

Economic Analysis of Sheep Marketing In Katsina Metropolis, Katsina State, Nigeria

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ABSTRACT: This study was piloted in Katsina metropolis, Katsina State. The aim was to analyze the marketing of Sheep in the metropolis. Three markets were purposively selected from Katsina metropolis. Thirty (30) respondents each were selected from the three (3) markets. This gave a total of Ninety respondents as the sample size of the study. Data were collected using two sets of structured questionnaires, one each for the producers / wholesalers and retailers. Data generated were analyzed using Descriptive Statistics (Frequencies and Percentages). Farm Budgeting, Marketing Margin, Marketing Efficiency, and Gini Coefficient. Result showed that 65% of the Sheep marketers were between 15 and 35 years of age. It also showed that 90% of them were males, bulk (86%) had a family size of between 1 and 10 and 42% had acquired Qur'anic education. The result from the study also revealed that marketers obtained higher Net Profit per head (N8,400), a Margin of N30.0 and a Marketing Efficiency value of 1.43. A Gini Coefficient of 0.5911 showed that there is inequality in the distribution of income among the marketers and marketing is conducted in an oligopolistic manner in the study area. Result also showed that 31.1% of the sheep marketers attributed their constraints to inadequate space. It is recommended that, Government should help in the provision of adequate field in the marketing area, provision of a good transportation means and cooperatives should also be formed by the Sheep marketers so as to help themselves.

KEYWORDS: Economic, Sheep, Marketing Margin, Structure, Marketing Efficiency

I. INTRODUCTION

Marketing is the sum total of all business activities involved in the movement of commodities from production to consumption [18]. This definition is applicable to the marketing of industrial goods as well as that of

agricultural commodities. Agricultural marketing is concerned with all stages of operations which include the movement of commodities from the farm to the consumers [3][4]. It involves the performance of all activities involved in the flow of goods and services from the point of initial production until they are in the hands of ultimate consumers [5][11].

Sheep is one of the most important pieces of small-ruminant livestock sub-sector, it plays an important role in rural income generation, livelihood and food security among rural households in Nigeria, and it is considered as a means of diversification and as a coping mechanism against crop failure due to weather and climatic changes [9].

Small Ruminants are increasingly becoming a major source of animal protein in Nigeria, contributing over 30 percent to the total meat consumption in the country. Sheep and Goats form an important economic and ecological niche in the Agricultural systems across developing countries. This is because they make a very valuable contribution to household income, especially to the poor in the rural areas [12]. Sheep in Northern Nigeria has a ceremonial importance. Sheep are predominantly bred for ceremonial slaughter in Nigeria. They are required for Islamic festivals (Salah festival, naming ceremonies and marriages) [9]. Nigeria has a population of 40.8 million goats and 27 million sheep. These animals are reared for various reasons such as income generation, religious purpose, household consumption and hobby and as security against crop failure. Managerially, women, small children and elderly, conveniently can rear sheep. The animal has an advantage of occupying little housing space; it has lower feed requirements, and supplies both meat and milk in quantities suitable for immediate family consumption [12]. Despite work done on Sheep marketing elsewhere by different authors, research of this kind has not been conducted in the study area and this is what inspired me to embark on this

type of work. It seems more research needs to be conducted on the marketing of Sheep in the study area. Findings of this work would be useful to the Sheep marketers in deciding on how to go with their marketing business, maximizing profit and solving their problems.

This study is aimed at analyzing Sheep marketing in some selected markets of the metropolis. It intends to identify the socio-economic characteristics of the Sheep marketers, determine the Profitability of Sheep marketing, the Marketing Margin of Sheep, the Marketing Efficiency of Sheep, examine the market structure of Sheep, identify the constraints and recommend solutions to the constraints of Sheep marketing in the study area.

II. MATERIALS AND METHODS

Sampling Procedure

Katsina Local Government Area has an area of 142 km². It is surrounded by city walls 13 miles (21 km) in length. It has an average rainfall ranging from 600-700 mm annually [7]. Generally, climate varies considerably according to months and season. The two climates are: a cool dry season from December to February; a hot dry season from March to May; a warm wet season from June to September; a less marked season after rains during the months of October to November, characterized by decreasing

rainfall and a gradual lowering of temperature. The minimum and maximum temperatures of Katsina metropolis are 21°C and 35°C respectively [7]. Modern day Katsina has many information technology companies, providing internet access to the people of Katsina.

Data Collection

The data used were collected through the use of structured questionnaires. Two sets of questionnaires were administered to Ninety (90) respondents (Producers/Wholesalers and Retailers).

Data Analysis

Descriptive Statistics (Percentage and Frequency), Budgetary Analysis, Marketing Efficiency and Gini Coefficient were used to analyze the data collected. Descriptive Statistics was used to present the results from the socio-economic characteristics and the marketing problems, Farm Budgeting Analysis was used to present the result of profitability, and Gini Coefficient was used to present the result of differences in distribution of income, while Marketing Margin and Efficiency present result on Margin and Efficiency respectively. The specified models of Farm Budgeting, Marketing Margin, Marketing Efficiency and Gini Coefficient are as follows:

$$NFI = TR - TVC - TFC \dots\dots\dots 1$$

Where: NFI = Net Farm Income

TR = Total Revenue

TVC = Total Variable Cost

TFC = Total Fixed Cost

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

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

Gini Coefficient

$$GC = 1 - \frac{\sum XY}{\dots\dots\dots} \dots\dots\dots 4$$

Where:

GC = Gini Coefficient

X = Percentage of Sheep marketers

Y = Cumulative percentages of the sales (Sheep marketers)

The Gini Coefficient can range from 0 to 1 it is sometimes multiplied by 100 to range between 0

and 100. A low Gini Coefficient indicates a more equal distribution with 0 corresponding to complete equality. While higher Gini Coefficient indicates more unequal distribution, with 1 corresponding to complete inequality, whereas:

0 = complete equality means there is perfect competition

1 = complete inequality which means there is monopoly

III. RESULTS AND DISCUSSIONS

Table 1: Socio Economic characteristics of the Marketers in Katsina metropolis

Variables	Categories	Frequency	Percentage
Age	15 – 25	16	17.8
	26 – 35	42	46.7
	36 – 45	26	28.8
	46 and above	6	6.7
	Total	90	100
Gender	Male	85	94.4
	Female	5	5.6
	Total	90	100
Marital Status	Married	80	88.9
	Single	10	11.1
	Total	90	100
Family Size	1 – 5	36	40
	6 – 10	41	45.6
	11 – 15	5	5.6
	16 and above	8	8.8
	Total	90	100
Educational Background	Qur'anic	38	42.2
	Adult	9	10
	Primary	8	8.9
	Secondary	28	31.1
	Tertiary	7	7.8
	Total	90	100

Source: Field Survey, 2020

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

Variable	Sheep (₦)
Average Cost/Animal	19,000
Average Cost of Marketing	600
Average Selling Price	28,000
Net Profit	8,400
Marketing Margin	30.0
Marketing Efficiency	1.43

Source: Field Survey, 2020

Table 3: Distribution of Sheep marketers by monthly sales in Katsina Metropolis

Quantity Sold(Animal)	Number of marketers	Percentage of Marketers (X)	Cumulative Percentage	Total value of monthly sales (₦)	Percentage of total sales	Cumulative percentage (Y)	ΣXY
1 – 10	29	32.2	32.2	2,810,000	9.5	9.5	0.0305
11 – 20	19	21.1	53.3	4,475,000	15.1	24.6	0.0519
21 – 30	16	17.8	71.1	6,200,000	20.9	45.5	0.0809
31 – 40	12	13.3	84.4	6,500,000	21.9	67.4	0.0896
41 and above	14	15.6	100	9,650,000	32.6	100	0.1560
Total	90	100		29,635,000	100		0.4089

Source: Field Survey, 2020

Note: $G = 1 - \Sigma XY$

$$= 1 - 0.4089$$

$$= 0.5911$$

Table 4: Constraints faced by Sheep Marketers in Katsina Metropolis

Constraints Faced	Frequency	Percentage	Ranking
Inadequate Capital	80	88.9	1 st
Transportation	70	77.8	2 nd
Government support	66	73.3	3 rd
Inadequate Space	55	61.1	4 th

Source: Field Survey, 2020; * Multiple Responses

The study revealed that 65% of the sheep marketers fall within the age of 15–35 years. This shows that marketing of sheep in the area was dominated by youth. [17] studied Sheep and Goat Marketing: Panacea to Poverty Alleviation in Akinyele Local Government Area of Oyo State, Nigeria. The study conveyed that the respondents were between the ages of 20–30 years which indicate that most sheep and goat marketers in their active working age. [10], studied the Assessment of the Performance of the Goat Marketing System in Afar Region, Ethiopia. The study revealed that middle aged who were between 25 and 45 years old covers the majority (67%) of the goat traders. It also tallied with findings of [6] in their study, the analysis of Structure, Conduct and Performance of Beef marketing in Katsina, Katsina State. The study revealed that 74% of the Beef retailers in the study area were within the age bracket of 21 and 40 with a mean age of 39.5 years. Similarly, 60% of the wholesalers were also within the age bracket of 21 and 40 with mean age of 37.3. The implication to this is that younger farmers are likely to adopt new innovation faster than the older ones [8].

The Results also revealed that majority (94%) of the respondents were males. This was probably due to the fact that men are the main source of income of most families. They therefore, have to get engaged in income generating activities to raise money in order to provide for their families. This tallied with the findings of [17] where they reported that 80% of the respondents were married. It also coincided with the findings of [13] who revealed that 60% of the backyard poultry farmers in Sokoto metropolis were males. Result of Marital Status revealed that 89% of the respondents were married. This was due to the fact that culture and religion emphasizes on early marriage in the study area. The result also agreed with the findings of [15], where they reported that 66% of Beef marketers were married.

The study also showed that 86% of the respondents had a family size of between 1 and 10. [19] studied the Economic Analysis of Small Holder Sheep Production among Women in Gwarzo, Tofa and Gabasawa Local Government Areas of Kano State, Nigeria. Their study displayed that 43%

of the respondents had a household size of 5–6 person trailed by 32% with 7–8; 12% with 3–4 member show ever 10% had 9–10.

The study also tallied with the findings of [6] in their study, the analysis of Structure, Conduct and Performance of Beef marketing in Katsina, Katsina State. The results showed that over 70% of the retailers had household sizes between 1 and 10, with a mean household size of 8. Similarly, 50% of the wholesalers had household sizes between 1 and 10 respondents with a mean household size of 11. But it is in contrary with [2] in his study family size and quality of life, the study observed that small family size enjoy better economic and social lives which have great influence on better understanding of environmental conditions.

The result from this study also revealed that 42% of the marketers had acquired Qur’anic education and only 8% of the marketers had acquired tertiary education. This further indicates the likely reason for probable poor adoption of progressive improvements by the marketers. [16] 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 attainments were usually faster adopters of innovations.

The result on the profitability of sheep marketing revealed that sheep marketing was profitable in the study area with a Net Profit of ₦8,400. This tallied with the findings of [17] in their studies. The study revealed that the total revenue was ₦136,085,000.00, total cost was ₦115,411,000.00 and the gross margin was ₦19,577,300.00. This also matched with the findings of [1] in their study, the 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. The findings were also in agreement with the findings of [12] in their studies analysis of sheep and goats marketing in Sokoto metropolis, Sokoto State, Nigeria. Their findings discovered that Net profits per head of ₦5,704.6 and ₦2,630.74 were recorded for sheep and goats, respectively. This shows that both sheep and goat

marketing were profitable in the study area. This study also revealed a ₦30.0 marketing margin for Sheep. It rhymes with the findings of [12] in their studies, analysis of sheep and goats marketing in Sokoto metropolis, Sokoto State, Nigeria. Their study showed a margin of ₦46.60 and ₦27.09 for Goats and Sheep respectively.

Result on Marketing Efficiency revealed that Sheep marketing was efficient (1.43) in the study area. This tallied with the findings of [17] where they reported a marketing efficiency of 84.8% in the study area. Also, [12] in their studies revealed marketing efficiencies of 1.33 and 1.46 for sheep and goat respectively.

On the Structure of Sheep marketing, the study revealed that the sheep market was moderately concentrated with a value of 0.5911 indicating the possibility of pure oligopoly and inequality in earnings among the Sheep marketers. This tallied with the findings of [8] in his study, analysis of poultry egg marketing in some selected Local Government Areas of Katsina State, Nigeria. The Gini coefficient analysis showed a concentration in the market with (0.5694) indicating the possibility of pure oligopoly. The study also tallied with findings of [12] in their studies analysis of sheep and goats marketing in Sokoto metropolis, Sokoto state, Nigeria. The study revealed a Gini-Coefficient of 0.5602 for sheep and 0.4901 for goats markets indicated that sheep markets in the study area are moderately concentrated while goats markets are slightly concentrated. The concentration ratios show that the two markets exhibit oligopolistic market structures.

On the type of constraints being faced by the sheep marketers, it was discovered that 89% of the marketers were faced with the problems of inadequate capital and 78% of the marketers attributed their problems to inadequate transportation means. This resembled the findings of [14] in their studies, evaluation of poultry egg marketing in Kuje Area council municipality of F.C.T Abuja, Nigeria. The result showed that 80% of the egg marketers encountered problems of transportation due to bad roads and poor condition of vehicle.

IV. CONCLUSION

Based on the findings of this study, it could be concluded that majority of the marketers were young people. Marketing of sheep was also profitable and efficient in the study area. Also the markets were moderately concentrated (inefficiency in the market structure) and there was also an inequality (unequal opportunities in income

generation) in the distribution of income amongst the marketers. However, majority of the sheep marketers in the study area were faced with some problem which include transportation and spaces problems.

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