
ASSESSMENT OF MARKETING TOMATO FRUITS (*LYCOPERSICON ESCULENTUM*) AMONG WOMEN IN UGHELLI NORTH LOCAL GOVERNMENT AREA, DELTA STATE

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Abstract: The paper examined the marketing of tomato fruit in Ughelli North Local Government Area, Delta State with a view to identify the socio-economic characteristics of tomato marketers, to determine the marketing margin, source of fund and to ascertain the constraints faced by women marketing tomato fruit in the study area. Data were randomly collected with the aid of well structured questionnaire from 40 respondents for the 2013 marketing season. The data collected were analyzed using frequency distribution, percentage, and gross marketing margin analysis. The result showed that 75% of the respondents used personal savings as source of capital for their enterprises. The study revealed that the average monthly purchasing price was ₦54,715.75 while the average monthly selling price was ₦160,478.75 per basket per woman. The gross marketing margin was ₦120,113.50 per woman per month. The study also revealed that marketing of tomato is a profitable venture but the major constraints were inadequate capital, high cost of loading and off loading the product, lack of storage facilities, low level of sales, high cost of transportation, and high purchasing price. It was therefore, recommended that State and Local Governments should boost agricultural lending to tomato marketers and government policies should be focused on assisting the marketers with credit facilities that can help them cope with challenges of marketing.

Keywords: Marketing Margin, Tomato Fruits, Women, Delta State.

INTRODUCTION

Tomato (*lycopersicon esculentum*) is a highly valued fruit vegetable, containing essential vitamins needed by the body. It contains folic acid which is necessary for the reconstruction and recovery of body cells. It also contains selenium which is the chemical substance that prevents cancer by providing the body with immune system against the disease. It contains potassium that protects the body from heart attack and magnesium that helps the body to overcome stress and muscular cramps. Tomato is also an excellent source of iron and copper. The miracle crop is a source of employment and income for those involved along its production, processing, transportation and marketing chains. Tomatoes are high in Vitamin A, Vitamin C, calcium, potassium, and high in lycopene for cancer prevention especially those of the prostate gland, lung and stomach (Ihekoronye and Ngoddy, 1985). Tomatoes, apart from being tasty, they are also very healthy; it is important for bone growth, cell division and differentiation. Economically speaking, tomatoes are worth a tremendous amount of money because they give more yields. As important as tomato is, its production, productivity and marketing have not generated much attention from researchers. Infact, researchers on tomato have barely tapped the potentials of the crop to meet the challenges of the declining contribution of agriculture to the nation's economy and hence be able to generate high income, reducing poverty in the rural areas and increase food security in the Country. According to Adekanye (1998), marketing is the sum total of all business activities involved in the movement of commodities from production to consumption. This definition is applicable to the

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marketing of industrial goods as well as to total of agricultural commodities. According to Abbott and Markhan (1986) marketing means different things to different people. Marketing has little relevance to subsistence agriculturist, whose major target is to meet its daily consumption needs and market a few of its product for income. Efficient marketing also ensures that supplies of goods that are seasonal become available throughout the year with little variation in prices that can be attributed to the cost of storage (Adegeye and Dittoh 1985). Marketing increases commercialization of the economy leading to exchange of goods and services. Its vitality to economy to earn its foreign exchange cannot be over emphasized. It also enables producers such as farmers and middlemen to earn income with which they purchase other useful goods and services. According to Arene (2008), marketing margin in the world of business and finance is a margin or the difference between the buying of goods and the selling of goods. Marketing margin of a produce is the difference between what a company pays for the product and what it exchanges for the product. A marketing margin is similar to a profit margin in that it shows the relationship between the amount a company pays for a product and the amount its customers pay. However, marketing margin is the difference between purchase price and resale price of a product retained by either a marketing agency or the marketing system as a whole. According to Arene (1998), marketing margin is a descriptive tool widely used by researchers in assessing marketing efficiency; this is because of its easiness in computation. According to Abbott and Makeham (1986), marketing margin can be estimated using three approaches viz; samples of representation of certain product followed through the whole marketing system; prices and charges are noted at each stage and averages are computed. The gross receipt and out lays of each handler along a marketing channel is divided by the number of volume units handled. Prices of each stage from producer averaged for a standard quality over a time period. Companies use marketing margin as a way of figuring profitability. A high marketing margin reflects a high level of profitability. It also reflects a high level of business stability, as it shows the business has the ability to pay for unexpected liabilities. Also a high marketing margin shows a business as having the abilities to respond to new competitions in the market by reducing prices. As a measurement of profitability, marketing margin is limited in its ability to account for the effect of further business growth. For instance, because it reflects current profitability of current prices, a calculation of marketing margin accurately manifest profitability as the business grows. Women play a very important role in marketing activities especially in the study area such as sorting, packaging, processing and selling activities.

Various research conducted on the contribution of women to agricultural development in the country is of the opinion that women contribution to farm work is very high; contributing 60-90% of marketing activities, (Auta *et al.*, 2000; Damisa and Tiku, 2006). However, the increased production of tomatoes has not translated to increased household access to fresh tomatoes in the market, (Adejobi *et al.*, 2011). Research into marketing of food stuffs has received little attention in the past, various works have been done in related field such as storage and transportation as it affects food crops. The first of the series of report into pattern of supply and distribution of tomatoes in Nigeria was carried out by (Adekanye 1998). The study revealed that major problems in tomato distribution are the high transport cost and bulkiness of the commodity. Adekanye (1998) study found out that farmers rarely store their products, the duration of storage of tomato fruits hardly exceed one week. Tomato marketing is in perfectly competitive market where entry is usually free because of trade association and accurate knowledge of conditions on supply and demand. Wasley (1996) suggests that marketing techniques influence both price and risk marketing strategies that reduce price risk

over a number of years and may not be strategies that lead to price enhancement in a specific marketing year. There was more research on the relationship among different marketing methods necessary to explain these inter-relationships. These results definitely suggest that the joint research on all techniques used through marketing session were necessary for farm behaviour.

An efficient tomato marketing system plays a major role in economic development. Marketing is intimately bound up with the expansion of agricultural production which is one of the keystones in the economic growth of developing countries, Ukwu (1991). An efficient tomato marketing system permits an increase in farm output moving into commercial markets. But the development role of the marketing goes beyond the performance of the above functions. Distribution systems link markets with marketers and producers in doing so, they equalize and distribute goods from surplus to deficit areas which are under the condition of demand and supply. The role of marketing goes beyond agricultural development; marketing also helps to promote the socio-cultural activities of groups of people. A market place serves as an ideal forum and storing base where important matters concerning the village or towns are discussed and unanimous decisions are taken. Another importance of marketing is the stimulation of research into the techniques of food and tomato fruits preservation and the preparation of various food items to meet the different tastes of the population. Marketing becomes even more important for Countries whose products are export oriented since earning from such export are used to finance development programmes. Agricultural marketing can be said to mean the performance of all business activities involved in flow of food products and services from the point of initial production until they are in the hands of the ultimate users. According to Kohis and Uhis (1998), it is the process of satisfying consumer's needs by transforming, storing and transporting agricultural products from the point of initial production to the consumers in the proper form, time and place. It could also be defined as the sum total of all business activities involved in the movement of commodities from production to consumption (Adekanye 1998). According to Adegeye and Dittoh (1985), marketing is concerned with all stages of operation which aid movement of commodities from the farms to the consumers and these includes assemblage of goods, storage, transportation, processing, grading and financing.

Baker (1995) stated that marketing is the process of determining consumers and clients demand for a product or services, motivating its sales and distributing it unto ultimate consumers as benefits. That is, marketing is not a specialized activity at all; it encompasses the entire business of an organization. According to Kotler (1995), marketing is a human activity directed at satisfying needs and wants through exchange process. Losses in perishable produce occur everywhere from the field to the ultimate consumers and this depends on the degree of perish ability of the products. Since the market chain or system refers to specific operations of handling, transportation and trade practices, there is a close correlation between the types and magnitude of loss incurred and where it is moved to. Tomato fruits are highly perishable in nature hence quick means of transportation is necessary. Carlson (1994) stressed that wholesalers and retailers of tomatoes use the same pricing strategy as their respective counterpart do in any marketing system. The seasonal fluctuation of supply and price of tomatoes has been studied by various workers. The prevailing marketing system of vegetables in Isoko North Local Government area especially that of tomatoes suffers from a number of imperfections and problems such as characteristics associated with the nature of tomatoes which resulted to imperfection in its marketing system. These characteristics include perish ability, bulkiness, and its fragile nature. In the course of transfer of title of ownership of this

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product, a lot of activities such as product prices, high operational costs, poor grading, standardisation and quality control as well as poor market information affect the performance of the marketing system of the product. Most wastage occurs on the farm in transit and during handling and holding in warehouse due to insufficient transportation facilities among others. The unique characteristics of agricultural products including tomatoes are problematic to both the farmers and the final consumers. Most importantly, its seasonality, small unit of production, bulkiness and perish ability exerts various pressures on handling, packaging, transport and sales with adverse antecedent effect on market price. In addition, poor storage facilities coupled with improper handling after harvest lowers quality and causes losses thus leading to low farm income which subsequently discourage marketers in tomato marketing. The perish ability nature of tomatoes and huge loss incurred during market call for attention. However, research into tomato marketing have not received adequate attention in recent times hence the need for this investigation in Ughelli North Local Government Area, Delta State, Nigeria. The main objective of the study was to assess the marketing of tomato fruits among women in Ughelli North Local Government Area, Delta State. The specific objectives were; to describe the socio-economic characteristics of tomato marketers in the study area, to identify the sources of funds available to tomato marketers, to determine the marketing margin of tomato marketing, to ascertain the constraints encountered by women involved in marketing tomato in the study area.

METHODOLOGY

Area of Study

The study was carried out in Ughelli North Local Government Area of Delta state. The population of Ughelli North Local Government Area was reported to be about 166,029,320,687 by National Population Commission of Nigeria, 2006. The topography of the area is fairly undulating and has tropical climate characterized by wet and dry season which favours Agriculture. Ughelli North Local Government Area has a land mass of 144 square kilometres and it came into existence on 23rd September 1991. Its birth then, followed the creation of Delta State from the Defunct Bendel State on 27th August 1991. It is important to note that the Local Government Area share common boundaries in the south with Patani and Bomadi Local Government Areas, in the North with Ethiope East and Uvwie Local Government Area and in the East with Isoko North Local Government Area. It is made up of seven (7) major clans, namely Ewreni, Ogor, Ughelli, Agbarho, Orogun, Uwhere and Agbarha-Otor and these clans are made up of many town and villages. Each of these clans is headed by a traditional ruler. The population of this study comprises of tomato marketers in Ughelli North Local Government Area, Delta State.

DATA COLLECTION

Data were obtained from primary sources and were gathered with the aid of well structured questionnaire.

SAMPLING TECHNIQUE

Four major clans were purposively selected from the seven major clans of Ughelli North Local Government Area, namely Ughelli, Ewreni, Agbarha-Otor, Agbarho. The reason is that those towns where marketing of tomatoes were popular in Ughelli North Local Government Area. Ten tomatoes marketers were randomly selected from each of the four selected major clans to make a total sample size of 40 respondents for the study.

DATA ANALYSIS

The analytical technique involved the use of frequency distribution, percentages, gross marketing margin and ranking in descending order. Marketing margin is also referred to as price spread (Barallat, *et al* 1987, Arene, 2003). Marketing margin can be defined in several ways. The different elements in the various definitions provide for clarity and better understanding of the concept. Simply put, marketing margins reflect both the costs of marketing and profits of marketing agents (Minot and Goletti, 2001). Marketing margin is the difference between the price at the retailer end of the market and producers and wholesale prices of the commodity (Arene, 1998). However, there are several basic types of marketing margins based on market levels or stage being considered. Gross marketing margin can be estimated by computing the difference between the price paid by the consumer (retail price) and the price the farmer gets (Olukosi and Isitor, 1990, Amobi, 1996). In this case, gross marketing margin is the same as total marketing margin. This can be stated mathematically as:

$$\text{GMM (₦)} = \text{CP} - \text{FP}$$

This is expressed as a percentage of purchase prices as:

$$\text{GMM}\% = \frac{\text{CP} - \text{FP}}{\text{CP}} \times 100 \quad (1)$$

Where:

GMM	=	Gross marketing margin
CP	=	Consumer or retail price (₦)
FP	=	Farm price (the price the farmer gets (₦))

In various studies, Gabre-Madhin (2001) and Alamu *et al* (2004) computed gross marketing margin by finding the difference between selling and supply (in some cases, buying) prices.

This can be stated mathematically as:

$$\text{GMM (₦)} = \text{SP} - \text{PP}$$

This is expressed as percentage of retail price as:

$$\text{GMM (\%)} = \frac{\text{SP} - \text{PP}}{\text{PP}} \times 100 \quad (2)$$

GMM	=	Gross Marketing Margin
SP	=	Selling Price (₦)
PP	=	Purchase Price (₦)

This was used to estimate gross marketing margin at each stage by marketing agents. Total marketing margin was obtained by summing up marketing margins of all participants involved. Marketing margins of participants was estimated in the same way to reveal trends in price in fluctuation and provide information for calculating net marketing margin.

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RESULTS AND DISCUSSION

Table 1: Socio-Economic Characteristics of Tomato Marketers

Variable	Frequency	Percentage (%)
<30	6	15
30 > 40	18	45
40 > 50	7	17.5
50 > 60	5	12.5
>60	4	10
Total	40	100
Marital Status		
Single	5	12.5
Married	33	82.5
Widow	2	5
Divorced	Nil	Nil
Total	40	100
Educational Level		
No formal Education	Nil	Nil
Primary Schools	27	67.5
Secondary Schools	12	30
Tertiary Institution	1	2.5
Total	40	100
Years of Marketing Experience		
<5 years	19	47.5
5 - 10 years	12	30
10 - 15 years	4	10
>15years	5	12.5
Total	40	100
Household Size		
<5	31	77.5
6 > 10	7	17.5
> 10	2	5
Total	40	100
Membership of cooperative society		
Member	25	62.5
Non-Member	15	37.5
Total	40	100
Membership of marketing association		
Member	21	52.5
Non-Member	19	47.5
Total	40	100

Source: Field Survey Data, 2013

Table 1 shows that 45% of the respondents were within the age range of 31-40 years old and 10% were 60 years and above; this is an indication that majority of tomato marketers were young people and are still active in business. The result also reveals that 82.5% of the respondents were married, 12.5% were singles and 5% were widow; an indication that married women were more engaged in economic activities of tomato marketing. The result shows that 67.5% of the respondents were first school leaving certificate holders, 30% had secondary school certificates and 2.5% are graduates of tertiary institutions. This suggests that the respondents are all literate. The result also shows that 48% of the respondents had less than 5 years marketing experiences and 13% of the respondents had 20 years and above, the result shows that majority of the tomato marketers had years of experience within the range of 1-5 years. The result also shows that 78% of the respondents had between 1 to 5 persons per house; 18% had between 6 to 10 persons per house and 5% had between 11 to 15 persons per house; an indication that majority of tomato marketers had small family sizes. The result also shows that 63% of the respondents were members of tomato marketing co-operative society and 38% were non-members. This is because cooperative societies help to facilitate trades and provide financial supports to members. The result also shows that 53% were members and 46% were non-members of Tomato Marketing Association; the result shows that average of the respondents were member of Association.

Table 2: Sources of Capital (Fund)

Variable	Frequency	Percentage (%)
Micro Finance Bank	Nil	Nil
Commercial bank	Nil	Nil
Co-operative	6	15
Personal saving	30	75
Friends and relations	4	10
Total	40	100

Source: Field Survey Data, 2013.

Table 2 shows that 75% of the respondents used personal savings as source of capital for their enterprises, 15% obtained loan from cooperative societies and 10% got loan from friends and relations. This shows clearly that personal savings was the major source of capital for starting and maintaining their enterprises.

Table 3: Distribution of Retailers by Monthly Marketing Margin

Purchasing Price (PP)			Selling Price (SP)		
Category	Frequency	Percentage (%)	Purchasing Prices per basket ₦	Selling Price Per Basket ₦	Marketing Margin (MM)
A	10	25	35,000	136,070	101,070
B	8	20	28,701	114,804	86,103
C	6	15	35,041	140,165	105,124
D	16	40	62,719	250,876	188,157
Average			54,715.75	160,478.75	120,113.50
Total	40	100	218,863	641,915	480,454

Source: Field Survey Data, 2013.

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Table 3 shows the gross monthly marketing margin of respondents. The average monthly purchasing price was ₦54,715.75 while the average monthly selling price was ₦160,478.75 per basket per woman. The gross marketing margin was ₦120,113.50 per month per woman. This result is in agreement with the findings of Samdi and Damisa (2012) who reported marketing margin of ₦1,182.48 and ₦1,548.38 at the wholesale level; ₦1095.05 and ₦1,248.02 at the retail levels for the Samaru and Sabon-Gari markets respectively on their study of the analysis of tomato marketing among women in Sabon-Gari Local Government Area of Kaduna State.

Table 4: Constraints Encountered by Women Selling Tomato in the Study Area.

Variable	Percentage (%)	Ranking
Inadequate Capital	95%	1 st
High cost of loading and off loading of the product	62.5%	2 nd
Lack of storage facilities	60%	3 rd
Low level of sales	50%	4 th
High cost of transportation	47.5%	5 th
High purchasing price	40%	6 th

Source: Field Survey Data, 2013.

Table 4 shows that the most serious constraints encountered by the women was inadequate capital (95%), followed by high cost of loading and off-loading (62.5%), lack of storage facilities (60%), low level of sales (50%), high cost of transportation (47.8%) and high purchasing price (40%). The retailers pointed out that Government should come to their aids by making credit available to them through the credit corporations and banks and also assist in making storage facilities at their disposal. This finding falls in line with the result of Haruna, Sani, Danwanka and Adejo (2012), who ascertained that high cost of purchase during lean season (46%), lack of storage facilities (30%) and difficulty in purchasing good quality during lean or off -season were the major constraints confronting fresh tomato marketers in Bauchi Metropolis of Bauchi State, Nigeria.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of this research work, it can be seen that most marketers sell directly to the consumers. Tomato marketing is a moderately profitable venture in the study area. In order to solve the problems affecting the marketing of tomato fruits in the study area and make it more profitable venture, the following recommendations are made:

- i. The State and Local Governments should boost Agricultural lending to tomato fruits marketers in order to improve upon their business activities.
- ii. Government policies should be focused on assisting the retail sellers with subsidies and credit facilities that can help them cope with challenges of marketing.
- iii. The government should help in opening up more rural and house storage facilities for the marketers. This will help to boost marketing of tomato fruits.
- iv. Awareness campaign should be embarked upon by Government on availability of credit facilities by micro-finance and commercial banks for marketers to take advantage of such facilities as sources of funding for their economic activities.

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