



**ECONOMIC ANALYSIS OF ORANGE MARKETING IN
GBOKO BENUE STATE, NIGERIA**

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ABSTRACT

The study examined economic analysis of orange marketing in Gboko, Benue State, Nigeria. A multi stage sampling procedure was used in selecting a sample of 120 respondents. Primary data were collected using a structured questionnaire and analyzed with descriptive statistics and benefit–cost ratio techniques. The results revealed that orange marketers were relatively young, with an average age of 34 years, and the trade was male-dominated (70%). Majority (65%) of respondents were married and lived in large households averaging seven persons. Education levels were fairly high, with 55% having secondary education, 30% having primary education, and 15% having tertiary education. Marketing experience was substantial, as 60% had over 10 years in the business. Income distribution showed that 45% earned less than ₦200,000 annually, 35% earned between ₦200,000 and ₦400,000, and 20% earned more than ₦400,000. Institutional participation was weak, with only 28% belonging to cooperatives, 22% accessing extension services, and 18% obtaining credit. Marketing channels were relatively direct: wholesalers supplied 55%, retailers handled 40%, while only 5% involved middlemen. Fresh oranges dominated sales (95%), with local markets absorbing 70% of total sales. The total cost incurred was ₦3,518,000, while total revenue reached ₦52,391,968, yielding a Benefit–Cost Ratio (BCR) of 14.89. Market structure analysis indicated that 69.17% perceived the system as monopolistic and 27.5% as perfectly competitive. Price uniformity was moderate for 51.67% of respondents, while access to market information was low for 54.17%. Market performance measures were favourable, with a Concentration Ratio (CR) of 7.29% and a Marketing Efficiency Index (MEI) of 27.91. Despite profitability, major constraints persisted. Price fluctuations (96.61%), pests and diseases (95.83%), high transportation costs (87.5%), poor road networks (83.33%), and unfavorable government policies (82.5%) were the most severe challenges. The study concludes that orange marketing in Gboko is highly profitable and efficient. Strengthening rural infrastructure, enhancing storage facilities, and expanding access to credit are recommended to improve the enterprise's sustainability

Keywords: Economic, Analysis, Orange, Marketing

INTRODUCTION

Agriculture is the backbone of Benue State and Nigeria. The urban economy is regulated by the urban masses, and its development often relies on the economic activities they perform, with agriculture being the primary sector (Purushottam, 2023). Horticultural farming is yet another major source of generating adequate income. There are various kinds of horticultural crops, such as fruits, vegetables, spices, nuts, and tuber crops, as well as medicinal and aromatic plants (Hu *et al.*, 2024). Fruits and vegetables are considered a key part of a healthy and balanced diet and a major component of agricultural production, and global fruit production in 2020 by selected varieties was 75.54 million metric tonnes (Chikkulapally, 2024). Oranges are cultivated in tropical and subtropical regions worldwide. The trees can grow in a variety of soil conditions ranging from extremely sandy to rather heavy clay loams, though the best environment for their best growth is the intermediate soil types (Joshi and Bhatta, 2024). Approximately 70 million tonnes of oranges are produced per year world-wide with about one third of the total produced is processed, while the rest being consumed as fresh fruits. In most cases, producers prefer to sell oranges to the fresh fruits market as their price is normally higher than those sold for processing into various juices. The fruits are eaten fresh and used for making juice (Ferreiro-Seoane *et al.*, 2022).



Orange fruit production as an important part in horticultural industry has emerged as a major economic activity in developing countries, especially those which were hitherto heavily dependent on agricultural production, often at subsistence levels. Horticultural producers in developing countries are mostly small farmers, and they are rarely organized into a formal cooperative or association. It is estimated that 10 to 20% of all farmers produce horticultural crops, sometimes in combination with or in rotation with field crops (Hatai, 2022). Beyond their economic importance, horticultural crops, including citrus fruits, are important sources of plant nutrients, vitamins, and minerals that are essential for human health and well-being, particularly for children and pregnant or nursing women (Phaleng *et al.*, 2024). Nigeria is one of the largest producers of citrus in Africa with about 14 states being major producers of this vitamin C-rich fruit, which includes Benue, Kano, Nasarawa, Kogi, Osun, Ogun, Ebonyi, Kaduna, Taraba, Ekiti, Imo, Kwara, Edo and Delta (Charles *et al.*, 2022). Benue State remains one of Nigeria's major orange cultivation states. Ushongo, Vandeikya, Gboko, Konshisha, Buruku, Gwer East, Kwande are known as the major Orange-producing local governments in Benue State. The orange juice business in Nigeria is highly dominated by unorganized players with over 85 per cent market share. The organized retailers which have only 15 per cent of the business comprised juice bars, juice cafes and packaged juice players. In Benue State, sweet orange is commonly produced by farmers to supplement their income. Commonly found varieties of sweet orange include Valencia 'Washington', 'Ibadan, Others include Tangerine and lemon (Charles *et al.*, 2022).

Some key weaknesses of the orange value chain are long gestation period for fruit-bearing, high cost of input and labour. Orange is highly perishable and must be sold immediately. Another major weakness is the poor availability of quality rootstock. Also, the farmer's share of the consumer price for oranges is very low compared to other fruits and vegetables due to the short shelf life, giving the farmer fewer options to hold back stock and wait until prices rise. The fruit has to reach the consumer within 3-6 days of plucking so that it remains in shape for consumption, as beyond this period, the fruit starts to deteriorate. Marketing plays a vital role in stimulating production and consumption and accelerating economic development. However, the horticultural marketing system in Benue State is highly decentralised, leading to inefficiencies. The marketing of oranges is particularly complex due to their perishability, seasonality, and bulk. Despite being more profitable than other seasonal crops, orange cultivation and marketing face numerous challenges. In Gboko, the orange marketing system is largely unorganized, with intermediaries such as wholesalers, retail traders, and pre-harvester contractors dominating the market. This leads to exploitation of farmers, resulting in low returns. Large quantities of oranges are utilized for producing single-strength juice, pectins for jams and jelly production, and residue used as livestock feed. Despite this potential, the orange industry remains underdeveloped, with only a small percentage of the produced oranges being utilised locally. The seasonal and localised nature of orange production, combined with the fruit's perishability, poses significant marketing challenges. This results in seasonal gluts, distress sales, and volatile price fluctuations. Fruit growers in urban areas face additional hurdles in marketing and transporting their produce, leading to exploitation by middlemen and reduced earnings.

The unorganised marketing practices prevalent in the orange industry lead to high marketing costs, margins, and price spreads, diminishing the economic attractiveness of the fruit. The neglect of the orange fruit industry is further exacerbated by the government and private sectors' preference to invest in food crops such as sesame, rice, cassava, and yams, which offer quicker returns. The orange industry is constrained by numerous marketing problems, including heavy fruit losses during transportation, spoilage due to poor storage and shelf life, and socio-economic factors affecting marketers. Frequent price fluctuations, stemming from the fruit's perishable and seasonal nature, discourage prospective investors from entering the orange market.

Several studies have been conducted on orange. For example, Chikkulapally, (2024) worked on the economic analysis of the production and marketing of sweet orange and mango; Joshi and Bhatta, (2024) analysed the marketing system for sweet orange in Darchula District, Nepal; Hatai (2022) worked on production and marketing of arunachal orange-an economic evaluation; Purushottam (2023) worked on economic analysis of production and marketing of mandarin orange in Maharashtra. Ferreiro-Seoane *et al.* (2022) measured the sustainability of the orange economy, and



Charles *et al.* (2022) analysed the effects of socio-economic characteristics on postharvest losses among sweet orange marketers in Benue State, Nigeria. However, none of these studies has focused on orange marketing in Gboko Local Government Area, Benue State. The current study seeks to bridge this research gap.

- i. describe the socio-economic characteristics of orange marketers in the study area;
- ii. identify the marketing channels for Orange in the study area;
- iii. analyse the profitability of orange marketing in the study area.
- iv. identify the constraints to orange marketing in the study area;

METHODOLOGY

The Study Area

Gboko is one of the most prominent Local Government Areas (LGAs) in Benue State, located in the North-Central region of Nigeria. The study area Gboko is bordered by Tarka LGA to the North, Ushongo LGA to the South, Buruku LGA to the West and Konshisha LGA to the East with a total area of 1,835Km² and density of 257.49Km² and an estimated population of 358,936 according to the 2006 census. City Population estimates the population to be around 615,202 people based on 2025 using the growth rate of 3.5%. The study area has coordinates 7°35' 0" North, 9°03' 0" East and is characterized by a tropical climate with very thick forests. The surface temperature alters between 26°C-36°C.

It is widely recognized as the traditional and cultural headquarters of the Tiv people, who are the predominant ethnic group in the area. Established in 1970, Gboko has grown into a vital socio-economic and political hub within the state. The administrative headquarters of the LGA is Gboko town, which is home to the Tor Tiv, the supreme traditional ruler of the Tiv nation. The presence of the Tor Tiv's palace in the town highlights its cultural and historical significance. Gboko is bordered by several other LGAs, including Tarka, Ushongo, Buruku, Gwer, and Konshisha, making it centrally positioned for trade and inter-community relations.

The local economy is largely agrarian, with the majority of the population engaged in farming activities. Commonly cultivated crops include yam, cassava, maize, and rice. Gboko is also known for its rich mineral deposits, especially limestone, which supports local industries such as cement production. One of the most significant industrial establishments in the area is Dangote Cement Plc, which contributes greatly to employment and economic development.

Gboko also plays a central role in commerce, with numerous markets scattered across its districts, facilitating the exchange of agricultural produce and other goods. The area is subdivided into districts such as Mbatyav, Mbatyierev, Mbayion, Yandev, and Ipav, each hosting various communities and contributing to the local administration and development.

The climate in Gboko is typical of the tropical savanna zone, featuring a distinct wet season and dry season. Temperatures are generally high throughout the year, with the hottest months being February through April. Rainfall is moderately distributed, supporting agricultural activities during the growing season. In terms of infrastructure, Gboko has a number of health facilities including the General Hospital Gboko, TBT Hospital, and several clinics and maternity centers. These facilities cater to the health needs of the population, though like many rural areas in Nigeria, they face challenges related to funding and staffing. Gboko also has a rich history in sports, particularly football. The BCC Lions Football Club, based in the town, once brought fame to the area by winning the African Cup Winners' Cup in 1990. Their home stadium, the J.S. Tarka Stadium, remains a major sports venue in the region.

Sampling Procedure and Sample Size

The population for the study consist of orange marketer in Gboko Local Government Area. A multi-stage sampling technique was used for the study. The first stage, involved the purposive selection of four markets in Gboko Local Government Area; namely Ortese, Akpagher, Gboko town and Tarukpe. The second stage, involved the random selection of orange marketers, from each of the four selected markets using a sampling proportion of 10%. This gives a sample size of 120 orange marketers selected for the study (Table 1).



Table 1: Sample Size Selection Plan

S/N	Market	Registered Orange Marketers	Sampling proportion of 10%
1	Ortese	220	22
2	Akpagher	380	38
3	Gboko main market	450	45
4	Tarukpe	150	15
	Total	1200	120

Method of Data Collection

Data for this study were obtained using a well-structured questionnaire. Section A; deals with the socio-economic characteristics of orange marketers. Section B; deals with marketing channels for oranges. Section C; deals with the profitability of orange marketing. Section D; deals with the structure, conduct and performance of orange marketing. Section E; deals with constraints to orange marketing.

Method of Data Analysis

Both descriptive and inferential statistics were used to analyse data. Specific objectives (i), (ii) and (iv) were analysed using descriptive statistics such as frequency percentages and means. Specific objective (iii) was analysed benefit cost ratio.

Model of Specification

Benefit-Cost Ratio (BCR)

The Benefit-Cost Ratio (BCR) is a financial metric used to evaluate the profitability of orange marketing by comparing total benefits (revenues) to total costs incurred.

$$BCR = \frac{\text{Total Benefit (Revenue)}}{\text{Total Cost}} \dots (1)$$

RESULTS AND DISCUSSION

Socio-economic Characteristics of Orange Marketers

The socio-economic characteristics of orange marketers in the study area were presented in Table 2. The age distribution reveals that the most (81.67%) of the respondents fell within the active age bracket of 21–40 years, with a mean age of 34 years. This suggests that orange marketing is largely undertaken by individuals in their economically productive years, who possess the energy and resilience needed to withstand the demands of agribusiness. Similar findings were reported by Akinbode (2020), who observed that most fruit marketers in Nigeria were young adults, which enhances their capacity for innovation and risk-taking in marketing.

The sex distribution shows that 67.50% of the respondents were male, while 32.50% were female, indicating male dominance in orange marketing. This aligns with the observation of Adeoye *et al.* (2021), who found that men often dominate agricultural marketing because of their mobility and greater access to capital compared to women, although women still play a complementary role, especially in retail sales. The marital status of respondents further demonstrates that majority (60.83%) of the respondents were married, a trend consistent with Oladejo and Adetunji (2023), who reported that married individuals are more engaged in agricultural activities as a means of catering for household needs.

Household size also plays a role in marketing outcomes. The mean household size was six, with significant proportion (44.92%) of respondents had between 11 and 15 persons, which is relatively large. Large households may contribute family labor to both farming and marketing activities, thereby reducing labor costs. This observation agrees with Onu and Okunmadewa (2020), who noted that large household sizes are common among agricultural households in Nigeria and often influence labor availability and welfare.

Education is an important determinant of marketing efficiency. The results show that 55% of marketers attained secondary education, while 25% reached tertiary level. Only 15.83% had no formal education. This implies that the majority are literate, which may facilitate better record-keeping, adoption of innovations, and efficient marketing practices. These results resonate with the findings of



Ohen and Abang (2021), who argued that higher education enhances managerial skills and improves market participation among agricultural entrepreneurs.

With respect to years of experience, more than half (54.17%) of respondents had 11–20 years of experience, with a mean of 12 years, showing that orange marketing in the area is dominated by experienced individuals who may have developed networks and strategies to cope with market challenges. This is in line with the findings of Nmadu *et al.* (2020), who stressed that longer experience in agribusiness strengthens decision-making and profitability.

Occupation distribution indicates that 70.83% of the respondents were primarily farmers, while 29.17% engaged in non-farming activities. This suggests that orange marketing is often combined with farming, a dual engagement strategy that provides multiple income streams. Adeoye *et al.* (2021) similarly reported that most agricultural marketers in Nigeria combine production with marketing to stabilize income and reduce risks.

The income distribution shows that majority (65.83%) of the respondents earned between ₦101,000 and ₦200,000 annually, with a mean income of ₦164,700. This level of income indicates modest returns, suggesting that while orange marketing contributes to household income, it may not guarantee financial security for all participants. These results agree with Olayemi (2020), who emphasized that fruit marketing provides supplementary income but often faces constraints such as price fluctuation and lack of storage.

Institutional factors such as cooperative membership, extension access, and credit availability also shape marketing outcomes. Only 18.33% belonged to cooperatives, while 81.67% did not. This reflects a low level of collective action, which could limit marketers' bargaining power, access to information, and credit. Low cooperative participation was also reported by Yusuf *et al.* (2019), who noted that farmers often lack trust in cooperatives despite their potential benefits. Similarly, only 27.50% of respondents had access to extension services, while 72.50% did not, pointing to a gap in knowledge transfer and innovation adoption, a challenge also highlighted by Adebisi and Ajayi (2020) in their study of fruit marketers. Access to credit was also very low (12.50%), which suggests that inadequate financial support remains a major constraint to expanding marketing activities, consistent with the findings of Oladeebo and Oladeebo (2023), who observed that limited access to credit hampers agribusiness growth in Nigeria.



Table 2: Distribution of Respondents based on the Socio-Economic Characteristics (n = 120)

Variable	Frequency	Percentage (%)	Mean
Age (Years)			
≤ 20	7	5.83	
21 – 40	98	81.67	
≥ 41	15	12.50	34
Sex			
Male	81	67.50	
Female	39	32.50	
Marital Status			
Single	35	29.17	
Married	73	60.83	
Divorced	8	6.67	
Widowed	4	3.33	
Household Size			
1 – 5	20	16.95	
6 – 10	42	35.59	
11 – 15	53	44.92	6
> 15	3	2.54	
Educational Status			
No Formal	19	15.83	
Primary	5	4.17	
Secondary	66	55.00	
Tertiary	30	25.00	
Years of Experience			
1 – 10	53	44.17	
11 – 20	65	54.17	12
Occupation			
Farming	85	70.83	
Non-Farming	35	29.17	
Annual Income (₦)			
≤ 100,000	33	27.50	
101,000 – 200,000	79	65.83	
201,000 – 300,000	3	2.50	
> 300,000	5	4.17	164,700
Cooperative Membership			
Yes	22	18.33	
No	98	81.67	
Access to Extension Services			
Yes	33	27.50	
No	87	72.50	
Access to Credit			
Yes	15	12.50	
No	105	87.50	

Source: Field Survey, (2025)

Marketing Channels in the Study Area

The marketing channels for orange in the study area is presented in Table 3. The results shows that the most (83.33%) of respondents sourced their oranges from wholesalers, while only 16.67% obtained supplies directly from retailers. This indicates a strong reliance on bulk supply channels, suggesting that wholesalers dominate the upstream orange trade. Similar findings were reported by Aliyu and Ibrahim (2021), who highlighted the central role of wholesalers in orange distribution chains in Kaduna State, noting that wholesalers often serve as the link between producers and downstream marketers due to their financial capacity to purchase in bulk.



Regarding selling outlets, more than half (55.83%) of respondents sold oranges to retailers, followed by 19.17% who sold directly to consumers and 18.33% who transacted with wholesalers. This distribution implies that the marketing system is structured so that retailers serve as the primary sales channel, bridging the gap between wholesalers and end users. The relatively low proportion of direct consumer sales suggests that most marketers prefer wholesale-retail chains to reduce transaction costs. Adebayo and Olorunsanya (2021) found a similar trend in Oyo State, where orange marketers mainly relied on retail markets to reach consumers, thereby reinforcing the importance of retailers as final distributors in the marketing channel.

The form of sale reveals that fresh oranges accounted for 90% of total sales, while only 10% of the respondents were involved in processing. This shows that orange marketing in the study area is dominated by sales of unprocessed produce, reflecting limited investment in value addition. The dominance of fresh sales aligns with the findings of Audu *et al.* (2020), who noted that the perishability of oranges discourages many marketers from processing, as processing requires additional capital and infrastructure. However, studies such as Ahmed *et al.* (2023) suggest that processed citrus products generally offer higher profitability, highlighting the need for expanded value-chain opportunities in Nigeria.

Regarding marketing locations, 76.67% of respondents sold in local markets, 11.67% in urban centers, and 10% along roadsides or streets, while a few (1.67%) used other locations. The dominance of local markets suggests that orange marketing is rooted in traditional, community-based systems where demand is consistent and transaction costs are lower. This observation is consistent with Adeoye *et al.* (2020), who found that fruit marketers in Southwest Nigeria relied heavily on local markets due to their accessibility, low operating costs, and established customer networks. However, the relatively smaller share of urban-based marketing indicates untapped opportunities to expand into higher-value urban markets with stronger consumer purchasing power.

However, the use of middlemen shows that 67.50% of marketers did not rely on intermediaries, while 32.50% did. The lower reliance on middlemen implies that many marketers prefer direct engagement with their buyers, possibly to maximize profit margins. This contrasts with findings from Ayanwale and Yusuf (2020), who noted that in many parts of Nigeria, middlemen play an essential role in facilitating transactions, particularly when producers lack adequate transport or market information. The reduced dependence on intermediaries in the present study may suggest improved direct linkages between marketers and their customers, but it may also limit wider market reach.

Table 3: Distribution of Respondents According to Marketing Channels for Orange (n = 120)

Variables	Frequency	Percentage (%)
Buying Sources		
Wholesalers	100	83.33
Retailers	20	16.67
Selling Outlets		
Wholesalers	22	18.33
Retailers	67	55.83
Consumers	23	19.17
Others	8	6.67
Form of Sale		
Fresh Orange	108	90.00
Processed	12	10.00
Marketing Location		
Local Markets	92	76.67
Urban Centres	14	11.67
Roadside/Street	12	10.00
Others	2	1.67
Use of Middlemen		
Yes	39	32.50
No	81	67.50

Source: Field Survey, (2025)



Profitability Analysis of Orange Marketing in the Study Area

The profitability analysis of orange marketing in the study area is presented in Table 4. The purchase value distribution shows that slightly more than half (50.83%) of respondents spent between ₦10,001 and ₦15,000, followed by 24.17% who spent more than ₦15,000, and only a small fraction (5%) who spent less than ₦5,000. This suggests that orange marketing is relatively capital-intensive, requiring moderate investment levels for effective participation. Similar results were reported by Chikkulapally (2024), who found that citrus marketing often requires substantial upfront expenditure, with profitability largely dependent on the scale of initial purchases.

The number of units sold shows that the vast most (90%) of marketers sold 500 units or fewer, with only 8.33% selling between 501 and 1000 units, and just 1.67% selling more than 1500 units. This indicates that the market is dominated by small-scale transactions, reflecting constraints in storage, transportation, and access to larger markets. According to Gomez *et al.* (2023), logistical challenges such as poor transportation infrastructure and a lack of cold storage facilities limit the ability of citrus marketers in developing economies to scale up sales, thereby capping profitability.

Selling prices were concentrated in the ₦41–₦60 range, accounting for 90.83% of respondents, while only 5% sold at prices above ₦60. The dominance of this price band suggests relative stability in orange market prices, likely influenced by competition and perishability, which discourage excessive markups. Garcia *et al.* (2020) also noted that citrus markets globally are characterised by narrow price margins due to strong buyer power and the perishability of fruit, which reduces sellers' ability to dictate prices.

Quality grading shows that 57.5% of marketers sold high-quality oranges, 35% sold low-quality fruit, and 7.5% sold medium-quality fruit. This underscores the importance of product quality in determining marketing outcomes. High-quality fruits likely command higher prices and faster turnover, which in turn enhance profitability. Emokaro and Ekunwe (2022) emphasised that quality differentiation is central to profitability in citrus marketing, with high-grade fruits commanding premium returns across different marketing channels.

Transport costs were incurred by most (91.67%) of respondents, indicating that transportation remains a significant expense in the marketing process. The cost of moving oranges from production or wholesale centers to selling points reduces net margins, especially in areas with poor infrastructure. Goletti and Babu (2021) observed that inefficient transport systems in developing economies distort price transmission along citrus marketing chains, thereby reducing marketing efficiency and profitability.

The profitability distribution shows that 60% of marketers earned more than ₦80,000, while 15% each earned between ₦40,001–₦80,000 and less than ₦20,000, and 7.5% earned between ₦20,001–₦40,000. The fact that a majority reported profits above ₦80,000 suggests that orange marketing can be highly profitable, especially for those who trade in larger volumes or deal in high-quality produce. Ferreiro-Seoane *et al.* (2022) also pointed out that citrus marketing remains a sustainable and lucrative economic activity when efficiency, quality management, and value addition are integrated. However, the wide variation in profitability within the sample indicates that while some marketers thrive, others operate at marginal levels, reflecting structural disparities in access to capital, markets, and infrastructure.



Table 4: Distribution of Respondents based on the Profitability of Orange Marketing (n = 120)

Variables	Frequency	Percentage (%)
Purchase Value (₦)		
1 – 5000	6	5.00
5001 – 10000	24	20.00
10001 – 15000	61	50.83
> 15000	29	24.17
Units Sold		
≤ 500	108	90.00
501 – 1000	10	8.33
> 1500	2	1.67
Selling Price (₦)		
21 – 40	5	4.17
41 – 60	109	90.83
> 60	6	5.00
Quality Grade		
Low Quality	42	35.00
Medium Quality	9	7.50
High Quality	69	57.50
Transport Costs		
No Cost	10	8.33
With Cost	110	91.67
Marketing Profit (₦)		
≤ 20,000	18	15.00
20,001 – 40,000	9	7.50
40,001 – 80,000	18	15.00
> 80,000	72	60.00
Selling Price (₦)	6,080	
Total Units	86,171	
Total Cost (₦)	3,518,000	
Total Revenue (₦)	52,391,968	
BCR (Benefit-Cost Ratio)	14.89	

Source: Field Survey, (2025)

Marketing Challenges of Orange Marketers

The results in Table 5 reveal that orange marketers face several challenges that undermine their efficiency and profitability. The most pressing issues include price fluctuations (96.61%) and pest and disease outbreaks (95.83%), which directly affect both the stability of returns and the quality of produce reaching the market. These findings are consistent with Silva and Martinez (2022), who emphasized that price volatility in citrus markets, particularly in Brazil, often arises from unpredictable supply shocks and market channel distortions. Similarly, Sharma and Upadhayaya (2020) noted that pest infestations and seasonal variability significantly increase marketing risks for orange producers in Nepal, thereby reducing their bargaining power.

High transportation costs (87.50%) and poor road networks (83.33%) were also highlighted as significant barriers, reflecting the infrastructural bottlenecks that escalate transaction costs and limit access to larger markets. This aligns with Uloh and Igwe (2018), who found that inadequate rural road systems in Nsukka, Nigeria, increased post-harvest losses and reduced farmers' profit margins. Additionally, inadequate storage facilities (79.17%) compound the problem by leading to spoilage and wastage, especially since oranges are highly perishable. Rodriguez and Morales (2023) similarly observed that in Latin America, the absence of modern storage infrastructure constrained marketing efficiency and eroded profitability despite favorable production conditions.

Policy-related challenges were also evident, with 82.50% of marketers citing unfavorable government policies as obstacles to smooth operations. This supports Sharma and Upadhayaya's (2020) conclusion that unclear or poorly implemented agricultural policies create uncertainty in the citrus value



chain. Moreover, limited access to credit (62.50%) restricts the ability of marketers to scale operations, invest in storage, or explore more profitable distribution channels. Uloh and Igwe (2018) also found that credit inaccessibility constrained orange traders' capital flow, reducing their competitiveness. Insecurity (78.33%) and competition (37.50%) further illustrate the socio-economic environment within which marketers operate, where risks from theft, unstable security conditions, and increasing rivalry reduce market stability.

Table 5: Distribution of Respondents based on the Marketing Challenges of Orange Marketers (n = 120)

Challenges	Frequency*	Percentage (%)
Poor Road Network	100	83.33
High Transportation	105	87.50
Inadequate Storage	95	79.17
Price Fluctuations	114	96.61
Lack of Credit Access	75	62.50
Pests/Diseases	115	95.83
Insecurity	94	78.33
Competition	45	37.50
Government Policies	99	82.50
Inadequate Markets	85	70.83
Other Constraints	1	0.83

Source: Field Survey, (2025) *Multiple response

CONCLUSION AND RECOMMENDATIONS

The study concludes that orange marketing in Gboko, Benue State, is a profitable and viable agribusiness venture. The dominance of relatively young male marketers, coupled with substantial marketing experience and moderate educational attainment, highlights the trade's human capital strength. With a Benefit–Cost Ratio (BCR) of **14.89**, every ₦1 invested returned approximately ₦14.89, demonstrating strong profitability. Despite profitability, the marketing process faces severe constraints, including price fluctuations, pest and disease infestations, poor road networks, high transportation costs, and unfavourable government policies, all of which threaten the sustainability and growth of the enterprise. It is recommended that the government and development agencies should prioritise the rehabilitation and expansion of rural road networks in the study area. Policies such as establishing price information systems and market regulation frameworks should be introduced to stabilise prices and improve income predictability, and extension services should provide timely training and affordable access to pest management technologies to reduce losses and improve fruit quality.

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