

Economic Analysis of Fresh Garlic Marketing in Bauchi Metropolis of Bauchi State

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Abstract

This study analyzed the marketing system of fresh garlic in Bauchi metropolis of Bauchi State. Two-stage sampling techniques was employed to select thirty (30) garlic marketers. The main objective was to analyze garlic marketing in Bauchi metropolis, while the specific objectives were to describe the socio-economic characteristics of Garlic marketers in the study area, to identify and describe the marketing channel of fresh garlic, to determine the efficiency of fresh garlic marketing, to determine the profitability of fresh garlic marketing, and also to describe constrains associated with garlic marketing in the study area. The data obtained were analyzed using Descriptive Statistics, Marketing Efficiency and Marketing Margin. Findings revealed that 43 % of fresh garlic retailer's marketers fell within the age

bracket of 31-40 years of age, while 57% of fresh garlic wholesaler's marketers fell within the category of 20-30 which were the majority in study area. The gender representation is 91.3% and 86% dominated by male gender of both retailers and wholesalers respectively in the study area. The result revealed that the majority 70% of retailers and 57% of wholesalers of pepper marketers were married. Fresh garlic marketers in the area had one form of education. Majority of retailers and wholesalers have secondary education. The result also revealed that Net Marketing Margin of 500 N/kg and 449.65N/kg for 1kg for retailers and wholesalers respectively. The analysis also revealed that tomato marketing is a profitable enterprise with BCR of greater than one (with 1.08 for retailers and 1.07 for wholesalers). The marketing efficiency of fresh bell pepper was found to be 710.23% and 181.71% on retailers and wholesalers respectively. The major challenges to fresh pepper marketing were seasonality nature of pepper, perishability nature of pepper, absence of processing industries, and supply problem during wet season. It was therefore recommended that pepper processing industries should be establish by private entrepreneurs was recommended to make resolving perishability of pepper produced.

Introduction

Garlic (*Allium sativum* L.) is one of the most important remunerative bulbous spices and medicinal crop grown commercially (Atinafu *et al.*, 2021) Garlic is a bulb belonging to the family Alliaceae. It is the second most widely

cultivated crop in the family Alliaceae after onion. Garlic originated from Central Asia about 3000 years and later spread to the Mediterranean regions (Labu & Rahman, 2019).

Unlike cereals, fruits and vegetables are subjected to various problems including wide fluctuation in prices. Because of the imbalance in distribution system and lack of organized marketing system there is always a market glut of fresh pepper during the on-season and scarcity of fresh pepper during the off-season in the study area.

The fresh garlic marketers as well as intermediary middlemen even though perform greater role in the income flow of farmers, but they are faced with problems of transporting farm products to the ultimate consumers, thereby leading to delays in supply. Other problems in the study area were supply problem during wet season, lack of cooling facilities as well as absence of processing industries. In order to solve or reduce the problems, it is necessary to provide empirical information on costs and returns associated with marketing of tomatoes of the study area.

This main objective of this study is to analyze garlic marketing in Bauchi metropolis

REASERCH METHODOLOGY

This study was conducted in Bauchi Metropolis, Bauchi State, Nigeria. Two stage sampling technic was employed for this research, the first stage was purposive sampling of respondent, due to their large concentration in the study area, the second stage was stratified sampling of wholesalers and retailers. Well-structured questionnaires were used to collect data from respondents in Muda Lawan, Wunti, and Bayara. The total sample frame as obtained during preliminary survey was 30 respondents, in line with that 10% of the respondent were selected in the study area.

Table 1: Sample frame and sample size.

S/NO	NAMES OF MARKETS	SAMPLE FRAME		SAMPLE SIZE	
1	MUDA LAWAL	Wholesalers	7	Wholesalers	7
		Retailers	10	Retailers	10
2	WUNTI	Wholesalers	0	Wholesalers	0
		Retailers	8	Retailers	8
3	BAYARA	Wholesalers	0	Wholesalers	0
		Retailers	5	Retailers	5
		TOTAL	30	30	

Source: Field survey, 2024.

RESULT AND DISCUSSION

Table 2: Socio-economic Characteristic of Respondent

Variables	Retailers		Wholesalers	
	Frequency	Percentage	Frequency	Percentage
Age (years)				
20-30	8	34.7	4	57
31-40	10	43	3	43
41-50	3	13	-	-
51-60	2	8.6	-	-
Gender				
Males	21	91.3	6	86
Female	2	8.7	1	14
Marital Status				
Married	16	70	4	57
Single	4	17	3	43
Divorce	2	9	-	-
Single	1	4	-	-
Level of Education				
Primary	5	22	-	-
Secondary	12	52	5	71
Tertiary	6	26	2	29
Marketing Experience(years)				
1-5	5	22	2	29
6-10	15	65	5	71
11-15	2	9	-	-
16-20	1	4	-	-
Household size				
1-5	15	65	5	71
6-10	6	26	2	29
11-15	2	9	-	26.7
16-20	-	-	-	6.7
Main Occupation				
Garlic Marketing	19	83	7	100
Vegetables	3	13	-	-
Trader	1	4	-	-

Source: Field survey, 2024.

As presented in table 2, majority (34% & 57%) of retailers and wholesalers marketers fell within the age bracket of 20–30 respectively. This shows that, the marketers are strong and energetic and are really efficient in their enterprises. This is in support of the findings of Maurice (2004) that, marketers of this age group can influence the adoption of improved

agricultural practices, which can equally influence a high level of garlic productivity.

Table 2 also revealed that gender representation dominated by male gender of both retailers and wholesalers respectively in the study area. (91% of retailers & 86% of wholesalers). The reason may be due to the volume of garlic retailers sell less volume of garlic.

Table 2, shows the distribution of respondent according to marital status. According to the response received, 69.56% of retailers were married and 21.73% were single. The result also revealed that 8.69% of the respondents were widow. However, 57.14% of wholesales were married while 28.57% are single and 14.28% are widow. This imply that majority of the marketers in the study area were married.

Table 2 further revealed that garlic marketers in the area are educated in one form or the other. Majority of retailers and wholesalers have Secondary education, this was equally reported by Amaza (2000), Adewuyi and Okumadewa (2001), education has positive and significant impact on efficiency in marketers. This literacy level will greatly influence the decision making and adoption of innovation by marketers, which may bring about increase in crop yield.

Table 2 describes the years of experience in garlic marketing. The result reveals that retailers with marketing experience from 1-5 years were 22%, while the wholesalers are 29% years. Subsequently, respondents with years of experience from 6-10 years were about 71% and 65% of wholesalers and retailers respectively. The result revealed increase or steady growth in the number of garlic marketers in Bauchi metropolis area in the last ten years. The growth may be due to favorable marketing conditions in garlic marketing or growth in demand as a result of growth in the population of Bauchi State.

As shown in table 2, a good number of the marketers surveyed had a household size of 1– 15 persons, majority (65% of retailers and 71% of wholesaler) of the respondents have household between 1-5. This implies

that there is appreciable source of family labour. According to the report of Bayacag (2001).

Lastly, table 2 revealed representation of the main occupation of garlic marketers. Majority 83% and 100% of the respondents both retailers and wholesalers respectively were into garlic marketing as their major occupation, also 13% of retailers are marketers of other vegetables, while 4% are traders of other commodities.

Marketing channel of Garlic

This channel in the area start from producer, farm commission agent, rural assemblers, urban commission agent down to urban wholesaler and then to retailer to final consumers. Figure 1 shows the marketing channel of garlic in the study area. This agrees with Aminu and Musa (2007), whom reported that the main channel of tomato starting from producers through commission agents, assemblers or regional wholesalers, urban wholesalers, retailers and finally ending with the consumers.

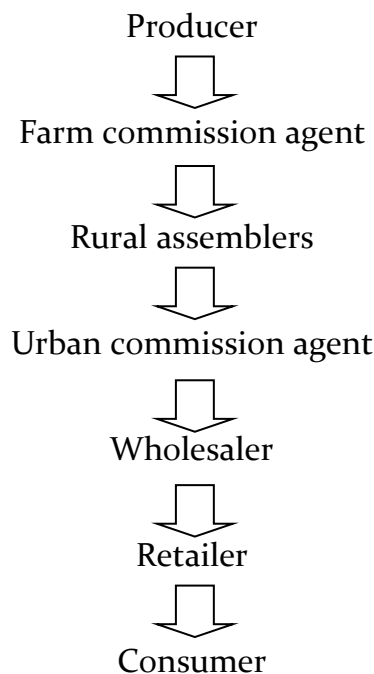


Figure 1. Marketing channel for garlic in the study area

In figure 1, very important channel in which the produce moves from the producer through the farm commission agent, rural assemblers, and urban commission agent and to the urban wholesaler via retailer and to the end

user consumers. Also, urban wholesaler went directly to producer in the rural area to purchase the produce through the commission agent to the retailer and the end user consumer needed to create the utilities of time, place, form and possession.

Profitability

Table 3. Marketing Margin of Garlic in the study area.

Retailers			Wholesalers	
Variables (Per Bag)	Cost(₦)	% of total	Cost(₦)	% of total
Purchase cost	6500	88.2	5500	79.63
Transportation cost	-	-	400	12.66
Cost of loading	-	-	50	2.27
Local government charges	10	0.43	10	0.52
Cost of levy	20	0.22	20	0.26
Cost of offloading	-	-	50	2.27
Labor	30.4	1.31	20.33	1.05
Cost of water	10	0.65	-	-
Total Marketing Cost	6500		6050.33	
Selling price	7000		6500	
Net Marketing Margin	500		449.67	
Benefit Cost Ration	1.08		1.07	

Source: Field survey, 2024.

Marketing Margin garlic

The profitability of garlic marketing was assessed by estimating the difference between net return from sales of garlic and the costs component involved in garlic marketing. The results are presented in table 3 the net return of fresh garlic per bag was found to be N500 and N449.67 respectively.

Cost analysis

Market costs are the actual expenses incurred in the performance of the marketing functions as commodity moves from the farm to ultimate consumers. It includes the cost of transportation, commission charges, loading cost, offloading cost and others costs such as taxes and union duties.

- **Transportation cost:** This is the cost incurred in moving the commodity from one location to another. The average transportation cost of garlic per sack on wholesalers was ₦400 and account for 12.66 % of total cost of garlic. This means that wholesalers have higher transportation cost.
- **Loading cost:** This is the cost paid for loading of garlic per bag. It is only incurred by wholesalers. Garlic cost ₦ 50 per bags and accounting for 2.27% of the total cost on wholesaler side.
- **Offloading cost:** This is the cost paid for offloading of garlic per bag. It is also only incurred by wholesalers. Garlic cost ₦ 50 per bag accounting for 2.27 % of total cost.
- **Labor cost:** The amount paid for labor by the fresh garlic marketers is ₦ 30.4 accounting for 1.31% of the total marketing cost on retailer's side. While on wholesaler's side, the labor cost is ₦ 20.33 accounting for 1.05% of total marketing cost.

Marketing Efficiency of Garlic

Marketing efficiency can be defined as the maximization of the ratio of output to input in marketing. As presented in table below, the marketing efficiency was found to be 710% and 181% for retailers and wholesalers respectively. This implies that marketing of fresh garlic is efficient for both retailers and wholesalers, but is more efficient for retailers.

Table 4: Marketing Efficiency of Fresh garlic in the Study Area.

Cost component (₦/Bag)	Retailers	Wholesalers
Cost of marketing	70.4	550.33
Purchase price	6500	5500
Selling price	7000	6500
Value added by marketing	500	1000
Marketing Efficiency	710.23%	181.71%

Source: Field survey, 2024.

Problems Associated with Garlic Marketing in the Study Area

The major constraints observed during the study are presented in Table 5. They includes inadequate storage facility by 74% and 4% of both the retailer and the wholesales respectively, poor transportation facility was accounted by 100% and 86% of both the retailer and the wholesales respectively, seasonality nature of garlic was accounted by 65% and 43% of both the retailer and the wholesales respectively, perishable was observed by 52% and 14% of both the retailer and the wholesales respectively, inadequate capital was detected by 74% and 71% of both the retailer and the wholesales respectively, high cost of transportation was perceived by 70% and 28% of both the retailer and the wholesales respectively. Likewise, price fluctuation was witnessed by 48% and 71% of both the retailer and the wholesales respectively. Supply problem during wet season was observed by 87% and 100% of both the retailer and the wholesales respectively.

Table 5: Constrains Associated with Garlic marketing in the Study Area

Retailers				Wholesalers		
Constrains	Frequency	Percentage	Rank	Frequency	Percentage	Rank
Supply problem during wet season	20	87	2	7	100	1
Inadequate storage facilities	18	78	3	4	57	4
Poor transportation facilities	23	100	1	6	86	2
Seasonality nature of garlic	15	65	6	3	43	5
Perishability nature of garlic	12	52	2	1	14	7
Inadequate capital	17	74	4	5	71	3
High cost of Transportation	16	70	5	2	28	6
price fluctuation	11	48	8	5	71	3
Absence of processing industries	13	57	7	-	-	1
Security problems	10	43	9	-	-	0

Conclusion

Based on the finding of this study, it was concluded that fresh garlic marketing is profitable in the study area. The retailers have higher profits than the wholesalers in the study area. However, there are many problems associated with the marketing of fresh garlic which must be address which were seasonality nature of garlic, perishability nature of garlic as major problem, followed by price fluctuation, absence of processing industries, and supply problem during wet season.

Recommendation

Governmental and non-governmental organization as well as private sector should establish garlic processing industries so that the surplus can be processed. Governmental and non-governmental organization should set program that will assist in providing credit facilities to garlic marketers.

Insecurity problems should be tackled seriously by government, because security stabilization attracts more customers and foreign investors into garlic marketing.

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