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### COSTS AND RETURN ANALYSIS OF ROASTED BEEF (*Tsire*) VENDORS IN METROPOLITAN KANO STATE, NIGERIA

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#### ABSTRACT

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The study analyzed the costs and return of roasted beef (*Tsire*) vendors in Kano Metropolis, Kano State. Three local government areas were selected based on concentration of roasted beef vendors. Kumbotso, Ungogo and Kano Municipal were purposively selected; three wards from each of the selected local government areas were selected being part of Kano Metropolis based on the concentration of the roasted beef (*Tsire*) vendors. Simple random selection was adopted and total of one hundred and twenty (120) respondents were randomly selected. The data were analyzed using net processing income, gross ratio, operational ratio and fixed ratio. The costs and return analysis revealed that the total costs of beef processing was ₦13,612.89k per 10kg of beef with a gross income of ₦16, 000.00 per 10kg. The study therefore concludes that vendors should establish co-operative societies in order to solve their immediate problems. It was recommended that with establishment of co-operative societies the financial intuitions and other stakeholders could assist roasted beef vendors with credit loan so that they can buy inputs in bulk to reduce the cost of processing and maximize returns.

#### INTRODUCTION

Beef processed into different products to meet the ever increasing demand for animal protein to enable the processors to convert low valued meat cuts into high valued products. This is done with a view to making profit and generates income. Experience has shown that roasted beef business meat products that has gained popularity and became a major source of income for processors in Nigeria and most African countries. A generic name of meat products in Hausa language, include *Tsire*, *Balangu*, *Kilishi* as well as *Danbun nama*. Concerted effort is needed for *suya* product development and large-scale commercial production for income

generation to alleviate poverty that is ravaging the African Continent (Ahmadu and Ibrahim, 2013). Meat is a major source of protein and the importance of protein to the body cannot be over emphasized. It is a class of food that rebuilds body tissues and enhances growth (Anonymous, 2009).

Iliyasu, Iheanacho and Mshelia (2013) asserted that the processing and marketing of meat provide a good investment opportunity to increase in protein intake for the average Nigerian. Effort should however, be made to improve the hygienic condition of the marketing environment of the products in general.

The major source of meat is obtained from different livestock including cattle, sheep and goats. The most popular fresh meat is obtained from cattle and is commonly referred to as beef. These meat products have formed the basis of the Nigerian livestock industry, which provides employment and income to the populace. Consequently, its production has become a major economic activity in Nigeria, Cameroon, Senegal, Mali and Chad Republic (Igene and Agboola, 2003).

This study therefore, intends to evaluate cost and return of roasted beef product (*Tsire*) in Metropolitan Kano State, Nigeria, due to high concentration of people living in Kano and the majority of them are traders and other businesses, which lead to high demand for protein especially from roasted beef products which are mostly available in the area, as a result of availability of cattle and conducive climatic condition found in the study area which are reared by Fulani herdsmen and other people that are involved in animal breeding, fattening and marketing activities.

#### **Objectives of the Study**

The broad objective of the study was to estimate the costs and return associated with the roasted beef (*Tsire*) Vendors in Metropolitan Kano state.

#### **METHODOLOGY**

Kano state lies between latitude Latitude 13°N in the North and 11°N in the south and Longitude 8°W in the West, 10°E in the East (Yakubu, 2014). It shares boundary with Jigawa State in the north east, Katsina State in the North West and Kaduna in the south. The state is administratively divided into 44 local government areas. It also has a population of 9,383,682 with an annual growth rate of 3.3% (NPC, 2006). It is also the most populous state in Nigeria with a population of 9, 383, 682 (NPC, 2006) as in: (Kurawa, 2006). The annual rainfall is between 420mm-1000mm and temperature is averagely warm throughout to about 32°C-34°C (KNARDA, 2007).

Agriculture is the backbone of Kano state economy followed by commerce. Agriculture, which is the major employer of labour in Kano state where about 70% of the farmers are engaged in subsistence farming

for household consumption (NPC, 2006). Kano state ecological characteristics is favourable for the production of cattle and it is one of the major producers of roasted beef in the northern part of Nigeria, the cattle can be produced both in the wet and dry season. Cattle are produced in all parts of the local government areas (L.G.As) of Kano state (KNARDA, 2012).

Kano Metropolitan comprises of eight local governments areas. They are Dala, Gwale, Kano Municipal, Nassarawa, Tarauni, Fagge Ungogo and Kumbotso local government areas respectively. The Kano Metropolitan have the population figure of two million eight hundred and twenty six thousand, three hundred and seven (2,826,307) as of 2006 (NPC, 2006). Kano state would have grown to 13,561,324 million as at 2016. The research was conducted based on the concentration of roasted beef vendors within the Kano Metropolitan.

#### **Sampling Techniques**

Multistage sampling technique was used for data collection in the study area. For the purpose of this research only three Local Government Areas (L.G.A) were selected. Kano state is divided into three Agricultural Development programmed (ADP) zones namely, zone I, zone II, and zone III, with their respective local government areas (L.G.As) as follows:

Zone I: Rano, Tudun wada, Doguwa, Bebeji, Kiru, Garun malam, Kura, Kumbotso, Madobi, Gwarzo, Karaye, Rogo, Kibiya, and Bunkure with Rano as APD zone I Headquarter.

Zone II: Danbatta, Bichi, Bagwai, Shanono, Tsanyawa, Kunchi, Kabo, Rimin Gado, Tofa, Dawakin Tofa, Makoda, Minjibir, and Ungogo with Danbatta as APD zone II Headquarter.

Zone III: Gaya, Ajingi, Wudil, Albasu, Garko, Takai, Sumaila, Dawakin kudu, Warawa, Gezawa, Gabasawa, Kano Municipal, Tarauni, Dala, Gwale, Fagge and Nassarawa with Gaya as ADP Zone III Headquarter.

The first stage involves the section of three (3) zones based on concentration of roasted beef (*Tsire*) vendors. On this premise, Kumbotso, Ungogo and Kano Municipal Local Government Areas were chosen from zone I, zone II and zone III respectively.

The second stage involved purposive selection of three wards from each of the selected local government areas based on the concentration of the roasted beef (Tsire) vendors. Consequent upon which, Naibawa, Panshekara and Mariri were selected in Kumbotso, Rijiyar Zaki, Rimin kebbe and Miltara wards in Ungogo and Agadasawa, Jakara and Gandun Albasa in Kano Municipal.

The third stage, involved simple random selection of respondents from the nine wards selected. A pre-survey was conducted and a total of two hundred and thirty five (235) roasted beef vendors were identified from all the nine wards out which 120 respondents were chooses on the basis of proportion allocation indicated in Table1.

**Table 1: proportion of sample size and location of wards selected based on roasted beef Vendors.**

Agricultural Zone	L.G.A	Wards	Estimate of Roasted Beef(Tsire)Vendors (sample frame)	50% of the sample frame (sample size)
I	Kumbotso	Naibawa	23	12
		Panshekara	10	5
		Mariri	27	14
II	Ungogo	Rijiyar zaki	30	15
		Rimin kebbe	35	18
		Miltara	35	18
III	Kano Municipal	Agadasawa	10	5
		Jakara	25	13
		Gandun Albasa	40	20
<b>Total</b>			<b>235</b>	<b>120</b>

Source: Field survey, 2016.

**Data Collection**

Data for the study were collected from primary sources. Primary data were collected with the aid of set of schedule questionnaire which were administered by the researcher and some trained enumerators. Data collected included information on the cost of inputs and

prices of roasted beef (Tsire) product from the respondents.

**Tools for Analysis**

The result were analyzed using Net Processing income, Net Gross ratio, Operational ratio and Fixed ratio

**Net Processing Income**

The expenses incurred in naira by each processor during processing activity consist both fixed and variable costs (Olukosi and Ositor, 2005).

$$NPI = TR - TC \text{ ----- (1)}$$

And  $TC = TVC + TFC \text{ ..... (2)}$

Where:

- NPI = Net Processing income of roasted beef (₦)
- TR = Total revenue of roasted beef (₦)
- TC = Total cost of roasted beef (₦)

**Gross ratio/ Operational ratio/ fixed ratio**

To determine the profitability of roasted beef some ratio were calculated. According to Olukosi and Erhabor, (2005) the following formula is used.

$$GR = \frac{TC}{GI} \text{ ..... (3)}$$

Where:

GR = Gross Ratio

TC = Total Cost

GI = Gross Income

A value of less than one (<1) is desirable for the business. The lower the ratio, the higher the returns per naira invested. A greater than one (>1) is disastrous for any set up business.

$$OR = \frac{TVC}{GI} \dots\dots\dots (4)$$

Where:

OR = Operation Ratio

TVC = Total variable Cost

GI = Gross Income

Operating ratio of one means the gross income barely covers the expenses on variable cost.

Operation ratio of less than one (<1) is desirable.

$$FR = \frac{TPE}{GI} \dots\dots\dots (5)$$

Or

$$FR = \frac{TC}{GI} \dots\dots\dots (6)$$

Where:

FR = Fixed Ratio

TPE = Total Processing Expenses

GI = Gross Income

If the fixed ratio is close to one, it means some of the fixed cost or inputs are either left idle or underutilized.

**Return per Naira Invested**

$$RPI = \frac{NPI}{TC} \dots\dots\dots (7)$$

Where:

RPI = Return Per Naira Invested

NPI = Net Processing Income

TC = Total Cost

**RESULTS AND DISCUSSION**

**Cost and Return Analysis of Roasted Beef Vendors per 10kg Raw Beef**

Table 2 attached presents the costs and return per naira invested per 10kg of raw beef processed by the Vendors. The Result reveals that, the cost of raw beef, groundnut oil, groundnut cake, vegetables, water, labour and others were variable cost component. The total variable cost per processing cycle was ₦13,612.00 per 10kg of raw beef. As observed, no fixed input identified in relation to roasted beef business. As such, the total cost per

processing cycle was ₦13612.89 per 10kg of raw beef on average. The net profit income was ₦2387.11 per 10kg of raw beef and the return per naira invested was 18kobo. This means that on every naira invested 18 kobo returned as profit after paying the cost necessary to generate that Naira. According to Iliyasu, Iheanacho and Mshelia, (2013) estimated gross margin per kilogram of meat used in preparation of Tsire was ₦114 .00. The return to labour was ₦2.2 and returns to other variable cost were 29 kobo.

**Table 2: Cost and Return Associated with Roasted Beef per 10kg Raw Beef**

Items	Quantity	Total cost(₦)	Unit Cost (₦)	%TVC	%TC
<b>Variable Cost</b>					
Raw beef	10kg	10,000	1000	73.58	73.46
Groundnut oil	2litre	800	400	5.89	5.88
Spices &Pepper	3kg	300	100	2.21	2.2
Seasoning	1kg	270	270	1.99	1.98
Groundnut cake	1kg	500	500	3.68	3.67
Firewood	3kg	300	100	2.21	2.2
Wrapping papers	20kg	100	5	0.74	0.73
Polythene bag	1kg	80	80	0.59	0.59
Vegetables	4kg	200	50	1.47	1.47
Salt	2kg	10	5	0.07	0.07
Water	2litre	30	15	0.22	0.22
labour	1 person /day	1000	1000	7.36	7.35
Sticks	2kg	1.11	1000	4.85	0.01
Trays	1piece	1.37	500	5.99	0.01
Knives	2kg	1.67	200	7.3	0.01
Table	2pieces	4.11	3000	17.96	0.03
Bowls	1piece	3.42	2500	14.94	0.01
Piece of Cloth	2yards	3.33	100	14.55	0.02
Knife Sharpener	1piece	0.21	150	0.92	0.03
Serving Plates	6piecces	0.83	50	3.63	0.01
Roasting Spot & shade	1piece	6.84	10,000	29.88	0.05
<b>TC</b>		<b>₦13612.89</b>			
Gross income (GI)		₦16000.00			
Net Processing Income (NPI)		<b>₦ 2387.11</b>			
Operational Ratio (OR)		0.85			
Fixed Ratio (FR)		0.85			
Gross Ratio (GR)		0.85			
Return per naira invested (RPI)		<b>18 kobo</b>			

**Source:** Field Survey, 2016

### Conclusion

Roasted beef business was found to be profitable with positive net profit income in the study area, with an average net profit income of ₦2387.11. The analysis further indicated a returned per naira investment of ₦ 0.18 , meaning that on every naira invested into the business 18 kobo was generated as profit.

### Recommendations

Based on the findings of the studies, the following recommendations were made; Roasted beef vendors (RBV) are advised to form strong and vibrant cooperative societies that could enable the meat processors easy access to raw materials at subsidized price in bulk purchase and credit facilities that might subsequently boost their production activities, expand their enterprise, increase their output, increase their income and improve their standard of living.

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