ECONOMICS OF PORK RETAILING OPERATIONS IN SOME MAJOR TOWNS IN EDO AND DELTA STATES: IMPLICATIONS FOR INCREASING LIVESTOCK PRODUCTION IN NIGERIA

J.B. UTOMAKILI AND U.A. OYIBU

Faculty of Agriculture, University of Benin, Benin-City, Nigeria.

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ABSTRACT

This study examined the economics of the retailing operations in the livestock industry in Nigeria with a view to finding out how the last link in the marketing system of livestock products could be used to enhance increased livestock production. Fifty-five pork retailing establishments were interviewed in four major towns in Edo and Delta States. Findings showed that the business was economically viable, the returns to management per year per trader was ₦33,350. About 32% of the respondents could not meet up with the demand for the product. It was also revealed from the study that ₦180,237 was spent annually per trader in the business, 95% of the amount was used to buy the meat for sale. The major constraints of the business were inadequate supply of the product, high cost of pigs, finance, and inconsistent electric power supply. There is the need to increase the supply of pork in the States by reducing existing constraints reasonably. This could be achieved through favourable mix of macroeconomic policies that will enhance livestock production in Nigeria.

KEY WORDS: Pork, Retailing, Constraints,

INTRODUCTION

Livestock retailing is one of the key operations performed along the marketing chain of livestock and its products, the focus here being the selling in small quantities to the final consumers of the products (Baker, 1985). As the final link in the marketing channel, its importance lies in the closeness to the final consumers and the consequent performance of various marketing operations to them (Obioha, 1976). The livestock sub-sector is an important component of the Nigerian agricultural sector. Among other issues, the importance of the sub-sector lies in the

provision of a high quality protein source for the people within and outside the country. Quite a number of reports have pointed out the significance of sufficient and good quality protein intake in human food diet (Ladipo, 1973; Olayide, 1983; Berg, 1968; Ernest *et al*, 1962).

There are gaps in the relationship between the demand for livestock products and their supply in Nigeria, the demand being higher than supply in all cases. Some of the identified factors responsible for the existing supply deficits are the lack of suitable breeds of animals; inadequate credit facilities for livestock production and marketing; instability in the governance of the country; high cost of operation in the industry; and lack of deliberate and consistent government policy to boost livestock production in the country. Various calls have been made by individuals and institutions about the urgent need to increase the supply of livestock products in the country (Olaloku, 1987; Obioha, 1976; FLD, 1981).

This paper examined the role livestock retailing industry in Nigeria could play in increasing the supply of livestock products in the country by examining the economic viability of the pork industry's operation. The specific objectives of the paper were to determine: The estimated gap between the demand for and supply of the product; the returns to management in the industry; the constraints affecting the retailing operations in the industry and to discuss the implications of the findings for increasing livestock production in Nigeria.

MATERIALS AND METHOD

Four Local Government Areas (LGAs) out of the former 19 LGAs in Edo and Delta State

were covered. The multistage purposive sampling method was used in selecting the LGAs, towns, and respondents. The major towns, using the human population figures and the popularity of pork as criteria, were covered; these were Benin City, Sapele, Warri, and Ughelli. Within each town, from the estimated existing number of the retailing stores, a representative number of the total was selected for interview. A total of 55 copies of a well structured and tested questionnaire were administered to the retailers sampled. Some of the key variables in the questionnaire were the demand, supply, cost of operations, revenue, and constraints in the industry, etc.

The returns to management (RTM) in the business was estimated as in Utomakili *et al* (1991). That is,

$$RTM = Q(UMM - UMC) \dots (1)$$

where,

Q = Volume of trade in kilogram (kg)
 UMM = Unit Marketing Margin
 UMC = Unit Marketing Cost

In cases where it was observed that a trader handled more than one line of livestock product in the same store, the total marketing cost for the business was apportioned to the various products handled. The proportion of a product's contribution to the total revenue of the business was used as the basis for apportioning the total cost of operation to the products.

That is,

$$TMC_p = \frac{TR_p}{TRA} \times TMCA \dots (2)$$

where,

TMC_p = Total marketing cost for pork
 TR_p = Total revenue for pork
 TR_A = The overall total revenue in the business
 TMCA = The overall total marketing cost.

The UMM refers to the margin between buying and selling pairs for each link in the marketing chain (Williams *et al*, 1988). Volume of trade (Q) refers to the specific volume of trade handled in the business. The fixed items of the business were depreciated, using the straight line method of depreciation; all items, with the exception of motor vehicles, were assumed to have zero salvage value. The estimation of the depreciation value was carried out using equation 3 below:

$$DP = \frac{\sum_{i=1}^m C_i - \sum_{i=1}^m S_i}{\sum_{i=1}^m L_i} \dots (3)$$

where

DP = Total annual depreciation
 C = Initial cost of an item "i"
 S = Salvage value of the item "i"
 L = The estimated life span of the item "i"
 i = 1, 2, 3, ..., n
 j = 1, 2, 3, ..., m, representing the number of firms in the industry.

RESULTS

Of the 55 traders interviewed, 50 of the cases were found analysable; the others had incomplete information. The results of the data analysed indicated that 35% of the trader sold only pork and the remaining 65% sold pork and other livestock products, meat. Table 1 shows the volume of trade by the different respondents. Most of the traders (44%) handled between 3,000 kg to 6,000 kg of pork in a year; only 2% handled between 18,000 kg to 21,000 kg of pork per year. The total quantity of pork handled by all the traders in a year was 331,980 kg; on the average each trader handled 6,639.60 kg. The total demand for pork in the industry was estimated to be 385,260 kg while the total supply was 331,980 kg, 14% lower than the demand. That is, the supply deficit that existed in the industry was 53,280 kg. On the average each trader needed about 3,530 kg of pork to meet the customers' demand for the product. Thirty-two percent of the traders said they could not satisfy their customers' demand for the product due to inadequate supply. Most of the traders (66%) got the pork they sold directly from the producers; 30% said they got the pork through middlemen, and 4% used the markets. Table 2 shows the cost structure of the industry. The major item was the meat purchased for sale, it accounted for about 95% of the total cost of the business. The next important item was the depreciation of the fixed items of the business, it accounted for 1.26% of the total amount. From the results of the analysis, it was estimated that ₦2,183,160 was spent on pork alone; this is about 26% of the amount spent on the meat bought for sale. In the Table, it was also estimated that the total cost of operation was ₦9,011,831. This means that the average total

TABLE 1: DISTRIBUTION OF THE VOLUME OF OPERATIONS OF PORK RETAILING INDUSTRY IN EDO AND DELTA STATES, NIGERIA

Volume Kg/Year	Number of Traders	Percentage of Total
Below 3000	0	0
3000 - 6000	22	44
6001 - 9000	17	34
9001 - 12000	7	14
12001 - 15000	3	6
15001 - 18000	6	0
18001 - 21000	1	2
Above 21000	0	0

Source: From the Survey Data, 1991.

cost of operation was ₦180,236.62

Table 3 shows the fixed items and the cost of each at the time of the study. The major fixed items in the business were motor vehicle, refrigerator, and generator. The estimated total amount spent on the fixed items was ₦841,390; on the average, about ₦16,828 was spent by each trader for the fixed items. Generally, the business is not capital intensive

and that makes it relatively easy for any investor to go into pork retailing business in the States covered.

The estimated mean UMC and the mean UMM were ₦0.85 and ₦4.32 respectively. Table 4 shows the distribution of the calculated statistics of the UMM and UMC in the industry. Most traders (46%) had UMM of ₦4.00 while most of them (42%) had UMC of ₦0.90. Table 5 contains the distribution of the estimated RTM per year. Forty-four percent of the traders had a range of RTM of ₦40,000 - ₦50,000 per year; 6% had a range of ₦30,001 - ₦40,000 per year. The total RTM for the industry was ₦1,667,500 in a year; the average amount was ₦33,350. Table 6 shows the RTM enjoyed by the traders at the specified volume of trader. The analysis of the study data shows that the industry had a number of factors that limited its operations. The major factors were high cost of pigs for

TABLE 2: DISTRIBUTION OF RETAILING COST PER ANNUM IN PORK RETAILING INDUSTRY IN EDO AND DELTA STATES, NIGERIA

Items	Number of Retailers	Amount Spent Per Year ₦	Percentage Total Cost
Meat types	50	8542392	94.77
Transportation	50	62580	0.69
Storage	50	42120	0.47
Slaughtering	35	19380	0.22
Packaging	50	37980	0.42
Advertisement	5	8580	0.10
Security	30	22104	0.25
Washing material	50	13680	0.15
Writing material	50	5076	0.06
Employment	50	77160	0.86
Rentage	50	61800	0.69
Weighing	50	5388	0.06
Depreciation	50	113591	1.26
Total		9011831	100.00

Source: Computed from the Survey Data, 1991.

TABLE 3: DISTRIBUTION OF COST OF FIXED ASSETS IN PORK RETAILING.

Trading Equipment (fixed assets)	Cost (₦)	Percentage of Total Cost
Vehicle	493,000	58.59
Refrigerators	7,600	0.90
Deep Freezer	208,000	24.72
Scale	10,860	1.29
Cutlasses	3,775	0.44
Knives	1,600	0.19
Fans	7,000	0.83
Generators	100,000	11.88
Tables	1,725	0.21
Chairs	980	0.11
Calculators	4,500	0.53
Bowls/Buckets	520	0.06
Coolers	1,030	0.12
Aprons	800	0.95
Total	841,390	100.00

Source: Computed from the Survey Data, 1991.

TABLE 4: DISTRIBUTION OF UMM AND UMC IN PORK RETAILING INDUSTRY IN EDO AND DELTA STATES, NIGERIA

Statistics	UMM (N/Kg)	UMC (N/Kg)
Minimum	3 (4%)	0.08 (4%)
Maximum	5 (4%)	1.00 (36%)
Median	4 (46%)	0.95 (4%)
Mode	4 (46%)	0.96 (42%)
Mean	4.32 (0%)	0.85 (14%)
Standard Deviation	0.45 (0%)	0.40 (0%)

Source: Computed from the Survey Data, 1991.

Note: The figures in bracket represent the percentage of pork retailers incurring the above values.

TABLE 5: DISTRIBUTION OF RETURNS TO MANAGEMENT IN THE PORK RETAILING INDUSTRY.

RTM/Year (N)	Number of Traders		% of Total Traders
Below	30000	0	0
30001 -	40000	3	6
40001 -	50000	22	44
50001 -	60000	20	40
60001 -	70000	5	10
Above	70000	0	0

sale, and inconsistent electric power supply. Table 7 shows the various factors that restricted the industry's activities.

DISCUSSION

The findings of this study have confirmed the earlier works that deficit exists in the supply of livestock products in the States covered and the nation in general (FLD, 1981; Olaloku, 1987). This situation therefore calls for the need to increase the production and supply of livestock and livestock products to the people of Nigeria. A break-through in the production of livestock will contribute to the broadening of the economic resource base of the country.

The study has also revealed that the livestock venture was economically viable. In other words, the livestock retailing business is profitable. This should therefore remove any fear that any livestock producer may have, when production increases. Since the retailing business is viable, all things being equal, there will be outlets for selling what will be produced. In fact, the magnitude of the estimated RTM compare favourably with the annual salary of senior civil servants in Nigeria (Utomakili, *et al*, 1991). With proper public enlightenment and orientation of people, marketing of livestock products could provide an alternative employment opportunity to those who are seeking for government jobs.

To make the marketing component of the livestock industry to be more effective in its contribution to the goal of increased livestock production, the existing constraints in the area should be addressed. The issue of finance should be the responsibility of both the government and the private sectors. Government policies should favour access to finance, from the available financial institutions, by livestock producers and marketers. The private sector could help to mobilise finance for livestock activities through cooperative society's effort.

The high cost of operation in the livestock industry could be managed through proper determination of the right value of the Naira and ensuring that the value is relatively steady. This could be done through the appropriate macro-economic policies and the collective will of Nigerians that such policies are effective. In other words, the inflation rate should be brought to a reasonable level. Good and effective macro-economic policies will encourage increased investment in the various sectors of the economy.

CONCLUSION

The findings of this study have shown that there exist great potentials for increasing the production of livestock and livestock products in Nigeria. More specifically, the pork retailing industry was found to be economically

viable and has opportunities for increasing pig production. In order to increase the supply of protein sources in Nigeria, both the government and private sectors need to address the factors that are presently limiting the operation of the livestock industry.

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TABLE 6: RETURNS TO MANAGEMENT AT DIFFERENT VOLUMES OF TRADE IN THE PORK RETAILING INDUSTRY WITHIN THE STUDY AREA.

Statistics	Volume of Trade (Kg)	RTM (N)	% of Total Traders
Mean Quantity	6639.60	23039.41	16
Minimum Quantity	3360	11659.20	8
Maximum Quantity	19200	66624.00	47
Median Quantity	6720	23318.40	17
Mode Quantity	4800	16656.00	12

Source: Computed from the Survey Data, 1991

1 US \$ = N22

TABLE 7: MAJOR CONSTRAINTS IDENTIFIED IN PORK RETAILING INDUSTRY.

Constraints	Number of Traders	% of Total Traders
Insufficient Pig Supply	17	11
High Cost of Pigs	43	29
Lack of Storage Facilities	7	5
Shortage of Finance	21	14
Lack of Transport Facilities	16	11
Theft	9	6
Inconsistent Electric Power Supply	36	24

Source: Computed from the Survey Data, 1991.

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