

# Minimum Wage Implementation and Its Perceived Influence on Marketing of Rice and Sorghum in Makurdi Local Government Area of Benue State, Nigeria

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*Abstract- This study was carried out to analyze the perceived influence of new minimum wage implementation on marketing of rice and sorghum in Makurdi Local Government Area of Benue State. Public opinion survey design was adopted for the study; multi-stage sampling technique was used to select 137 respondents from the study area. Data for the study were source mainly from primary source with the aid of questionnaire. Descriptive statistic were tools for data analysis. Results showed that majority (62.8%) of the rice and sorghum marketers were female majority (89.8%) were married with an average household size of 5 persons. The result further showed that high costs of transporting rice and sorghum with the mean value of 4.09 was the major perceived influence of new minimum wage implementation on marketing of rice and sorghum in the study area, followed by high cost of production and processing of rice and sorghum for marketing ( $x=3.80$ ) and as well as increase in buying and selling of rice and sorghum ( $x=3.28$ ) due to increase in the purchasing power of the customers as a result of the new minimum wage implementation. Also the result showed that the quantity of rice marketed before minimum wage implementation was 86.15bags while after minimum wage implementation was 70.96bags, the annual income before minimum wage implementation was N6, 260,583.94 and after implementation was N5, 210,051.09; yearly operational cost before minimum wage implementation was N416, 642.34 and after implementation was N720, 802.92, quantity of sorghum marketed before minimum wage was 36.06bags and after implementation was 27.36bags, annual income before minimum wage implementation was N2,016,496.35 and after was N2,326,817.52, yearly operational cost before minimum wage implementation was N188, 175.18 and after was N240,882.35. It was concluded that implementation of new minimum wage impacts rice and sorghum marketers*

*in various form, ranging from reduction in market size, increase in cost of transportation, increase in yearly operational costs and reduction in the number of hired labourers engaged. It was recommended that rice and sorghum marketers should leverage on the existing markets association to subsidize means of transportation of their market produce by providing association alternate means of transportation instead of relying on the general means of transportation of rice and sorghum and ease the cost of transportation.*

*Index Terms- New minimum wage, Implementation, Perceived, Influence and Marketing*

## I. INTRODUCTION

Wages represent the monetary compensation that workers receive in exchange for their labor, serving both as a reward for productivity and a means of ensuring their welfare (Adedoyin and Han, 2016). According to Borhat, Kanbur and Stanwix (2021), wages are critical in maintaining a worker's standard of living and play a significant role in economic development. The level of wages paid to workers determines their ability to meet basic needs such as food, shelter, healthcare, and education. In many economies, governments and labor unions advocate for fair wages to prevent worker exploitation and to promote decent living conditions [International Labour Organization, (ILO), 2020].

Different countries implement minimum wage policies based on their economic conditions. On the 3<sup>rd</sup> day of September, 1981, Nigerian began the payment of minimum wage (Igbadumhe *et al.*, 2020).

In 1981 the minimum wage was ₦125, ₦5,500.00 in 2000, and between ₦7,500 and ₦18,000 in 2011, in 2019 it was reviewed from ₦18,000.00 to ₦30,000.00, thereafter ₦70,000 in 2024 (Federal Government of Nigeria, 2023).

The minimum wage has a direct impact on marketing as it influences consumer demand and market stability. When workers earn higher wages, their purchasing power increases, leading to greater demand for goods and services (ILO, 2020). This is particularly important for staple food commodities like rice and sorghum, which constitute a major portion of household consumption in Nigeria. Higher wages enhance consumers' ability to buy these essential food items, thereby stimulating market activities and increasing revenues for producers and marketers. Additionally, a stable minimum wage contributes to economic predictability, enabling businesses to make informed decisions regarding production and pricing (Bhorat *et al.*, 2021).

Globally, rice is one of the most important staple foods, with marketing systems varying widely across regions due to differences in production levels, trade policies, and consumption patterns. Major rice producers such as China, India, Indonesia, and Vietnam dominate the global rice market, with India being the largest exporter (FAO, 2022).

On the contrary, sorghum is marketed both as a staple food and industrial crop, with major producers including the United States, India, Nigeria, and Mexico. The global sorghum market is influenced by demand from food industries, animal feed, and biofuel sectors. International marketing is often dictated by trade policies, weather conditions, and price competitiveness compared to maize and wheat (USDA, 2022).

In Nigeria, rice is a key staple food and a strategic commodity in national food security and agricultural policy. Despite being a major rice producer in West Africa, Nigeria still imports rice to meet domestic demand, which affects local rice marketing and pricing structures. The marketing system involves smallholder farmers, millers, wholesalers, retailers, and middlemen, with inefficiencies arising from poor

infrastructure, inadequate storage facilities, and limited access to market information (NBS, 2020). Increased demand for these grains encourages farmers and traders to expand production and distribution networks, fostering market growth. Furthermore, higher purchasing power can lead to improved dietary choices and food security among low-income earners (World Bank, 2021).

The implementation of minimum wage policies is intended to improve the standard of living for workers by increasing their purchasing power. However, its impact on agricultural commodity markets, particularly the marketing of staple grains such as rice and sorghum, remains a critical concern (Igbadumhe *et al.*, 2020). In major areas where rice and sorghum serve as essential food items and economic commodities, fluctuations in purchasing power due to wage adjustments can significantly affect market dynamics. While an increase in minimum wage may boost consumer demand for these grains, it may also lead to inflationary pressures that increase production, transportation, and marketing costs, ultimately affecting both marketers and consumers.

If wage increments are not matched with stable market policies, marketers may struggle with unpredictable demand, increased cost of operations, and reduced profit margins, which could hinder economic stability in the agricultural sector.

Furthermore, while policymakers aim to use minimum wage adjustments as a tool for economic growth, the unintended consequences on staple food markets remain largely unexplored. There is a risk that higher wages could contribute to inflation, making rice and sorghum less affordable for low-income households. Additionally, the extent to which wage policies influence competition among marketers, supply chain adjustments, and overall market equilibrium remains unclear (Aduba *et al.*, 2018). This study seeks to fill this gap by describing the socioeconomic characteristics of rice and sorghum marketers in Makurdi Local Government Area; examine the perceived influence of new minimum wage implementation on rice and sorghum marketing in the study area; and determine the size of

rice and sorghum marketing before and after new minimum wage. It becomes important to assess the perceived influence of minimum wage implementation on the marketing of rice and sorghum in Makurdi Local Government Area, providing insights that can inform policy decisions and enhance market sustainability. This study will provide rice marketers with crucial insights into how changes in minimum wage policies affect the cost structure, consumer purchasing power. By understanding these dynamics, rice and sorghum marketers can better plan pricing strategies, labor management, and inventory control to maximize returns. This study is centered on Theory of consumer choice and Keynesian theory of income and employment.

## II. METHODOLOGY

### The study area

The research was conducted in the Makurdi Local Government Area of Benue State. Makurdi, the capital city, was established in the early 1920s and gained importance in 1927 when it became the headquarters of the Benue Province. In 1976, it became the capital of Benue State. Makurdi is located between latitudes 7°40'N and 7°50'N and longitudes 8°20'E and 8°40'E, covering a total area of approximately 670 km<sup>2</sup>. The estimated population of Makurdi in 2025 is 489,839. The major ethnic groups in the area are the Tiv, Idoma, Igede, and Etulo.

A prominent geographical feature of the area is the River Benue, which divides the Local Government into two parts: the northern part called North Bank and the southern part called South Bank. The primary occupation of the people in Makurdi is farming, with approximately 75% of the population engaged in subsistence farming.

Makurdi Local Government Area of Benue State possesses several characteristics that support the marketing of sorghum and rice. The area is strategically located along the Benue River, providing fertile alluvial soils suitable for cultivating both crops. Its central location within the state and proximity to urban centers enhance access to major

markets such as Wurukum, Modern Market, and North Bank.

### Sample procedure and sample size selection

The population of the study consists of all rice and sorghum marketers in Makurdi Local Government Area of Benue State. Sample size of 137 rice and sorghum marketers were selected using a multi-stage random sampling technique. In the first stage, five (5) council wards—Walamaiyo, Bar, Mbalagh, North Bank I, and North Bank II out of the eleven (11) council wards were purposively selected from Makurdi Local Government Area of Benue State based on their active participation in rice and sorghum marketing. The second stage involves selection of one (1) market each from the selected council wards using simple random sampling techniques. The final stage involves development of a sample size for each of the selected market using proportional allocation of 4% (0.04). A total of 137 (55 sorghum marketers and 82 rice marketers) were selected for this study.

### Method of data analysis

The data for the study was analysed using descriptive statistics.

## III. RESULTS AND DISCUSSION

### Socioeconomic Characteristics of Rice and Sorghum Marketers

The result of the distribution of socioeconomic characteristics of rice and sorghum marketers is presented in Table 1. The result on sex showed that majority (62.8%) of the rice and sorghum marketers were female, while 37.2% were male. This indicates that the marketing of rice and sorghum in the study area is dominated by women. This finding aligns with the general trend in Nigeria where women play an active role in agricultural produce marketing, particularly in the retail and distribution stages. Women often dominate food crop marketing due to their traditional engagement in household food security and small-scale trading. This finding agrees with Ebukiba and Ogbole (2020), who reported that

women constitute the majority of paddy and locally milled rice in Federal capital territory Abuja, Nigeria. Similarly, Oteh and Nwachukwu (2017) found that female dominance in rice marketing in Ebonyi State.

The result on age showed that, majority (61.3%) of the respondents were between the age bracket of 31–50 years, followed by (19.7%) who were above 50 years and 19.0% were below 30 years. The average age of marketers was 40.58years. This indicates that, most marketers are still in their economically active age group, capable of engaging in the rigorous activities involved in marketing agricultural commodities. This age structure indicates the potential for innovation and adaptability to market changes following the new minimum wage implementation. This finding is consistent with the study of Ebukiba and Ogbola (2020), who reported the age of rice marketers between 35-45years. Likewise, Adgidzi and Gambo (2017) stated that marketers within the age range of 31-50 years exhibit high productivity and responsiveness to changing economic policies in sorghum marketing in Doma Local Government Area of Nasarawa State, Nigeria.

Marital Status distribution of respondents showed that, majority (89.8%) were married, 4.4% divorced, 2.9% single, and another 2.9% widowed. This implies that, those who are married participate mostly in marketing of rice and sorghum in the study area. The dominance of married respondents suggests that rice and sorghum marketing serves as a major source of livelihood for family sustenance in the area. Married individuals often engage in such ventures to support household welfare and meet family obligations. This is in line with the findings of Ibitoye (2020), who noted that married individuals are more committed to income-generating activities in rural economies. Similarly, Abah and Magaji (2019) reported that most rice marketers were married.

The findings on household size shows that most (56.2%) of the respondents have between 4–6 members, followed by 20.4% with less than 3 members, 16.1% have between 7-6members, and 7.3% have more than 10persons. The average household size was 5.0 persons, which showed that,

marketers have a reasonable number of person in the household which could be used as family labour to be employed as sales persons in marketing rice and sorghum in the market. This agrees with the findings of Tersoo and Agber (2021) who reported a household size of between 5-10persons for smallholder rice marketers in Benue State.

The result on years spent in school shows that, most (57.7%) of the respondents spent more than 13years in school, followed by 40.1% who spent between 7-12years, and 2.2% spent between 1-6years in school with a mean of 14years. This indicates that, most respondents attain a level of education and are literate enough to carry out marketing activities like managing market transactions, record-keeping, and adapting to policy or economic changes, such as the implementation of a new minimum wage. This was similar to the findings of Tersoo and Agber (2021), who found that majority of marketers were literate and had between 10-15years of formal education. Similarly, Abdullahi and Yusuf (2018) who reported most of the grain marketers were literate.

Concerning major occupation of respondents, majority (100%) were marketers. This indicates full-time engagement in agricultural produce marketing, reflecting the economic importance of rice and sorghum trading in the study area. This is in agreement with the findings of Nwosu and Ali (2019) who reported involvement of persons in marketing of rice.

The result of marketing experience shows that, most (43.1%) of the respondents have less than 10 years of experience, followed by 34.3% with 11-20years and 22.6% having above 21 years of marketing experience. The mean marketing experience was 14.39 years indicating that, most marketers have substantial experience in handling market dynamics, pricing and demand trends, which enhances their ability to adapt to economic shifts such as the implementation of increased minimum wage. This disagrees with the findings of Nwosu and Ali (2019) who reported the marketing experience of 9years for sorghum marketers in Taraba State. Similarly, Abdullahi and Yusuf (2018) reported a marketing

experience of 12years for grain marketers in Giwa LGA, Kadua State.

The result on marketing status shows that, majority (95.6%) of respondent were involved in small-scale marketing, while only 4.4% engaged in large-scale marketing. This implies that the rice and sorghum market in the study area is dominated by small-scale traders, possibly due to limited capital, poor access to credit, and infrastructural constraints. This agrees with the findings of Adgidzi and Gambo (2017) who reported that most marketers of rice were small-scale traders in Benue State, Nigeria.

Annual Income result shows that, most (40.9%) earn less than ₦5000,000 and between ₦5000,001 – ₦10,000,000 respectively, followed by 10.2% who earn between ₦10,000,001 – ₦15,000,000 and 8.0% who earn more than ₦15,000,001 per annum. The mean annual income was ₦8,024,087.59, which

indicates that, marketers earn a reasonable although only enough to be considered small scale marketers. This result is not in line with the findings of Abah and Magaji (2019), who reported that agricultural marketers earn less than N1,000,000.00 per annum in Benue State.

The result of membership of market association showed that, all respondents (100%) belonged to a market association. This shows strong social and institutional participation among marketers, which may help in collective bargaining, price stabilization, and information sharing. This finding agrees with Oteh and Nwachukwu (2017) who found that membership in market associations enhances access to market information and credit facilities. Similarly, Abah and Magaji (2019) reported that collective organization among traders strengthens their negotiation power and resilience to policy shifts.

Table 1: Distribution of Respondents based on Socioeconomic Characteristics of Rice and Sorghum Marketers (n=137)

Socioeconomic characteristics	Frequency	Percentage	Mean
Sex			
Male	51	37.2	
Female	86	62.8	
Age (years)			41 years
< 30	26	19.0	
31 – 50	84	61.3	
51+	27	19.7	
Marital Status			
Married	123	89.8	
Single	4	2.9	
Divorced	6	4.4	
Widow	4	2.9	
Household size (persons)			5 persons
<= 3	28	20.4	
4 – 6	77	56.2	
7 – 9	22	16.1	
	10	7.3	
Years spent in school			14.0years
1 – 6	3	2.2	
7 – 12	55	40.1	
13+	79	57.7	
Major occupation			
Marketing	137	100.00	
Civil service	0	0.0	

Artisans	0	0.0	
Farming	0	0.0	
Marketing experience			14.0years
<= 10	59	43.1	
11 – 20	47	34.3	
21+	31	22.6	
Marketing status			
Small scale marketing	131	95.6	
Large scale marketing	6	4.4	
Annual income from rice/sorghum (naira)			8,024,087.59
<= 5000000.00	56	40.9	
5000001.00 - 10000000.00	56	40.9	
10000001.00 - 15000000.00	14	10.2	
15000001.00+	11	8.0	
Membership of market association			
Yes	137	100.00	
No			

Source: Field Survey, 2025

#### Perceived Influence of New Minimum Wage Implementation on Rice and Sorghum Marketing

The result on the perceived influence of new minimum wage implementation on rice and sorghum marketing is presented in Table 2. The result on the upper segment of table 2 showed that majority (100%) of the respondents are aware of current minimum wage policy in Nigeria. Also, 75.2% of the respondents identified that, the recent implementation of minimum wage affected the wages paid and received in marketing of rice and sorghum in the study area. This indicate that most of the respondents are aware of minimum wage implementation and how it influences rice and sorghum marketing.

The result of mean response on the perceived effects new minimum wage implementation on rice and sorghum marketing in the lower segment of table 2 considers a bench mark of 3.00 mean scores. The result showed that minimum wage enforcement has increased the cost of rice/sorghum transportation ( $\bar{x} = 4.09$ ), increased minimum wage had led to higher production cost in rice/sorghum processing ( $\bar{x} = 3.80$ ), and minimum wage implementation has increased buying and selling prices of rice/sorghum ( $\bar{x} = 3.28$ ) were the ways minimum wage implementation affects rice and sorghum marketing.

This implies that high costs of transporting rice and sorghum with the mean value of 4.09 was the major

perceived factors influencing marketing of rice and sorghum in the study area, followed by high cost of production and processing of rice and sorghum for marketing ( $\bar{x} = 3.80$ ) and as well as increase in buying and selling of rice and sorghum ( $\bar{x} = 3.28$ ) due to increase in the purchasing power of the customers as a result of the new minimum wage implementation. Indicates that, the inflation caused by increase in minimum wage has led to increase in cost of transportation. This could be as a result of increase in petrol price, cost of machine spare parts and general maintenance of vehicle and road. Also higher cost of production arise due to increase in minimum wage increase. The price of buying and selling rice/sorghum has increase leading to a change and shift in market forces of demand and supply.

This has shown that new minimum wage implementation affects rice and sorghum marketing in the study area. This is in line with the findings of Ibrahim and Yusuf (2020) who reported that the increase in minimum wage has led to increase in cost of transportation, likewise Okoh and Akosu (2021) reported that implementation of new minimum wage leads to increase in cost of production. Similarly Ochoche and Ejeh (2021) also reported that increase

in minimum wage influences the demand and supply of agricultural products in Benue and Nasarawa State.

Table 2: Perceived Influence of New Minimum Wage Implementation on Rice and Sorghum Marketing

New minimum wage affects rice and sorghum marketing	Frequency	Percent				
Are you aware of the current minimum wage policy in Nigeria?						
Yes	137	100.00				
No	0	0.00				
Has the recent implementation or change in minimum wage affected the wages you pay (receive) in marketing?						
Yes	103	75.2				
No	34	24.8				
Extents	SA	A	N	D	SD	Mean
Increased minimum wage had led to higher production cost in rice/sorghum processing.	35 (25.5)	71 (51.8)	14 (10.2)	2 (1.5)	15 (10.9)	3.80
Minimum wage enforcement has increased the cost of rice/sorghum transportation	35 (25.5)	87 (63.5)	8 (5.8)	6 (4.4)	1 (0.7)	4.09
Labour shortages have resulted due to my inability to pay the minimum wage	18 (13.1)	2 (16.1)	12 (8.8)	29 (21.2)	56 (40.9)	2.39
I have adjusted my business strategy due to wage policy	7 (5.1)	9 (6.6)	10 (7.3)	21 (15.3)	90 (65.7)	1.70
Minimum wage implementation has increase buying and selling prices of rice/sorghum	19 (13.9)	66 (48.2)	10 (7.3)	19 (13.9)	23 (16.8)	3.28
Has the demand for rice/sorghum changed due to the price adjustment	5 (3.6)	3 (2.2)	15 (10.9)	2 (15.3)	93 (67.9)	1.58
Have you experienced changes in the volume of rice/sorghum sold per annum since the implementation of minimum wage?	2 (1.5)	4 (2.9)	17 (12.4)	99 (72.3)	15 (10.9)	2.12
Minimum wage has forced me to reduce the number of workers.	1 (0.7)	5 (3.6)	4 (2.9)	33 (24.1)	94 (68.6)	1.41
The minimum wage implementation has increased my profit margin	10 (7.3)	15 (10.9)	7 (5.1)	47 (34.3)	58 (42.3)	2.07
Customers have increased as a result of minimum wage implementation	13 (9.5)	21 (15.3)	8 (5.8)	30 (21.9)	65 (47.4)	2.18

( ) values in parenthesis are percentages; Strongly Agreed [SA], Agreed [A], Neutral [N], Disagreed [D], Strongly Disagreed [SD]

Source: Field Survey, 2025

Size of rice and sorghum marketing before and after new minimum wage implementation

The result on size of rice and sorghum marketing before and after new minimum wage implementation is presented in Table 3.

The result showed that the quantity of rice marketed before minimum wage implementation was 86.15bags while after minimum wage implementation was 70.96bags; the number of workers before minimum wage was 0.04persons and after minimum wage implementation was

0.04persons; the annual income before minimum wage increase was ₦6, 260,583.94 and after implementation was ₦5, 210,051.09; yearly operational cost before minimum wage implementation was ₦416, 642.34 and after implementation was ₦720, 802.92. This indicates that the of rice market (quantity of rice marketed) and annual income earned from rice marketing were higher before minimum wage implementation than after implementation. This could be as a result of increases marketing costs and production and processing costs after the implementation of the new minimum wage. Economy is structure in such a way that money released will be syphoned back into the economy, this is to say that increase in the purchasing power of the customers via the implementation of the new minimum wage does not necessary increase the market sizes of marketers as well as income earned from marketing. However, yearly operational cost was higher after the implementation of new minimum wage than before the implementation while number of workers remain same. The increases operational cost during the period of implementation reflects the general inflationary pressure and increased cost of transportation, storage, and labor associated with the implementation of the new wage policy. The stability in number of workers may suggest that most rice marketers rely on family labor or few hired workers, minimizing wage-related adjustments. This findings relates with Tyopev and Alaku (2022) who reported increase in cost of production during increase in minimum wage. Similarly, Ibrahim and Yusuf (2020) and Sulaiman and Abdullahi (2021) reported reduction in quantity of stock and annual income due to implementation of minimum wage.

Pertaining sorghum marketing, the result showed that, quantity of sorghum marketed before minimum wage was 36.06bags and after implementation was 27.36bags, number of workers before minimum wage implementation was 0.36persons and after minimum wage implementation was 0.00person, annual income before minimum wage implementation was ₦2,016,496.35 and after was ₦2,326,817.52, yearly operational cost before minimum wage implementation was ₦188, 175.18 and after was ₦240,882.35. This indicates that quantity marketed and number of workers were higher before minimum wage implementation than after the minimum wage implementation which could be a reflection of contraction (reduction) in the marketing size, possibly due to higher yearly operational costs following the wage policy change. However, the slight increase in annual income and operational cost after minimum wage implementation suggests that marketers may have benefited from higher product prices or improved market efficiency, even though the marketing volume decreased. This finding aligns with Okonkwo and Eze (2021), who observed that changes in wage policies tend to alter marketing dynamics, leading to higher costs but improved income margins due to price adjustments. Similarly, Bassey *et al.* (2013) reported that cost of marketing rise during minimum wage implementation with revenue. One can deduce that implementation of new minimum wage impacts rice and sorghum marketers in various form, ranging from reduction in market size, increase in yearly operational costs and reduction in the number of hired labourers engaged.

Table 3: Size of rice and sorghum marketing before and after new minimum wage implementation

Variables	Rice		Sorghum	
	Before minimum wage increase	After minimum wage increase	Before minimum wage increase	After minimum wage increase
Quantity marketed	86.15bags	70.96bags	36.06bags	27.36bags
Number of workers employed	0.04 persons	0.04person	0.36persons	0.00persos
Annual income	₦ 6,260,583.94	₦ 5,210,051.09	₦ 2,016,496.35	₦ 2,326,817.52
Yearly operational cost	₦416,642.34	₦ 720,802.92	₦ 188,175.18	₦ 240,882.35

Source: Field Survey, 2025

#### IV. CONCLUSION AND RECOMMENDATION

The study concludes that there are perceived factors that influenced the marketing of rice and sorghum after the minimum wage implementation in Makurdi Local Government Area of Benue State, Nigeria; such perceived influence includes increased costs of transporting rice and sorghum, higher production and processing cost of rice and sorghum and increase in buying and selling activities in the rice and sorghum markets. The study also concludes that majority of marketers were female small-scale traders with substantial marketing experience and strong association membership. The further concludes that implementation of new minimum wage impacts rice and sorghum marketers in various form, ranging from reduction in market size, increase in yearly operational costs and reduction in the number of hired labourers engaged. Furthermore, the decline in quantity marketed and rise in operational expenses after the wage adjustment reflect the policy's impact on market dynamics. The study concludes that while the minimum wage policy aimed at improving welfare of workers, its implementation inadvertently increased marketing costs and reduced income earned from rice and sorghum marketing in the study area. *Based on the findings the research recommends that; rice and sorghum marketers should leverage on the existing markets association to subsidize means of transportation of their market produce by providing association alternate means of transportation instead of relying on the general means of transportation of rice and sorghum and ease the cost of transportation. Also government should subsidize processing of rice and sorghum by providing processing equipment to the existing markets association at a subsidized rate, which could reduce the cost of processing and subsequently increase the marketing size of rice and sorghum as well as annual income from marketing in the study area.*

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