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Impact of loan acquisition among beef sellers in abattoir market, FCT-Abuja, Nigeria

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Abstract

The study investigated the effects of loan acquisition among beef vendors in Abuja's abattoir market. In the Abuja Municipal Area Council, FCT-Abuja, the study was carried out in Kubwa, Bwari Area Council, Gwarinpa, and Wuse. The study was directed by four goals: describing the respondents' socioeconomic traits; identifying their financial sources; identifying the problems faced by the beef dealers; and identifying the variables impacting respondents' access to loans. Data gathered from 100 beef vendors utilizing a structured questionnaire and interview approach were used to obtain primary data, which were then analyzed using descriptive statistics, the logit regression model, and the binary regression model. The findings indicate that, with a mean age of about 33 years, the majority of the beef vendors were men. Most respondents (74%) had access to loans, mostly from friends. The outcome of a binary logistic regression model for the variables influencing the acquisition of loans by beef sellers in the study area revealed that the coefficients of the variables for marital status and beef selling experience had a positive impact on the acquisition of loans by beef sellers in the study area. At a 10% significant level of confidence, the coefficients of gender and age both had a detrimental impact on the beef vendors' ability to obtain loans in the research area. Although insufficient capital was the main obstacle facing enterprises involving the sale of beef in the research area.

Keywords: Beef, abattoir, loan, market

Introduction

Cattle are a significant form of livestock in Nigeria due to the prevalence of beef consumption among Nigerian consumers (Gambo 2020) ^[32]. In pastoral areas and where there is significant involvement in cow production in the sub-humid and semi-arid ecological zones, owning cattle is seen as a guarantee for an assured food source among livestock-rearing communities (Kubkomawa *et al.* 2017) ^[26]. In all parts of the nation, cattle are employed in significant rituals like weddings and burials. Yet, a trend analysis of cattle imports, exports, and production from 2005 to 2019 revealed that local output cannot keep up with the country's rising demand (FAO 2019; Odoemena, *et al.*, 2020) ^[27]. According to Suleiman, Jackson, and Rushton (2015) ^[33], Nigeria manages its cattle herd through smallholder and pastoral systems that make use of local production methods, which has an impact on the limited supply and higher cattle prices. Nonetheless, it appears that there are no practical alternatives for satisfying home demand (Kubkomawa 2017) ^[26]. The greatest market in Nigeria is the cattle trade, with live animals being moved from the country's northern areas to consumers in its southernmost regions. The large geographic distance between the primary producing areas and consumer markets affects transportation costs, which in turn raises marketing expenses (Kubkomawa 2017; Kubkomawa *et al.* 2018) ^[26, 28].

The value chain's effectiveness is influenced by the structure of the cattle market, claims Kubkomawa (2017) ^[26]. When considering the dynamic fluxes of cattle among many heterogeneous chain participants, the trade flows that define this structure are complex (Bigras-Poulin *et al.* 2006) ^[29]. The supply of beef is impacted by the cattle market's inefficiencies, which in turn alters the cattle market's structure (Emokaro and Egbodion 2014) ^[30]. The interplay between the various value chain sectors (production, commerce, and performance) determines how the sector develops through a sophisticated system of

feedback loops. Nigeria eats 360,000 tonnes of beef annually, or 50% of West Africa, according to government figures. When compared to industrialized nations, consumption is modest per person, but it is expanding quickly and is predicted to double by 2050. Lagos alone consumed 6,000 cows daily as of 2017, excluding the number consumed at abattoirs, birthday celebrations, funerals, and other events. The total number of cows consumed daily in Port Harcourt, Umuahia, Abuja, Kano, Kaduna, and Maiduguri will be astonishing. Statista estimates that the meat industry will generate \$30.86 billion in revenue in 2022, and the market will expand by 8.79 percent during that time (2022-2027) Chika Onyesi (2022). There are 1.468 billion cattle in the globe, according to FAO (2015) ^[10], and the majority of them are utilized for dairy or draft purposes, with beef production being a mere afterthought. All beef cattle eventually become dairy and draft animals, however not all beef cattle do. Unlike to the veal and baby beef produced in nations like North and South America, Australia, and New Zealand, there is no specific breed of cattle raised for beef in Africa, notably Nigeria. A large portion of the cattle reared in Africa are multipurpose animals without any stratification according to industry. All cattle bred in Africa reach a mature age of two years or more before being killed and declared fit for human consumption.

Veal or baby beef consumption is uncommon and occasionally regarded as aberrant in African society. The majority of calf carcasses retrieved from slaughterhouses or due to mortality are either discarded after a few months or processed to be used as pet food. Africans, and Nigerians in particular, prefer mature cattle meat with good fat covering that is chewable over tender and juicy beef from veal or calves (Sennuga 2019) ^[23]. Different factors influence access to loans to deserving farmers. Some of the attributes are loan availability, accessibility, interest rates, and the behaviour of financial institutions toward the release of such funds (Ogah *et al.*, 2015) ^[31]. These circles of events on agricultural loans present the farmers (especially small-scale farmers) with challenges that restrict access to agricultural loans and agricultural credit facilities. Loans according to Mgbebu and Achike (2017) ^[15] is needed to increase the Level of production thereby breaking the vicious cycle of low productivity. This emphasizes the importance of loan in the form of farm credit resource as an important factor needed to improve farm investment.

However, efforts to deliver formal agricultural loans and funds to the farmers in the country had largely failed over time (Otunaiya *et al.*, 2014) ^[21]. The perceived risk of loan default and the inability of the farmers to provide the needed collateral restrict financial institutions from providing loans to the farmers while high transaction cost discourages small scale farmers to access loans from commercial banks. To reduce the effect of some of these factors on farmers and financial institutions, the government established agricultural credit schemes which aimed to make agricultural funds accessible to farmers. To ensure the effectiveness of agricultural credit availability, the government (through the central bank) introduced regulations that required commercial banks to allocate a stated percentage of their operating capital to finance the operations of the small-scale farmers (Henri-Ukoha *et al.*,

2011) ^[11]

There is no doubt that agricultural loan fund in Nigeria is an important determinant in the field of agricultural production. However, the ability for the farmers to acquire and pay back these funds as agreed is replete with challenges. In some instances, factors that restrict farmers' access to agricultural loan facilities needs to be identified. In view of this, it becomes necessary to study the factors that influence loan acquisition by the farmers from financial institutions.

Understanding the process of moving cattle from areas of surplus or production to areas of shortage or consumption is crucial for enhancing the effective management of cattle markets, which is essential for attaining long-term and lucrative agricultural commercialization in Nigeria's livestock sector. This process is known as arbitraging (Mafimisebi, 2011; Mafimisebi, 2012) ^[14, 13]. The livestock sector in Nigeria is modest and developing slowly compared to the population that depends on it for meat (Agboola & Balcilar 2012; Babatunde & Qaim 2010) ^[4, 7]. The country's huge population's primary source of protein comes from the livestock industry, which contributes 5-6% of the total GDP and 15-20% of the agricultural GDP (Mshelbwala 2013) ^[16]. An industry this vital requires assistance through a variety of intervention strategies, such as getting the viewpoint of the ultimate consumers.

For this reason, the value chain development strategy has been promoted; it incorporates interventions from multiple parties (often with different objectives, different starting points and assumptions),. As the ultimate users of the end goods, consumers play a crucial role in the value chain of the development plan to be used for the cattle industry.

Challenges faced by the beef sellers and dairy production in Nigeria

- Lack of Knowledge.
- Poor Health Management And Biosecurity Practices.
- Lack of Access to Land.
- Lack of Investment.
- Breeds And Breeding Procedures.
- Insecurity.
- Inadequate Processing and Storage Facilities.
- Inadequate Extension Services.

Any business operations connected with getting a product from producers to consumers are included in marketing (Sennuga *et al.*, 2020) ^[24]. The migration of cattle from pastoralists in the Northern Nigerian producing areas to the final consumers, who are frequently headquartered in Southern Nigeria, is a cause for concern (Adeyemi *et al.*, 2023) ^[2]. The delivery of cattle to buyers in the required form, location, and time is made possible by the cattle marketing process. To improve the effectiveness of cattle markets, it is necessary to thoroughly comprehend the arbitraging process, which involves moving cattle from areas where they are in excess or being produced to those where they are in short supply or are being consumed it is crucial for attaining lucrative and sustainable agricultural commercialization in the cattle sector. in Nigeria's livestock sub-sector to achieve sustained and lucrative agricultural commercialization (Fadiji and Sennuga, 2020) ^[9]. Marketing is a business activity that encourages more production. If

done well, it will satisfy both the producer and the consumer in that the former will receive a price that will allow them to continue producing the good while the latter will pay a price that will encourage them to continue using it (Adeyong *et al* 2022) ^[2]. The National Livestock Project Division (NLPD, 1992) claims that there is a shortage of cattle and the goods made from them as a result of a drop in supply and an increase in demand. The frequent scapegoat for this predicament is the high expense of marketing cattle. Due to the significant spatial separation between the production and consumption areas as well as other ancillary considerations, handling costs are substantially in relation to cattle transportation (Aluko *et al*, 2021) ^[5].

Specific objectives

- Describe the socioeconomic features of the study area's respondents;
- Identify the source of funds of the respondents in the study area;
- Determine the factors influencing access to loan acquisition by the respondents;
- Identify the challenges faced by the beef sellers in the study area.

Materials and Methods

The study was conducted in Nigeria's Federal Capital Territory of Abuja. Nigeria's capital city is FCT-Abuja. Nassarawa, Niger, Kaduna, and Kogi were some of the states that made up the FCT-Abuja when it was created in 1976. It is located in the nation's central belt. The Niger River and Benue River converge just north of Lokoja in this territory. Its neighbors include the states of Kogi to the southwest, Nasarawa to the east and south, Kaduna to the northeast, and Niger to the west and north. Abuja is a city in Nigeria that is situated in the country's geographic center between latitude 9.083 and longitude 7.533. The land area of the Federal Capital Territory is about 923,768 km². Its location inside the Savannah region has a moderate climate. The primary language of Abuja's native population is Gbagyi, along with Bassa, Gwandara, Gade, Ganagana, and Koro. Cassava, yam, sweet potato, sorghum, maize, crop, onions, tomatoes, pepper, rice, groundnut, cowpea, eggplant, etc. are some of the main staple crops farmed in the region. Because there is a high population of young farmers in Abaji, Gwagwalada, and Kwali, three of the six zones will be sampled. Six agricultural zones make up the territory: Abaji, Abuja Metropolitan Area Council, Bwari, Gwagwalada, Kuje, and Kwali (FCT ADP (2018).

Population of the Study

The population of the study comprised of some of the beef sellers in the study areas.

Sampling Procedure and Sample Size

Simple Random Sampling and Purposeful Sampling techniques was used to sample 100 respondents.

Method of Data Collection

This study made use of primary data. They were gathered utilizing an interviewing technique and a standardized questionnaire.

Model Specification

The logit regression model was used to assess the factors influencing the beef sellers' loan acquisition in the study area, as adopted by Obike *et al.*, (2018) ^[18]. It is expressed as:

$$Y_1 = f(X_{ij}, \mu_i) \quad (1)$$

Where;

$$Y_1 = \ln \frac{p}{1-p}$$

Y_1 = Sellers access to loan (1 if accessed, 0 if otherwise), and X_{ij} = vector of socioeconomic variables of household, μ_i = random error term;

Explicitly,

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \mu$$

Where,

$Y = Y_1$, as defined previously; X_1 = Household size (persons); X_2 = Marital status of beef sellers (1 if married, 0 if otherwise); X_3 = Level of education (years spent in school); X_4 = Beef selling experience (Years); X_5 = Gender of (1 if male, 0 if female); X_6 = Frequency of loan acquisition; X_7 = Age of beef sellers (years), and μ = stochastic error term.

Results and Discussions

Socioeconomic Characteristics

Table 1: Socioeconomic characteristics of the beef sellers in the study area

Socio-economic variable	Frequency	Mean distribution
Age		33.3
Household Size		6.3
Years of Experience		7.2
Gender		%Distribution
Male	94	94
Female	06	06
Marital Status		
Single	07	7
Married	93	93
Level of Education		
No Formal Education	45	45
Formal Education	65	65
Capital Size		
100,000 – 200,000	73	73
250,000 – 500,000	27	27
Total	100	100

Field data, 2023

The socioeconomic characteristics of the respondent were analyzed and presented in Table 1. The result shows that the majority of the beef sellers were male, with a mean age of approximately 33 years. The inference is that men in the research region dominate beef-selling activities since they are still of active, economic, and industrious age. According to the marital status findings, 93% of beef sellers were married. Just 7% of those polled were single. These findings are significant because borrowers' marital status may be utilized to determine if they have a distinct influence on loans in the study area. Tchekpo *et al.* (2020) ^[25] noted that the chance of loan default is significant among married

farmers due to their domestic responsibilities.

The findings showed that about 65% of the beef sellers who acquired loans were literate. Educational attainment is an essential economic indicator since it affects individuals' lifestyles and borrowing habits. The finding implies that a more significant proportion of respondents in the study area can write and read. This outcome is consistent with the results of Nwibo and Nwakpu (2017) ^[17], who investigated cooperative farmers' loan acquisition and repayment capabilities in Ebonyi state.

The result further revealed that the majority (73%) of the beef sellers had capital sizes ranging between ₦100, 000 to ₦200,000. This indicates that the respondents are majorly

small-medium scale businesspersons. The average household size of approximately six persons per home suggests prominent families that may supply family labour, minimizing the cost associated with hired labour. Liqiong *et al.* (2019) ^[12] discovered that household size affects household income, credit, and agricultural loan accessibility. Furthermore, the respondents had an average of around seven years of experience in the cow beef marketing enterprise. According to Abiona (2010) ^[1], farming expertise is vital for every agricultural venture and a fundamental component in determining its performance.

The Source of Funds

Table 2: the source of funds available to the beef sellers in the study area

Variables	Frequency	Percentage %
Access to Loan		
Yes	74	74
No	21	21
Not Interested	5	5
Sources of Funds		
Personal Savings	26	26
Loan from Cooperatives	14	14
Loan from Individuals	31	31
Loans from Government Agencies	26	26
Loans from Financial Institutions	3	3
Total	100	100

Source: Computed from Field data, 2023

The respondents' distribution in accordance to the sources of their loans is shown in Table 2. The findings revealed that most respondents (74%) had access to loans, primarily through friends. Further analysis of the data showed that 21% of the respondents had no access to loans of any kind. This might be explained by respondents' lack of collateral and the rigorous documentation that discourages the majority of sellers. Others may refuse loans from traditional

sources due to the inclusion of interest rates contrary to the study location's culture. This result is consistent with the findings of Ayat *et al.*, (2020) ^[6]. The results also found that respondents had less access to loans from formal credit institutions than respondents from informal sources.

The Factors Influencing the Beef Sellers' Loan Acquisition

Table 3: Binary regression result of factors influencing the beef sellers' loan acquisition

Variables	Parameter	B	SE.	Wald	Sig.	Exp (B)
Household Size	b ₁	.867	0.545	2.531	0.112	2.380
Marital Status	b ₂	1.510	1.376	1.203	0.003***	0.221
Level of Education	b ₃	-0.350	0.398	0.773	0.379	0.704
Beef Selling Experience	b ₄	0.110	0.588	0.035	0.052*	1.116
Gender	b ₅	-2.201	1.002	4.828	0.028**	0.111
Frequency of Loan Acquisition	b ₆	-0.292	0.336	0.755	0.385	0.747
Age	b ₇	-0.171	0.316	0.292	0.089*	0.843
Constant	b ₀	6.868	3.454	3.953	0.047	6.657
-2 log-likelihood	102.415					
H-L model significant test result	67.086					
Number of Obs	100					
Prob>chi ²	0.000					
Correctly predicted overall sample (%)	73.7					

Source: Computed from Field data, 2023

*** = sign. @ 1%, ** = sign @ 5% and * = sign @ 10%

In Table 3, the findings of the binary logistic regression model for the variables impacting the acquisition of loans by beef vendors in the research region are shown. The model's results showed that 73.7% of the loans acquired by beef sellers were correctly predicted by the binary logit model. The results of the Hosmer-Leme (H-L) show test showed a chi-square value of 67.1 with a p-value of 0.000, which is

higher than the 0.10 and 0.05 levels, indicating that there is no difference between the observed and predicted values and that the model's estimates fit the data very well at an acceptable level. Of the seven variables in the model, only four (4) were statistically significant.

The coefficient of the variable for marital status was found to be positively influencing the beef sellers' loan acquisition

in the study area and significant at a 1% level. This suggests that married beef sellers have a better chance of loan acquisition than their single counterparts. The coefficient of the beef selling experience was positive and significant at 10%, implying that a unit increase in years of experience will increase loan acquisition by its coefficient (0.110), *ceteris paribus*.

At the 10% level, the gender coefficient was unfavorable and significant. This meant that compared to their male counterparts, female beef vendors in the research area were more likely to obtain loans. This finding contradicts the findings of who discovered that males had more access to loans than women. The coefficient of age was negatively significant at 10%, indicating that younger beef sellers in the area are more likely to acquire loans than older beef sellers. This finding is akin to that of Ololade and Olagunju (2013) ^[20] and Obisesan (2013) ^[19].

The Challenges faced by the Beef Sellers

Table 4: challenges facing the beef sellers in the study area

Challenges	Frequency	Percentage %	Ranking
Poor Patronage	32	12.7	5 th
Poor Processing Facilities	39	15.5	4 th
Inadequate Capital	58	23.0	1 st
High Cost of Cows in the Market	44	17.5	3 rd
High Cost of Transportation	52	20.6	2 nd
High Cost of Preservation	27	10.7	6 th
Total	252	100	

Field data, 2023

The activities of the beef seller were observed to be hindered by a series of factors. As shown in Table 4, about 23% of the beef sellers observed inadequate capital as the major challenge facing their activities. This was followed by the high cost of transportation (20.6%) and the high cost of cows in the market (17.5%). Other challenges facing the beef sellers within the study area are poor patronage (12.7%) and poor processing facilities (15.5%). The high cost of beef preservation (10.7%) ranked as the least challenging facing beef sellers in the study area.

Conclusions and Recommendations

This study examined the impact of loan acquisition among beef sellers in the abattoir market, the Federal Capital Territory (F.C.T) Abuja, Nigeria. The result shows that the majority of the beef sellers were male, with a mean age of approximately 33 years. The majority (74%) of the respondents had access to loans, mainly from friends. The result of the binary logistic regression model for the factors influencing the beef sellers' loan acquisition in the study area showed that the coefficient of the variable for marital status and beef selling experience positively influenced the beef sellers' loan acquisition in the study area. The coefficient of Gender and age both negatively influenced the beef sellers' loan acquisition in the study area at a 10% significant level of confidence. While inadequate capital was the major challenge facing beef-selling activities in the study area. The study recommended that governments and non-governmental organizations should promote easily available lending platforms in order to appropriately address

the problem of capital inadequacy among beef sellers in the study area. Moreover, banking institutions should offer low-interest loans to guarantee that any credit gained is manageable for farmers. Beef sellers, like many other small business owners, often require financing to grow and expand their business operations. One common way of acquiring funding is through loan acquisition. Loans can provide beef sellers with the capital they need to purchase more inventory and improve their facilities. However, taking out a loan can also have a significant impact on the financial health of the business.

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