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Analysis of Tomato Marketing System in Owerri Agricultural Zone, Imo State, Nigeria

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Abstract - Tomato marketing plays a critical role in food supply, income generation, and employment in Nigeria, yet the system is often constrained by perishability, seasonal price instability, and weak market organization. This study analysed the tomato marketing system in the Owerri Agricultural Zone of Imo State, Nigeria. A descriptive cross-sectional survey design was adopted. Primary data were collected from 105 tomato traders using a structured questionnaire administered across major markets in the zone.The results show that tomato marketing in the study area is dominated by economically active traders, with the majority falling within the 32–41 age bracket. Female traders constituted a higher proportion of participants. Tomato supply in the zone was found to depend largely on northern Nigeria, particularly Jos and the Kaduna–Zaria axis, with Relief Market serving as the main aggregation and redistribution hub. Retailers constituted the largest group of market participants, highlighting the consumption-oriented nature of the market. The study recommends the standardisation of measurement units, improvement of market information systems, strengthening of local aggregation and storage facilities, among others.

Keywords: Tomato marketing, system, Owerri, Agricultural Zone, Nigeria.

I. INTRODUCTION

Agriculture remains a vital support to the Nigerian economy, despite oil revenue (Food and Agriculture Organization of the United Nations [FAO], 2022). Tomato (Solanum lycopersicum), as the second-largest fruit vegetable, is a principal crop for dry-season farmers and a "poverty reduction crop" (Oyesuntimi,, 2023). It holds significant economic and nutritional potential due to its abundance of vitamins, minerals, and secondary metabolites like lycopene (Ali et al., 2020). The supply chain is dominated by labour-intensive activities, adding value in terms of time, place, and form (Thompson et al, 2018). The crop's fundamental challenge is its high perishability, with a short shelf life of only 4-7 days. This leads to a severe imbalance: a market glut and high wastage during the production season, followed by off-season scarcity and sharp price fluctuations (Ojeleye, et al., 2023).

The study examines the tomato marketing system in Imo State, stating its relevance within Nigeria's broader agricultural economy, where agriculture remains a major contributor to GDP, employment,

and food supply despite the country's high crude oil revenues (Micheal, 2024). Fruit, vegetables, and tomatoes in particular, hold substantial nutritional and economic value as they contribute essential vitamins, minerals, and bioactive compounds to human diets (Ali, et al., 2020). However, tomatoes are highly perishable with a short shelf life of four to seven days, making efficient marketing systems essential to prevent rapid quality deterioration, minimise waste, and stimulate both production and consumption (Thompson et al., 2018). The background problem is heightened by seasonal fluctuations, poor storage capacity, inadequate handling systems, and inefficient market organization, which collectively contribute to high levels of post-harvest losses and inconsistent tomato supply in regions like Imo State.

Tomato marketing in Nigeria is described as complex due to its perishability, seasonality, bulkiness, and lack of organised marketing structures (Osunmakinde, et al., 2024). The Nigerian tomato supply chain involves multiple actors whose activities extend from production to distribution, but is hindered by inefficiencies in logistics, technical constraints, and information asymmetry (Sanusi & Dada, 2016). Many farmers earn marginal returns because the marketing system does not guarantee equitable profit distribution across participants, a problem exacerbated by a glut during peak production seasons and scarcity during off-seasons (Adeoye, et al., 2019). Middlemen often dominate price setting, and the lack of standard weights and measures creates room for exploitation, while poor transportation and storage systems heighten post-harvest losses, widening the supply-demand gap (Ojeleye, et al., 2023).

The need to understand how tomatoes move from the northern production regions of Nigeria to consumption regions such as Imo State underscores the rationale for this study. Although tomatoes are cultivated nationwide (Olanrewaju, et al., 2017), Imo State experiences severe supply inconsistencies and price fluctuations, suggesting inefficiencies in market conduct, structure, and performance within the region. Additionally, during off-seasons, rapid supply shortages occur despite high production volumes nationally, revealing gaps in supply chain coordination and logistics (Ogah, 2022). Despite the economic and nutritional importance of tomato, empirical studies focusing specifically on the structure, conduct, and performance of the tomato marketing system in Owerri Agricultural Zone are scarce. Existing studies often emphasize production challenges at the national or regional level, with limited attention to localized market dynamics, actor interactions, marketing margins, and post-harvest loss patterns. Given the unique socio-economic and infrastructural context of Owerri Agricultural Zone, there is a clear need for a detailed, location-specific analysis.

This study is therefore undertaken to analyze the tomato marketing system in Owerri Agricultural Zone, Imo State. By examining the roles of market participants, pricing mechanisms, marketing margins, constraints, and inefficiencies, the study seeks to generate evidence-based insights that can inform policies and interventions aimed at improving market efficiency, reducing post-harvest losses, stabilizing prices, and enhancing the livelihoods of tomato producers and marketers in the zone.

1.1 Objectives of the Study

The general objective of this study was to analyze the tomato marketing system in the Owerri Agricultural Zone of Imo State, with a view to assessing its structure, performance, and constraints, and identifying factors influencing marketing efficiency and profitability.

The specific objectives of the study were to:

i) Describe the socio-economic features of tomato traders in Owerri Agricultural Zone, Imo State.
ii) Describe the marketing channels of tomato and,
iii) Describe the market conduct of tomato traders in Owerri Agricultural Zone of Imo State.

II. MATERIALS AND METHODS

The study adopted a descriptive cross-sectional survey design combined with analytical methods commonly used in agricultural marketing and value chain studies. The study was conducted in the Owerri Agricultural Zone of Imo State, Nigeria. The zone comprises nine Local Government Areas where tomato production and marketing activities are prominent. They include Aboh Mbaise, Ezinihitte Mbaise, Ikeduru, Mbaitoli, Ngor-Okpala.

Others are Owerri Municipal Council, Owerri West and Owerri North LGA. The zone is bounded to the north, east, west, and south by Oru-West LGA, Abia State, Isiala Mbano and Rivers State respectively. The area is characterized by a humid tropical climate, seasonal rainfall, and a large population dependent on agriculture and food trade for livelihoods. Major markets within the zone serve both rural producers and urban consumers, making the area suitable for analyzing tomato marketing dynamics. The population of the study consisted of tomato traders involved in tomato marketing within the Owerri Agricultural Zone. A multi-stage sampling technique was employed in selecting the sample size. In the first stage, selected Local Government Areas known for active tomato marketing were purposively chosen. In the second stage, major tomato markets within these LGAs were identified. In the third stage, tomato marketers were randomly selected from market lists or through systematic sampling where formal lists were unavailable. The list of tomato traders obtained from the traders' association of each market was used as sample frame. A total of 105 tomato traders was used as sample for the study. Data for the study were obtained from both primary and secondary sources. Primary data were collected directly from respondents using structured questionnaires. Secondary data were obtained from published journal articles, government reports, FAO publications, and agricultural market bulletins. The primary instrument for data collection was a structured questionnaire. The primary instrument for data collection was a titled: "Analysis of Tomato Marketing System Questionnaire (ATMSQ). The questionnaire was divided into three sections covering respondent socio-economic characteristics, source of origin of tomatoes in the area, and tomatoes marketing conduct in the area. To ensure content validity, the questionnaire was reviewed by experts in agricultural economics and agribusiness. A pilot-test was conducted in a nearby market outside the study area, and necessary adjustments were made based on feedback. The data collected from the pilot test were analyzed using the Cronbach Alpha reliability coefficient method. The overall reliability coefficient obtained was 0.87, indicating a high level of internal consistency. Participation in the study was voluntary, and respondents were informed about the purpose of the research. Confidentiality of information provided was assured, and data were used strictly for academic purposes, in line with standard research ethics in social science research (APA, 2020). Descriptive statistics such as frequency counts and percentages were used to analyze socio-economic characteristics of respondents, source of origin of tomatoes in the area, and tomatoes marketing conduct in the area.

III. RESULTS

This section presented the results obtained from the data collected and analyzed on the analysis of tomato marketing system in Owerri Agricultural Zone. Data were analyzed using frequency counts and percentages to answer the three research questions.

Objective 1: Describe the socio-economic features of tomato traders in Owerri Agricultural Zone, Imo State.

3.1. Socio-economic Characteristics of the Respondents

Table 1. Distribution by Age

Age	Frequency	Percentage
22 – 31	14	13.3
32 – 41	49	46.6
42 – 51	25	23.8
52 – 61	9	8.8
62 – 71	7	6.6
Total	105	100

Table 1 indicates that a greater proportion of the respondents (46.6%) are within the age bracket of 32 - 41 years, (23.8%) of the respondents are within 42-51, while (6.6%) of the respondents are within the ages of 62 -71. This shows that 46.6 of the tomato traders are still in their working age group, which signifies that they still possess the energy and strength to carry out their marketing activities.

Table 2: Distribution by gender

Sex	Frequency	Percentage
Male	44	41.9
Female	61	58.1
Total	105	100

From the table 2, it shows that the majority (58.1%) of the tomato marketers are women, while (41.9%) are men.

Table 3: Distribution by Household Size

Household	Frequency	Percentage
1 – 5	5	41.9
6 – 10	61	58.1
Total	105	100

Table 3 showed that a greater population of the respondents (50.5 %) have between 1- 5 persons in their household, and (49.5%) of the respondents have between 6- 10 persons in their household.

Table 4: Level of Education

Level of education	Frequency	Percentage
None	5	4.8
Primary	30	28.6
Secondary	60	62.8
Tertiary	4	3.8
Total	105	100

Table.4 showed that majority (62%) of the respondents who were 60 in number attained secondary education, while (3.5%) had their education up to tertiary level. This indicates that to a reasonable degree, the respondents are learned.

Table 5: Frequency Distribution by Marketing Experience

Marketing experience	Frequency	Percentage
2 – 11	55	52.4
12 – 21	47	44.8
22 – 31	3	2.8
Total	105	100

The result in Table 5 showed that the majority (52%) of the respondents had marketing experience of 2-11 years, while 2.8% had marketing experience of 31 years, the mean was 12years, implying that most respondents have adequate knowledge and exposure concerning the enterprise.

Table 6. Distribution by Occupation

Occupation	Frequency	Percentage
Tomato marketers	79	75.2
Others	26	24.8
Total	105	100

The results in table 6 showed that the majority (75%) of the respondents were tomato marketers, while 24.8% had other forms of business.

Overall, the socio-economic characteristics of tomato traders in the Owerri Agricultural Zone depicts a market dominated by economically active, moderately educated, and experienced individuals, with women playing a leading role. Most traders depend heavily on tomato marketing for their livelihoods, making them highly vulnerable to inefficiencies arising from price volatility, post-harvest losses, and seasonal supply imbalances.

Objective 2: Describe the various sources of the purchase tomatoes and area of sales, hence describe marketing channels of tomato in Owerri Agricultural Zone of Imo State,

3.2 Source of Product, Point of Sale and Marketing Channel

The distribution of the traders based on the source and destination regions of tomatoes sold in the area is shown in Table 7.

Table 7. Distribution of Traders based on their source and Destination Regions

Source market	Frequency	%	Destination markets	Frequency	%
Sokoto	10	9.5	Relief Market	48	45.7
			Eke-Ukwu Owerri	12	11.4
Jos	65	61.9	Eke-Ukwu Owerri	18	17.1
			Relief Market	44	41.9
Kaduna/Zaria	45	42.8	Eke-Ukwu Owerri	20	19.0
			Relief Market	56	41.9
Kano/Katsina	8	7.6	Relief Market	20	19.0
Relief Market	40	38.1	Nkwoala Market	25	23.8
			Eke-Opkala	38	36.2
			Afo Ogbe Ahiara	44	41.9
			Eke-Ukwu Owerri	36	34.3
Total	168+				361+

Sources of Tomato Supply

The results reveal that tomato marketing in the Owerri Agricultural Zone is heavily dependent on external supply, particularly from northern Nigeria. A majority of the respondents (61.9%) sourced their tomatoes from Jos, Plateau State, making it the dominant supply region. This was followed by Kaduna/Zaria axis, which accounted for 42.8% of the supply. Smaller proportions of traders sourced tomatoes from Sokoto (9.5%) and Kano/Katsina (7.6%).

Destination Markets and Internal Redistribution

On the demand side, tomatoes supplied into the zone are redistributed across several urban and rural markets. The results show that Relief Market plays a central role as both a destination and redistribution hub. A substantial proportion of tomatoes arriving from northern Nigeria are first offloaded at Relief Market, from where they are further distributed to other markets within the zone. Specifically, 38.1% of traders in rural markets sourced their tomatoes from Relief Market rather than directly from northern suppliers. Other key destination markets include Eke-Ukwu Owerri, Nkwoala Market, Eke-Opkala, and Afo Ogbe Ahiara. This pattern indicates a hierarchical market structure in which Relief Market functions as a major aggregation and wholesale centre, while surrounding markets operate mainly as retail or secondary wholesale outlets.

Marketing Channels of Tomatoes

The distribution of respondents by marketing channel shows that tomato marketing in the Owerri Agricultural Zone is retailer-dominated. Retailers constitute the largest proportion of traders, accounting for 48.6% of respondents. This is followed by wholesalers, who make up 36.2% of the sample. Commission agents account for 9.5%, while merchant-speculators represent only 5.7%. No assemblers were recorded among the respondents.

The dominance of retailers suggests that the zone functions primarily as a consumption-oriented market, where tomatoes are sold in small quantities directly to final consumers. Wholesalers play a secondary but important role by bridging long-distance supply from northern Nigeria to local markets. The small number of merchant-speculators reflects the high risk associated with tomato storage and price uncertainty, which discourages large-scale speculative activities.

3.2.1 Distribution Channels of Tomatoes in Owerri Zone of Imo State

The results in Table 8 show the distribution of the respondents based on their marketing channel in the area.

Table 8. Distribution of Tomatoes Traders Based on the Level of Distribution Channels

Traders	Frequency	Percentage
Wholesalers	38	36.2
Merchant/speculator	6	5.7
Retailers	51	48.6
Assemble	0	0
Commission Agent	10	9.5
Total	105	100

The result showed that the retailer has the highest (48.6%) proportion of the traders in the study area. This is followed by 36.2 % of those who are Wholesalers, 5.7% of them are merchant/speculator while only 9.5% of them are commissioned agents.

Overall, the results show that tomato marketing in the Owerri Agricultural Zone is characterized by strong spatial dependence on northern Nigeria for supply, a centralized redistribution system anchored by Relief Market, and a retailer-dominated marketing channel.

Objective 3: Describe the market conduct of tomato traders in Owerri Agricultural zone.

3.3 Marketing Conduct of Tomato Marketing in Owerri Zone

The results in Table 9 show the market conduct of tomato traders in Owerri zone. Market conduct is examined from product standardisation, sorting, grading, behaviours, information, assembly and value-added operation of the traders.

Table 9. Distribution of traders based on their market conduct in the Area

Product standardisation/ Measurement/ Container	Weight (kg)	Mean (qty/No)	Price/Measure	Price/Kg (₦)	Rel freq. %
i. Sharing	0.6	157	300/share	450.00/Kg	68.7%
ii. Custard Bucket	3.5	87	2000/Bucket	571.00/Kg	78.6%
iii. Paint Bucket	14.6	9	6500/Bucket	445.20/Kg	29.7%

iv. Basket	60.0	24	13000/Bucket	216.00/Kg	34.5%
Sorting and Grading Pattern	Rel. frequency (%)		Total Qty Sold (Kg)	Price /kg	Patronage/day
i. Window dressing		49.8%	54.9	658.08/Kg	0.55
ii. Sorting and sharing		57.8%	187.4	500.00/kg	0.78
iii. Cart display		45.2%	69.9	566.46/kg	0.45
iv. Road side display		67.7%	205.1	489.87/kg	0.81
Information dissemination					
Phone calls		28.8%	68.7	585.98/kg	0.31
Face to face contacts			122.7	448.89/kg	0.78
Jiggles and customer dragging		43.1%	189.6	455.56/kg	0.69
Meet buyer at the front of gate		23.7%	87.4	489.67/kg	0.45
Home visit/services		19.8%	142.9	648.89/kg	0.82
Other Value Addition along the Supply Chain					
i. Further processing		79.9%	106.1	650.00/kg	0.76
ii. Paying in advance		58.6%	58.7	458.56/kg	0.46
iii. Credit services		34.5%	89.7	699.00/kg	0.67

3.3.1 Measurement and Product Standardisation Practices

Results show that tomato marketing in the Owerri Agricultural Zone is characterised by non-standardised measurement systems. Traders use a variety of containers and informal measures, including product sharing (0.6 kg), custard buckets (3.5 kg), paint buckets (14.6 kg), and baskets (60 kg). These measures differ widely in both quantity and implied price per kilogram.

Product sharing is the most commonly used unit, adopted by 68.7% of traders, and sold at ₦300 per share, translating to ₦450 per kilogram. Custard buckets are used by 78.6% of traders and sold at ₦2,000 per bucket, equivalent to ₦571 per kilogram. Paint buckets and baskets, used mainly by wholesalers, are sold at ₦6,500 and ₦13,000 respectively, with corresponding unit prices of ₦445.20/kg and ₦216.00/kg.

Sorting, Grading, and Display Practices

Sorting and grading practices further reflect differentiated market behaviour among traders. Four major display patterns were identified: window dressing (49.8%), sorting and sharing displays (57.8%), cart displays (45.2%), and roadside displays (67.7%).

Roadside display traders recorded the highest patronage ratio (0.81) despite offering the lowest unit price (₦489.87/kg). This suggests that accessibility, visibility, and lower overhead costs play a major role in attracting customers. In contrast, window-dressing traders charged the highest unit price (₦658.08/kg) but recorded relatively low patronage (0.55), indicating that consumers in the study area may be price-sensitive and less responsive to aesthetic presentation.

Market Information and Buyer–Seller Interaction

Market information dissemination varies widely among traders and contributes significantly to price dispersion. The dominant mode of information exchange is face-to-face interaction, used by 68.7% of traders and associated with the lowest unit price (₦448.89/kg). This method promotes direct negotiation, price comparison, and bargaining, thereby limiting excessive price mark-ups.

Other information strategies include jingles and customer attraction techniques (43.1%), phone calls (28.8%), meeting buyers at shop entrances (23.7%), and home visits (19.8%). Phone-based transactions and home delivery services recorded higher unit prices (₦585.98/kg and ₦648.89/kg respectively), reflecting the premium charged for convenience and personalised service.

Value-Addition Activities

Value addition is another important aspect of market conduct in the tomato marketing system. The most

common value-addition service is on-site processing, with 79.9% of traders providing facilities such as grinding, washing, and blending of tomatoes into paste. This service recorded a high patronage ratio (0.76) despite a relatively high unit price of ₦650/kg, indicating strong consumer preference for convenience.

Other value-addition practices include advance payment arrangements (58.6%) and credit sales (34.5%). Advance payment allows buyers to secure future supplies at current prices, although it recorded a lower patronage ratio (0.46), possibly due to trust and price fluctuation risks. Credit sales attracted a relatively high unit price (₦699/kg) and a patronage ratio of 0.67, reflecting the cost of delayed payment and risk borne by traders.

Overall, the market conduct of tomato traders in the Owerri Agricultural Zone is characterised by non-standardised measurement systems, differentiated pricing strategies, information asymmetry, and selective value-addition practices. These behaviours create significant price dispersion and uneven bargaining power among market participants. Although traders employ these strategies to manage perishability risks and maximise returns, they collectively contribute to market inefficiency and imperfect competition within the tomato marketing system..

IV. DISCUSSION OF FINDINGS

Findings in Tables 1-6 showed that tomato trading in the Owerri Agricultural Zone is largely carried out by economically active, moderately educated, and experienced individuals, with women forming a majority of respondents and most traders relying on tomato marketing as a primary livelihood. These characteristics shape traders' capacity to manage perishability, respond to price swings, and adopt improved marketing practices. First, the predominance of traders in the 32–41 age bracket (46.6%) and the broader 32–51 range indicates a labour force composed mainly of physically active adults. This is consistent with findings from other Nigerian vegetable-market studies where younger and middle-aged adults dominate perishable commodity trading because it is physically demanding and time-intensive (RSIS International, 2023). Second, women's dominance among traders (58.1%) aligns with broader evidence that fresh-produce retailing and small-scale wholesaling in many parts of Nigeria are female-led activities (Wineman et al., 2024). Third, the educational profile (majority with secondary education) suggests traders possess sufficient literacy and numeracy for routine market tasks—record-keeping, price negotiation and simple accounting—while relatively few have tertiary education. Recent studies show that higher education increases uptake of improved marketing tools (digital price info, contract arrangements) and practices (better preservation/packaging), which can reduce losses and improve margins (Benc, 2024). Fourth, the average marketing experience (mean ≈ 12 years; majority 2 – 21 years) indicates a seasoned trader population. Experience helps in forecasting seasonal price cycles, building supplier relationships, and managing perishability risks—advantages noted in empirical work on vegetable value chains (Osunmakinde, 2024). Fifth, the finding that 75.2% list tomato marketing as their primary occupation highlights heavy livelihood dependence on a highly perishable product. This makes households particularly vulnerable to seasonal gluts and price collapses: when supply surges and storage options are limited, incomes fall sharply (Affognon et al., 2015; Ojeleye et al., 2023).

The findings in Tables 7 – 8 on the sources of tomato supply and marketing channels reveal a tomato marketing system in the Owerri Agricultural Zone that is highly dependent on external production regions, spatially centralized around a few major markets, and dominated by retail-level transactions. These characteristics have important implications for price behaviour, market efficiency, and income distribution among participants. The study shows that the majority of tomatoes marketed in the Owerri Agricultural Zone are sourced from northern Nigeria, particularly Jos in Plateau State and the Kaduna/Zaria axis. This result is consistent with existing literature that identifies northern Nigeria as the major tomato-producing belt due to its favourable dry-season climate and irrigation facilities (Adeoye et al., 2019; Olanrewaju et al., 2017). On the destination side, the results indicate that Relief Market functions as a central aggregation and redistribution hub within the Owerri Agricultural Zone. A substantial proportion of traders source their tomatoes from Relief Market rather than directly from northern suppliers. This finding reflects a hierarchical market structure in

which bulk tomatoes are first offloaded at a central urban market and then redistributed to secondary and rural markets. Similar market concentration patterns have been documented in other Nigerian urban centres, where central markets serve as wholesale nodes that determine price transmission across surrounding markets (Obetta & Achike, 2023). The analysis of marketing channels shows that tomato marketing in the Owerri Agricultural Zone is dominated by retailers, who constitute nearly half of the traders, followed by wholesalers. The dominance of retailers suggests that the zone primarily functions as a consumption-oriented market, where tomatoes are sold in small quantities directly to final consumers. This structure aligns with findings from studies in other southern Nigerian markets, which report a high prevalence of retailers in urban and peri-urban tomato trade due to daily household demand for fresh produce (Sanusi & Dada, 2016; Osunmakinde, 2024). The absence of assemblers in the marketing channels further highlights the limited role of local aggregation within the Owerri Agricultural Zone. Tomatoes are rarely collected from nearby farms for onward marketing, reinforcing the zone's dependence on external production areas. This lack of local assembly reduces opportunities for collective marketing, economies of scale, and bargaining power, thereby weakening the overall efficiency of the marketing system (Affognon et al., 2015).

The results in Table 9 showed a market conduct characterized by non-standardised measures, heterogeneous sorting/grading and display practices, significant information asymmetries, and diverse value-addition/payment arrangements. Each of these behaviours helps traders manage the risks of a highly perishable product, but together they generate price dispersion, raise transaction costs, and weaken market transparency and equity.

The result also reveal wide use of informal units (shares, custard buckets, paint buckets, baskets) with large variations in implied price per kilogram. Such non-standard units permit flexible, context-dependent pricing but also create confusion and opportunities for rent extraction by better-informed traders. This finding is consistent with evidence from Nigerian markets where the absence of standard weights/measures contributes to price variability and consumer exploitation (Sanusi & Dada, 2016; Adeoye et al., 2019).

The distinct sorting/grading and display strategies (roadside, cart, window dressing) reflect deliberate market segmentation: traders use presentation and grading to target different customer segments and willingness to pay. Roadside sellers commanding highest patronage at lower unit prices suggest the importance of convenience and lower overheads for many consumers, while window-dressed stalls capture higher unit prices from buyers who pay for perceived quality or hygienic presentation. This pattern aligns with studies showing that physical presentation and grading are used strategically to extract premiums in perishable-goods markets (Osunmakinde, 2024; Obetta & Achike, 2023).

The results indicate a plurality of information channels — face-to-face negotiation, jingles, phone calls, home delivery — with the lowest prices associated with face-to-face interactions and higher prices tied to convenience services (phone orders, home delivery). This pattern highlights how information access and transaction convenience translate into price differentials. The literature shows that limited access to reliable market information is a major driver of price dispersion in Nigerian vegetable markets; digital or institutional interventions that improve price transparency tend to compress margins and enhance farmer/consumer welfare (Shehu et al., 2018; Benc, 2024).

The prevalence of on-site processing (grinding/blending), advance payment, and credit sales demonstrates traders' efforts to add form and time utilities and to build customer loyalty. These services carry a premium (higher unit prices) — customers pay for convenience, guaranteed supply, or deferred payment. While such value-added services can raise trader returns and consumer welfare (through convenience), they also introduce price differentiation that may disadvantage cash buyers or those without credit access (Sanusi & Dada, 2016).

V. CONCLUSION

This study analysed the tomato marketing system in the Owerri Agricultural Zone of Imo State, focusing on trader characteristics, supply sources, marketing channels, and market conduct. The findings show that tomato marketing is dominated by economically active and experienced traders, particularly women, who depend largely on the enterprise for their

livelihoods. The system relies heavily on supplies from northern Nigeria, with Relief Market serving as the main redistribution hub. This dependence, combined with limited storage and poor logistics, exposes the market to seasonal shortages, gluts, and price instability. Market conduct is characterised by non-standardised measures, information asymmetry, and varied pricing practices, which contribute to inefficiencies and unequal profit distribution. Overall, tomato marketing in the zone is economically viable but constrained by weak coordination, inadequate infrastructure, and lack of standardisation. Addressing these challenges is essential for improving market efficiency, reducing losses, and stabilising trader incomes.

Based on these findings, the study recommended that: Market authorities and trader associations should enforce the use of standard weighing scales and uniform measurement units to reduce price manipulation, improve transparency, and protect both traders and consumers. Investment in affordable storage technologies such as evaporative coolers and small-scale cold rooms, as well as improved transportation systems, is necessary to reduce post-harvest losses and stabilise tomato supply across seasons. Timely dissemination of market price and supply information through notice boards, mobile platforms, or trader associations should be encouraged to reduce information asymmetry and enhance fair pricing. Tomato traders should be encouraged to form and strengthen cooperatives to enable bulk purchasing, collective transportation, shared storage, and stronger bargaining power within the marketing system. Given the dominance of women in tomato marketing, tailored credit schemes and training programmes on post-harvest handling, record-keeping, and business management should be provided to enhance their capacity and income stability. Government agencies should provide supportive policies and effective market regulation to improve coordination between producing and consuming regions, reduce seasonal supply disruptions, and enhance overall market efficiency.

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