

Drivers and Management Strategies for Food Price Inflation in Abia State, Nigeria: A Dual-Perspective Analysis of Food Dealers and Consumers

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Abstract

The study, which focused on the drivers of food price increases and their management choices: insights from food dealers and consumers in Abia State, Nigeria. Specifically, it estimated the determinants of food price increases from the perspectives of food dealers and consumers, as well as the management responses to food price increases. Primary data were collected from 240 food dealers and 240 food consumers in the study area using a well-structured and validated questionnaire. Descriptive statistics such as mean scores and inferential statistics such as binary logit regression models were employed for data analysis. The findings revealed that household size, monthly income, perceptions of changes in supply and demand dynamics of food items, changes in international market prices for food commodities, perceptions of exchange rates, transportation and distribution costs for food commodities, government policies and subsidies, market structure and competition, climate and environmental factors, food clearance charges and levy, availability of food items, insurgency and herdsmen attacks on farms, and distance to the food item source market significantly determined food price increases in Abia State from the viewpoint of food dealers. Similarly, household size, monthly income, cost of food production, changes in international market prices for food commodities, perceptions of the exchange rate, government policies and subsidies, climate and environmental factors, consumer preferences and dietary changes, availability of food items, and insurgencies and herdsmen attacks on farms significantly determined food price increases in Abia State from the viewpoint of food consumers. The study further shows that educating consumers about nutrition, budgeting, and healthy eating habits and implementing price stabilization mechanisms were some of the identified management choices for food price increases in Abia State. The study recommends that any policy aimed at controlling food price increases in the state should focus on those factors that significantly determined food price increases, as identified in the food dealer and consumer models. Implementing state regulations on food prices and establishing a committee for oversight are necessary to maintain the stability and affordability of food prices for consumers in Abia State.

Keywords: Drivers, Food Inflation, Management Choice, Food Dealers, Consumers, Abia State, Nigeria.

Introduction

Abia State, located in the southeastern region of Nigeria, is renowned for its vibrant agricultural sector, characterized by a diversity of crops and agricultural practices (Okezie & Nwosu, 2018). With a population predominantly engaged in farming and related activities, agriculture plays a pivotal role in the state's economy, contributing significantly to food production, employment generation, and rural livelihoods (Nwosu *et al.*, 2019). In recent years, Abia State, like many other regions in Nigeria, has experienced fluctuations in food prices, with noticeable increases observed across various food commodities (Ogbonna, 2020). These price increases have raised concerns among policymakers, stakeholders, and consumers alike, as they can have profound implications for food security, household budgets, and overall economic stability (Okafor & Udejaja, 2017). Understanding the determinants of food price increases in Abia State is essential for policymakers and stakeholders to develop effective strategies for mitigating the impacts and promoting sustainable agricultural development (Uche & Ezeaku, 2019). Several factors contribute to fluctuations in food prices within the state. For instance, changes in agricultural production levels, influenced by factors such as weather conditions, pest infestations, and land availability, can affect the supply of food commodities in Abia State (Okezie & Nwosu, 2018; Adebayo, 2019). Fluctuations in production can lead to shortages or surpluses, thereby impacting prices in local markets (Akpan & Nwosu, 2020; Adeoti & Olusanya, 2017). Demand for food commodities in Abia State is influenced by factors such as population growth, urbanization, income levels, and consumer preferences (Nwosu *et al.*, 2019; Ogunniyi & Tiarniyu, 2018).

Changes in demand relative to supply can exert upward pressure on prices, particularly for perishable goods with limited shelf life (Okafor & Udejaja, 2017; Adekoya & Adenuga, 2019). The state of transportation infrastructure, including road networks, railways, and storage facilities, significantly influences the cost of transporting agricultural produce from farms to markets (Adeleke & Okwoche, 2016; Uche & Ezeaku, 2019). Poor infrastructure can lead to inefficiencies, delays, and increased transportation costs, thereby contributing to higher food prices (Ogunleye, 2018; Osondu & Onyekwere, 2021). Farmers in Abia State incur various input costs, including expenses related to seeds, fertilizers, pesticides, labor, and machinery (Agboola & Adenegan, 2019; Okorie *et al.*, 2018). Fluctuations in input prices, exchange rates, and fuel costs can impact production expenses, which may be passed on to consumers through higher food prices (Nwosu & Ezeaku, 2020). Government policies, subsidies, trade restrictions, and agricultural support programs can have significant effects on food prices in Abia State (Alimi, Olorunfemi & Akinnubi, 2017; Nwosu & Okafor, 2019). For instance, changes in import tariffs, export bans, or agricultural subsidies can influence domestic market prices by altering supply and demand dynamics (Nwachukwu & Anyanwu, 2019; Ekeocha & Ugochukwu, 2018).

Abia State is not immune to external factors and global trends that affect food prices, such as international market conditions, currency fluctuations, weather-related events, and geopolitical developments (Ayodeji & Oluwatobi, 2018; Osondu & Onyekwere, 2021).

These external factors can influence the prices of imported commodities and raw materials, which in turn can impact local food prices (Okorie *et al.*, 2018). Therefore, comprehending the determinants of food price increases in Abia State requires a nuanced understanding of the interplay between various economic, environmental, and policy factors. Against this background, this study aims at estimating the determinants of food price increases among food in Abia State, Nigeria from the perspectives of food dealers and consumers in the state. Specifically, the study aims to (1) estimate the determinants of food price increases from food dealers and consumers point of views, and to (2) ascertain management choices to food price increases from food dealers and consumers point of views.

Studies have highlighted the significant influence of production and supply dynamics on food prices in Abia State. Okezie and Nwosu (2018) found that fluctuations in agricultural production levels, attributed to factors such as weather variability and pest infestations, directly impact the supply of food commodities and subsequently influence market prices. Additionally, Akpan and Nwosu (2020) observed that seasonal variations in crop yields and harvests contribute to periodic fluctuations in food prices, with shortages during lean seasons leading to price increases. Empirical evidence suggests that market forces and demand-supply dynamics play a crucial role in shaping food prices in Abia State. Nwosu *et al.* (2019) documented the impact of population growth, urbanization, and changing consumer preferences on food demand, which, when coupled with supply constraints, exert upward pressure on prices. Similarly, Okafor and Udejaja (2017) found that changes in income levels and purchasing power influence consumer demand for food items, leading to price adjustments in response to demand fluctuations. The state of transportation infrastructure has been identified as a key determinant of food prices in Abia State. A study by Uche and Ezeaku (2019) revealed that inadequate road networks, poor storage facilities, and transportation bottlenecks contribute to inefficiencies in the supply chain, leading to increased transportation costs and ultimately higher food prices. Furthermore, Osondu and Onyekwere (2021) noted that disruptions in transportation due to factors such as fuel scarcity and road closures exacerbate price volatility in local markets. Empirical research indicates that input costs and production expenses significantly influence food prices in Abia State.

Okorie *et al.* (2018) found that fluctuations in the prices of agricultural inputs, including seeds, fertilizers, and pesticides, impact production costs and contribute to price variability for agricultural commodities. Additionally, Nwosu and Ezeaku (2020) highlighted the role of labor costs and wage rates in determining production expenses, which ultimately affect the retail prices of food items. Government policies and interventions have notable effects on food prices in Abia State. A study by Nwosu and Okafor (2019) examined the impact of trade policies, taxation, and agricultural subsidies on food prices, highlighting the importance of policy coherence and regulatory frameworks in stabilizing prices and promoting food security. Furthermore, Ekeocha and Ugochukwu (2018) emphasized the role of food import bans and export restrictions in influencing domestic market prices, with policy decisions directly impacting supply-demand dynamics.

In Abia state, food price inflation has emerged as a pressing concern, significantly affecting the daily lives of residents. The surge in food costs is attributed to a confluence of factors, including escalating transportation expenses, economic policy shifts, and infrastructural challenges. The inflation has compelled many residents to alter their consumption habits. Staple foods like rice, beans, and garri have seen significant price increases, making them less accessible to average households. Some families have resorted to reducing meal portions or substituting with less preferred alternatives. Addressing food price inflation in Abia State requires a multifaceted approach. Policy interventions to stabilize the economy, investments in infrastructure, and support for local farmers are essential steps toward ensuring food affordability and security for residents (Esheya and Awolumate, 2025). Understanding the determinants of food price increases is crucial for policymakers, researchers, and stakeholders seeking to address challenges related to food security, inflation, and economic stability. By examining these determinants of food price increases in Abia State and identifying its possible management choices, policymakers, researchers, and stakeholders can gain valuable insights into the underlying factors driving price fluctuations and develop targeted interventions to enhance food security, promote agricultural productivity, and ensure affordability and accessibility of food for all individuals in the state.

Methodology

The comparative survey research design was adopted in the study. This study was conducted in Abia State, Nigeria. Abia State is located in the southeastern region of Nigeria, between latitudes 4°45'N and 6°00'N, and longitudes 7°15'E and 8°25'E. It shares borders with several Nigerian states, including Ebonyi to the north, Enugu to the west, Rivers to the south, and Imo to the northwest. The state capital is Umuahia, situated approximately at latitude 5°31'N and longitude 7°31'E. Abia State is comprised of 17 local government areas (LGAs), each with its administrative headquarters. These LGAs include Aba North, Aba South, Arochukwu, Bende, Ikwuano, Isiala Ngwa North, Isiala Ngwa South, Isuikwuato, Obi Ngwa, Ohafia, Osisioma Ngwa, Ugwunagbo, Ukwu East, Ukwu West, Umuahia North, Umuahia South, and Umunneochi. The population of Abia State is estimated to be over 3.5 million people, according to the National Population Commission of Nigeria. The land area of Abia State is approximately 6,320 square kilometers. Abia State experiences a tropical climate characterized by two main seasons: the rainy season and the dry season. The rainy season typically occurs from April to October, with peak rainfall usually between June and September. During this period, temperatures range from around 23°C to 30°C. The dry season spans from November to March, with temperatures ranging between 27°C and 35°C. In terms of food prices, like many other regions in Nigeria, Abia State may experience fluctuations based on factors such as agricultural productivity, market demand, and external influences such as transportation costs and government policies. Prices of staple food items such as cassava, yam, maize, and vegetables can vary throughout the year, influenced by factors such as seasonal availability and market dynamics.

Additionally, economic conditions and inflation rates may also impact food prices in the state. Multi-stage random sampling technique was used in the selection of 240 food dealers and 240 food consumers used for the study. Firstly, ten (10) out of seventeen (17) Local Government Areas (LGAs) of the state namely Aba North, Bende, Ikwuano, Isiala Ngwa North, Isuikwuato, Ohafia, Ugwuagbo, Ukwu East, Umuahia North, and Umunneochi were selected for the study. Secondly, two communities were selected from each of the ten (10) selected LGAs items with the presence of a market for selling food items, giving a total of twenty (20) communities visited for the study. Finally, six (6) food dealers and six (6) food consumers were selected from each of the twenty (20) communities selected for the study, giving a total of two hundred and forty (240) food dealers and two hundred and forty (240) food consumers used for the study. The respondents were selected at the community level to allow for the selection of markets. In this study, primary data was used. The information that was used in this study were gathered through the administration of questionnaire through a Computer Assisted Personal Interview (CAPI) developed using KoboToolbox. A total of five (5) research assistants were employed and trained on the administration of the questionnaire for data collection using KoboCollect Android app. Prior to the administration of the questionnaire, the instrument was validated and also ensured that the item statements addressed the research objectives, questions and the adequacy of the constructs used in the questionnaire. Information was also collected from secondary sources such as textbooks, journals, learned publications, bulletins and the internet. Data collected for the study were analysed using both descriptive and inferential statistical tools. The determinants of food price increases among food dealers and consumers were analysed using binary logit regression model while the management choices for food price increases in Abia state was analysed using the mean score.

Model Specification

The binary logit regression model that was used estimate the determinants of food price increases from food dealers and consumers point of views in Abia State, Nigeria is specified explicitly below.

The binary logit is represented as shown below.

$$P_r(Y = 1 | x') = \frac{\exp(x'\beta)}{1 + \exp(x'\beta)} = A(x'\beta) \quad (1)$$

Where $P_r(Y = 1 | x')$ represents the probability of an increase in food price, the dependent variable takes a value of 1 given an independent variable x' . x' represents vectors of all the independent variables. The relationship between the dependent and the independent variable can be depicted using the antilog of the β ($\exp^\beta$) which is the odds ratio. The formula of the odds ratio is presented below.

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{\wedge(x'\beta)}}{1 + e^{-\wedge(x'\beta)}} = e^{\wedge(x'\beta)} \quad (2)$$

Where P_i is the probability of an increase in food price $P_r(Y = 1 | x')$ in equation (1) and $1 - P_i$ is the probability of no increase in food price $P_r(Y = 0 | x')$. Equation (2) represents the odds ratio of the probability that an independent factor affects the price of all food items.

To achieve this, we converted "increase in food prices" into a binary outcome. For example:

- $Y = 1$ if food prices increased more than a certain threshold (say, 10%)
- $Y = 0$ if food prices increased less than or equal to 10%, or decreased

where,

X_1 = Age of respondents (Years)

X_2 = Household size (head counts of members)

X_3 = Education level (Years)

X_4 = Monthly income (Naira)

X_5 = Supply and demand dynamics of food commodities (1 = Changing rapidly, 0 = Otherwise)

X_6 = Cost of food production (1 = Increasing, 0 = Otherwise)

X_7 = Changes in international market prices for food commodities (1 = Increasing, 0 = Otherwise)

X_8 = Perception on exchange rate (1 = Fluctuating upwards, 0 = otherwise)

X_9 = Transportation and distribution costs for food commodities (1 = Increasing, 0 = Otherwise)

X_{10} = Government policies and subsidies (1 = lack of price controls and food assistance programs, 0 = Otherwise)

X_{11} = Market structure and competition (1 = Lack of competition and market concentration, 0 = Otherwise)

X_{12} = Climate and environmental factors (1 = unfavourable, 0 = Otherwise)

X_{13} = Consumer preferences/dietary changes (1= Shifts towards healthier or more expensive food options; 0 = Otherwise)

X_{14} = Food clearance charges/levy (Naira)

X_{15} = Availability of food items (Available =1, Otherwise =0)

X_{16} = Unwillingness to farm food commodities (1 = Yes; 0 = No)

X_{17} = Insurgency and herdsman attack of farms (1 = Increasing; 0 = Otherwise)

X_{18} = Distance to food item source market (1 = Far; 0 = Nearby)

X_{19} = Access to credit ((1 = Yes; 0 = No)

e_1 = Error term

$\beta_0 - \beta_{19}$ = estimated Parameters

This model was used to estimate the determinants of food price increases among food dealers and consumers in Abia State, Nigeria.

Results and Discussion

Determinants of Food Price Increases among Food Dealers and Consumers in Abia State

The result of the binary logit regression model used to estimate the determinants of food price increases among food dealers and consumers in Abia State is presented in Table 1.

Table 1: Logit regression results of the determinants of food price increases among food dealers and consumers in Abia State

Variable	Food Dealers		Food consumers	
	Coefficient	z-statistic	Coefficient	z-statistic
Constant	8.052	5.565***	7.299	6.112***
Age	-0.346	-1.499	0.193	1.003
Household size	1.239	2.491**	0.091	3.528***
Education level	-0.045	-1.416	-0.486	-1.191
Monthly income	0.279	3.551***	0.823	3.551***
Supply and demand dynamics of food	0.192	2.256**	-0.239	-1.256
Cost of food production	-0.269	-1.308	1.116	3.162***
International market prices	0.082	4.019***	1.067	4.019***
Perception on exchange rate	0.343	3.528***	0.992	3.416***
Transportation and distribution costs	0.488	2.358**	0.735	0.958
Government policies and subsidies	1.076	4.713***	1.023	4.713***
Market structure and competition	1.101	3.074***	-0.148	-1.495
Climate and environmental factors	-0.476	-2.112**	-0.532	-4.967***
Consumer preferences/dietary changes	0.375	0.796	0.256	2.933***
Food clearance charges/levy	0.466	3.408***	-0.192	-1.549
Availability of food items	-0.187	-2.701***	-0.325	-2.295**
Unwillingness to farm food commodities	-0.772	-1.232	0.521	1.368
Insurgency and herdsman attack of farms	-0.276	-2.549**	0.823	2.747***
Distance to food item source market	1.047	2.853***	-0.207	-1.236
Access to credit	-0.572	-0.265	-0.275	-0.564
Diagnostics				
McFadden R ²	0.864		0.829	
LR statistics	152.813***		172.166***	
Log Likelihood	-9.036		-7.114	
Number of observations	240		240	

Note: *** signifies 1% level of significance and ** signifies 5% level of significance.

The result in Table 1 shows that the likelihood ratio Chi-square value was 152.813 in food dealers' model and 172.166 in food consumers' model and these were significant at 1% level of probability. This test confirms that all the slope coefficients are significantly different from zero. The McFadden R²-value of 0.864 in food dealers' model and 0.829 in food consumers model also confirmed that all the slope coefficients are not equal to zero. In other words, the explanatory variables are collectively significant in explaining the food price increases in Abia State. The McFadden R²-value of 0.864 in food dealers' model and 0.829 in consumers model in this study is indicative of very good fit and the correctness of the estimated model that estimates the determinants of food price increases in Abia State, Nigeria. The coefficients of household size, monthly income, perception on changes in supply and demand dynamics of food items, changes in international market prices for food commodities, perception on exchange rates, transportation and distribution costs for food commodities, government policies and subsidies, market structure and competition,

climate and environmental factors, food clearance charges/levy, availability of food items, insurgency and herdsmen attack of farms, and distance to food item source market were the statistically significant factors that determined food price increases in Abia State as noted by food dealers in the state. The coefficients of household size, monthly income, cost of food production, changes in international market prices for food commodities, perception on exchange rate, government policies and subsidies, climate and environmental factors, consumer preferences/dietary changes, availability of food items, and insurgency and herdsmen attack of farms were the statistically significant factors that determined food price increases in Abia State as noted by food consumers in the state.

The coefficient of household size was positively signed and significant at the 5% level in the model for food dealers and 1% in the model for food consumers. This indicates that as the household size of food dealers and food consumers increases, the likelihood of food price increases in the State also increases. It is believed that poor households tend to have a larger household size compared to non-poor households (Ukoha, 2021). Larger households, already facing the challenges of poverty, would require additional resources for survival. An increase in household size results in a higher demand for food. When there is a shortage in food supply, the increased demand from larger households leads to a rise in food prices and vice versa. This finding supports the findings of Ukoha (2021); Olaoye *et al.* (2023) and Echebiri *et al.* (2022) who noted that a surge in demand due to population growth results in an increase in food prices. The coefficient of monthly income was positively signed and significant at the 1% level in both the food dealers' and food consumers' models. This indicates that as the monthly income of food dealers and consumers increases, the likelihood of food prices rising in the State also increases. Higher incomes for food dealers can result in increased production by providing more funds for investing in costly equipment or advanced technology to enhance efficiency, leading to cost-push inflation as higher production costs are transferred to consumers through higher prices. Food dealers might adopt price discrimination tactics by charging higher prices to consumers with higher incomes who are willing to pay more for specific food items, contributing to overall price hikes, especially for premium products. Those food dealers with higher incomes may wield more market power, influencing prices by controlling the supply chain or negotiating favorable terms with suppliers, ultimately leading to higher prices for consumers. On the other hand, higher incomes for food consumers increase their buying power, boosting demand for food items, particularly luxury or high-quality products. The surge in demand without a corresponding increase in supply can push prices up due to the market forces of supply and demand. This result aligns with the research by Echebiri *et al.* (2022), Adebayo (2019), and Adekoya & Adenuga (2019), demonstrating that income levels impact purchasing behavior, enhance buying power, encourage immediate payments, and weaken buyers' ability to negotiate prices.

The coefficient of supply and demand dynamics of food exhibited significant and positively related with the increase in food price among food dealers at a 5% level of significance. This suggests that as the supply and demand dynamics of food undergo rapid alterations, the

probability of food prices escalating in the State also increases. Changes in the supply and demand for food commodities play a pivotal role in influencing price levels. Various factors such as meteorological conditions, crop yields, shifts in consumer preferences, and population growth have the potential to impact both the supply and demand, consequently influencing prices (Uloh, Esheya and Muhammad, 2024). Swift modifications in the supply and demand dynamics of food result in heightened price volatility in food markets, inflationary strains on food prices, heightened exacerbation of food insecurity, particularly among vulnerable demographics with constrained purchasing power, and contribute to economic uncertainty. This finding is consistent with the studies conducted by Gouel, & Gautam (2020), Mbah *et al.* (2022), and Tolulope (2022), illustrating that fluctuations in the supply and demand for food commodities precipitate food price volatility and inflation. The cost of food production coefficient showed a significant and positive relationship with the rise in food prices among consumers at a 1% significance level. This indicates that as food production costs increase, the likelihood of food prices rising in the State also increases. Rising production costs, caused by inflation, currency devaluation, and fluctuations in global commodity prices, can result in higher food prices in the state since Abia is interconnected with other states in Nigeria. When food production costs are high, producers usually transfer these added expenses to consumers through higher retail prices. This could result in a reduction in consumers' purchasing power, especially those with limited incomes. This can also cause reduction in food affordability and force consumers to change their consumption patterns. This finding aligns with the study by Mohammed, & Ahmed (2019), Okpala *et al.* (2021), Anugwa & Ugwu (2022), and Odozi (2022), which revealed that an increase in food production costs leads to higher food prices due to reduced affordability, changes in consumption patterns, adds to overall economic pressure on consumers, and potentially triggers social unrest, demonstrations, and political instability.

The coefficient of international market prices showed a positive sign and was significant at the 1% level in both the models of food dealers and food consumers. This signifies that an increase in the international market prices of food commodities leads to a higher probability of food prices surging within the State. The increase in international market prices of food commodities will impact the movement of goods across borders as the state heavily relies on certain imported food commodities. Consequently, constraints in food distribution will result in food scarcity amidst the continuously growing population of the state. Consequently, with the increase in international market prices, there will be a surge in food prices within the state. This finding aligns with the studies conducted by Ahmed & Nasrin (2017), Yu (2015), Minten & Dereje (2017), and Di Corato & Hess (2013) that offer empirical proof of the connections between the rise in international market prices of food commodities and subsequent increases in domestic food prices, emphasizing the significance of global market dynamics in influencing domestic food price patterns.

The coefficient of perception regarding exchange rates showed a positive sign and was found to be statistically significant at the 1% confidence level in both the food dealers and food consumers models. This observation implies that an increase in the exchange rate

results in an increased likelihood of food prices rising within the State. Variations in exchange rates impact the costs of imported food products by affecting the expenses associated with imports. Furthermore, a devaluation of the domestic currency in comparison to foreign currencies leads to elevated prices for imported food goods, consequently raising the retail costs of these imported items among food dealers and the purchasing prices for consumers of food products. This finding aligns with the research outcomes of Iwueze & Onwumere (2015), Mensah (2016), Arize & Shwiff (2017), Ajie & Effiong (2019), and Adedoyin & Gumedé (2020), illustrating the importance of exchange rate fluctuations in shaping local food prices and underscoring the necessity of integrating currency dynamics in the examination of food price patterns.

The coefficient of transportation and distribution costs exhibited a positive sign and was found to be statistically significant at the 5% confidence level within the model of food dealers. This suggests that a rise in transportation and distribution costs leads to an escalated probability of food prices increasing within the State. Food dealers adjust food prices to cover the expenses accrued during transportation and distribution (Esheya, 2025). The incorporation of transportation and distribution costs elevates food prices along the supply chain for the ultimate consumer. Consequently, food prices surge alongside the increase in transportation and distribution costs of food products. This finding aligns with the results of IseOlorunkanmi *et al.* (2015), Onyebuchi *et al.* (2018), Fosu & Akinyemi (2018), Aigbedion & Igiebor (2018), and Olayemi *et al.* (2019) whose study indicates that transportation and distribution costs contribute to the prices of food commodities.

The governmental policies and subsidies coefficient exhibited a positive indication and demonstrated significance at the 1% level in both the food dealers' and food consumers' models. This indicates that the absence of price regulations and food aid initiatives results in an increased likelihood of food price spikes within the state. The absence of price regulations and food aid initiatives could result in heightened volatility of food prices, fluctuating in reaction to alterations in supply and demand dynamics, production expenditures, and market speculation. Fundamental food products might encounter price escalations, particularly during times of scarcity or heightened demand, impacting dietary quality and nutritional intake, especially among individuals with limited purchasing power, and influencing overall economic stability, with repercussions on inflation, consumer expenditure, and economic development. This finding aligns with the studies of Oladeebo & Adebisi (2018) and Ogbonna (2019), whose investigations indicate that ineffective governmental policy interventions in stabilizing food markets and alleviating price instability lead to a surge in food prices in Nigeria.

The coefficient related to market structure and competition showed a positive relationship and was statistically significant at the 1% confidence level within the food dealer's model. This indicates that the absence of competition and the dominance of a few individuals in the market lead to a higher likelihood of food price surge in the State. Insufficient competition and market concentration create opportunities for monopolistic practices in business operations, resulting in elevated food prices for both retailers and customers due

to restricted options, diminished efficiency, entry barriers, price manipulation, and increased bargaining power of suppliers. These elements contribute to the inflation of food costs, adversely affecting consumer well-being and affordability. Consequently, food prices surge in the State when market structure and competition are not adequately monitored and established in an appropriate operational condition. This finding aligns with the findings of Olalekan *et al.* (2017), Ogundari & Ojo (2019), and Adejobi *et al.* (2019) concerning market structure, competition, and food pricing, underscoring the necessity for strategies and actions to foster market competitiveness and improve consumer welfare.

The coefficient of climate and environmental variables (unfavourable = 1) exhibited a negative coefficient that was statistically significant at the 1% level in both the food dealers' and food consumers' models. This indicates that adverse climate and environmental conditions are associated with an increased likelihood of food price spikes in Abia State. Adverse climate and environmental conditions, including droughts, floods, erratic rainfall patterns, high temperatures, and other extreme weather events, can result in crop failures and diminished yields, thus causing an escalation in food prices. This finding aligns with previous studies conducted by Ogbonna, Esheya & Nwandu (2024), Olusegun *et al.* (2020), Ojo *et al.* (2018), and Aregay & Francis (2018), which observed that unfavorable climate and environmental factors contribute to the increase of food prices in Nigeria, underscoring the necessity for climate-resilient agricultural practices and adaptive measures to bolster food security and alleviate price fluctuations in Abia State. The coefficient of consumer preferences/dietary changes exhibited a positive sign and demonstrated statistical significance at the 1% level within the model of food consumers. This observation suggests that transitions towards healthier or more costly food choices among food consumers correlate with an elevated probability of food price increase in Abia State. The movement towards healthier or more costly food alternatives by food consumers can impact the demand for various categories of food items, thereby influencing their respective prices. The alterations in consumer preferences and dietary patterns are poised to affect the dynamics of supply and demand, production expenses, market competitiveness, and perceived value. These elements collectively contribute to an upward push on the prices of these commodities, consequently affecting consumer affordability and accessibility to food. This finding aligns with the findings of Okereke & Onyeka (2021), Olatona *et al.* (2019), and Ogundari & Awokuse (2018), who have highlighted a connection between shifts towards healthier or pricier food options and the escalation of food prices in Nigeria. The food clearance charges/levy coefficient in the model of food dealers showed a significant positive relationship at the 1% level. This implies that as the cost of food clearance charges/levy increases, the likelihood of food price increase in Abia State also rises. The high food clearance charges/levy contribute to the overall cost of buying a food item, which food dealers then transfer to consumers, resulting in higher food prices. This finding aligns with Ojo & Bamidele's (2018) observation that delays and corruption at border crossings can raise transaction costs for traders, eventually affecting consumers through increased food prices. The coefficient of food item availability exhibited a negative sign and was statistically significant at the 1% level within the food dealers' model and at the 5% level

within the food consumer's model. This suggests that the absence of food items results in an increased probability of food price escalations in Abia State as perceived by both food dealers and consumers. This finding aligns with the study of Ojiako & Onu (2020) and Olabisi *et al.* (2018) who highlighted that restricted availability of specific food items attributable to aspects like market disturbances or supply chain challenges can influence food prices and overall food security.

The coefficient of insurgency and herdsman attacks on farms had a negative relationship and was statistical significance at the 5% level in the model of food dealers, but had positive relationship at the 1% level in the model of food consumers. This observation indicates that a rise in incidents of insurgency and attacks by herdsman on farms leads to an escalation in the likelihood of food price hikes in Abia State. The disruptions caused by insurgency and herdsman attacks interfere with agricultural operations, prompting farmers to either abandon their farms or curtail cultivation activities due to security apprehensions. Consequently, this scenario can result in diminished agricultural output and a shortage of food items in the market, consequently causing price surges due to reduced supply (Esheya, Ogbonna and Nwandu, 2024). The upsurge in incidents of insurgency and attacks by herdsman on farms in Abia State may also have the effect of diminishing food production, causing disruptions in the supply chain, and elevating security expenses. This discovery aligns with the conclusions drawn by Ojiako & Onu (2020), Oladipo & Oladipo (2019), and Onwusiribe *et al.* (2015) who observed that insurgency and attacks by herdsman on farms diminish food supply, compelling food dealers to incur higher costs for procurement. The coefficient of distance to the food item source market had a positive sign and was statistical significance at the 1% level within the food dealers' model. This suggests that as the distance to the food item source market increases, the probability of food price increase in the State also rises. The distance to food item source markets impacts multiple facets of the supply chain, such as transportation expenses, supply chain robustness, market competitiveness, and availability of food products. An increase in these variables will lead to a rise in food costs. Consequently, food prices rise with an increase in the distance to the food item source market, and conversely. This finding aligns with the results obtained by Muhammad & Ahmad (2021), Adewuyi & Amoo (2020), and Yahaya & Atte (2018), who highlighted the influence of distance to food source markets on food prices across different regions of Nigeria.

Management Choices to Food Price Increases among Food Dealers and Consumers

The mean responses of the respondents on the management choices to food price increases in Abia State is presented in Table 2.

Table 2: Mean score responses on management choices to food price increases among food dealers and consumers in Abia State

S/N	Management choices to food price increases in Abia State	Food Dealers			Food Consumers		
		Mean	S.D.	Rmk	Mean	S.D.	Rmk
1	Enhancing agricultural productivity through investments in technology, research, and infrastructure	4.15	1.02	A	3.95	1.05	A
2	Investing in agricultural productivity through increasing cultivated area of land in the state and livestock production	4.07	1.01	A	4.13	1.28	A
3	Diversifying food sources and promoting a variety of crops and food products	3.84	1.18	A	3.89	1.04	A
4	Ensuring good road network for food supply	3.98	1.14	A	3.80	1.08	A
5	Improving the efficiency and resilience of the food supply chain	4.13	1.22	A	4.19	1.16	A
6	Implementing price stabilization mechanisms	3.85	1.07	A	4.37	1.45	A
7	Promoting food trade and market integration	4.23	1.16	A	3.92	1.09	A
8	Educating consumers about nutrition, budgeting, and healthy eating habits	4.36	1.08	A	3.94	1.11	A
9	Regulating taxes exploitation	4.21	1.07	A	4.24	1.15	A
10	Regulating domestic food export limits	3.98	1	A	4.02	1.1	A
11	Setting up task force to ensure compliance of food dealers to state food price regulation	4.08	1.17	A	3.90	1.09	A
12	Implementing social safety nets, food assistance programs, and targeted subsidies	4.19	1.11	A	4.14	1.11	A
13	Providing storage facilities by government for food reservation	3.81	1.16	A	3.67	1.05	A
14	Practicing food price hedging	4.28	1.16	A	4.02	1.15	A
15	Policy coordination and governance reform	4.04	1.09	A	4.21	1.15	A
16	Reducing transportation cost	4.08	1.2	A	4.35	1.19	A
17	Investing in research and innovation	4.19	1.03	A	4.27	1.13	A
18	Encouraging sustainable consumption and production practices	3.91	1.1	A	4.05	1.04	A
	Grand mean score	4.08	1.11	A	4.06	1.13	A

Source: Field survey data, 2024

Evidence derived from the mean score responses of food dealers concerning the managerial choices related to the increase of food prices in Abia State, shown in Table 2, indicated that individuals involved in food dealers had the highest average score responses in terms of educating consumers about nutrition, budgeting, and fostering healthy eating habits ($M = 4.36$; $S.D. = 1.08$). Conversely, they had the lowest mean response regarding the provision of storage facilities by the government for food reservation ($M = 3.81$; $S.D. = 1.16$). These findings reveal that the mean responses of food dealers to all eighteen (18) items concerning the managerial choices linked to food price increases in Abia State within the

research location surpassed the critical threshold of 3.00. The mean of the food dealers' responses concerning the managerial choices regarding food price increases in Abia State was 4.08, with a standard deviation of 1.11. The recorded value surpasses the critical threshold of 3.00, suggesting that food dealers endorsed all statements concerning the managerial choices regarding food price increases in Abia State. Similarly, an analysis of the mean score responses from food consumers regarding the managerial choices related to food price increases in Abia State, as depicted in Table 2, disclosed that food consumers exhibited the highest mean score responses in terms of implementing price stabilization mechanisms ($M = 4.37$; $S.D. = 1.45$). Conversely, they had the lowest mean response concerning the provision of storage facilities by the government for food reservation ($M = 3.67$; $S.D. = 1.05$). These results indicate that the mean responses of food consumers to all eighteen (18) items linked to the managerial decisions concerning food price increases in Abia State within the research location exceeded the critical threshold of 3.00. The average of the food consumers' mean responses regarding the managerial choices concerning food price increases in Abia State was 4.06, with a standard deviation of 1.13. The observed value exceeds the critical threshold of 3.00, indicating that food consumers approved all statements concerning the managerial choices regarding food price increases in Abia State. The investigation has revealed that both food dealers and consumers in Abia state share the belief in improving agricultural productivity by investing in technology, research, and infrastructure. This includes expanding cultivated land and livestock production, diversifying food sources, ensuring a reliable road network for food supply, enhancing the efficiency of the food supply chain, promoting food trade and market integration, educating consumers on nutrition and healthy eating, regulating taxes and domestic food exports, establishing a task force to enforce state food price regulations, implementing social safety nets and food assistance programs, providing government storage facilities for food reserves, practicing food price hedging, coordinating policies, reforming governance, reducing transportation costs, investing in research and innovation, and promoting sustainable consumption and production practices. This finding aligns with the recommendations of Onuoha & Madukwe (2018), Odoemelam & Okoye (2019), Anya & Agu (2020), Nwachukwu & Agwu (2021), and Igwe & Umeokeke (2022) on managing food price increases in Nigeria.

Conclusion and Recommendation

The study which focused on the drivers of food price increases and their management choices: insights from food dealers and consumers in Abia State, Nigeria, revealed that household size, monthly income, perception on changes in supply and demand dynamics of food items, changes in international market prices for food commodities, perception on exchange rates, transportation and distribution costs for food commodities, government policies and subsidies, market structure and competition, climate and environmental factors, food clearance charges/levy, availability of food items, insurgency and herdsmen attack of farms, and distance to food item source market significantly determined food

price increases in Abia State as noted by food dealers in the state. Similarly, household size, monthly income, cost of food production, changes in international market prices for food commodities, perception on exchange rate, government policies and subsidies, climate and environmental factors, consumer preferences/dietary changes, availability of food items, and insurgency and herdsmen attack of farms significantly determined food price increases in Abia State as noted by food consumers in the state. The study further shows that improving agricultural productivity by investing in technology, research, and infrastructure. This includes expanding cultivated land and livestock production, diversifying food sources, ensuring a reliable road network for food supply, enhancing the efficiency of the food supply chain, promoting food trade and market integration, educating consumers on nutrition and healthy eating, regulating taxes and domestic food exports, establishing a task force to enforce state food price regulations, implementing social safety nets and food assistance programs, providing government storage facilities for food reserves, practicing food price hedging, coordinating policies, reforming governance, reducing transportation costs, investing in research and innovation, and promoting sustainable consumption and production practices were the ways to manage food price increases in Abia State.

The study recommends that any policy that aimed at controlling food price increases in the state should focus on those factors that significantly determined food price increases as identified in the food dealers and consumers models. Resources should be directed towards technology, research, and infrastructure to boost agricultural productivity, including expanding cultivated land and livestock production. It is also crucial to encourage diversification of food sources to mitigate the impact of price increases on certain commodities and ensure food security. Improving transportation networks, reducing transportation costs, and promoting market integration are essential to enhance the efficiency and resilience of the food supply chain. Implementing state regulations on food prices and establishing a committee for oversight is necessary to maintain stability and affordability of food prices for consumers in Abia State.

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