



RSM2SNF
Research Supporting African MSMEs
To Provide Safe and Nutritious Food

**Are women represented where they are present?
Evidence from female leadership roles in food wholesale
markets in Nigeria.**

Osuntade O.B., Liverpool-Tasie Lenis Saweda O., Kolade O., Amadi G., Reardon T., and
Wineman A.



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Abstract

Despite noted benefits of and advocacy for more female leaders in society, women still play limited or background leadership roles in many spheres of the economy. This study use data from ~470 commodity associations in 300 food wholesale markets to explore the extent and drivers of female leadership roles in Nigerian markets. We find limited role of women in top leadership positions within wholesale food markets, despite their active presence as traders. Key findings suggest that three main factors influence female leadership involvement: active participation in trading, the practice of electing leaders and cultural norms. Interestingly, the presence of at least one woman in the leadership committee correlates positively with improved market services, such as hygiene and security. This underscores the importance of inclusion, not only for gender equity but also for enhancing the overall effectiveness of market governance and experience for traders and customers.

Introduction

There is clear evidence that significant challenges persist in achieving the Sustainable Development Goals (SDGs) vis a vis gender equality (Leal Filho et al. 2023 United Nations, 2022). Issues around gender inequality are pervasive across multiple dimensions including female participation in leadership roles at all levels. (United Nations, 2022). Women's empowerment and gender equality in leadership positions is a cross-cutting goal that, if addressed, can unleash the potential for community, national, regional and global transformations. Recent studies on gender diversity in corporate governance provide consistent evidence regarding the impact of gender issues on corporate governance and firm performance (Gao et al., 2024; Lad, 2024 and Mansour et al., 2024). For example, increasing female participation in top corporate roles has been shown to mitigate company



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

stereotypes and boost business effectiveness (Beaman et al. 2009; Mölders et al., 2018). In addition, in recent years, many countries and organizations have instituted quotas for women in leadership positions (Krook, 2016; Mölders et al., 2018, Sojo et al., 2016).

Despite the potentially revolutionary outcomes of gender equality and efforts to increase female participation in leadership via quotas, gender inequality continues to be pervasive in many sectors of society (Colley et al., 2021, Kilgour, 2013, Noland et al., 2016). Additionally, though there is increasing recognition of women's potential contribution as leaders and numerous efforts to address the longstanding disparity, significant gender gaps persist. Men continue to dominate top-level positions, while women are often relegated to lower-level roles, despite possessing equivalent qualifications and experience (Rahim et al., 2018, World Economic Forum, 2020). This gender imbalance is detrimental to the inclusivity and diversity of economies and undermines the potential for innovation and growth. An underrepresentation of certain genders in leadership positions can hinder market responsiveness to diverse consumer preferences, leading to potentially negative market outcomes. Though less prevalent (compared to higher income countries), studies across Africa complement the findings in higher income countries and recent evidence has documented socio-economic constraints and cultural barriers that have historically hindered women's advancement in the workforce (Tinuke, 2012; Amusan et al. 2021). Some have provided valuable insights on systemic obstacles to leadership roles faced by women and how they navigate through these. These obstacles often include gender biases, limited access to networks, lack of mentorship, societal expectations, and organizational cultures that may not support women's advancement. (Metu & Nwokoye, 2014).



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

In general, while there is increasing attention being paid to female leadership in the corporate world (Ayman & Korabik, 2010; Catalyst, 2020, Gooty et al., 2023, Minehart et al., 2020), there is much less evidence on gender roles and determinants in non-corporate settings generally and particularly in developing regions. This includes food markets that are an important avenue of economic activity in many developing countries. Not only do markets serve as an important venue for income generation for the millions of vendors and associated service providers operating within them, but they are also the main source of food for the vast majority in developing regions (Liverpool-Tasie et al., 2024; Market, 2014, Robinson and Yoshida, 2016). In many food markets, women are present and dominant as traders. However, while there is recognition of the importance of policy interventions to promote gender equality and women's empowerment, there is a dearth of empirical research on the nature and dynamics of market governance and the impact of such governance systems (e.g. how leaders are determined) along with other cultural factors or specific policy initiatives operate on female engagement in leadership in the context of food markets.

In response this study provides empirical evidence on the extent and drivers of female engagement in the leadership of wholesale markets across Nigeria, Africa's most populous country and largest economy. We deliberately focus on wholesale markets for three commodities (tomatoes, fish and GLVs) whose consumption have rapidly expanded across Nigeria (and Africa more broadly), triggering a supply response that has seen the rapid growth of investments by micro, small and medium scale enterprises in their production, processing and distribution. We capture important variation within Nigeria in terms of agroecology, culture and economic development. This allows for the learnings specific to



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Nigeria but also captures important variation within the country that may apply to other African countries with similar contexts.

The article is structured as follows. Section 2 provides an overview of the role of wholesale markets and women's leadership roles in the informal sector. Section 3 presents our data and sample while section 4 presents our empirical strategy. Section 5 presents our results and section 6 concludes.

Wholesale food markets and women leadership in small businesses and the informal sector

Small businesses, particularly micro, small and medium scale enterprises (MSMEs) are the heart and soul of communities (Audina et al., 2024. Ayalu et al., 2023). Women's engagement in MSMEs is widely documented globally (Abdurohman, 2023, Basak, & Gupta, 2018, Bongomin et al., 2020, Kumar, 2016) and in developing regions. Studies have explored women's experiences within these businesses; many in the informal sector (Huggies & Yang, 2020, Guma, 2015). Some studies have described the challenges faced by female small business owners (Guma, 2015; Lim et al., 2024, Sultan & Sultan, 2020). Others document their presence and importance as a source of innovation, job creation and vibrant communities (Ayalu et al., 2023, EIB, 2022)

Within this literature of female engagement in MSME's, limited attention has been paid to food markets. However, food markets serve as a linchpin in the economies of developing countries, acting as the vital intermediary between food producers and consumers (Agwu et



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

al., 2015, Asogwa et al., 2020, Diallo 2020, Djomo et al., 2021, Okezie, 2020; Onyenouru et al., 2022). With their sprawling network of transactions and exchanges, food markets facilitate the distribution of goods across countries, contributing significantly to economic growth and stability (FAO, 2022, World Bank, 2020).

Historically, the wholesale sector has been male dominated (Tinke, 2012; Murphy et al., 2020) However, the recent rapid expansion of value chains for nutrient rich but often perishable products such as fruit and vegetables as well as animal source foods creates a unique opportunity to confirm if male dominance persists while exploring if these value chains create opportunities for higher female participation and engagement in leadership roles. In contrast with some traditional staples such as maize, these value chains often have significant levels of female participation along the value chain segments (production, processing, wholesale, and retail). This could create differential opportunities and/or need for need and interest in leadership roles among women. However, there is limited evidence on food markets generally and wholesale markets particularly in developing regions. There is even less attention paid to the governance of these markets and particularly from a gender perspective. Thus, this paper explores the drivers of gender roles in leadership positions across Nigerian wholesale markets for tomatoes, fish and green leafy vegetables; important value chains that have recently expanded in Nigeria (and other developing countries) as part of the country's food system transformation and in response to changing consumption patterns as incomes increase and populations urbanize (Reardon et al., 2019; Tschirley et al., 2015). The production and distribution of animal source foods such as fish and tomatoes and green leafy vegetables have rapidly expanded in Nigeria as consumers



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

increase their consumption of more diversified foods (Parkhi et al., 2023; Liverpool-Tasie et al., 2020; Liverpool-Tasie et al., 2023).

A review of literature on food markets revealed a few studies that explore gender and leadership in markets (Onyenouru, et al., 2022; Obayelu et al., 2020; Nwanesi, 2006). Some acknowledge regional variations in female leadership within Nigeria's wholesale markets (Obayelu et al., 2020, Nwanesi, 2006). However, these studies are largely descriptive case studies with a limited number of markets within a particular location and across different geographic contexts. There is a dearth of research that systematically examines the presence and drivers of any differences in female leadership across value chains and regions within the same country. In addition, while some studies identify barriers to female leadership in Nigeria's wholesale market sector such as limited access to education, financial resources, and support networks (Nkanta, 2023, Ojinta, 2018), there is much less work on what factors create barriers or an enabling environment for women to engage in leadership. Understanding the specific mechanisms through which barriers to and/or opportunities for female engagement in leadership operate and their differential impact on women from diverse backgrounds is essential for designing effective interventions to promote gender equality and women's empowerment (Okeke, 2017).

Thus, this study investigates the nature of leadership roles played by men and women in the governance of wholesale markets of tomatoes, GLV and Fish across 8 Nigerian states reflecting the country's diverse economic, cultural and agroecological variation. We explore both the variation and drivers of female engagement in leadership across and within Nigeria's more affluent south (with higher levels of education and lower poverty and



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

malnutrition) and the relatively poorer northern region. This is the first study that the authors are aware of to use quantitative data from a large sample of wholesale markets in an African country that allows for exploring variation across and within regions of varying economic and cultural contexts and at multiple levels of governance within markets. Examining the intersecting influences of ethnicity, socio-economic status, and other identity markers on women's leadership opportunities and experiences provides a more nuanced understanding of the challenges and opportunities women face in this sector (Ezeokafor et al., 2021). In addition, understanding the drivers of female leadership within Nigeria's wholesale market sector holds implications not only for gender equality and women's empowerment but also for broader economic development efforts.

We supplement a descriptive analysis of the leadership roles in a census of wholesale markets for the three study commodities (by gender) with a regression analysis to identify key correlates of female participation in leadership roles. We attempt to capture nuanced regional variations and socio-cultural dynamics that influence women's ability to engage in leadership positions within wholesale markets as well as potential heterogeneities across the three study value chains. Exploring how these factors such as organizational culture, decision-making processes, and support mechanisms within wholesale market enterprises correlate with female engagement in leadership can shed light on the facilitators and inhibitors of women's advancement to leadership positions and inform on how policies and programs can be designed to improve female participation in leadership (Lawal et al., 2019, World Bank, 2020).



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Data and descriptive statistics:

This study uses data collected from a census of all food markets where fish, tomatoes, or green leafy vegetables (GLVs) was sold wholesale across seven Nigerian states and Abuja, the Federal Capital Territory (FCT). These states are major regional producers of at least one of the priority commodities (tomatoes, GLV or fish) and represent a wide diversity of agro-ecological, and socio-economic conditions in Nigeria (see Figure 1). The data was collected via a structured questionnaire administered to a focus group consisting of market leaders and traders between July 2023 and February 2024.¹ Each focus group was designed to be composed of a diverse group of market actors knowledgeable about the history and current operation of the market. This included overall market leaders (e.g., the market chairperson, treasurer, or other executives of the market association); product section leaders (i.e. leaders of product specific associations), traders who have a long history in the market, female traders and other stakeholders.

The questionnaire captured detailed information on market level characteristics such as infrastructure available in markets, number of traders and businesses in the market, location (rural vs. urban) and proximity to towns. It also captured information on market governance including who runs the day-to-day operations of the market and how are they selected as well as who oversees the activities of the traders of our priority commodities (tomatoes, fish and GLVs) and how they are selected. Thus, our study sample consists of market level

¹ In this study, a wholesale market was defined as an established place where 2 or more wholesalers were trading any of our study products, tomatoes, green leafy vegetables or fish. This is a location where retailers typically go to purchase fish/vegetables. A wholesaler is defined an intermediary who procures (by possession or for a commission as brokerage) a product from a supplier (a farmer, processor, or other wholesaler) and supplies (by sale if he/she possesses it, or by mere delivery if he/she works for commission) that product to a non-final user (a processor, a retailer (who by definition only sells to final users such as consumers), or another wholesaler.



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

information for the entire universe of 299 wholesale markets that were found in the seven study states and Abuja. These 299 wholesale markets give us 471 market product section governance information about the leaders of product section associations.

In food wholesale markets in Nigeria, it is common for the day to day running of the market to be handled by a market chairperson/leader alone or supported by others (Osinubi, 2007) that constitute the market authority (92% of our study markets). The market chairperson and/or the market authority could have been elected from among the traders, appointed by the municipality or community leadership, inherited it from an ancestor or have volunteered or been volunteered into the position. According to Wemlinger & Berlan (2016), women who are mostly in leadership position are mostly volunteers. To capture important agroecological, socioeconomic and cultural variation across Nigeria, we distinguish between trading and market characteristics in northern Nigeria, with more Guinea and Sudan and Sahelian ecology (that well suited for vegetable production), lower levels of education and higher rates of poverty) and the relatively more affluent south that falls largely in the rainforest, mangrove, and forest ecologies.





Figure 1: Map of Nigeria showing the eight study locations

Table 1 presents the extent of female engagement in market leadership in our sample. Four key points emerge. First, though female traders account for a significant share of traders in these markets (~30% and ~80% in the north and south respectively), they are highly underrepresented in market leadership. Less than 1% and about 15% of overall market leaders are females in the north and south respectively and only ~5% and ~40% of product section leaders in both regions are female. Second, though women may not be the overall leader of the market or product section, we find more female representation as members of overall market or product leadership committees. For example, there is at least one female in the overall market leadership in ~30% of northern markets and in ~60% of southern markets. While the share of markets with at least one female is higher than the share with an overall female leader, the average share of positions held by females in product level leadership associations is lower at 15% (~30% in the south and <10% in the north). Third, there is much more female participation in leadership in the south compared to the north. At market level, the share of markets with a female leader is much higher, at 15% in the south compared to less than 1% in the north. Even within product associations, while only about 10% of product section committees in the north include at least one woman compared to about 50% in the south. These results are consistent with other studies that have documented women's limited decision-making power within households and communities in the northern markets, and that women are more empowered in Southern Nigeria in terms of leadership roles (Hoffman et al., 2017, Nwanesi, 2006).



Fourth, while we find more female engagement in market governance in urban and peri-urban markets compared to rural markets, female engagement in leadership in rural markets is non-trivial. For example, the share of markets with at least 1 female in the overall market leadership committee is about 50% in urban and peri-urban markets compared to 35% in rural markets and the leader of a product association is female in 15% of rural markets compared to 25% in urban and peri-urban areas.

Table 1: Female engagement in market and section leadership

| Variable (market level) | Overall | North | South | Rural | Non-rural |
|---|----------------|--------------|--------------|--------------|------------------|
| Share of markets with a female as the overall leader (market association/authority head) | 0.07 | 0.01 | 0.16 | 0.05 | 0.08 |
| Share of markets where any of the market leadership positions (Executive committee of the market association) is occupied by a female | 0.42 | 0.29 | 0.62 | 0.35 | 0.49 |
| Share of overall market leadership positions held by females | 0.16 | 0.07 | 0.28 | 0.14 | 0.18 |
| Variable (Product section level) | Overall | North | South | Rural | Non-rural |
| Share product sections in market whose leader is female | 0.21 | 0.05 | 0.42 | 0.16 | 0.25 |
| Share of product sections in markets for which any executive in the product section is female | 0.27 | 0.12 | 0.48 | 0.21 | 0.32 |
| Share of product leadership positions held by females | 0.32 | 0.05 | 0.43 | 0.16 | 0.26 |

Source: Author calculations



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Table 2 presents the descriptive statistics for the market and product level leadership committees, and we highlight three key points. First, when women are engaged in overall market governance, they are not in positions of chair or deputy chair. In the north 99% and 95% of market chairperson or deputy chairperson are male and in the south these figures are ~85% and ~90% respectively. This is consistent with the findings of Onyenouru (2022) in their analysis of gendered leadership in a food market in southern Nigeria.

Second, while women are not in overall leadership positions in the market, we do see women more likely to be in positions related to finance such as the position of treasurer or financial secretary. In the north we find that among markets with a treasurer position, about 10% had a woman as the treasurer or financial secretary compared to almost 0% in other roles. In the south, about 30% and 15% of markets with such positions had a female treasurer and financial secretary respectively.

Third, while females remain absent across all positions at product level in the north, females dominate in all non-chairperson leadership positions in the south. Even at product level, only five percent or less of all product level leadership positions were held by women in northern markets. This contrasts with the south where ~85%, ~80% and ~65% of markets with product level associations with executive members had a female deputy chairperson, treasurer, and financial secretary, respectively.

Table 2: Gender distribution among different market leadership roles

| | North | | South | |
|---------------------------|-------|--------|-------|--------|
| | Male | Female | Male | Female |
| Market leader/chairperson | 99% | 1% | 84% | 16% |



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

| | | | | |
|-------------------------------------|-------------|---------------|-------------|---------------|
| Deputy chair | 95% | 5% | 88% | 12% |
| Treasurer | 90% | 10% | 71% | 29% |
| Secretary | 96% | 4% | 77% | 23% |
| Financial Secretary | 91% | 9% | 87% | 13% |
| Number of observations* | 299 | | 299 | |
| Product section level | Male | Female | Male | Female |
| Product section leader/chairperson | 95% | 5% | 58% | 42% |
| Product section deputy chairperson | 97% | 3% | 14% | 86% |
| Product section treasurer | 95% | 5% | 19% | 81% |
| Secretary | 97% | 3% | 25% | 75% |
| Product section financial secretary | 96% | 4% | 33% | 67% |
| Number of observations* | 471 | | 471 | |

Source: Author calculations. * Note that not all markets had all the executive positions so these variables represent the subset of markets with such positions and this number could be less than the highlighted N

Empirical approach:

To identify the drivers of female engagement in market governance we leverage on several multivariate regression approaches applied at multiple levels. We first explore the extent and drivers of female engagement in leadership at the overall market level. Then we explore the extent and drivers of female engagement in market governance at product level, i.e. within product associations.

At both market and product section level, we measure female participation in market governance in three ways. First is with a binary variable equal to 1 if the overall market leader (or product section leader) is female and zero, otherwise. The second measure of female participation in governance is a binary variable equal to 1 if any of the overall market leadership (market chairperson and or any of the executives of the overall market leadership



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

(chairperson of the market association, treasurer, financial secretary, public relations officer etc.) is female and zero otherwise. At the product section level, this variable is equal to 1 if any of the product section leadership (chairperson and/or any of the executives of the product association) is female and zero, otherwise.

Given the binary nature of these leadership variables, we evaluated the factors that influence female participation in leadership with a probit model. The statistical model is based on a cumulative distribution function and the probability that a market has female representation in leadership ($Y = 1$) under given conditions can be calculated as:

$$p_i = Prob[Y = 1 | x_i] = \phi(X_i' \beta) \quad (1)$$

With p_i being the probability that market i has a female market chairperson (or at least 1 female in the market leadership committee) is highly ethnocentric (Greene 2000). The cumulative distribution function of a standard normal variable is represented by ϕ , while X_i' is a list of k characteristics describing market i and β represents the respective parameter estimates. To determine the effect of each variable we estimated the marginal effect for each market characteristic and presented the average. Holding other variables constant the marginal effect of each market characteristic can be expressed as:

$$\Delta = \phi(\bar{X}\beta, d = 1) - \phi(\bar{X}\beta, d = 0), \quad (2)$$

With d as the indicator variable for binary explanatory variables in the model. In the case of continuous independent variables, it can be derived as:



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

$$\frac{\partial p_i}{\partial x_{ik}} = \phi(X_i' \beta) \beta_k. \quad (3)$$

To capture variation (across markets and product sections within markets) in the extent of female engagement, we also measure female participation in market governance with a variable that captures the share of the market leadership positions (executive of the market authority and/or association) and the share of product section leadership committee positions held by women. Since the outcome variable in this instance is a share and ranges between 0 and 1, we estimate this with the fractional response model. This is a model of the mean of the share of the dependent variable (y = market/product section leadership that is female) conditional market characteristics (X_i'), which we denote by μx . Because y is in the $[0, 1]$ range, we ensure that μx is also in $[0, 1]$ by using a probit model for μx estimated using a quasi-likelihood estimation. In all our product level analysis we cluster our standard errors at market level to account for within cluster correlation for product associations in the same market.

We have grouped the set of explanatory variables expected to explain female leadership roles into four groups. The first capture variation in spatial characteristics of markets expected to be associated with opportunities for or interests in female leadership. The spatial factors include whether the market is in an urban area or the more affluent south with less conservative cultural norms vs a rural area and the north with lower levels of education and income and more conservative culture. It also captures if the market is in a production area (meaning that the majority of the product sold in the market comes from farms within same state) and the distance of a market to a city with a population of 50,000 people or more. All things being equal and within conservative locations, markets that are more remote areas might be closer to rural communities and thus more accessible to



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

women and thus see higher participation in trading and thus leadership. On the other hand, remote markets in production areas might also be more conservative and thus less likely to encourage female engagement in leadership. The second group of controls capture the scale of the market measured by the average number of traders present in the market in a typical day and the number of different businesses operating in the market². All things being equal, larger markets with more economic activity might be perceived to have better opportunities for economic benefits for leaders which might encourage male capture. Larger markets might also be complex to handle and thus less attractive to women who might otherwise have been interested in a leadership positions. The third group relates to the duration of market operations. This includes the age of the market and its hours and days of operation. Older markets are likely to have established norms that are traditional and thus more resistance to increased female participation in leadership. Markets that open all day and every day might require more time commitment for oversight than those that open for a few hours a day or just a couple of days a week. Such a time commitment might be more difficult for women with other responsibilities such as family and/or childcare. Finally, to capture variance in incentives associated with how leaders emerge, we control for whether leaders are elected versus if they are appointed or inherit their leadership positions. All things being equal, where leaders are elected (verses appointed or emerging via inheritance) creates a space for females to compete or be brought forward for leadership positions. Given our focus on horticultural products and fish, we distinguish

² The number of businesses captures the number of different businesses operating in the market from a list of 26 different kinds of business activities ranging from food retailers and processors and their input suppliers to day laborers, toilet service providers, transporters and other service providers in the market.



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

between wholesale markets where fish was sold relative to markets where horticultural products are sold.

In an estimation of the drivers of female leadership, some explanatory variables could be endogenous with the likelihood of female engagement in leadership, either as an inhibitor or facilitator. For example, there could be market characteristics that jointly affect the governance of the market (e.g. use of elections) and also encourage female engagement in leadership thus causing omitted variable bias on such explanatory variables. It is also possible that females in leadership could drive particular governance systems such as elections leading to reverse causality. Since we only have a snapshot of female engagement in market leadership, we argue that we have included a rich set of market characteristics (e.g. those associated with the location, scale and age of the market) that are not likely to be determined by female engagement in leadership but likely to also affect female ability and interest in market leadership conditional on other factors such as female participation in the market, this will reduce concerns about omitted variable bias. However, we cannot rule out endogeneity completely nor reverse causality and thus interpret our results as correlations/associations and not cause. We also argue that the direction, magnitude and statistical significance of any associations, holding all else equal is meaningful in this understudied context and provides improved understanding of important correlates associated with female engagement in market leadership.

Finally, to understand how and if female in leadership could affect market outcomes, we explore the correlates of female engagement in leadership and the existence of certain market services. We specifically focus on hygiene services (captured by the presence of a functional toilet, the number of toilets and the trader toilet ratios in a market) and security



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

measured by the presence of a security guard and the number of security guards. Because female leadership is very low (~5%) of the sample and almost 0% in the north, we focus on whether at least one member of the overall market leadership committee is female, and the share of the leadership positions held by women.

Results and Discussion

Table 3 presents the descriptive statistics about our sample of 299 markets and 471 product level associations. Most of the study markets are in the north (60%) compared to the south (40%) but markets in the south tend to have a higher number of traders than those in the north with ~2400 traders present in a typical day in the south compared to 1680 in the north. The majority of the wholesale markets are old, averaging about 45 years in the north and 55 years in the south. They are typically open for wholesale activities 4 days a week in the north and 3 days a week in the south. In both regions, the markets tend to operate all day (12 hours) on days they are open³.

The majority of the study markets are in urban and peri-urban areas with only about 40% of wholesale markets in both regions located in rural areas. This shows that wholesale markets have grown and expanded around major consumption areas. This is further confirmed with the average distance of our wholesale markets being 13 and 9 kilometers away from a city or town of 50,000 people or more in the north and south respectively.

³ For hours of operation and days of the week operational we use the maximum number for either of our products because this question was asked at the product level and not the overall market level. Our assumption is that the max of the hours or days of operation for each of the product traders gives us a lower bound on these variables.



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Tomatoes are more commonly found in the northern markets (~75% in the north compared to ~55% in the south) while GLVs are more commonly found in southern markets (sold in ~70% compared to 50% in the north). and 75% in the south. Tomato production is concentrated in the north relative to the south while GLVs are grown all over the country. Only about 40% of the study wholesale markets sold fish in the south and 25% in the north. This reflects the dominance of horticulture wholesale markets relative to fish and is consistent with anecdotal evidence that suggests that with the rapid expansion of fish farming, wholesale markets are becoming less patronized as fish farmers tend to engage with wholesalers on their farms who then move the product directly to retail markets or their customers who will engage in the processing of fish.

The majority of our wholesale markets are in production areas, meaning more than 50% of the products sold in those markets are secured from within the state. This is not surprising since the states were selected because they were major producers of the study products (fish, tomatoes and GLV) in their respective geopolitical zone in Nigeria⁴.

We find that leaders for the overall market tend to be elected in only about 35% of markets (37% in the north and 33% in the south). However, northern markets are more likely to have elections at the product level (~60%) compared to leadership determination at market level or compared to markets in the south where only 30% have elections, similar to the situation at the level of the overall market.

Finally, we find that women are present, active and often dominant in the share of traders in Nigerian wholesale market. Approximately 55% of traders in the study sample are female

⁴ There are six geopolitical zones in Nigeria, Northwest, Northeast, North central, Southeast, Southwest and South South



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

with about 30% in the north and 80% in the south. We find that female participation varies significantly across products and regions. More specifically, there is consistently much higher female participation in the south and also in GLV wholesale compared to fish and tomatoes. About 30% and 80% of GLV wholesalers are female in the northern and southern markets respectively. This compared with about ~20% and ~80% of tomato wholesalers and 15% and 70% for fish wholesalers respectively for northern and southern markets. Despite, their presence in markets (albeit at different levels), a female as the overall or deputy head of a market or product sections is generally low and almost non-existent in the north.

Table 3: Summary of key explanatory variables

| | North | South |
|--|------------|------------|
| Region of Nigeria market is located | 0.6 | 0.4 |
| Market in in a rural area (1/0) | 0.44 | 0.39 |
| Market is in a production area (1/0) | 0.92 | 0.82 |
| Average number of traders | 1681 | 2414 |
| Age of market | 45 | 54 |
| Government land ownership | 0.90 | 0.97 |
| Average number of businesses operating | 51.20 | 19.84 |
| Market sells tomato (1/0) | 0.74 | 0.57 |
| Market sells glv (1/0) | 0.50 | 0.71 |
| Market sells fish (1/0) | 0.24 | 0.42 |
| Average distance to town of 50,000 | 13.36 | 8.97 |
| Market Leaders are elected (1/0) | 0.37 | 0.33 |
| Number of hours a day open | 12.12 | 11.56 |
| Number of days a week market is open | 4.00 | 3.00 |
| Number of products sold in the market | 4.50 | 5.50 |
| Share of traders in the market that are female | 0.33 | 0.84 |
| Number of observations | 180 | 119 |
| Product section leaders are elected (1/0) | 0.58 | 0.3 |
| Share of fish traders that are female (1/0) | 0.14 | 0.67 |
| Share of tomato traders that are female (1/0) | 0.17 | 0.76 |



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

| | | |
|--|------------|------------|
| Share of GLV traders that are female (1/0) | 0.29 | 0.82 |
| Hours of operation for the sections | 11.7 | 11.6 |
| Days of operation for the sections | 4 | 3.5 |
| Number of observations | 471 | 471 |

Source: authors calculations

Table 4 presents the average marginal effects (AME) results from the probit and fractional response model at market level. Four key points stand out. First, the one factor that is consistently positively associated with having a female market leader is the presence of female traders in the market. All things being equal, a one percent increase in the share of traders that are female is associated with a 24-percentage point higher probability of having a female as the overall market leader, a 49-percentage point higher probability of having at least one female in the market leadership committee and a 24-percentage point higher share of females among the members of the market leadership committee. These results are statistically significant at 1% and indicate the potential to see more women in leadership as women’s successful engagement in food trading continues to expand.

Second, we find variation in the probability and extent of female leadership across the three study products. More specifically, a market selling fish is associated with a 7-percentage point higher probability of having a female leader while a market that sells tomatoes in wholesale quantities is associated with a 5-percentage point lower probability of having female market leader, all else equal. This might reflect trading characteristics associated with tomatoes that are more restrictive due to their large volumes and higher level of perishability (such as the time and duration of trade each day) compared to fish or green leafy vegetables such that conditional on female engagement in trading tomato wholesale markets might reduce their opportunities for or interest in leadership.



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Third, consistent with the descriptive results we find that a market in the south is associated with an 8-percentage point higher share of female members in the market leadership committee compared to their counterparts in the south, *ceteris paribus*. This is consistent with other studies that have demonstrated lower female engagement in business and other activities outside of the home in northern Nigeria (Obayelu et al., 2020, Rahman, 2008).

Fourth, other significant variables include the age of the market, number of business enterprises operating in the market and the share of market that is on government land. All these variables are negatively associated with female engagement in leadership at market levels. These findings are consistent with the hypothesis that older markets and governments with significant influence by community/government leaders are likely to be more conservative and thus less likely to encourage female engagement in leadership. Markets with larger numbers of businesses operating are likely to be more complex to manage. This might create a difficult context for females to engage in leadership from both the perspective of opportunities and interest. For example, more enterprises and perceived economic opportunities for leaders to benefit from might lead to male dominance as has been observed in the literature (Toff & Palmer, 2020). On the other hand, markets with more enterprises are likely to require more effort from leadership to handle the diverse needs associated with service provision in markets, trading rules, conflict resolution etc., thus unattractive to women when considered alongside their other trading and household responsibilities. This is consistent with Onyenouru et al., 2022 who noted that some women in a market in Nigeria's southwest region considered issues of dispute resolution to require physical strength and skills that were typically found more among males.



Table 4: Factors associated with female leadership at market level

| | Market leader is female | | Any of the market leadership is female | | Share of market leadership that is female | |
|---|-------------------------|-------|--|-------|---|-------|
| | AME | p>z | AME | p>z | AME | p>z |
| South | 0.043 | 0.264 | 0.079 | 0.320 | 0.082 | 0.006 |
| Market in in a rural area (1/0) | -0.030 | 0.223 | -0.084 | 0.125 | -0.020 | 0.454 |
| Market is in a production area (1/0) | 0.034 | 0.268 | 0.154 | 0.071 | 0.032 | 0.422 |
| Average number of traders | 0.000 | 0.332 | 0.000 | 0.504 | 0.000 | 0.939 |
| Age of market | -0.001 | 0.005 | -0.001 | 0.201 | -0.001 | 0.059 |
| Government land ownership | 0.000 | 0.631 | -0.001 | 0.232 | -0.001 | 0.088 |
| Average # of businesses operating | -0.002 | 0.084 | 0.000 | 0.569 | 0.000 | 0.282 |
| Market sells tomato (1/0) | -0.055 | 0.057 | 0.079 | 0.277 | -0.033 | 0.344 |
| Market sells glv (1/0) | 0.024 | 0.479 | 0.091 | 0.149 | 0.042 | 0.174 |
| Market sells fish (1/0) | 0.070 | 0.016 | 0.042 | 0.612 | -0.022 | 0.536 |
| Average distance to town of 50,000 | 0.000 | 0.61 | 0.000 | 0.839 | 0.000 | 0.806 |
| Leaders are elected (1/0) | 0.029 | 0.264 | 0.080 | 0.122 | 0.003 | 0.918 |
| Number of hours a day market is open | 0.013 | 0.064 | -0.002 | 0.861 | 0.002 | 0.751 |
| Number of days a week market is open | 0.002 | 0.735 | 0.008 | 0.471 | 0.005 | 0.318 |
| Number of products sold in the market | 0.004 | 0.651 | 0.013 | 0.335 | 0.006 | 0.407 |
| Share of market traders that are female | 0.002 | 0.000 | 0.005 | 0.000 | 0.002 | 0.000 |
| Number of observations | 299 | | 299 | | 299 | |

Source: Author calculations

Table 5 presents the AMEs for explanatory variables associated with female leadership at the commodity section level within food wholesale markets. Four key points stand out. First, location (north versus south) is a key predictor of the probability of females engaged in leadership. A market in the south is associated with a 15-percentage point higher probability of having a female product section leader and an 18-percentage point higher probability that at least one member of the section leadership committee is female. A market being located in the south is also associated with a 19-percentage point higher share of the section leadership committee being female. These results are all statistically significant at 1%. As



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

noted at market level, the distinction between female leadership roles in the north and southern regions of Nigeria is consistent with the literature on cultural norms and female engagement out of the home.

Second, we find consistent evidence that the way leaders are selected into commodity section leadership committees is extremely important. Leaders being elected (versus appointed or through inheritance) is associated with a 22-percentage point higher probability that a section leader is female, a 27-percentage point higher probability that at least one of the product leadership committee members is female and a 23-percentage point higher share of female members in the leadership committee. These results are statistically significant at 1% and large in magnitude. They indicate one potential mechanism to increase female participation in market leadership.

Third, we find consistent evidence that product sections with higher share of female traders in the sections are more likely to have females engaged in leadership, as the section leader or a member of the leadership committee and a higher share of females in the leadership committee. These results are large in magnitude (23-45 percentage points) and statistically significant at 1% for all the leadership measures (see table 5). These results are intuitive as higher presence of women both creates an incentive for women's needs to be met but also increases the pool of potential leaders. However, they also indicate another potential mechanism to increase female engagement in leadership by supporting their successful engagement in trade at food markets.

Fourth, we find that older markets tend to have a lower level of female engagement in leadership though only significant at 10% and small in magnitude (0.1 percentage point). This



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

is consistent with the previous results at market level indicating that older markets might be more conservative and thus have fewer opportunities for females to engage in leadership.

Taken together, the section level results inform on two potential opportunities to increase female participation in the governance of wholesale food markets; higher participation among females in food wholesale and governance based on elections. However, these results reveal that even where elections are held, and females are present, cultural norms still play a very important role in supporting female engagement in leadership in Nigeria. Norms can have a direct and indirect effect on female engagement in leadership if they restrict women's engagement in activities that are income generating and likely to encourage their engagement in leadership (e.g. trading) or if they are not opposed to women to engage in activities but restrict their engagement in leadership.

Table 5: Factors associated with female leadership at commodity section level

| | Product leader is female | | Any of the product section leadership is female | | Share of product section leadership that is female | |
|--------------------------------------|--------------------------|-------------|---|-------------|--|-------------|
| | AME | p>z | AME | p>z | AME | p>z |
| South | 0.15 | 0.00 | 0.18 | 0.00 | 0.18 | 0.00 |
| | 0 | 2 | 0 | 1 | 8 | 0 |
| | - | - | - | - | - | - |
| Market in in a rural area (1/0) | 0.01 | 0.61 | 0.00 | 0.94 | 0.01 | 0.66 |
| | 6 | 2 | 3 | 0 | 2 | 0 |
| Market is in a production area (1/0) | 0.04 | 0.28 | 0.02 | 0.76 | 0.02 | 0.46 |
| | 7 | 6 | 0 | 8 | 9 | 7 |
| Average number of traders | 0.00 | 0.39 | 0.00 | 0.21 | 0.00 | 0.56 |
| | 0 | 8 | 0 | 9 | 0 | 1 |
| | - | - | - | - | - | - |
| Age of market | 0.00 | 0.13 | 0.00 | 0.23 | 0.00 | 0.07 |
| | 1 | 2 | 1 | 9 | 1 | 3 |



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

| | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| | - | - | - | - | - | - |
| Government land ownership | 0.09 | 0.22 | 0.07 | 0.26 | 0.09 | 0.11 |
| Average number of businesses operating | 1 | 4 | 3 | 8 | 2 | 9 |
| Tomato (1/0) - base is fish | 0.00 | 0.53 | 0.00 | 0.45 | 0.00 | 0.49 |
| | 0 | 8 | 0 | 7 | 0 | 4 |
| GLV (1/0)- base is fish | 0.04 | 0.27 | 0.00 | 0.90 | 0.04 | 0.30 |
| | 7 | 9 | 7 | 5 | 0 | 1 |
| Average distance to town of 50,000 | 0.05 | 0.24 | 0.02 | 0.73 | 0.04 | 0.28 |
| | 1 | 5 | 0 | 3 | 6 | 1 |
| Leaders are elected (1/0) | 0.00 | 0.55 | 0.00 | 0.31 | 0.00 | 0.20 |
| | 1 | 7 | 2 | 2 | 2 | 7 |
| Number of hours a day trade occurs | 0.22 | 0.00 | 0.26 | 0.00 | 0.23 | 0.00 |
| | 3 | 0 | 5 | 0 | 3 | 0 |
| Number of days a week trade occurs | 0.00 | 0.39 | 0.00 | 0.87 | 0.00 | 0.68 |
| | 3 | 9 | 1 | 8 | 2 | 1 |
| Share of product traders that are female | 0.00 | 0.62 | 0.00 | 0.19 | 0.00 | 0.71 |
| | 3 | 3 | 8 | 7 | 2 | 7 |
| Number of products sold in the market | 0.45 | 0.00 | 0.38 | 0.00 | 0.38 | 0.00 |
| | 5 | 0 | 2 | 0 | 3 | 0 |
| Number of observations | 0.00 | 0.99 | 0.01 | 0.30 | 0.00 | 0.83 |
| | 0 | 7 | 1 | 1 | 2 | 4 |
| | 471 | | 471 | | 471 | |

Source: Author calculations

Given the strong role of location (i.e. the region of the country where a wholesale market is located), we estimate our probit and fractional response models separately for the north and the south. This informs if the factors associated with female leadership vary across markets within a particular region. Table 6 presents these results and reveals several key points.

First, while some of the variables that explain female engagement in leadership generally apply within both regions, there are important differences in the significance, direction, and magnitude of some of these key factors across regions. For example, while leaders being

27



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

elected is an important predictor of female leadership in both regions, the magnitude of the effect is much larger in the south than in the north. Leaders being elected is associated with a 44- percentage point higher probability of having a female section leader, a 54- percentage point higher probability that there will be at least one woman in the section leadership committee and 48-percentage point higher share of females in the executive of the commodity association in the south. However, in the north, having elections is only associated with a 5-percentage point higher probability of having a female commodity section leader and a 4-percentage point higher share of females in the committee leadership. We do see larger effects of elections on the probability of having at least one female in the commodity association leadership committee (~10-percentage points). Similarly, while the share of female traders in the section is important for female engagement in both regions, it is much larger in the south (2.7 times) for the probability of having a female commodity section leader and on the share of the commodity section leadership committee that is females compared to the north.

In the north, increasing female engagement in trading is the factor with the highest impact on female engagement in leadership. However, diversified markets with more products being sold also tend to have higher female engagement in product leadership. This is consistent for all measures of female engagement in leadership and statistically significant at 10% or less. Since we already control for female engagement in the product sections, this might reflect spillover effects from female engagement in trading and/or leadership in other product associations in the same food markets. On the contrary, the age and location of markets are more important in the south. More specifically, older markets and more remotely located markets in the south are less likely to have female leaders (all else equal) as one might expect



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

if newer markets in and around urban areas are more open to gender inclusion than the older markets.

Another important regional distinction relates to the length of time the products are traded in the market. In the south, there is a positive association between the number of hours that a market is open on a given day and female leadership (heading a commodity section or at least having one female in the commodity section leadership committee). However, in the north, the number of trading hours is consistently negatively associated with female engagement in leadership. Again, this might be linked to cultural norms. If markets are open longer in a more conservative region (in terms of female engagement in activities out of the home), then longer hours can be a discouragement from engagement in leadership for females who might have limited time to stay in the market. On the contrary, in the south where female traders dominate the food wholesale markets, longer hours might be necessary for their livelihoods and increase their desire to have a say in trading activities in their section.

Taken together, these results clearly reveal important “within region” variation that would be missed in a pooled analysis that can inform strategies that are likely to be effective in encouraging more female engagement in leadership but also raise issues that require further exploration.

Table 6: Factors associated with leadership in the northern and southern markets

| | Product leader is female | | Any of the product section leadership is female | | Share of product section leadership that is female | |
|---------------------------------|--------------------------|-------|---|-------|--|-------|
| | AME | p>z | AME | p>z | AME | p>z |
| North | | | | | | |
| Market in in a rural area (1/0) | 0.002 | 0.937 | 0.010 | 0.769 | 0.028 | 0.121 |



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

| | | | | | | |
|--|---------------------------------|--------------|--|--------------|---|--------------|
| Market is in a production area (1/0) | 0.024 | 0.550 | 0.100 | 0.300 | 0.033 | 0.381 |
| Average number of traders | 0.000 | 0.204 | 0.000 | 0.152 | 0.000 | 0.217 |
| Age of market | 0.001 | 0.239 | 0.001 | 0.483 | 0.000 | 0.424 |
| Government land ownership | 0.043 | 0.254 | 0.072 | 0.203 | 0.060 | 0.036 |
| Average number of businesses operating | 0.000 | 0.689 | 0.000 | 0.478 | 0.000 | 0.747 |
| Tomato Section | 0.005 | 0.891 | 0.120 | 0.188 | 0.017 | 0.617 |
| GLV section | 0.009 | 0.832 | 0.108 | 0.264 | 0.015 | 0.678 |
| Average distance to town of 50,000 | 0.002 | 0.027 | 0.001 | 0.383 | 0.001 | 0.212 |
| Leaders are elected (1/0) | 0.047 | 0.046 | 0.106 | 0.003 | 0.044 | 0.018 |
| Average number of hours a day open | 0.004 | 0.083 | 0.007 | 0.092 | 0.004 | 0.019 |
| Average number of days a week open | 0.004 | 0.324 | 0.011 | 0.074 | 0.001 | 0.845 |
| Share of product traders that are female | 0.249 | 0.000 | 0.296 | 0.000 | 0.206 | 0.000 |
| Number of products sold in the market | 0.030 | 0.008 | 0.030 | 0.063 | 0.020 | 0.013 |
| Number of observations | 268 | | 268 | | 268 | |
| | Product leader is female | | Any of the product section leadership is female | | Share of product section leadership that is female | |
| South | AME | p>z | AME | p>z | AME | p>z |
| Market in in a rural area (1/0) | 0.078 | 0.230 | 0.021 | 0.738 | 0.046 | 0.448 |
| Market is in a production area (1/0) | 0.096 | 0.226 | 0.182 | 0.013 | 0.106 | 0.122 |
| Average number of traders | 0.000 | 0.363 | 0.000 | 0.385 | 0.000 | 0.554 |
| Age of market | 0.001 | 0.181 | 0.001 | 0.074 | 0.001 | 0.070 |
| Government land ownership | 0.178 | 0.115 | 0.078 | 0.498 | 0.155 | 0.382 |
| Average number of businesses operating | 0.001 | 0.646 | 0.000 | 0.777 | 0.000 | 0.818 |



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

| | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| Tomato section | - | - | - | - | - | - |
| | 0.080 | 0.350 | 0.098 | 0.208 | 0.073 | 0.305 |
| GLV section | - | - | - | - | - | - |
| | 0.041 | 0.625 | 0.080 | 0.310 | 0.052 | 0.506 |
| Average distance to town of 50,000 | - | - | - | - | - | - |
| | 0.006 | 0.046 | 0.008 | 0.028 | 0.006 | 0.016 |
| Leaders are elected (1/0) | 0.441 | 0.000 | 0.539 | 0.000 | 0.475 | 0.000 |
| Average number of hours a day open | 0.011 | 0.097 | 0.012 | 0.072 | 0.012 | 0.258 |
| Average number of days a week open | - | - | - | - | - | - |
| | 0.002 | 0.903 | 0.006 | 0.640 | 0.004 | 0.749 |
| Share of product traders that are female | 0.687 | 0.000 | 0.480 | 0.000 | 0.571 | 0.000 |
| Number of products sold in the market | - | - | - | - | - | - |
| | 0.015 | 0.346 | 0.005 | 0.759 | 0.014 | 0.329 |
| Number of observations | | 203 | | 203 | | 203 |

Source: author calculations

Does female participation in leadership matter?

Finally, we explore if having females engaged in market leadership is associated with the existence of hygiene and security related services in the markets, all else equal. Table 7 presents these results. First, though having at least one female in the overall market association leadership is not significantly associated with having a functional toilet, *ceteris paribus*, for those markets that do have a toilet, having at least one female in the leadership committee for the overall market is associated with having almost 5 more toilets. In addition, having at least one female in the leadership committee for the overall market is significantly associated with lower trader/toilet ratios (by about 490 traders per toilet). These results are statistically significant at 5% or less. Similarly, we find that having at least one female engaged in market leadership is associated with a 7-percentage point higher probability of having security guards in a market and with having 1.5 more security guards



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

than a market without any females engaged in market leadership, all else equal. Though requiring more thorough investigation, these preliminary results suggest that female engagement in leadership does matter and could be quite important in improving the hygiene and safety profile of these food wholesale markets.

Table 7: Association between market service provision and female leadership

| | Having a toilet (Probit) | | Number of toilets (Tobit) | | Trader/Toilet ratio (regression) | | Having security (Probit) | | Number of security guards (tobit) | |
|--|--------------------------|---------|---------------------------|---------|----------------------------------|---------|--------------------------|---------|-----------------------------------|---------|
| | A ME | p> z | A ME | p> z | AM E | p> z | A ME | p> z | A ME | p> z |
| >=1Female in market leadership committee | 0.06 | 0.26 | 4.94 | 0.05 | 492.5 | 0.02 | 0.07 | 0.04 | 1.55 | 0.08 |
| share of females in the leadership committee | 0.08 | 0.47 | 1.90 | 0.71 | 485.4 | 0.24 | 0.10 | 0.04 | 0.41 | 0.82 |
| Other control variables included | YES | | YES | | YES | | YES | | YES | |
| Number of observations | 299 | | 299 | | 299 | | 299 | | 299 | |

Source: Author calculations



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Conclusion and policy implications

This study provides crucial insights into the extent and drivers of gender roles in leadership within Nigeria's wholesale food markets, focusing on markets for tomatoes, fish, and green leafy vegetables. We find that while women are highly engaged as traders in many of these wholesale food markets (and dominant in the south), they are less likely to be engaged in leadership; particularly as the head/leader or deputy head of the market or product associations. However, we find that women often play supporting roles within the leadership committees, particularly in the south.

Our analysis of the drivers of female engagement in market and commodity associations leadership reveals that female participation (as traders), market location (north vs. south) and mode of leader selection (election vs. appointment or by inheritance) are the three strongest determinants. However, even among markets in Nigeria's more affluent south where (~80%) of traders are female, women are not likely to be the overall market leader or the commodity section leader. In addition, while many market leadership committees have at least one female (~60% in the south and 30% in the north), there is only likely to be 1 or 2 females in the leadership committee (28% of the members in the south and 5% in the north). Finally, we find evidence that female engagement in market leadership is significantly associated with the provision of key hygiene and security services expected to improve the functioning of markets and the experience of traders and customers.

This study highlights how structural barriers, such as conservative cultural norms and historical male dominance in leadership roles persist in governance across Nigeria's food



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

markets. Nevertheless, we do see clear evidence that in some markets (particularly in the south), female voices are heard, and this is positively associated with market services. The role of modern governance structures—such as elected leadership—and the growing involvement of women in product distribution (even at wholesale level) presents pathways for improving gender inclusion in leadership.

The study findings underscore the need for targeted policy interventions to address barriers that hinder a more inclusive environment for women in leadership. We offer five recommendations for consideration by policy makers and development partners (1) promotion of inclusive leadership selection processes such as elections for leadership positions rather than relying on traditional or heritage-based methods. Where these processes are transparent and democratic, this could promote equal opportunities for women. (2) Having specific programs targeting markets in rural areas and more conservative regions (such as the north) could be implemented to challenge traditional gender roles and promote female leadership. These programs could include awareness campaigns, leadership training for women, and the introduction of policies that encourage gender diversity and support women who engage in leadership. (3) Encouraging mentorship and capacity building that connect aspiring female leaders with experienced market leaders (male and female) can provide the necessary guidance and support for women to take on leadership roles. Additionally, capacity-building initiatives tailored to women can help them develop the skills and confidence required for leadership. (4) Engaging with local and national governments to advocate for policies that promote gender equality in leadership at the market level can drive systemic change. This could include lobbying for legal reforms, gender quotas, and financial incentives for markets that demonstrate progress in female



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

leadership representation. (5) Finally, creating a market environment that supports women's ability to balance their leadership roles with their other work and family responsibilities is essential. Policies such as flexible working arrangements and leadership training focused on diversity and inclusion can help create an enabling environment for female leaders to thrive while allowing women receive necessary support to manage their multiple responsibilities. These recommendations are often linked, and coordinated efforts across multiple stakeholders will be required to achieve them.

While this study contributes to a deeper understanding of gender dynamics in Nigeria's food markets and offers actionable insights for promoting female leadership across diverse socio-economic and cultural contexts, additional research is needed to unpack some of these results. For example, additional research is needed to explain the low level of female engagement in leadership in the north despite female active presence (particularly GLVs). Further research could target those markets in the north with some female engagement in leadership to understand how this has happened despite existing norms. In addition, further research could test the effectiveness of different strategies that encourage higher female participation in markets on female engagement in leadership to inform on what strategies to use to encourage female participation in a way that translates to higher engagement in leadership. Though elections are clearly a potential mechanism to increase female participation in leadership, additional research is needed to understand how women can be supported and encouraged to engage in these elections. This could enhance the effectiveness of having elections as a strategy to promote female engagement in leadership. Finally, more research is needed to understand how female engagement in leadership affects both trader and market level outcomes in food markets. Female engagement in



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

leadership is being noticed and documented in the formal sector. More evidence on female leadership in the informal sector, particularly wholesale markets given their important role in the economic activity of developing regions.



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

References

Abdurohim, D. (2023). Women's Empowerment in MSMEs: Analysis of Social And Economic Impacts. *International Journal of Management and Business Economics*, 2(1), 49-53

<https://doi.org/10.58540/ijmebe.v2i1.467>

Adeola, A. A., Ayegbokiki, A. O., Akerele, D., Adeniyi, B. T., & Bamidele, N. A. (2016).

Marketing perspective of smoked catfish by consumers in southwest, Nigeria. *Applied*

Tropical Agriculture, 21(2), 58-66. [https://www.researchgate.net/profile/Abiodun-Adeola-](https://www.researchgate.net/profile/Abiodun-Adeola-2/publication/313657679_MARKETING_PERSPECTIVE_OF_SMOKED_CATFISH_BY_CONSUMERS_IN_SOUTH-WEST_NIGERIA/links/5e9976974585150839e3bb0f/MARKETING-PERSPECTIVE-OF-SMOKED-CATFISH-BY-CONSUMERS-IN-SOUTH-WEST-NIGERIA.pdf)

[2/publication/313657679 MARKETING PERSPECTIVE OF SMOKED CATFISH BY CONSUMERS IN SOUTH-WEST NIGERIA/links/5e9976974585150839e3bb0f/MARKETING-](https://www.researchgate.net/profile/Abiodun-Adeola-2/publication/313657679_MARKETING_PERSPECTIVE_OF_SMOKED_CATFISH_BY_CONSUMERS_IN_SOUTH-WEST_NIGERIA/links/5e9976974585150839e3bb0f/MARKETING-PERSPECTIVE-OF-SMOKED-CATFISH-BY-CONSUMERS-IN-SOUTH-WEST-NIGERIA.pdf)

[PERSPECTIVE-OF-SMOKED-CATFISH-BY-CONSUMERS-IN-SOUTH-WEST-NIGERIA.pdf](https://www.researchgate.net/profile/Abiodun-Adeola-2/publication/313657679_MARKETING_PERSPECTIVE_OF_SMOKED_CATFISH_BY_CONSUMERS_IN_SOUTH-WEST_NIGERIA/links/5e9976974585150839e3bb0f/MARKETING-PERSPECTIVE-OF-SMOKED-CATFISH-BY-CONSUMERS-IN-SOUTH-WEST-NIGERIA.pdf)

Agwu, N. M., Agodi, J. E., Onwukwe, F. O., & Iroh, O. A. (2015). Determinants of agribusiness entrepreneurs' participation in innovations: a study of Abia State, Nigeria.

https://managementjournal.usamv.ro/pdf/vol.15_3/Art2.pdf

Aina, O. I. (2011). Promoting gender equality for sustainable development. *Social*

Development and Gender Empowerment, Ekiti State, Adetiloye Hall, Trade Fair Complex,

Ado-Ekiti (November 2011).

[https://www.academia.edu/download/32802897/PROF_AINA - EKITI SUMMIT -](https://www.academia.edu/download/32802897/PROF_AINA_-_EKITI_SUMMIT_-_LEAD_PAPER_-_NOV_1.pdf)

[_LEAD PAPER - NOV 1.pdf](https://www.academia.edu/download/32802897/PROF_AINA_-_EKITI_SUMMIT_-_LEAD_PAPER_-_NOV_1.pdf)

Amusan, L., Akokuwebe, M. E., & Odularu, G. (2021). Women development in agriculture as

agency for fostering innovative agricultural financing in Nigeria. *African Journal of Food,*

Agriculture, Nutrition and Development, 21(7), 18279-18299.

<https://www.ajol.info/index.php/ajfand/article/view/231653>



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

- Asogwa, I. S., Omah, E. C., & Asogwa, M. A. (2020). Empowering women through agribusiness: A key to reducing poverty and food insecurity in Nigeria. *Academia.edu*. Retrieved from <https://www.academia.edu/download/108769999/47.pdf>
- Audina, M., Yunus, R., Parinding, K. A., & Nasruddin, M. A. (2024). The Role of Micro, Small, and Medium Enterprises in Improving Community Welfare. *Golden Ratio of Data in Summary*, 4(1), 81-89. <https://goldenratio.id/index.php/grdis/article/view/516>
- Ayalu, G., Abbay, A. G., & Azadi, H. (2023). The role of micro-and small-scale enterprises in enhancing sustainable community livelihood: Tigray, Ethiopia. *Environment, Development and Sustainability*, 25(8), 7561-7584. <https://link.springer.com/article/10.1007/s10668-022-02359-7>
- Ayman, R., & Korabik, K. (2010). Leadership: Why gender and culture matter. *American Psychologist*, 65(3), 157–170. <https://doi.org/10.1037/a0018806>
- Basak, R., & Gupta, M. D. (2018). Literature review on importance of MSMEs in empowerment of women participants. *Journal of Entrepreneurship and Management*, 7(3), 22. <http://publishingindia.com/jem/>
- Beaman, L., R. Chattopadhyay, E. Duflo, R. Pande, & P. Topalova. 2009. “Powerful Women: Does Exposure Reduce Bias?” *The Quarterly Journal of Economics* 124 (4): 1497–1540. <https://doi.org/10.1162/qjec.2009.124.4.1497>
- Bongomin, G. O. C., Woldie, A., & Wakibi, A. (2020). Microfinance accessibility, social cohesion and survival of women MSMEs in post-war communities in sub-Saharan Africa: Lessons from Northern Uganda. *Journal of Small Business and Enterprise Development*, 27(5), 749-774. <https://www.emerald.com/insight/content/doi/10.1108/JSBED-12-2018-0383/full/html>



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Bukola Osuntade (2023): Gender issues along the fish and vegetable value chains in Nigeria: A call for policy action.

<https://www.canr.msu.edu/fsg/projects/RSM2SNF%20gender%20brief%2021-02-2023.pdf>

Catalyst. (2020). Why Diversity and Inclusion Matter: Quick Take
<https://www.catalyst.org/research/why-diversity-and-inclusion-matter/>

Colley, L., Williamson, S., & Foley, M. (2021). Understanding, ownership, or resistance: Explaining persistent gender inequality in public services. *Gender, Work & Organization*, 28(1), 284-300. <https://doi.org/10.1111/gwao.12553>

Diallo, A. (2020). Land Ownership, and Women in the Agribusiness Sector in Mali: The Agricultural Orientation Law and its Implications for Women. *Journal of Liberal Arts and Humanities (JLAH) Issue, 1(3)*, 16-24. <https://jlahnet.com/wp-content/uploads/2020/04/3.pdf>

Djomo, C. R. F., Ukpe, U. H., & Dzever, D. D. (2021). Assessing the performance and participation among young male and female entrepreneurs in agribusiness: A case study of the rice and maize subsectors in Cameroon. *ResearchGate*. Retrieved from <https://www.researchgate.net/publication/349722758>

Ejumudo, K. B. O. (2013). Gender equality and women empowerment in Nigeria: The desirability and inevitability of a pragmatic approach. *Developing Country Studies*, 3(4), 59-66. <https://www.academia.edu/download/110719143/5170.pdf>

Engle, C. R., Hanson, T., & Kumar, G. (2021). Economic history of U.S. catfish farming: Lessons for growth and development of aquaculture. *Aquaculture Economics & Management*, 26(1), 1–35. <https://doi.org/10.1080/13657305.2021.1896606>

European Investment Bank (EIB), 2022. Gender equality and women's economic empowerment. <https://www01.eib.org/attachments/publications/gender-overview-2022->



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

[en.pdf#:~:text=OVERVIEW.%202022.%20%E2%80%9CBridging%20the%20gender%20divide%20is%20not%20only%20a](#)

Ezeokafor, U. R., Nwankwo, F. O., & Onuoha, O. C. (2021). Socio-economic activities of cooperative societies and women empowerment in Anambra State, Nigeria. *Journal of Global Economics and Business*, 2(6), 103-121.

<http://journalsglobal.com/index.php/jgeb/article/view/61>

Food and Agriculture Organisation FAO. 2022. *The State of Agricultural Commodity Markets 2022. The geography of food and agricultural trade:Policy approaches for sustainable development*. Rome, FAO. <https://doi.org/10.4060/cc0471en>

Food and Agriculture Organization of the United Nations. (2011). *The State of Food and Agriculture 2010-11: Women in Agriculture: Closing the Gender Gap for Development*. Retrieved from [FAO Report](#)

Gao, Y., Tian, X., & Xu, J. (2024) Intellectual Capital, Board Diversity, and Firms' Financial Performance: A Complex System Perspective. *Systems*12(9), 363; <https://doi.org/10.3390/systems12090363>

Gooty, J., Ruggs, E. N., Aguinis, H., & Kent, T. (2023). Stronger together: A call for gender-inclusive leadership in business schools. *Journal of Management*, 49(1), 12–29. <https://doi.org/10.1177/01492063231178792>

Hoffmann, L. K., Melly, P., & Walther, O. J. (2017). Gender and Markets: Empowering Women in West African Markets Case Studies from Kano, Katsina (Nigeria) and Maradi (Niger). https://www.academia.edu/download/105331624/WFPgenmks_LKH-PM-OW12-17_report_copy.pdf



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Hughes, K. D., & Yang, T. (2020). Building gender-aware ecosystems for learning, leadership, and growth. *Gender in Management: An International Journal*, 35(3), 275-290.

<https://www.emerald.com/insight/content/doi/10.1108/GM-11-2019-0215/full/html>

Hunt, V., Layton, D., & Prince, S. (2015). Why diversity matters. McKinsey & Company. <https://www.mckinsey.com/business-functions/organization/our-insights/why-diversity-matters>

Ifejika, S. I., & Ojo, O. V. (2024). Gender Equity and Women's Inclusion in Governance Processes in Nigeria: Why Was the National Gender Policy's Affirmative Action Unable to Engender Desired Change? *The International Journal of Community Diversity*, 24(1), 51.

https://search.proquest.com/openview/687037106d1e5c7db74d6b9d878c2d0d/1?pq-origsite=gscholar&cbl=5528222&casa_token=cT1KEFIL7ZoAAAAA:qWQE8UgPF3-lypKQL30iIUzcoYKXwrVrceu7CzPiojThgO48pcRyK1ZUAsY9DH6TbFnXsiR

Karakire Guma, P. (2015). Business in the urban informal economy: barriers to women's entrepreneurship in Uganda. *Journal of African Business*, 16(3), 305–321.

<https://doi.org/10.1080/15228916.2015.1081025>

Kilgour, M. A. (2013). The global compact and gender inequality: a work in progress. *Business & Society*, 52(1), 105-134. <https://doi.org/10.1177/0007650312459918>

Koveshnikov, A., Tienari, J. & Piekkari, R. (2019) Gender in international business journals: A review and conceptualization of MNCs as gendered social spaces. *Journal of World Business*, 54(1), 37–53. Available from: <https://doi.org/10.1016/j.jwb.2018.10.002>

Krook, M. L. (2016). Contesting gender quotas: Dynamics of resistance. *Politics, Groups, and Identities*, 4, 268–283. <https://doi.org/10.1080/21565503.2016.1151797>

Kumar, Y. (2016). Women participation in Indian MSMEs in globalized era. *International Journal of Information, Business and Management*, 8(2), 277.



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

<https://search.proquest.com/openview/e794819c03bf72e788471c287b174e81/1?pq-origsite=gscholar&cbl=2032142>

Lad, V. S. (2024). *The Role of Women in Indian Business Leadership: A Special Reference to Mumbai City*. ResearchGate: https://www.researchgate.net/profile/vaishnavi-lad/publication/383360482_the_role_of_women_in_indian_business_leadership_a_special_reference_to_mumbai_city

Lawal, M. K., Oluyemi, O. T., & Abiola, O. A. (2019) Women Participation and Political Leadership in Africa: A Case of Nigeria.

<https://www.academia.edu/download/94988095/J0704024957.pdf>

Leal Filho, W., Kovaleva, M., Tsani, S. *et al.* Promoting gender equality across the sustainable development goals. *Environ Dev Sustain* **25**, 14177–14198 (2023).

<https://doi.org/10.1007/s10668-022-02656-1>

Lim, S. S., Sonko, L. K., & Cham, E. (2024). Exploring the supportive factors and inhibitors to the growth propensity of women owned MSMEs in the Gambia. *Technology Analysis & Strategic Management*, *36*(3), 423-439. <https://doi.org/10.1080/09537325.2022.2035348>

Liverpool-Tasie, L. S. O., Wineman, A., & Resnick, D. (2024). Divergent beliefs about food safety and affordability in Nigeria. *Global Food Security*, *41*, 100753.

<https://www.sciencedirect.com/science/article/pii/S2211912424000154>

Mansour, M., E'leimat, D. A., Alim, S. A., & Marei, A. (2024). Board gender diversity and bank performance in Jordan. *Banks and Bank Systems*, *19*(1), 183.183-194.

[doi:10.21511/bbs.19\(1\).2024.16](https://doi.org/10.21511/bbs.19(1).2024.16)

Market, S. F. (2014). *Food cart economics*. SF Market. Retrieved from

<https://core.ac.uk/download/pdf/36692399.pdf>

McKinsey & Company. (2018). *Delivering through Diversity*. Retrieved from McKinsey Report



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Metu, A., & Nwokoye, E. (2014, June). Entrepreneurship development in Nigeria: Prospects and challenges. In *International Conference on Entrepreneurship: Strategy for Socio-Economic advancement in Emerging Economies, organized by the Department of Business Administration, Faculty of Social and Management Sciences, Bowen University Iwo.* <https://dx.doi.org/10.2139/ssrn.2622222>

Minehart R.D., Foldy E. G., Long J. A., Weller J.M (2020). Challenging gender stereotypes and advancing inclusive leadership in the operating theatre. *British Journal of Anaesthesia*, 124(3), pp 148-154, <https://doi.org/10.1016/j.bja.2019.12.015>

Mölders, S., Brosi, P., Bekk, M., Spörrle, M., & Welpel, I. M. (2018). Support for quotas for women in leadership: The influence of gender stereotypes. *Human Resource Management*, 57(4), 869-882. <https://doi.org/10.1002/hrm.21882>

Murphy, S., Arora, D., Kruijssen, F., McDougall, C., & Kantor, P. (2020). Gender-based market constraints to informal fish retailing: Evidence from analysis of variance and linear regression. *PloS one*, 15(3), e0229286. <https://doi.org/10.1371/journal.pone.0229286>

Nhamo, G., Nhamo, S. & Nhemachena, S. (2018) What gets measured gets done! Towards an Afro-barometer for tracking progress in achieving Sustainable Development Goal 5. *Agenda*, 32(1), 60–75. <https://doi.org/10.1080/10130950.2018.1433365>

Nkanta, I. (2023). Prospects and challenges for empowering female entrepreneurs in Africa—a Nigerian case study. <https://wlv.openrepository.com/handle/2436/625429>

Noland, M., Moran, T., & Kotschwar, B. (2016). Is Gender Diversity Profitable? Evidence from a Global Survey. Peterson Institute for International Economics. <https://www.piie.com/publications/working-papers/gender-diversity-profitable-evidence-global-survey>



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

Nwanesi, P. K. (2006). Development, micro-credit and women's empowerment: a case study of market and rural women in Southern Nigeria.

http://ir.canterbury.ac.nz/bitstream/10092/958/1/thesis_fulltext.pdf

Obayelu, A. E., Ogbе, A. O., & Edewor, S. E. (2020). Gender gaps and female labour participation in agriculture in Nigeria. *African Journal of Economic and Management Studies*, 11(2), 285-300 <https://doi.org/10.1108/AJEMS-03-2019-0128>

Ojinta, R. I. (2018). *Barriers to women leadership of small and medium enterprises in Nigeria*. Walden University.

https://search.proquest.com/openview/51fdbfbef6c03c91bb79f9e1216e45/1?pq-origsite=gscholar&cbl=18750&casa_token=9sQLNy6tda8AAAAA:a1mHaJUGdRtrEXQJpi-5PER2oeMxII272cxUEGQejBMN_j2I2xm5PhnlkgvQeJ99N9M_vlcD

Okafor, F. C. (1985). The Functional Role of Medium-Sized Towns in Regional Development: The Case of South-Eastern Nigeria. *Third World Planning Review*, 7(2), 143.

<https://www.liverpooluniversitypress.co.uk/doi/pdf/10.3828/twpr.7.2.v215813041023701>

Oke, U. R., Njoku, M. E., & Agbo, F. U. (n.d.). *Gender Differentials in Performance of Milled Rice Wholesale Marketers in Southeast, Nigeria*. Journal of Agricultural Economics and Extension Services. Retrieved from

https://www.jaees.org/documents/journals/1719048844.Oke_117_139.pdf

Okezie, C. R., & Joshua, A. (2016). Analysis of women entrepreneurship development in agribusiness sector in Benue State, Nigeria. *Academia.edu*. Retrieved from

<https://www.academia.edu/download/78473948/Art25.pdf>

Okunade, B. A., Adediran, F. E., Balogun, O. D., Maduka, C. P., Adegoke, A. A., & Daraojimba, R. E. (2023). Gender policies and women's empowerment in nigeria: an analytical review of



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

progress and barriers. *International Journal of Applied Research in Social Sciences*, 5(10), 543-565. <https://fepbl.com/index.php/ijarss/article/view/650>

Onyeonoru, I. P., Eneji, T., & Chiagozie, C. (2022). Gender and Leadership of Market Associations: A Study of Bodija Market Ibadan, Nigeria. *BEYOND OUR IMAGINATIONS*, 73. <https://books.google.com/books?hl=en&lr=&id=w991EAAAQBAJ&oi=fnd&pg=PA73&dq=female+leadership+in+business+and+trade+associations&ots=4RzgitwFY&sig=oCM8tLgYahiHdpomIFknmpjHWFm#v=onepage&q=female%20leadership%20in%20business%20and%20trade%20associations&f=false>

Osinubi, T. S. (2007). Women in development: the case of Bodija market in Ibadan, South Western Nigeria. *International handbook of research on Indigenous entrepreneurship*, 46. <https://www.elgaronline.com/downloadpdf/edcollbook/9781843768340.pdf#page=60>

Post, C., & Byron, K. (2015). Women on boards and firm financial performance: A meta-analysis. *Academy of Management Journal*, 58(5), 1546-1571.

Rahim, A. G., Akintunde, O., Afolabi, A. A., & Okikiola, I. O. (2018). The glass ceiling conundrum: Illusory belief or barriers that impede women's career advancement in the workplace. <https://ir.unilag.edu.ng/handle/123456789/10525>

Rahman, S. A. (2008). Women's involvement in agriculture in northern and southern Kaduna State, Nigeria. *Journal of Gender Studies*, 17(1), 17-26. <https://doi.org/10.1080/09589230701838347>

reports.weforum.org/global-gender-gap-report-2020/

Robinson, E., & Yoshida, N. (2016). *Improving the nutritional quality of food markets through the informal sector: Lessons from case studies in other sectors*. Institute of Development Studies. Retrieved from

https://opendocs.ids.ac.uk/articles/report/Improving_the_Nutritional_Quality_of_Food_M



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

[arkets through the Informal Sector Lessons from Case Studies in Other Sectors/26464030](#)

Sojo, V. E., Wood, R. E., Wood, S. A., & Wheeler, M. A. (2016). Reporting requirements, targets, and quotas for women in leadership. *The Leadership Quarterly*, 27, 519–536.

<https://doi.org/10.1016/j.leaqua.2015.12.003>

Strøm, R. Ø., D’Espallier, B., & Mersland, R. (2014). Female leadership, performance, and governance in microfinance institutions. *Journal of Banking & Finance*, 42, 60-75.

<https://doi.org/10.1016/j.jbankfin.2014.01.014>

Sultan, S., & Sultan, W. I. (2020). Women MSMEs in times of crisis: challenges and opportunities. *Journal of Small Business and Enterprise Development*, 27(7), 1069-1083.

<https://www.emerald.com/insight/content/doi/10.1108/JSBED-06-2020-0226/full/html>

Tinuke, M. (2012). Gender and development: Challenges to women involvement in Nigeria's development. *International Journal of Academic Research in Business and Social Sciences*, 2(6), 14.

<https://search.proquest.com/openview/56d9532d7092585bc27b28fbdf665b0b/1.pdf?pq-origsite=gscholar&cbl=696344>

United Nations (2022). Progress in the sustainable development goals. The Gender Snapshot 2022. <https://www.unwomen.org/en/digital-library/publications/2022/09/progress-on-the-sustainable-development-goals-the-gender-snapshot-2022>

Toff, B., & Palmer, R. A. (2019). Explaining the gender gap in news avoidance: “News-is-for-men” perceptions and the burdens of caretaking. *Journalism Studies*, 20(11), 1563-1579.

https://www.tandfonline.com/doi/abs/10.1080/1461670X.2018.1528882?casa_token=GRKHbns4JNMAAAAA:3vMMPxa07k02tmD15XPUHIBfCR6myaZQ6tKIP0xXtIEmnUOJrDzEH0Anpf dXeioPi1WgAJZ1MKQ



RSM2SNF

Research Supporting African MSMEs
To Provide Safe and Nutritious Food

UN Women. (2015). Progress of the World's Women 2015-2016: Transforming Economies, Realizing Rights. Retrieved from UN Women Report

Wellalage, N. H., & Thrikawala, S. (2021). Bank credit, microfinance and female ownership: Are women more disadvantaged than men?. *Finance Research Letters*, 42, 101929. <https://doi.org/10.1016/j.frl.2021.101929>

Wemlinger, E., & Berlan, M. R. (2016). Does gender equality influence volunteerism? A cross-national analysis of women's volunteering habits and gender equality. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 27, 853-873. https://idp.springer.com/authorize/casa?redirect_uri=https://link.springer.com/article/10.1007/s11266-015-9595-x&casa_token=2CTfPgakjjYAAAAA:satodHISuFu3f0-KkdgdU4qno_96mc1YCeUM99Y3qVhzazvX3TNjp1DS-kR6ddvZ9QTWp0gyxcDaPEc

Wittenberg-Cox, A. (2018). What Most Companies Miss About Customer Lifetime Value. Harvard Business Review. <https://hbr.org/2018/03/what-most-companies-miss-about-customer-lifetime-value>

World Bank Group. (2021). Women, Business and the Law 2021. Retrieved from [World Bank Report](#)

