

# Profitability Analysis of Fresh Tomato Retail Marketing In Some Major Markets Of Kano State, Nigeria

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**Abstract**—Small scale farmers in Nigeria can't do without tomato production because of its special attributes and quick cash generation as tomato is being viewed as cash crop, despite its perishable and non-storable nature. The study examined the profitability of fresh tomato retail marketing in major markets of Kano State. A total of 149 respondents were randomly selected from the four market sites selected purposively due to the high concentration of continuous retail marketing throughout the year, the market sites are; Tarauni, 'Yan Kaba, Garin Dau and Wudil Market. Information was collected using structured questionnaire. Deconstructed marketing margin was used for the analysis, the results revealed the marketing margin to be N452.6 and -N374.5 per basket at the peak and the off season respectively. Transportation cost accounts for about 35% and 40% of the total marketing cost for on and off season respectively. The study concluded that the retail marketing of fresh tomato is generally profitable and recommends that fresh tomato retail marketers should imbibe the idea of collective purchase in order to minimize transportation cost for maximum profit, it further recommends agricultural scientists to find ways of reducing postharvest losses at all levels of marketing so as to make the price of the commodity relatively stable throughout the year to ensure sustainability in the business.

**Key words:** Tomato, Cash Crop, Profitability, retail marketing, sustainability, marketing margin, perishability.

## I. INTRODUCTION

Tomato (*Solanum lycopersicum*) is among the major vegetable crops grown in most parts of the world contributing significantly to the income and nutritive security of the majority of the households [5]. In Nigeria a total arable land of about 1,000, 000ha was under tomato production with an estimated output of 1.8 million metric tons per annum [11]. This placed Nigeria 16<sup>th</sup> on the global production and second largest in Africa [3]. It is widely cultivated by small scale farmer because of its special attributes and quick cash generation; once it started fruiting, a farmer will continue to harvest fruits every 7 days up to a period of 6 weeks unlike any other vegetable crop [9].

However, in Nigeria tomato is being viewed as a cash crop been among the priority vegetable crop listed in the current policy and strategy document of the Agricultural Transformation agenda. And demand for it is currently estimated at 2.3 million metric tons per annum [10] and of the estimated output of 1.8 million metric tons of tomato 50% is lost due to postharvest losses which is not unconnected with the poor food supply chain management, lack of good storage facilities and poor developed marketing channels leading to excess demand gap [6]. In the same vein, Federal Ministry of Agriculture and Rural Development [7] reported that about 105, 000 metric tons of tomato paste valued at about 16 billion naira is imported annually to bridge the demand gap, as tomatoes account for about 18% of the average daily consumption of vegetables in Nigeria.

*It is therefore clear that the demand for tomato in Nigeria has far outweighed its supply despite the presence of abundant fertile land and low-labor cost indicating that; the country is producing below its potential, this might be probably due to the farmers' poor performance in the production, non-adoption of good agricultural practices among farmers, and/or lack of proper postharvest handling.*

Tomato consumption trend in Nigeria shows that between January and April (months 1- 4), supply of fresh tomato is high and the price could be as low as ₦1, 000 (\$2) per basket thus consumers rarely use other tomato products. However, from April to September (months 4-9), the supply of fresh tomato drastically declines representing the off season during which consumers turn to other forms, especially imported tomato paste. These changes result in fluctuation of tomato product prices, affect consumption pattern and the profitability. During this period the price of fresh tomato could shoot to as high as ₦40, 000 (\$111.4) per basket. It is in light of the foregoing the study investigated the profitability of this commodity bearing in mind the seasonal price variation.

In Nigeria, Tomatoes grow very well in the northern states of the country specifically, Kano, Kaduna, Katsina, Jigawa

Zamfara, Bauchi, Sokoto, and Taraba states with Kano having a comparative advantage for the production of tomatoes on a commercial scale [4]. Unfortunately previous studies have concentrated largely on the “production” component in the state with less attention being paid to marketing performance and that there is information dearth on profitability of its marketing. The aim of the study was to investigate the performance of fresh tomato retail marketing in order to provide more information and better policy prescriptions for policy makers in order to attract potential investors into the business

## II. METHODOLOGY

The study area is located within latitude 11°30'N to 11°50'N and longitude 8°30'E to 8°50'E. Multistage sampling technique was adopted for the selection of tomato retail marketers in this study. First stage was the purposive selection of four (4) local government areas each from non-metropolitan and metropolitan because they were characterized by a continuous retail marketing of tomato throughout the year. The second stage was the purposive selection of one market site from each of the selected local government areas based on high concentration of tomato retail marketers coupled with their nodal characteristics namely; Wudil market, Garindau market, 'Yan Kaba market and Tarauni market. The third stage was the random selection of 149 retail marketers from a population of 297 respondents.

### Analytical Tools

Primary data were obtained using structured questionnaire and were analyzed using deconstructed marketing margin as specified below;

### Deconstructed Marketing Margin

The Deconstructed marketing margin allows for the estimation of marketing margins and profit margins. The marketing margin is the difference between costs of purchasing tomatoes ( $C_i$ ) per day and sales of tomato per day ( $R_i$ ), given as:

$$M_m = \frac{\sum_{i=1}^n (R_i - C_i)}{N} \quad (1)$$

To at least break even, the revenue from the sale of tomatoes should encompass the cost of purchasing tomatoes, marketing cost ( $C_i$ ) and r profit margin ( $P_m$ ) as

$$R_c = \frac{\sum_{i=1}^n (C_i + M_c + P_m)}{N} \quad (2)$$

Equations (1) and (2) give equation (3), as a model for deconstructed marketing margins along the market chain as:

$$M_m = \frac{\sum_{i=1}^n (M_c - P_m)}{N} \quad (3)$$

N is the number of market participants at each stage (say farmers, retailers or wholesalers). The marketing margin must cover costs involved in transferring produce (tomatoes) from one stage to the next and provide a reasonable return to those doing the marketing [2]. Costs of marketing tomatoes are the transaction cost ( $T_c$ ), cost of working capital ( $W_c$ ) and trader's profit margin ( $P_m$ ), depreciation of fixed asset ( $A_c$ ). Substituting these components in equation (5) yields a new equation stated as:

$$M_m = \frac{\sum_{i=1}^n (T_c + W_c + A_c + P_m)}{N} \quad (4)$$

Following from equation (2), profit margin is obtained as:

$$P_m = \frac{\sum_{i=1}^n (R_i - (C_i + T_c + W_c + A_c))}{N} \quad (5)$$

The five equations allowed for the estimation of the marketing and profit margins, the various components of the marketing cost and their proportions of the marketing margins, transportation cost, market tolls, packaging cost, taxes, and bribes [1].

## III. RESULTS AND DISCUSSION

### A. Marketing Margin of Fresh Tomato Retail Marketing in Kano State

Table 1 presents the results of marketing margin of fresh tomato retail marketing in Kano state during on and off season. The results show that an average retail marketer purchased a basket of tomato at a cost of ₦1096.8 and ₦25,544.3 at on and off season respectively and sold it at the price of ₦1905.1 and ₦25554.8. The total marketing cost incurred by the retail marketer was found to be ₦355.6 and ₦385 during on and off season respectively, transportation expenses accounts for the largest portion (36.8% and 41.6%) of the total marketing cost during on and off season respectively, this is due to the sudden rise in fuel price followed by commission fee, cost of storage, cost of loading and offloading, depreciation on basket and tax.

Moreover, the results revealed that an average fresh tomato retail marketer obtained a margin of ₦808.2 and ₦10.5 at on and off season respectively. The marketing margin constituted the marketing cost which allowed the marketer to break even. The results further revealed that that an average retail marketer obtained a profit margin (net profit) of ₦452.6 and -₦374.5 at on and off season respectively

From the result presented it could be deduced that the on season fresh tomato retail marketing in the study area was profitable, a net profit margin of ₦452.6 confirmed the observation and this is closely related to the findings of Giroh [8] who reported a profit margin of about ₦500. However, the off season retail marketing in the study area was found to be unprofitable and a net profit margin of -₦374 confirmed the observation, the negative margin obtained in this study area was

not a common phenomenon but it was as a result of the damages caused by the incidence of *Tuta Absoluta* commonly known as Tomato Ebola virus which causes artificial scarcity in the rain fed and dry season tomato. Despite the losses, the marketers still engaged in the marketing of fresh tomato during that period for a simple reason of retaining their customers and most of the losses were covered from the profit margin obtained from the marketing of other related commodities in the possession of the retail marketers. The producer's share of 0.42 and 0.00041 for on-season and off-season respectively implies that for every 1

naira paid by the final consumer the producer's share will be 42 kobo and 0.041 kobo for on and off-season respectively

#### IV. CONCLUSION AND RECOMMENDATION

From the findings of this article it could be concluded that fresh tomato retail marketing is generally profitable and can serve as a way forward for reducing unemployment rate level as some significant amount of the literate people found some means of sustenance in the business. Though, the marketing of this commodity is highly profitable and efficient during the peak season and otherwise in the off season.

Table I: Results of Marketing Margin of 57.38kg Basket of Fresh Tomato

Items	On season		Off season	
	Amount(₦)	(%) of TMC	Amount(₦)	(%) of TMC
<b>a. Purchase Price</b>	1096.8		25544.3	
<b>b. Selling Price</b>	1905.1		25554.8	
<b>c. Cost of Marketing Services</b>				
i. Transport	130.9	36.8	160.3	41.6
ii. Loading and off loading	39.5	11.1	39.5	10.3
iii. Tax	35.4	10.0	35.4	9.2
iv. Commission Fee	71.4	20.1	71.4	18.5
v. Storage Cost	63.3	17.8	63.3	16.4
vi. Depreciation on basket	15.1	4.2	15.1	3.9
<b>Total</b>	<b>355.6</b>	<b>100.0</b>	<b>385.0</b>	<b>100.0</b>
<b>d. Marketing Margin (b-a)</b>	808.2		10.5	
<b>e. Net Profit Margin (b-a-c)</b>	452.6		-374.5	
<b>f. Producers' Share (a-b/a)</b>	0.420		0.00041	

Source: Computed From Field Survey, 2016

TMC-Total Marketing Cost

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