

Profitability of Tomato Marketing In Katsina Local Government Area, Katsina State, Nigeria

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ABSTRACT: This study was piloted in some selected tomato markets of Katsina Local Government Area, Katsina State. The aim was to analyze the profitability of tomato marketing in Katsina Local Government Area. Four areas were purposively selected from Katsina Local Government Area; twenty marketers were randomly selected from each category of marketers (Wholesalers and Retailers). This gave a total of forty marketers as the sample size of the study. Data were collected using two sets of structured questionnaires, one each for the Wholesalers and Retailers. Data generated were analyzed using descriptive statistics (Frequencies and Percentages) Farm Budgeting, Marketing Margin and Marketing Efficiency. Result showed that 63% of the tomato marketers were between 15 and 35 years of age. It also showed that 95% of them were males and 33% had Qur'anic education. Result revealed that marketers obtained Net Profit per basket (₦700), a Marketing Margin of 19.4% and a Marketing Efficiency value of 1.24. Result also showed that 88% of the tomato marketers attributed their constraints to lack of Government Assistance.

Keywords: Profitability, Marketing, Tomato, Marketing Margin, Marketing Efficiency, Katsina

I. INTRODUCTION

Agriculture is still one of the most significant sectors of the Nigerian economy. Agriculture adds to over 40% of Nigeria's GDP, employs about 70% of the population and produces about 80% of the food needs [17]. Agriculture is an important sector in most developing countries; as such increase in agricultural productivity depends heavily on its marketability so as to improve its vital roles in a national economy [9]. Amongst the varied range of Agricultural crops, vegetables occupy an important place because of their economic promises. Vegetable refers to those plants and plant parts that are eatable, especially leafy or fleshy parts that are usually eaten with staples as main courses or supplementary foods in cooked or raw forms [17].

Vegetables play a very significant role in human nutrition. They contain vitamins, minerals and chemical compounds that are important for human health. For instance, vitamin A sustains eye health and fortifies the immune system, vitamin B helps transform food to energy, folate reduces the risk of some birth flaws and helps avert heart diseases. Vitamin C increases the absorption of calcium and iron from other foods. Vitamin E is a powerful antioxidant that protects the cells from cancer causing agents. Dietary fiber helps move food through the digestive tract and lower blood cholesterol levels [7].

The World Health Organization (WHO) places low vegetable intake sixth among its twenty risk factors of global human mortality, just behind better known killers such as tobacco use and high cholesterol [7]. It is to this end that a minimum level of 400g per head per day is recommended for vegetables consumptions. However, according to the [6], vegetable intake per head per day in Nigeria is as low as 179g compared to the suggested rate. Apart from its nutritional benefits, vegetables also serve as a source of employment for both the rural and urban people directly or indirectly providing smallholder farmers with much higher income and more jobs per hectare than staple crops [17]. Amongst different vegetables grown in Nigeria, tomato clearly stands out as the most significant both in scale of production and level of consumption [1]. Tomato (*Solanum lycopersicum*) is grown by most dry season market gardeners who regard it as the principal crop. Most other vegetables have restricted demand in Nigeria, but the demand for tomato is universal. Tomato has the great poverty alleviation capacity. Its production, handling, transportation, distribution and marketing will definitely employ a large number of people. Tomato can be processed and exported to other West African nations or sold within the country. An increase in agricultural productivity depends heavily on its marketability [8].

Agricultural marketing is defined as the performance of all the activities involved in the flow of agricultural products and services from the initial points of agricultural production until they reach the hands of the ultimate consumers. It is concerned with all that happens to crops after they leave the farm gate; making decisions, taking actions and bearing the responsibility of the action. Agricultural marketing also articulates all processes that take place from when the farmer plans to meet specified demands and market prospects to when the produce finally gets to its consumers [9].

Vegetable production and marketing in Katsina Local Government Area provides full time job to many people especially peasant farmers. Apart from satisfying home consumption, the income derived from the production of vegetable per unit area is usually greater when compared with what they get from the field crops[17]. This study is aimed at analyzing the profitability of tomato marketing in Katsina Local Government Area. It intends to identify the socio-economic characteristics of the tomato marketers, determine the profitability of tomato marketing, the Marketing Margin of tomato, the marketing efficiency of tomato and identify the constraints to tomato marketing in the study area.

Gross Margin (GM) Analysis

According to [16], Gross Margin (GM) Analysis is the difference between Gross Income (Revenue) and Total Variable Cost (TVC) of production. This was used to determine the costs, returns as well as profitability of tomato marketers.

$$\text{Gross Margin} = \text{TR} - \text{TVC} \dots\dots\dots 1$$

Where:

GM = Gross Margin

TR = Total Revenue

TVC = Total Variable Cost

$$\text{Marketing Margin} = \frac{\text{Selling Price} - \text{Supply Price}}{\text{Selling Price}} \times 100 \dots\dots\dots 2$$

$$\text{Marketing Efficiency} = \frac{\text{Average Selling Price}}{\text{Average Cost / head} + \text{Average Cost of marketing}} \dots\dots\dots 3$$

II. METEERIALS AND METHODS

Sampling Procedure

Katsina Local Government Area is traditionally divided into four (4) wards namely: WakilinArewa, WakilinGabas, Wakilin Kudu and WakilinYamma wards. The study was piloted in some selected tomato markets of the Local Government Area. Four markets were purposively chosen from the Study area namely: Katsina Central Market, Yan’ Cefane (Yar’ Kutungu), Chake and Katsina old Central Market. They were purposively selected because of the high concentration of tomato marketing in the area[10].

Data Collection

The data used were collected through the use of a structured questionnaire. The questionnaires were administered to forty (40) respondents (Wholesalers and Retailers).

Data Analysis

Descriptive Statistics (Percentage and Frequency), Budgetary Analysis and Marketing Efficiency were used to analyze the data collected. Descriptive Statistics was used to present the results from the socio economic characteristics and the marketing constraints and Gross Margin Analysis was used to present the result of profitability. The specified models of Gross Margin, Marketing Margin and Marketing Efficiency are as follows:

III. RESULTS AND DISCUSSIONS

Table 1: Socio Economic Characteristics of Tomato Marketers

Parameter	Frequency	Percentage
Age		
15 – 25	15	37.5
26 – 35	10	25.0
36 – 45	7	17.5
46 and above	8	20.0
Total	40	100

Sex		
Male	38	95.0
Female	2	5.0
Total	40	100
Marital Status		
Married	32	80.0
Single	8	20.0
Total	40	100
Family Size		
1 – 5	15	37.5
6 – 10	12	30.0
11 – 15	9	22.5
16 and above	4	10.0
Total	40	100
Educational Level		
Qur'anic	13	32.5
Adult	9	22.5
Primary	8	20.0
Secondary	7	17.5
Tertiary	3	7.5
Total	40	100

Source: Field Survey, 2020

Table 2: Net Profit, Marketing Margin and Marketing Efficiency of tomato

Variable	Tomatoes/Basket (₦)
Average Cost/basket	2,700
Average Cost of Marketing	200
Average Selling Price	3,600
Net Profit	700
Marketing Margin	19.4
Marketing Efficiency	1.24

Source: Field Survey, 2020

Table 3: Constraints to Tomato marketing in Katsina Metropolis

Constraints	Frequency	Percentage	Ranking
Lack of Government Assistance	35	87.5	1 st
Inadequate Storage Facilities	30	75.0	2 nd
Lack of Transport Facilities	29	72.5	3 rd
Lack of Marketing Information	26	65.0	4 th

Source: Field Survey, 2020; * Multiple Responses

The study revealed that 63% of the tomato marketers fall within the age range of 15–35 years. This displayed that marketing of tomato in the area was controlled by the young. [12], “analyzed Fresh Tomato Retail Marketing in Mubi Metropolitan Area Adamawa State, Nigeria”. The Study revealed that 43% of the trialed fresh to mato marketers were in their most active age (31 to 40 years). Therefore, their strength can be effectively exploited in tomato marketing. This study also tallied with the findings of [14] in their studies “Economic Analysis of Tomato Marketing in Ile-Ife, Osun State, Nigeria”. Findings of the

study showed that the 70% of the experimented marketers were between the ages of 35 and 54 years with a mean age of about 43 years. It also tallied with [4] who studied the “Economics of Tomato Marketing in Ashanti Region, Ghana”. The results of the study showed that 30% of tomato wholesalers in Ashanti Region of Ghana were within the age brackets of 31–40 years. This was an indication of active youth participation in tomato marketing activities. This therefore enhances a sustained ready market for tomato producers in the region. This result also tallied with the findings of [9] in their studies, “Economic analysis of fresh tomato marketers in Bauchi metropolis of Bauchi

State, Nigeria". The study revealed that 40% of the marketers belong to the active population group of 36-40 years.

This Result also revealed that 95% of the marketers were males. This is probably due to the fact that men are the bread winners of most families. They therefore, have to get engaged in income generating activities in order to provide for their families. Findings to this study agreed with the findings of [20] in their studies "Profitability of Small Scale Dry Season Tomato (*Lycopersicon esculentum*) Production in Adamawa State, Nigeria". The study revealed that 85% of the tomato farmers in Adamawa State were males. But it contradicts what [14] discovered. Their findings revealed that all the marketers cross-examined were females which indicated that tomato marketing was a female-dominated enterprise. Still, this result contradicts the findings of [4]. Their findings showed that only 17% of the sampled tomato wholesalers were males. This implied that most tomato wholesalers in Ashanti Region of Ghana were females. Their findings also showed that only 29% of the sampled tomato retailers were males. This also means that greatest number of tomato retailers in Ashanti Region of Ghana were females.

Result of Marital Status revealed that 80% of the marketers were married. This was due to the fact that culture and religion emphasizes on early marriage in the study area. These findings confirmed the findings of [14] where they discovered that 90% of the marketers were married. It also coincided with the findings of [20] where they reported that 76% of the respondents were married. It also agreed with the findings of [13], where they reported that 66% of beef marketers were married. This study also showed that 68% of the marketers had a family size of between 1 and 10. These findings confirm the findings of [19] in their studies "Profitability analysis of marketing tomato in Odeda Local Government Area of Ogun State, Nigeria". The study revealed that 88% of the respondents had family sizes of between 1 and 10. This study also tallied with the findings of [5] where they reported that over 70% of the retailers had household sizes between 1 and 10. Similarly, 50% of the wholesalers had household sizes between 1 and 10 dependents. In a similar study, [9] discovered that 78% of the marketers had a family size of between 1 and 10.

Findings of this study also revealed that 33% of the marketers had acquired Qur'anic education and only 8% of the respondents had acquired tertiary education. This implied that most

of the respondents have not acquired formal education and it will therefore obstruct their acceptance of improved marketing practices as education simplifies farmers' adoption of innovation [17]. This further indicates the reasons for likely poor adoption of developmental innovations by the marketers. The result tallied with the findings of [20], their study revealed that 53% of the respondents had no formal education. But it was in contrary with the findings of [3] in their studies "Economic analysis of Fresh Tomato Marketing in the wet season under tropical conditions". The study revealed that 77% of the marketers had formal education. [15], studied the empirical determination of socio-economic status and its relationship with selected characteristics of rural male farmers in Kwara State, Nigeria. The study revealed that individuals with higher educational attainment were customarily faster adopters of innovation.

The result on the profitability of tomato marketing revealed that tomato marketing was profitable in the study area with a Net Profit of ₦700 / basket. This tallied with findings of [12], where they revealed that the net income/basket was ₦1,063. [9], revealed that based on computation per basket, the average weight per basket of tomato was 50KG and average price per basket was ₦3,000. The total cost of marketing was ₦68,670 while the total revenue of ₦80,000 was realized making a net income per ton of ₦11,330. In review of this costs and returns results, the raw tomato marketing in Bauchi Metropolis was highly profitable since the gross ratio (0.86) was positive and less than one. This also corresponded with the findings of [2], in their study, "Economic analysis of poultry marketing in Ido Local Government Area of Oyo State, Nigeria". The research showed a Net Return of ₦6,540, indicating a profitable investment. These findings were also in agreement with the findings of [11] in their studies "Analysis of sheep and goats marketing in Sokoto metropolis, Sokoto State, Nigeria". They revealed Net profits per head of ₦5,704.6 and ₦2,630.74 for Sheep and Goats, respectively. This shows that both Sheep and Goat marketing were profitable in the study area.

The study also revealed a ₦19.4 margin for tomatoes. This is in line with the outcomes of [4]. Their findings indicate that the wholesalers have a higher margin of 99.7%, while the retailers have a margin of 75.4 percent. This also rhymes with the findings of [11]. Their study showed a margin of ₦46.60 and ₦27.09 for Goats and Sheep respectively.

Result on Marketing Efficiency revealed that tomato marketing was efficient in the study area with a value of 1.24. [14], discovered that there turn on capital invested was ₦1.02 indicating that the enterpriseis marginally profitable. [20], exposed that return on naira invested was 1.33. Also [11] in their studies revealed marketing efficiencies of 1.33 and 1.46 for Sheep and Goat respectively.

On the type of constraints faced by the tomato marketers, it was revealed that 88% of the marketers were faced with lack of Government Assistance while 75% were faced with inadequate storage facilities. This coincided with the findings of [9],the study revealedthat 30% of the tomato marketers were faced with storage problem due to change in season.

IV. CONCLUSION

Based on the findings of this study, it could be concluded that tomato marketing was dominated by young and able bodied people. Tomato marketing is also profitable and efficient in the study area. However, majority of the tomato marketers in the study area were faced with lack of Government Assistance.

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