Economic Analysis of Roasted Beef (Suya) Marketing in Bauchi Metropolitant of Bauchi State

LADAN YAKUBU MUAZU
Federal Road Safety Commission Adamawa Sector Command Numan Road Jimeta Yola Adamawa State
Nigeria

Abstract
The study analyzed the economics of roasted beef (suya) Marketing in Bauchi metropolis. It examined the socio economic characteristics of the respondent, the cost and return as well as the market structure of roasted beef (suya) marketing in the study area. Seventy road side roasted beef marketers were randomly selected. Structured questionnaire were used to capture information from the respondents. Data collected were analyzed using descriptive statistics, marketing margin and Gini coefficient. The result revealed that the business was mainly dominated by male (96) while majority of the responded (54%) attended one form of formal education on the other (62%) had the experience of 6-19 years of roasted beef marketing, Majority (89) were married. The study also revealed that the gross marketing margin of roasted beef in the study area was N3210 per 10kg of beef. The gini coefficient of 0.71 obtained which shows that the structure of the market was a perfect market.

INTRODUCTION

The word beef is from the latin bos, in contrast to cow, which is from middle English "Cou". People have eaten the flesh of bovines from prehistoric times; some of the earliest known cave painting such as those of lascaux show aurochs in hunting scenes. People domesticated cattle around 8000bc to provide ready access to beef, milk and leather. (Neolithic 2008).

It is unknown exactly when people started cooking beef. Cattle were widely used across the old world as draft animal (oxen). For milk or specifically for meat, With mechanization of farming. Some breeds were specifically breed to increase meat yield, and some breed have been selected for both meat and milk production as well.

When preparing beef it is first divided into primal cuts, pieces of meat initially separated from the carcass during butchering. These are basic sections from which steaks and other subdivisions are cut. The term " primal cut" use to characterize cuts considered to be of light quality, since the animals legs and neck muscles do the most work, they are the toughest, the meat becomes more tender as distance from hoof and horn increase. Different countries and cuisines have different cuts and names and sometime use the same name for a different cut.

Aging and tenderization.

To improve tenders of beef, it often is age (i.e store refrigerated) to allow endogenous proteolytic enzymes to weaken structural and myofibriller proteins. Wet aging is accomplished using vacuum parking to reduce spoilage and yield loss. Dry aging involves hanging primals (usually libs or loins) in humidity controlled coolers. Outer surface dry out and can support growth of molds (and spoilage bacteria in too humid) resulting in trim evaporative losses.

Evaporation concentrates the remaining proteins and increases flavor intensity; the molds can contributes a nut- like flavor. After two to three days there are significant effects. The majority of the tenderizing effects occur in the first 10 days. Boxed beef, stored and distributed in vacuum packaging, is in effect, wet aged during distribution. Meat from less tender cuts or older cattle can be mechanically tenderized by forcing small sharp blades through the cuts to disrupt the proteins. Also solution of exogenous proteolytic enzymes can be injected to augment the endogenous enzymes. Similarly, solution of salt and sodium phosphates can be injected to soften and swell the myofibrillar proteins. This improves juiciness and tenderness. Salt can improve the flavors but phosphate can contribute a soapy flavor.

Cooking and preparation

Beef can be cooked to various degrees, from very rare to well done. The degree of cooking corresponds to the tempered in the appropriate center of the meat which can be measured with meat thermometer.

Beef can be cooked using the sous vide method which cooks the entire steak to the same temperature but when cooked using a method such as boiling or roasting it is typically cooked such that it has a "bull eye" of done ness, with the least done (coolest) at the center and the must done (warmest) at the outside. Meat can be cooked in boiling oil, typically by shallow frying, although deep frying may be used often for meat enrobed with bread crumbs as in milanesas. Larger pieces such as steaks may be cooked this way, or meat may be cut smaller as in stir frying, typically an Asian way of cooking; cooking oil with flavoring such as garlic, ginger and onions

is put in a very hot wok. Then small pieces of meat are added followed by ingredients which cook more quickly, such as mixed vegetables. The dish is ready when the ingredients are cooked. (Fas.usda 2009)

Nutrition and health
Beef is an excellent source of complete protein and minerals such as zinc, seleninum, phosporus and iron and B vitamins. Red meat is the most significant dietary sources of carnitine and like any other meat is a source of creatine. (WHF 2004) Consumption of red meat is known to increase the risk of bowel cancer and lung cancer and is suspected to be implicated in increased risk of some other cancers (xuexj 2014).

The Harvard school of public health recommends consumers eat red meat sparingly as it has high levels of undesirable saturated fat. This recommendation is not without controversy though another study from the same school appearing in circulation (journal) found "consumption of processed meat but not red meats is associated with higher incidence of coronary heart disease and diabetes mellitus (hspyh 2011)

This finding tended to confirm an earlier meta-analysis of the nutritional effects of saturated fat in the American journal of clinical nutrition which found a prospective epidemiologic studies show that there is not significance evidence for concluding that dietary saturated fat is associated with an increased risk of coronary heart disease or cardiovascular disease. More data are needed to elucided weather cardiovascular disease risk is likely to be influence by the specific nutrients used to replace saturated fat (meta-analysis 2011)

Suya business in Bauchi
Suya business in Bauchi is one fast moving enterprise which enjoys a wide patronage especially in the metropolis that where the social life is on the high side.

The enterprise is acquiring a significant development through patronage at the road side, hotels and the green areas of the metropolis where many enterprise management employ men or contract them to make the delicacy which adds pep to their social business.

For the chiefs who produce the delicacy made of many animal parts including the kidney, liver, beef and more which are usually spiced to attract patronage and good taste, it has become one famous enterprise whose market is always booming once the cash is there.

Suya making which is usually prepared with firewood is now attracting the use of fuel generators and uniform running the business to enhance the necessary attraction and hygiene (udeozochibuzo 2014).

Methodology
The study covered Bauchi, metropolitan roasted beef marketers. Bauchi, local Government area covers about 3540 square km, the area falls within the western part of Bauchi state and has population of 493, 810 (NPC 2006.) The vegetation of the study area is open Savannah; April is the hottest month of the year. The mean humidity is highest in August (66.50%) and lowest in February (16.50%). The mean annual rainfall ranges from 800-900mm and the climate is characterized by two seasons wet and dry seasons.

The population of the study was mainly roasted beef marketers and sample was drawn using random sampling techniques 70 road sides roasted beef marketers all over the metropolitan were used. The main source of information was primary data it was collected through the administration of questionnaire, using oral interview and direct observation during the survey period. The analysis of the collected data was achieved using descriptive statistics, marketing margin analysis and gini coefficient.

The data collected were analyzed using descriptive statistics (frequency distribution, percentage and means).

Estimate of marketing margins and efficiency, were obtained using olukosi, et al (2007). Marketing margin is the difference in price paid of a given commodity at different stages of time, form, place and possession as it move from the primary produce to the hands of ultimate consumers. Marketing margin is simply the difference between retails price and form gate price. This was used to determine the profitability of the marketing of roasted beef in the study area.

Marketing margin expressed as

$$Mm = \frac{Rp - Pp}{Rp} \times 100$$

Where
   Mm = Marketing Margin
   Rp= Retail Price (₦/kg)
   Pp = Producer Price (₦/kg)
Gini coefficient was employed as in Koch (1980) and defined as
GC =1-∑XY
Where GC =Gini Coefficient

∑= Summation

X= Sample of traders

Y= Cumulative percentage of sales

Concentration will play a larger part in the determination of market behaviour within an industry because it affects the independence of actions among participants. The concentration index was Ginni coefficient (Koch 1980) which will utilize market shares to determine the extent of market concentration.

RESULT AND DISCUSSION

Table 1 shows that 54% of the respondent attended a formal education while 46% attended only informal education, this will help the marketers to easily acquire or understand a new innovation as they have enough knowledge of doing so.

Table 2 revealed the years spends by the respondents (experience) on the marketing of roasted beef in the study area, the result shows that about 62% of the respondents has between 6-19 year of experience while 23% has about 20 years of experience and only 15% are below 5 years of experience respectively.

Table 3 indicated that majority of the respondents in the study are male with 96% only 4% are women, this may be due to the culture in the study area in which they restricted female in an open association with male in most activities.

Table 4 revealed that 89% of the respondents are married; all other 11% are single. This indicated that most of the marketers in the study are responsible in the sense that they have family under them.

Table 1: Distribution of respondents according to educational level.

Level of education	Frequency	Percentage(%)
None formal education	33	46
Primary education	20	29
Secondary education	13	19
Tertiary education	4	5
TOTAL	70	100

Source: field survey 2014

Table 2: distribution of respondents according to experience

Year	frequency	Percentage (%)
<-5years	11	15
6-10years	13	19
11-15years	16	23
16-19years	14	20
20years	16	23
TOTAL	70	100

Source: Field survey 2014

Table 3: distribution of respondents according to sex

Sex	frequency	Percentage (%)
Male	67	96
female	3	4
TOTAL	70	100

SOURCE: field survey 2014

Table 4: distribution of respondents according to marital status.

Marital status	Frequency	Percentage (%)
single	8	11
married	62	89
widowed	-	-
others	-	-
TOTAL	70	100

SOURCE: field survey 2014.

Table 5: analyze the gross margin analysis which shows the various cost items associated with beef (suya). Marketing in the study area which shows that an average marketer incurs a total variable cost of #11,655 and makes #15,081 as revenue per 10kg of beef (Suya).

Gross margin = TR-TVC

GM=   #15081 – 11655

   =   #3,210

Table 6: market structure for beef (Suya) marketing the gini coefficient of 0.71 obtained in the study which indicates a high concentration thus the market structure is a perfect market.

Table 5: cost items used in marketing beef (suya) in the study area.

Cost/item	Amount(#) 10kg	percentage
Cost of purchase	9,000	76.00
Transportation cost	255	2.12
Market tax	80	0.6
Other cost(preparation roasting packaging)	2320	20
Tvc	11655	98.13
Rent	215	1.81
Total cost	11871	100
Total revenue	15081	
Gross margin	3210	

 Source: Field Survey 2014

Sellers range(#)	Number of marketers	Percentage of marketers	Corrected (x)	Cumulative percentage of marketers	Total value of individual sales	Percentages of total sales.	Cumulative percentage of total sale	Corrected (Y)	XY
1-1500	6	9	0.09	9	43.315	11	11	0.11	0.0099
16-4500	27	38	0.38	47	120.230	30	41	0.30	0.114
46-75000	23	33	0.33	80	126115	31	72	0.31	0.102
>76000	14	20	0.20	100	116,342	28	100	0.28	0.056
TOTAL	70	100	1.0		406002	100		1.0	0.281

Mean Value of Individual Sale=5800.028

Ginni Coefficient=1-0.281

         =0.71

CONCLUSION

It is therefore concluded that majority of respondents (96%) are male and most of them (marketers) attend one form education or the other, and 62% of the respondents had the experience of 6-19 years of beef (suya) marketing and majority of the marketers 89% are married. The gross margin of the beef marketers in the study area per 10kg of beef was #3210. The gini coefficient of 0.71 showed that the market structure for beef market in the study area is a perfect market, which seems to influence strategically the nature of competition and pricing within the markets.

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