

# Some marketing aspects of slaughter animals in rural slaughterlabs in Kaduna State of Nigeria

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## RÉSUMÉ

### Quelques aspects de la commercialisation des animaux abattus dans des unités d'abattage rurales de l'Etat de Kaduna, Nigeria

Deux études séparées sur l'abattage du bétail ont été effectuées dans deux villages de Nigéria du nord de 1973 à 1976. L'âge, le prix et l'état des animaux présentés à l'abattage ont été déterminés en interrogeant les éleveurs et à l'inspection. Les données recueillies ont montré des tendances semblables pour le volume et le prix des animaux mis à la vente ; leur nombre, qui a diminué légèrement durant la période d'enquête, a accusé une variation saisonnière avec une augmentation de l'abattage en début de saison sèche. Le plus grand nombre de petits ruminants abattus l'a été en début de saison des pluies.

Les prix sont passés d'une moyenne de 70 naira par bovin début 1973 à 186 naira début 1976, principalement à cause de l'inflation. Mises à part les influences saisonnières et de l'inflation, ils dépendaient aussi de l'état des animaux. Ceux-ci étaient le plus souvent des animaux de réforme suspects de maladie, ce qui influait significativement sur les prix.

*Mots clés* : Commercialisation — Bovins — Petits ruminants — Abattoirs ruraux — Nigeria.

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**Summary.** — Two independent surveys concerning livestock slaughter were carried out in two villages in northern Nigeria during 1973-1976. The age, price and condition of animals presented for slaughter were determined through interview and inspection. The data collected in these two villages showed similar trends in volume and price of the animals offered for sale. The number of livestock, which decreased slightly during the survey period, showed a seasonal variation with the highest number of cattle slaughtered at the beginning of the dry season. The highest number of small ruminants were slaughtered during the beginning of the rainy season. Prices of livestock rose considerably from an average of 70 naira for cattle in early 1973 to 186 naira in early 1976. The rise was mainly related to inflation. Many of the animals slaughtered in the villages were cull animals often suspected to suffer from disease. Apart from seasonal and inflationary influences, the prices were also affected by the condition of the animals. Disease had a significant effect on the price of cattle slaughtered in the rural slaughterlab.

*Key words* : Marketing — Cattle — Small ruminants — Rural slaughter-house — Nigeria.

## INTRODUCTION

Despite the fact that livestock contributes in no small amount to the African economies, very little is known about the marketing and price structure of cattle, sheep and goats. The complexity of the livestock marketing system in West Africa has been described in Niger (7), and by COHEN (2) in a study concerning the long distance trace from the cattle-breeding areas in the west African savanna to the meat markets in the southern parts of Nigeria. Statistics on livestock sales provided by government agencies, frequently quoted by visiting consultants (1), provide useful data on volume and prices, but are only concerned with larger markets and abattoirs. Moreover the prices recorded are rough estimates and rarely accurate. These records however do indicate the existence of considerable price differences between the markets in the consuming areas (Lagos, Enugu) and the producing areas in the North. It seems justified, based on the experience with staple goods like grains, groundnuts etc. to assume that livestock price differences between rural and staple markets in northern Nigeria show similar patterns as other agricultural commodities. These differences are mainly related to the seasonal availability of livestock, transport costs etc., but probably also to the quality of the animals offered for sale. SCHILLHORN VAN VEEN (5) observed, in a village in Katsina province, that 70 % of the animals offered for sale and slaughter during the dry years 1972-1973 were considered to be suffering from diseases, and lower prices were paid for such animals. The following study was carried out during 1973-1976 in order to obtain more information about the quality, ailments and prices of animals offered for sale and slaughter in rural slaughterslabs. As the price variations during that period, which included the drought aftermath as well as the Nigerian oil boom, were highly volatile, this information is of interest as a record of prices during periods of rapid change.

## MATERIALS AND METHODS

The study was carried out in two rural villages in Kaduna State : Soba, approximately 40 km east of Zaria in an area with large

floodplains (« fadamas ») which are utilized as dry season grazing areas by semi-nomadic livestock, and Dan Mahawayi (DM) 25 km west of Zaria in a drier area where most of the land is being utilized by arable farmers and very little is left for grazing livestock.

The information at the slaughtersite was collected by local enumerators. In DM the enumerator collected data on livestock slaughtered from the whole village (including home slaughter), in Soba the data were mainly collected at the slaughterplace. The enumerators interviewed owners and butchers and noted the information on origin, condition, sex, age and price of the animals. At slaughter the animals were inspected and the age, sex and condition was verified. In addition certain samples were collected for examination in the laboratory as described elsewhere (6). The quality of the data collected was verified by weekly, and later biweekly, unexpected visits of the author or colleagues to the slaughterplace.

## RESULTS

The survey in DM lasted for 34 months from March, 1973, to January, 1976. In Soba, the data were collected from December, 1973, till May, 1976 with an interruption during February and March of that year. The majority of the slaughtered animals originated from semi-nomadic Fulani livestock owners. Sometimes animals were bought from the Fulani owners by villagers (farmers, butchers) at the end of the harvest season (December) and kept in their compounds until the next planting season (April-May) when they were sold and slaughtered. Very few animals originated from large cattle markets such as Zaria, except during festival-days like « Sallah » when the demand for meat was high, and during the height of the 1972-1974 drought period when cattle prices in the large markets were considerably lower than those in the rural markets.

In Soba long distance trade cattle constituted 18.3, 11.9, 20.9 and 4.3 percent of the animals slaughtered, respectively, in January, February, March and April 1974. Unfortunately, no reliable price data are available from the larger market in Zaria.

TABLE 1. Prices (in Naira) of cattle in Soba arranged by sex and month. The number of animals recorded is given in parenthesis

	1974		1975		1976	
	M	F	M	F	M	F
J	76.24 (55)	53.60 (20)	99.04 (22)	85.55 (9)	185.55 (24)	130.00 (9)
F	80.90 <sup>∞</sup> (47)	44.40 (20)	101.61 <sup>∞</sup> (32)	75.71 (7)	--	--
M	70.81 (50)	40.53 (21)	101.06 (36)	75.00 (6)	--	--
A	53.91 (28)	47.16 (40)	97.20 (27)	66.00 (4)	243.85 (14)	185.00 (3)
M	66.11 (29)	30.00 (18)	47.69 (14)	92.50 (3)	187.00 (20)	150.00 (7)
J	53.13 (32)	40.00 (12)	60.00 (13)	70.00 (5)	--	--
J	54.17 (44)	47.60 (5)	70.66 (15)	45.00 (2)	--	--
A	92.50 (32)	60.00 (9)	115.20 (24)	--	--	--
S	91.35 (39)	66.15 (11)	128.63 (23)	96.66 (3)	--	--
O	87.71 (56)	90.71 (6)	165.00 <sup>∞</sup> (28)	174.00 (5)	--	--
N	98.70 <sup>∞</sup> (30)	115.00 (6)	147.00 (25)	110.00 (3)	--	--
D	101.66 (23)	50.00 (7)	156.92 (42)	113.00 (6)	--	--

<sup>∞</sup>Indicates months with Moslem celebrations when extra cattle were slaughtered, although not always at the slaughterhouse.

The prices of cattle are demonstrated graphically in Figure 1. The number of animals slaughtered in DM was considerably lower than in Soba ; for this reason the total number of animals slaughtered in three months is demonstrated for DM, as compared to monthly data from Soba (Fig. 1 and 2). The prices of cattle varied during the survey period and increased three-fold during these two and one-half years, with sharp increases in November, 1974, November/December, 1975 and beginning of 1976 and with declines during February, 1974 and June, 1975. The small ruminants also showed a steady increase in price level, although less spectacular than cattle. Moreover, the number of small ruminants offered for sale showed distinct seasonal differences with peaks in April and May just

before the beginning of the wet season (Fig. 2).

Cattle below the age of 4 years as well as those over 8 years were generally cheaper than those between 4-8 (Table 1). Male animals were more expensive than females (Table 2). The interaction between age and sex with respect to price was not determined. Significant differences in price were observed in relation to the health status of the animals as healthy animals were approximately two times as expensive as diseased animals. The major ailments, and associated mean prices, are listed in Table 3. In most cases, it was not

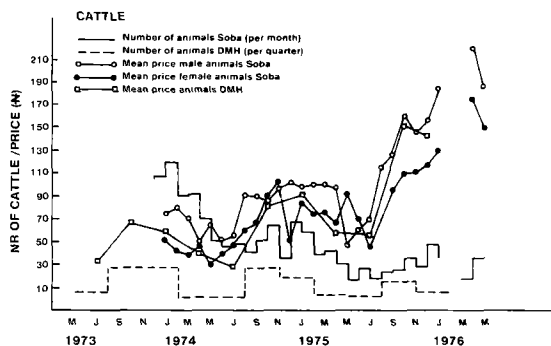


Figure 1. — Number and price of cattle in two villages in Northern Nigeria.

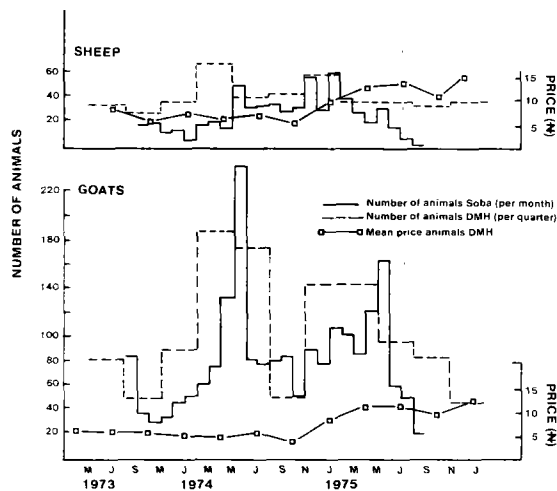


Figure 2. — Number and price of small ruminants in two villages in Northern Nigeria.

TABLE 2-Mean price (in Naira) of cattle in relation to age (Soba) during 1974

Age	Number of Animals	Mean Price
1	10	38.20
2	54	49.59**
3	18	57.59
4	79	71.56
5	50	70.60
6	103	74.29
7	80	82.81
8	141	97.92**
9 or older	62	69.70**

\*statistically significantly different ( $p < 0.05$ ) from preceding and following age group

TABLE 3-Prices (in Naira) of cattle in relation to health status (Soba)

Condition	Number of Animals	Price
Healthy	539	112.74
Unthrifty	127	48.63**
"Daji"	49	55.28**
"Hanta"	100	93.90
Broken leg	6	63.33
F.M.D.	22	42.73**
"Kirci"	33	61.51**
"Diarrhea"	5	56.00
Old age	3	60.00
Reproductive problems	3	88.66
Others	6	56.00

\*statistically different from price of healthy animals ( $p < 0.05$ )

- Daji:** (Hausa) Condition with nervous signs, mainly due to heartwater disease.
- Hanta:** (Hausa) Condition with signs of depression and liver changes often associated with liverfluke disease.
- Kirci:** (Hausa) Condition with skin lesions mainly due to *Dermatophilus* infections.
- F.M.D.:** Condition with secondary lesions associated with foot and mouth disease.

possible to determine the main disease problem of the animal, and such cases were listed as « unthrifty » in accordance with the owner's and butcher's opinion. In cases where the

animals appeared to be suffering from more than one ailment, the major detectable condition is listed.

## DISCUSSION

The surveys in Soba and Dan Mahawai were initiated and executed separately and the more or less similar trend in cattle prices indicates the reliability of the data collected by different enumerators supervised and employed by different departments.

Although the data were collected more than five years ago, they are still of considerable interest as they demonstrate trends which are still relevant today. The period 1973-1976 was a rather interesting time in the Nigerian economy. The Sahel drought of 1973 had a considerable impact on the livestock sector in the sub-Saharan zone. Relatively high numbers of animals originating from the Sahel area were offered for sale in this area. Although these animals were mainly channeled through the bigger cattle markets, the drop in price influenced the rural market and for a short period led to a reversal of the cattle flow in early 1974 when animals were shipped from the major markets into rural markets.

During the same period, however, the Nigerian oil boom caused a serious inflation in the country leading to an increase in prices, especially during the two periods of significant upward adjustment of salaries of workers in government and industry (the so-called « -Udoji »-and- « -Adebo » awards in respectively 1974 and 1976). Both adjustments caused a sharp rise in the price of commodities and food, including the price of livestock. Besides these rather unique variations in the livestock prices, there is a recurrent seasonal trend influenced by availability of livestock for sale as well as by the availability of cash in these rural markets. Livestock owners tend to sell off some of their animals during the dry season. This is partly related to tax payments at the beginning of the dry season, but it is also due to the increasing difficulty to provide their cattle with sufficient fodder following a dry season. The cattle tax was abolished during 1975 but the habit of selling cattle during the beginning of the dry season may linger on for some time. Many older cattle are not able to handle the dry, coarse straw and grass well at

the end of the dry season and are sold in poor condition. Such cattle generally end up in rural markets. Healthy animals are often bought up by middlemen and then trekked to larger markets. In Soba, approximately 40 % of the animals examined were slaughtered because of poor health, either acute disease conditions such as heartwater disease, broken legs, or enteritis (17 %), or chronic conditions and old age (83 %).

Table 3 provides some general information on the prices of diseased cattle. The lower prices of cattle with « dayi » and diarrhea may be biased as these conditions are mainly seen in younger animals. The other conditions were not associated with specific age groups. The lower prices of affected cattle indicates the economic impact of these diseases in the rural market ; in many cases, the price was less than half the normal price. The latter, however, was probably even lower than the prices which could be acquired when the animal was sold to long distance traders.

The price data have to be evaluated with some reserve as the weights of the animals were not recorded. Generally, the animals were in the best condition at the beginning of the dry season. In 1974, however, many animals were slaughtered because of disease especially during February-June, 1974.

The data show a fairly consistent price advantage of male over female animals. Male animals were generally younger and in better condition than female animals, similar to the observations made in the nearby village of Maska during 1978 (5). Occasionally some older bulls in good condition were slaughtered, especially during festivals. It is difficult to establish the contribution of festival-slaughter in October and November to the seasonal price increase at the beginning of the dry season.

The trends in slaughter and prices of small ruminants have to be explained differently from those in cattle. There is to some extent an inverse relationship between the number of small and large ruminants slaughtered. This is most obvious during the months of April and May when considerable numbers of small ruminants, especially goats, were slaughtered. Goats and sheep are often used as a short-term investment and are sold when cash is needed. During April and May, at the beginning of the

growing season, farmers need cash in order to pay for seed, labor, and fertilizer. This sudden increase in the availability of goat meat has some effect on the cattle prices as well as on the number of cattle slaughtered ; both are at their lowest point during the beginning of the rainy season. Moreover, most cattle had left the area by this time in search for better grazing grounds.

The reasons for the low number of cattle slaughtered in the rainy season is due to a number of reasons. Most butchers are also farmers and are too occupied with their crops to spend considerable time at the slaughter place. Indeed it was not uncommon to find the slaughter place deserted during some rainy market days in the early planting season. On the other hand, very few cattle were available in the area during the rainy season as most land was under cultivation leaving little grazing land. The only cattle available were working bulls or those in smaller sedentary herds. Animals from these herds were only sold if necessary, generally in an emergency. A final reason for the low number of cattle slaughtered in the rainy season is probably the lack of cash at the time when all crops are planted and all money available is used for the purchase of fertilizer and labor.

Similar annual trends in availability of cattle as compared to small ruminants have been observed by MAKINEN and ARIZA-NINO (3), and by the Nigerian Livestock and Meat Authority (4) in their annual records. The latter, however, are obtained by collecting price information in the larger cattle markets and do not consider the price fluctuation in rural areas. Slaughter data from rural areas however are important as can be seen in this study. Not only because they provide records from primary markets but also because the numbers of livestock slaughtered in places such as Soba and DM are substantial and probably constitute up to 20 % of the offtake of the national herd. As such these data show the importance of the rural slaughter and the influence of nearby large cattle markets on the price structure at the village level.

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SCHILLHORN van VEEN (T.W.), BUNTJER (B. J.). Algunos aspectos del mercadeo de los animales matados en los centros rurales de matanza del estado de Kaduna, Nigeria. *Rev. Elev. Méd. vét. Pays trop.*, 1983, **36** (3) : 307-312.

**Resumen.** — Se efectuaron dos encuestas sobre la matanza del ganado en dos aldeas del norte de Nigeria de 1973 a 1976. Se determinaron la edad, el precio y el estado de los animales para la matanza al interrogar a los ganaderos y durante la inspección. Los datos recogidos mostraron tendencias semejantes del número y del precio de los animales para la venta; el número, que disminuyó ligeramente durante el periodo de encuesta, mostró una variación estacional con un aumento de la matanza al principio de la estación seca. Fue matado el mayor número de pequeños rumiantes al principio de la estación de las lluvias. Los precios, de un término medio de 70 naira por cabeza de bovino al principio de 1973 llegaron a 186 naira al principio de 1976, principalmente a causa de la inflación. Aparte las influencias estacional y de la inflación, también dependían del estado de los animales. Eran los dichos la mayoría de las veces animales de desecho sospechosos de enfermedad, lo que influía significativamente sobre los precios.

*Palabras claves* : Mercadeo — Bovinos — Pequeños rumiantes — Mataderos rurales — Nigeria.

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