homes (two to three) make up 6.3% and larger households (six to seven) 26% of all households. Respondents with households of four to five people have a strong opinion of taking part in Irish potato marketing,

followed by households with six to seven people, probably because of family obligations, and households with two to three people have a weak opinion (Table 1). Women who have perception for marketing Irish potatoes are mostly secondary educated (35.9%), followed by primary educated (32.2%), tertiary educated (19.7%), or have no formal education (12.2%), suggesting that majority of participants have at least basic education (Table 1). Farmers make up the largest group (48.7%), followed by businesswomen (37%), civil servants (11.1%), and housewives (2.8%). This implies that among the women who are involved in this sector, farming is the most common occupation. Irish potato marketing is largely perceived by women as an extension of their farming pursuits (Table 1). The majority of women who participate in Irish potato marketing (61.6%) have 5–10 years of experience, followed by those with 0–5 years (31.6%), and only 6.8% have 10–15 years. Women who have little long-term experience in the business generally perceive their participation in Irish potato marketing as a recent (Table 1).

Table 1 Socio-economic Profile of the Respondents

Age	Frequency	Percentage
10- 20	40	11.7
20 - 30	81	23.1
30 - 40	99	28.2
40 - 50	103	29.3
50 - 60	27	7.7
Total	350	100
Marital Status	Frequency	Percentage
Single	80	22.8
Married	167	47.6
Divorced	53	15.1
Widow	51	14.5
Total	350	100
Household size	Frequency	Percentage
2	1	0.5
3	21	6
4	111	31.6
5	126	35.9
6	75	21.4
7	16	4.6
Total	350	100
Educational Attainment	Frequency	Percentage
Never been to school	42	12.2
Primary education	113	32.2
Secondary education	126	35.9
Tertiary education	69	19.7
Total	350	100
Occupation	Frequency	Percentage
Farmer	171	48.9
Business	130	37.1
Civil servant	39	11.1
House wife	10	2.9
Total	350	100
Marketing Experience (years)	Frequency	Percentage
0 - 5	111	31.6
5 - 10	216	61.6
10 - 15	23	6.8
15 - 20	0	
Total	350	100

Source: Field Survey, 2024

Results of Factor Analysis

Exploratory factor analysis was done to identify the factors affecting women's perceptions of their involvement in Irish potato marketing. This approach focused more on principal component analysis, which aims to maximize variance, and principal axis factoring, which is intended to identify the latent factors that account for the observed correlations across variables (Reise et al., 2000). Using a factor loading criterion of 0.50, the study narrowed down a large number of factors to a few vital elements, providing accurate analysis. Majority of communalities were above 0.30, indicating that the data's

variance could be satisfactorily explained (Table 2). The data's acceptance for factor analysis was supported by the confirmation of substantial correlations by Bartlett's Test of Sphericity (Chi-Square = 5811.027, df = 253, $p < 0.001$). The dataset's suitability for this research was further confirmed by the Kaiser-Meyer-Olkin (KMO) measure of 0.828, which was significantly higher than the 0.50 cutoff. Tables 2 and 4 show that five variables with eigenvalues above 1 and distinct percentage contributions were retrieved, accounting for 74% of the total variance. These results support factor analysis as a reliable technique for identifying hidden dimensions in the data. By reducing 23 variables to five, the study was able to explain 74% of the variation in women's opinions of Irish potato marketing. "Forms of Market," the top component, had an eigenvalue of 5.30 and explained 21.81% of the variance. "Access to Markets" (eigenvalue = 3.95, 16.12%), "Experience" (eigenvalue = 3.00, 11.78%), "Market Information" (eigenvalue = 2.76, 10.27%), and "Intention" (eigenvalue = 2.00, 7.07%) were next in line. With weights greater than 0.87, key components FM18, FM16, FM17, FM19, and FM20 were highlighted for their significance in the "Forms of Market" factor. Similar noteworthy contributions were noted under "Access to Markets" from ACM9, ACM10, and others, as well as in relation to other factors including "Experience," "Market Information," and "Intention." According to the analysis, there were no cross-loading problems, proving that each variable was unique and significant. These results provide vital information for understanding the perception of women in potato marketing participation and demonstrate the factor structure's strength.

Table 2 KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.828
Bartlett's Test of Sphericity	Approx. Chi-Square		5811.027
	df		253
	Sig.		.000

Source: Field Survey, 2024

Table 3 Factor Analysis- communalities

Variables	MI1	MI2	MI3	MI4	MI5
Initial	0.583	0.54	0.579	0.47	0.354
Extraction	0.591	0.609	0.637	0.467	0.307
Variables	ACM6	ACM7	ACM8	ACM9	ACM10
Initial	0.672	0.688	0.526	0.855	0.842
Extraction	0.675	0.694	0.495	0.855	0.809
Variables	EXP11	EXP12	EXP13	EXP14	EXP15
Initial	0.696	0.497	0.714	0.728	0.726
Extraction	0.724	0.466	0.761	0.726	0.704
Variables	FM16	FM17	FM18	FM19	FM20
Initial	0.812	0.786	0.834	0.774	0.75
Extraction	0.825	0.789	0.866	0.789	0.765
Variables	IT21	IT22	IT23		
Initial	0.528	0.428	0.578		
Extraction	0.611	0.494	0.76		

MI = Market Information, ACM= Access to market, EXP= Experience, and FM= Forms of Market

Source: Field Survey, 2024

Table 4 Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.303	23.057	23.057	5.017	21.814	21.814	4.139
2	3.948	17.167	40.224	3.708	16.122	37.936	3.857
3	3.002	13.053	53.277	2.709	11.779	49.715	3.732
4	2.755	11.978	65.255	2.361	10.265	59.979	2.939
5	2.01	8.738	73.993	1.627	7.072	67.051	2.043
6	0.834	3.626	77.619				
7	0.646	2.808	80.426				
8	0.518	2.253	82.68				
9	0.464	2.016	84.696				
10	0.421	1.83	86.525				
11	0.402	1.747	88.272				
12	0.377	1.638	89.91				

Extraction Method: Principal Axis Factoring.

When factors are correlated, sums of squared loadings cannot be added to obtain a total variance

Source: Field Survey, 2024

DISCUSSION

Results for the socio-economic profiles of the respondents according to the survey are that, 80.6% of the women who have perception to participate in the marketing of Irish potatoes in Plateau State, Nigeria, are between the ages of 20 and 50. This could be attributed to their active working age and financial responsibility for maintaining the welfare of their families. This finding is consistent with the findings of a study conducted by Adeyanju et al., (2023) who evaluated food security among African farmers and discovered that majority of respondents were between the ages of 27 and 29, indicating that they are older youth and therefore in their economically productive years. The researchers went on to say that age significantly enhanced farmers' abilities to identify business opportunities in their surroundings and network with potential business partners. Majority of the respondents (47.6%) are married, suggesting that married women in Plateau State, Nigeria, have perception to take part in Irish potato marketing because of their support for their marriages and their financial duties to their households. This finding is similar with research by Adaeze (2020) who emphasizes that married women, especially in Nigeria, rely on necessity-driven enterprise to reduce poverty. Married women's take part in agricultural enterprises to meet household needs and ensure food security is highlighted in similar findings in studies by Amekawa, et al., (2021). Most of the respondents (67.5%) live in households with five to six people, suggesting that growing families influence the perception of women to participate in marketing Irish potatoes in order to meet rising financial needs. This finding correlates with the research findings of Oyetunde-usman et al., (2021) who indicate that, smallholder farmers in Nigeria had average households' size of eight people, indicating a family with large members. The researchers further said that, most farming households in developing nations have large family sizes, which indicate the potential for family labour supply. Majority of the respondents (36%) only completed secondary school, sizable percentages (32%) finished primary school, while substantial proportions completed higher education (20%), and a noteworthy percentage (12%) never attended school, indicating that the majority of women in the research region have low educational attainment. This result is consistent with the observation made by Obasi et al., (2021) who state that, just around 8% of women in the Niger Delta region lack any formal education, with the majority being at least literate at the basic level. In a similar spirit, Alemu et al., (2022) opined that, women's empowerment and involvement in economic activities are determined by education.

The researchers advance that, education is a useful tool that can help women perceive the potential rewards of embracing new marketing ideas, such as taking on revenue-generating activities. The majority of women who make up the research participants (48.9%) are farmers. This finding is in line with the submission of Agwu et al., (2023) who express that, in rural Nigeria, the majority of people take to farming as their major occupation. Most of the respondents (61.6%) had five to ten years of marketing experience, which is consistent with research outcome of Umoffia et al., (2020), who found that most Irish potato marketers in the city of Bauchi State, Nigeria had between one and ten years of marketing experience. The researchers assert that expertise is important for enhancing trading operations and marketing success. The finding of a study by Olagunju et al., (2022) is comparable to this one, showing that most small scale farmers had less than 10 years of experience in catfish farming, whereas three of the four managers of large-scale farms had more than 10 years. The writers made the argument that farming methods get better with practice and that seasoned farmers are better able to comprehend the market and, as a result, can have their goods offered for competitive prices.

Result of factor analysis indicates that, women's perception on participation in marketing activities is significantly influenced by the types of market. This finding is in line with the opinions of Ma et al., (2024a) who assert that, market structure influences how marketers perceive their engagement in agricultural marketing because it determines prices of goods, motivate buyers to have opportunities to make choices, and marketers to adjust to competition in response to market demand. This study supports the findings of Avenyo (2021) who observe that, majority of rural markets in Sub-Saharan Africa are informal and local. Particularly in product marketing, these markets stimulate competitive exchanges and have transformed into vital socio-economic pillars that support the livelihoods of lots of people. This result is also consistent with the study by Isibor & Nkamigbo (2024) who found that, the market structure for marketing of turmeric in the Onitsha agricultural zone of Anambra State, Nigeria, is significantly influenced by the prevalence of wholesale and retail activities. This finding is in line with the research outcome of Balasha et al., (2024), who demonstrate that, women in Sub-Saharan Africa have a relatively small participation in wholesale trading within the market framework. However, as a kind of self-employment, they play an important role in marketing and retailing for both domestic and informal markets, particularly those close to urban centers.

The authors went ahead to say that, women's influence over resources is severely restricted by social and traditional norms, which restricts their participation and access to opportunities in higher-value agricultural value chain segments. In terms of how women's participation in Irish potato marketing is perceived, the study emphasizes market access as one of the most important factors. This research's finding correlates with those of Ezeudu & Obimbua (2024), who pointed out that, market access is an important part of agricultural development as it allows producers to connect with consumers and succeed financially by selling their produce at competitive prices, thereby, improving their financial status and standard of living. This study supports the opinions of Gliga & Evers, (2023), who emphasize that market access is vital for allowing businesses to obtain competitive information from suppliers, which helps marketers determine the price to offer to customers. This implies that, market access is an avenue for income-generating opportunities and product's commercial success throughout its life cycle, which could influence women's perception of marketing participation. However, women's access to markets might be limited by both social norms and physical constraints, such as costs and distance of transportation between production sites and market locations. The result further indicates that,

lack of marketing experience to response to the diverse customers' preferences is the most closely link variable to the construct. This could be attributed to the fact that, inexperience can lead to lack of confidence, which may limit women's opinions from participating in the competitive Irish potato marketing environment. This result is consistent with the submissions of Bansal (2023) who assert that, marketers need to develop expertise and skills that enable them to obtain a sustainable competitive advantage, provide customers with superior value, and build an outstanding track record for excellence in the industry in order to meet up with today's fast-paced and dynamic competitive markets.. The results of this study support the claims made by Rane et al., (2023) , who stress that expertise enables marketers to build a solid network of connections and relationships within the sector. Furthermore, it allows them to lay emphasis on continuous improvement, communicate effectively and promptly, anticipate customer needs, identify potential challenges and opportunities, and make well-informed decisions that contribute to achieving customer satisfaction. The result indicates that, barriers in accessing market information which made women to have negative perception on participation in the marketing of Irish potato is the most closely linked to the construct.

This finding is consistent to that of SASA et al., (2022) who contend that, sociocultural norms, technological barriers, and insufficient extension services aggravate women's limited access to market information. In a similar vein, the research outcome by Misra et al., (2022) demonstrate that, , commercialization of Irish potatoes requires an understanding of market dynamics, buyer networks, and value-added opportunities, all of which depend on reliable market information. This finding is consistent with the research by Carmo (2023) which demonstrates the growing popularity of information-driven marketing and communications as businesses and marketers focus on using market and customer information to develop strategies and make well-informed decisions. This strategy recognizes how important marketing plays in generating income, which in turn improves cash flow and supports household financial stability.

CONCLUSION

This study reveals that socioeconomic factors like age, marital status, household size, education level, forms of market, market access, marketing experience, and market information have significant effects on women's perception on participating in Irish potato marketing. Women who are into Irish potato business enhance their children's education and career possibilities, supplement the financial needs of their households, in addition to supporting the economic growth of the society. However, women's participation in the Irish potato marketing is restricted by sociocultural norms, institutional support systems, and limited access to market information, despite their significant contribution to Irish potato production. Gender inclusive policies and policy interventions are necessary to address these issues in order to enhance market access, improvement in skills, and access to resources while reducing the effects of social norms. These measures will assist to achieving food security and stimulating gender economic equality by increasing women's participation in Irish potato marketing.

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