Full Length Research Paper

ANALYSIS OF STRUCTURE, CONDUCT AND PERFORMANCE OF BEEF MARKETING IN KATSINA, KATSINA STATE

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The study assessed the structure, conduct and performance of beef marketing, the socioeconomic characteristics as well as the constraints faced by the beef marketers in Katsina local government, Katsina State. A Multistage sampling technique was used to select 60 respondents from the target populace. The data was collected using pre-coded questionnaires. The study used a combination of Gini Coefficient, descriptive statistics and marketing efficiency ratio to achieve its aims. Analysis of the responses obtained revealed that all the respondents were males, of whom 67% were under forty years (with a mean age of 38.4 years), 75% were married with 60% of them having household sizes between 1 and 10 (with a mean household size of 10). Furthermore, 63 % of them had Qur'anic and 13% had primary education, respectively. More so, 47% of the respondents have other occupations than beef marketing. The market structure characteristics discovered by the study consisted of product homogeneity, absence of barrier to trade, numerous buyers and sellers, full awareness on information on market conditions among market participants and a Gini Coefficient of 0.23 (index of 23%). Market Conduct on the other hand discovered by the study consisted of absence of exclusionary measures against existing and incoming firms, sales promotion by selling on credit, and price determination using cost price as a measure. The study also revealed a marketing efficiency ratio of 2.20 depicting a well performing market. Intervention in livestock marketing through addressing the marketers' infrastructural needs such as storage and credit facilities to better up their situations will go a long way in improving viable competitions between actors within the beef market.

Keywords: Analysis of Structure, Conduct, Performance, Beef Marketing, Katsina, Katsina State

INTRODUCTION

Markets are complex institutions encompassing hierarchies and interlinked transactions which may involve simultaneous considerations of various commodities (Palmer. (2008). Throughout the world, the major share of staple food costs to the consumer is typically accounted for by marketing costs. In Nigeria and several other African counties, marketing costs account for about 40% to 60% of the total price spread between Wholesaler and retail prices (GMRP 1997). The reduction of these costs represents a major opportunity to improve farm production incentives and simultaneously make food more affordable to low-income consumers and simultaneously improve living standards. Over 60% of the rural households in Nigeria posses less than one hectare of land, to be able to sustain adequate crop-livestock combination for

producing sufficient beef or growing plenty food to feed themselves. The market dependent population, that is, the population that depends on the market for all or part of its food supply, is estimated to be about 42% of the total population (Alemayehu 1993). Almost all urban consumers are dependent on the functioning of agricultural markets to acquire their beef and food, which accounts for about 65% of total household expenditure (Dessalegn *et al*, 1998). It is clear that an inefficient marketing system entailing substantial costs to consumers will have detrimental effect on the food security and well being of the poor and even the average.

Protein, which is the major beef constituent next to water, forms a very important tribute to diets of humans, nutritionally and socially

METHODOLOGY

Katsina is located 160 miles East of the city of Sokoto, and 84 miles Northwest of Kano, close to the Niger frontier, at approximately 12°59′N 7°36′E Coordinates. The city is a trade center for an agricultural region where guinea corn and millet are grown for home consumption, and peanuts, cotton, beef and hides are produced commercially. The city has a steel-rolling and vegetable oil mills. Leather handicrafts are made in Katsina As of 2007; Katsina's estimated population was 459,022 NPC (2006)

Multistage staged sampling technique was used to collect data from survey respondents. First staged involved purposive sampling selection of three places within Katsina Local Government, namely due relative abundance of beef marketers in the area, for this reason the areas selected were; 'Yan Turaku, Abattoir, and the Central Market. The target populations were the wholesalers and the retailers. Second stage involved simple random selection of ten (10) wholesalers and ten (10) retailers for each of the three location identified based on list of marketers obtained from preliminary studies in the area. A total of sixty (60) marketers were used for the study

Both secondary and primary data were collected for the study. The secondary sources consisted mainly of the published and unpublished documents of the government, projects, and journal bulletins of research institutions, online wikis, researches and other relevant publications. The primary data used in the study were the information obtained using the pre-coded questionnaire.

The Gini Coefficient and Descriptive Statistics were used to assess market structure. The Gini Coefficient determined the sellers' concentration or monopoly in the market.

The Gini has possible values ranging from 0 to 1 expressing the extent to which the market is concentrated. The value of Gini equals to zero when there is perfect competition in the market. The Gini equals to one when there is perfect monopoly in the market.

Descriptive tool was used to determine marketing conduct. Marketing Efficiency ratio was used to assess marketing performance.

MODELS SPECIFICATION

1. The descriptive tools are frequencies and percentages.
2. The Gini Coefficient is given by:
$G = 1 - \sum XY$
Where:
G: Value of Gini Coefficient
X: Proportion of Sellers' Concentration per period of study

Y: Cumulative Proportion of Sellers' Concentration per period of study.
3. Marketing Efficiency is given by:
ME = Value of outputs/Value of inputs
4. Budgeting:
$NP = TR - TC$, where
NP: Net Profit
TR: Total Revenue
TC: Total Cost of production.

RESULTS AND DISCUSSION

From table 1 the results show 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. This connotes that majority of the respondents may easily accept new technologies, as with the finding of Francis, 1994; who opined that influence of age becomes significant when agricultural development activities remain central.

The results show that 80% of the retailers were married, while only 20% were single. Similarly, 76.6% of the wholesalers were married while only 23.3% are single. This implies that due to family responsibility, both groups of respondents were into production and marketing to earn enough with which to cater for their families. It also reflects the values, beliefs and norms of the people of the study area, hence agrees with Smith (1997).

The results show that majority (70%) of the wholesalers had only obtained Qur'anic education. Similarly only 56.7% of the retailers obtained only Qur'anic education and 20% obtained primary education while all the rest proceed to secondary and tertiary schools. This further indicates probable reason for probable poor adoption of development innovations by the research population.

The results show 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 as opined by Tambi, (2005), who opined that the respondents that kept large family provide cheap family labour on the farm.

The results show that 43% of the retailers had, apart from beef marketing, other occupations. Similarly, 50% of the wholesalers had secondary occupations to beef production. The results show that 54% of the wholesalers had farming as secondary occupation to beef production while 23% engaged in trading to supplement their earnings from beef production. 54% of the retailers similarly had farming as their secondary occupations and 23% of them engaged in trade to supplement earnings from beef retailing

The product (beef), in the study area was homogeneous. In other words, it was not different in

Table 1: Socioeconomic variables of survey respondents

Variable	Wholesalers		Retailers	
	Frequency	Percentage	Frequency	Percentage
Age (years):				
Below 20	3	10	0	0
21 to 30	6	20	11	37
31to 40	9	30	11	37
41 to 50	3	10	3	10
51 to 60	7	23	2	6
Above 61	2	7	3	10
Sex:				
Male:	30	100	30	100
Female:	0	0	0	0
Marital Status:				
Single:	7	23.3	6	20
Married:	23	76.7	24	80
Educational level:				
Qur'anic	21	70	17	56.7
Primary	2	6.7	6	20
Secondary	4	13.3	7	23.3
Tertiary	3	10	0	0
Household Size:				
1to 5	9	30	11	37
6 to10	6	20	12	40
11 to 15	6	20	2	6
16 to 20	6	20	5	17
20 and above	3	10	0	0
Secondary Occupation				
Yes	13	43.3	15	50
No	17	56.7	15	50
Type of Secondary Occupation				
Farming	7	54	9	54
Civil service	2	15	4	15
Trading	3	23	2	23
Other	1	7	0	7

Source: Field survey, 2015

nature across the participants, but varied only in condition of sales (sanitary attribute).

Results in table 2 shows that all the respondents opined that they have awareness on market conditions; about costs, prices and other information relevant to competitive participation in the market. They however differ from the angle of where such information is sourced

Table 3 shows that the value of Gini therefore implies that marketing of beef in the study area is carried out in a competitive way, because the situation of the market structure is 23% away from perfect competition and 77% away from perfect monopoly. It further confirms the absence of barriers to entry and exit to trade.

Table 4 presents results show that over 90 percent of the retailers used purchase price as instrumental tool of pricing their products, and only 6.7 percent relied on the ambient price levels to determine their products' price. Similarly, 50% of the wholesalers priced their products based on ambient price levels. Only 10% of the wholesalers determined their products' prices with size/beauty of the animal as the instrumental tool, whereas 40% relied on the ambient price levels to guide their product pricing

Table 5 results showed that over 50% of the wholesalers promoted sales by selling beef on credit. 26.7% however, did so by improving their product (beef) quality. Similarly, 40% of the retailers promoted sales through product sales on credit. However, quality improvement, subsidy and customer entertainment altogether constituted over 30% of the methods used by firms to promote sale

Table 2: Distribution of respondents based on source of market information

| | Wholesalers | | Retailers | |
	Frequency	Percentage	Frequency	Percentage
Friends	18	60	16	53.3
Market agents	5	16.7	9	30.0
Radio	6	20	4	13.3
Television	1	3.3	1	3.3
Total	**30**	**100**	**30**	**100**

Source: Field survey, 2015

Table 3: Concentration of market share of the respondents.

Respondents	Revenue	X	Y	XY
Wholesalers	1310920	0.66	0.66	0.44
Retailers	657950	0.33	1.0	0.33
Total	**1968870**	**1.0**	**1.66**	**0.77**

G= 1 - ∑XY
G= 1 – 0.77
G= 0.23

Table 4: Distribution of respondents based on method of determining price

| | Wholesalers | | Retailers | |
	Frequency	Percentage	Frequency	Percentage
General Price level	12	40	2	6.7
Purchase Price	15	50	28	93.3
Animal Size/beauty	3	10	0	0.0
Total	**30**	**100**	**30**	**100**

Table 5: Distribution of respondents based practice used to promote sales.

| | Wholesalers | | Retailers | |
	Frequency	Percentage	Frequency	Percentage
a) Improving quality	8	26.7	5	16.7
b) Subsidy/Discount	3	10	5	16.7
c) Sanitary measures	1	3.3	3	10.0
d) Selling on credit	17	56.7	12	40
e) Entertaining People	1	3.3	4	13.3
f) Improving quality, Subsidy and Entertaining people	0	0	1	3.3
Total	**30**	**100**	**30**	**100**

Source: Field survey, 2015

This is an analytical tool which is measured as a ratio of output to input worth to determine the efficiency of marketing and resource use efficiency in marketing as well.

From Table 6;

Marketing Efficiency (ME) = $\frac{\text{Value of output}}{\text{Value of input}}$

= 1968870/ 892950.5

= 2.20

This signifies efficiency in marketing and better resource use efficiency. This finding relates to the structural attributes of the market discovered as above, like the 0.23 Gini Coefficient, absence of trade barrier and adequate market information, as opined by Olukosi *et al*, 2007. This rhymes with the finding of Najamuddeen (2006) who discovered efficient market performance to be efficient when the Gini coefficient is 0.24 in Sokoto Metropolis.

Table 6: Cost and revenue of the wholesalers and retailers

Total Cost (TC, Naira)		Total Revenue (TR, Naira)
Wholesalers	351169.5	1310920
Retailers	541781	657950
Total	**892950.5**	**1968870**

Net Profit = TR – TC
Net Profit = 1968870 – 892950.5
Net Profit = 1075919.5 Naira

Table 7: Distribution of the respondents based on the constraints they face

	Wholesalers		Retailers	
	Frequency	Percentage	Frequency	Percentage
Lack of Storage Facilities	10	33	5	16.7
Lack of Government Support	15	50.0	16	53.3
Risks involved	4	13.3	5	16.7
Lack of road	2	6.7	1	3.3
Lack of Peoples Support	1	3.3	2	6.7
Lack of Rearing Place	1	3.3	2	6.3
Defaulting by Customers	1	3.3	0	0
Erratic Nature of Market	1	3.3	4	13.2
Total	**35**	**116.3**	**34**	**113.2**

Source: Field survey, 2015

The results in table 7 showed that over 80% of the wholesalers are constrained by lack of storage facilities and government support. Similarly, 80% of the retailers are constrained by lack of government support and storage facilities. This finding is in agreement with David West, 1982; Nuru, 1982 as among the institutional and economic constraints impeding the growth and development of the livestock industry in Nigeria.

CONCLUSION

The study of the market structure of beef discovered product homogeneity, absence of barrier to trade, numerous buyers and sellers, full awareness on information on market conditions among market participants and a Gini Coefficient of 0.23 (index of 23%). As revealed by the study, the type of beef market structure operational in the study area depicts strong competition and make the structure model assumes the qualities of pure competition.
beef marketing in the study area was discovered to have a good measure of performance, having an efficiency ratio of 2.20.
   intervention in livestock marketing through providing more infrastructural needs of the beef marketers as roads, storage and credit facilities to better up the situations of the beef marketers in ways that improve viable competitions between the actors within the beef market.

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