

# Economic Analysis of Cowpea Retailing in Donga Local Government Area of Taraba State, Nigeria

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## Abstract

*The study analysed the economies of cowpea retailing in Donga Local Government Area of Taraba State, Nigeria. The specific objectives of the study were to describe the socio-economic characteristics of cowpea retailers, estimate the cost and returns of cowpea retailing and identify the constraints to cowpea retailing in the study area. Primary data were collected from 71 respondents using purposive and simple random sampling techniques. The data were analysed using descriptive statistics and gross margin analysis. The results show that majority (91.55%) of the respondents were below 48 years of age and mostly (69.01%) males in the retailing of cowpea. The study also indicates that most (95.77%) were formally educated, 70.42% had more than six (6) years of retailing experience and most (57.75%) were traders. The findings on the cost and returns of cowpea retailing showed that the gross income, gross margin, net income and return on naira invested per month were: N21,000, N5,680, N5,130 and N0.30k, respectively. Generally, cowpea retailing was profitable. Constraints identified includes: high cost of transportation, inadequate storage facilities, price fluctuation, insecurity, inadequate funds among others. However, provision of good roads, basic market facilities such as storage facilities and security services and formation of cooperative societies were recommended.*

**Keywords:** Analysis, Cowpea, Donga, Economic, Retailing.

## Introduction

Cowpea is the most economically important indigenous African legume crop (Langyintou *et al.*, 2003). It is one of the most important grain legume crop throughout the belt covering Asia, the far East and Africa (Singh, 2000). Cowpea is one of the most ancient crops known to man. Its origin and subsequent domestication is associated with pearl millet and sorghum in Africa. It is now a broadly adapted and highly valued crop, cultivated around the world primarily for seed but also a vegetable for leafy green, green pods, fresh shelled and shelled dry peas, a cover crop and for fodder (Dugie, 2009).

About 3.7 million tons of cowpea is established to be the estimated output produced annually covering around 8.7 million hectares of

land throughout the world (Langyintou *et al.*, 2003). The authors also reported that Nigeria remains the largest producer and consumer of cowpea both in West Africa and in the world. A structured cowpea market is part of an ancient trade that links the humid coastal zones with the semi-arid interior region, however, due to inadequate rainfall, its grain production has been limited (Langyinto *et al.*, 2003). A well-developed marketing system is expected to complement the farm production efforts towards the realization of its desirable goals through the provision of time, place, possession and form utilities (Olukosi, *et al.*, 2007). Fatchamps, *et al.*, (2003) stated that, the major food grains (cowpea, maize and polished rice) constituted 80-90% of the per calorie consumption of Nigerians. Low levels

of domestic production, poor storage facilities and inconsistent trade policies have been found to be largely responsible for insufficient market supply of these commodities (Onu and Iliyasu, 2008). Sidhu (1990) stated that an efficient marketing system does not only serve as an effective agent for change, but, also an important means of raising the income level of the producers and satisfaction level of consumers. Thus, improvement in marketing encourages production largely through direct or indirect effect of higher prices to producers (Acharya and Agawal, 1984). Accordingly, Njoku (2000) asserted that marketing plays a vital role in enhancing production and economic development in general. Marketing strategy can therefore be harnessed to improve the quality of life of the masses (Musa, 2003).

Agricultural produce mostly produced in the rural areas need to be assembled, processed, transported and finally sold in the market to meet the consumers' demand. Cowpea is one of these products that need immediate and efficient marketing due to its easy susceptibility to pest and diseases attack. Taraba State particularly the study area is well known for cowpea production (NBS, 2007), therefore, there is need to establish good marketing system to sustain and promote its production in the area. Lack of stable price of agricultural produce and poor marketing structure in the country could be some of the reasons that scared most farmers from producing in surplus. According to Abu *et al.*, (2007) the marketing system has often been regarded as inefficient, disorganized with wholesalers and retailers exploits striving farmers and powerless consumers. Cowpea retailing is faced with so many problems, Taraba State may not be an exemption, hence there is need to ascertain such problems. The level of profit is likely to affect decisions in terms of the quality and quantity of cowpea to

purchase for sale. In order to ameliorate these problems, it is necessary to provide empirical information on costs and returns associated with cowpea marketing (Singh, 2004). This study therefore becomes imperative to analyze the economics of cowpea retailing in Donga Local Government Area, Taraba State, Nigeria. The study was aimed specifically to:

- describe the socio-economic characteristics of cowpea marketers
- estimate costs and returns of cowpea marketing and
- identify the constraints to cowpea marketing in the study area.

## Materials and Methods

### *The study area*

Donga Local Government Area is one of the 16 LGAs in Taraba State, Nigeria. It is located in the Southern part of the State having boundaries with Kurmi in the East, Wukari in the West, Bali in the North and Takum in the South. The LGA has 10 wards namely: Gyattaure, Kumbo, Assibiti, Suntai, Nyita, Fada, Gayama, Mararraba, Akate and Kadarko wards. It is located between latitude  $8^{\circ} 90' N$  and longitude  $11^{\circ} 57' E$  of the equator. The study area occupies a total landmass of  $3120\text{km}^2$  with the total population of 87,021 people (NPC, 2006). The temperature of the area ranges between  $28-35^{\circ}\text{C}$  with an annual rainfall of about 1,200 – 1,800mm per annum. Majority of the inhabitants of the area are: Ichen, Chamba, Kpanzo, Tiv, and Hausa. Others include: Kabawa, Igbo, Mumuye, and Yandang. The major occupations are inclined on agricultural activities such as cultivation of crops like: cowpea, groundnut, maize, rice, sorghum, cassava, millet and yam etc. (Department of Agriculture and Natural Resources, 2007).

**Sampling techniques**

Purposive and simple random sampling techniques were used for the selection of respondents. Five (5) major markets: Kadarko, Akate, Asibiti, Fada and Gyattaure were purposively selected because of their prominence in cowpea retailing. The respondents were 71 in number and chosen at random in proportion to the numbers of retailers in each market for the analysis.

**Method of data analysis**

Descriptive statistics and budgeting techniques were employed for data analysis. The descriptive statistics methods used were frequency and percentages, while the budgeting technique used was the gross margin analysis. The gross margin is the difference between the value of production and the total variable costs. The formula for the gross margin (Olukosi and Erhabor, 2005) is stated below:

$$GM=GI-TV \tag{1}$$

Where:

GM= Gross Margin

GI= Gross Income

TVC= Total Variable Costs

$$NI=GM-TFC \tag{2}$$

Where:

NI= Net Income

TFC= Total Fixed Cost

**Results**

Table 1 reveals that 22.53% of the respondents were between 18–27 years of age, 39.44% were within the age range of 28–37 years, while 29.58% were within the age range of 38–47 years and 8.45% were above 48 years of age. The result also shows that males dominated (69.01%) in cowpea marketing compared to their female counterpart which constitute the

remaining percentage (30.99%). Majority of the respondents were married (67.61%) while 26.76% and 5.63% were single and widowed/divorced, respectively.

**Table 1:** Socio-economic characteristics of Cowpea retailing (n=71)

Variable	Frequency	Percentage (%)
<b>Age (years)</b>		
<18-27	16	22.53
28-37	28	39.44
38-47	21	29.58
48 and above	06	8.45
<b>Gender</b>		
Male	49	69.01
Female	22	30.99
<b>Marital Status</b>		
Single	29	26.76
Married	48	67.61
Widowed/Divorced	04	5.63
<b>Educational Level</b>		
Non-formal education	03	4.23
Primary education	11	15.49
Secondary education	36	50.70
Tertiary education	21	29.58
<b>Years of retailing experience</b>		
1-5	21	29.58
6-10	29	40.85
11-15	09	12.68
16 and above	12	16.89
<b>Occupation</b>		
Trading	41	57.75
Farming	23	32.40
Civil Servants	07	9.85

Source: Field Survey, 2014.

Table 1 further shows that, majority of respondents (50.70%) had secondary education, 29.58% had tertiary education, while 15.49% had primary education and 4.25% had non-formal education. The results in Table 1 further reveals that 40.85% of the respondents had 6-10 years retailing experience, 29.58% had 1-5

**Table 2:** Average costs and returns per 50k of cowpea retailing per month

<b>Production variables</b>	<b>Value (₦/50kg)</b>	<b>Percentage (%)</b>
<b>(a) Variable cost</b>		
Acquisition cost	14,000.00	
Transportation cost	250.00	
Loading/Offloading	50.00	
Commission	100.00	
Handling/Preservation	720.00	
Total variable costs (TVC)	15,320.00	96.53
<b>(b) Fixed costs</b>		
Store rent	50.00	
Utilities	500.00	
Total fixed costs (TFC)	550.00	3.47
Total marketing costs (A+B)	15,870.00	
<b>(c) Returns</b>		
Gross Income (GI)	21,000.00	
Gross Margin (GI-TVC)	5,680.00	
Net Income (GM-TFC)	5,130.00	
Return on Naira Invested (NFI/TC)	0.32k	

Source: Field Survey, 2014.

years retailing experience, while 12.68% had 11-15 years retailing experience and 16.89% had 16 years and above retailing experience. Findings on occupation of the respondents reveal that, majority (57.75%) were into trading as the major source of livelihood/occupation, while 32.40% were into farming and 9.85% were civil servants.

Results in Table 2 present the estimated average costs and returns of cowpea retailing. The total marketing costs was N15,320 accounting for 96.53% whereas the total fixed

cost of N550.00 accounted for the remaining 3.47%. The results further show the Gross Income, Gross Margin, Net Income and Return on Naira Invested to be N21,000, N5,680, N5,130 and N0.32k respectively.

Table 3 shows the major constraints to cowpea marketing which include: inadequate funds (98.59%), poor transportation network (95.77%), inadequate market infrastructures (91.55%), inadequate processing/storage facilities (92.96%), price fluctuation (94.37%) and insecurity (97.18%).

**Table 3:** Constraints to Cowpea Retailing (n=71)

<b>Constraints</b>	<b>Frequency *</b>	<b>Percentage (%)</b>
Inadequate funds	70	98.59
Poor transportation network	68	95.77
Inadequate market infrastructure	65	91.55
Inadequate processing/storage facilities	66	92.96
Price fluctuations	67	94.37
Insecurity	69	97.18
Variability in climatic conditions	77	87.50
Insecurity	80	90.91

Source: Field Survey, 2014.

\* Multiple responses

## **Discussion**

Findings on the age of respondents reveals that majority (91.55%) fell below 48 years of age. This implies that, they are in their productive years that could positively sustain cowpea marketing in the area. Males in the study area dominated (69.01%) cowpea marketing compared to their female counterpart which constitute the remaining percentage (30.99%). This agreed with the findings of Benjamin and Victoria (2012) who found that marketing is predominated by young people who are energetic enough to withstand the stress involved in the business. This might not be unconnected with the labour intensive nature of marketing that involves moving from one market to another in carrying out the physical functions of marketing as was also found by Sanusi and Salimonu (2007).

A good proportion of the respondents were married, which implies that most of the cowpea marketers have responsibilities been the household heads. Also, majority (95.77%) of the respondents had formal education ranging from primary (15.49%), secondary (59.70%) and tertiary (29.58%) level. According to the finding of Benjamin (2012), formal education enhances easy communication between marketers and their customers, and facilitates fast adoption of market innovations. Similarly, most (70.42%) of the respondents had marketing experience of more than 6 years. This level of experience could positively enhance their marketing efficiency for increased income. Also, most (57.75%) of the marketers chose trading as their main occupation. This implies that most of the respondents are predominantly traders and take trading as their main source of income to cater for themselves and their households. Cowpea retailing in the study area is a profitable venture, as for every naira invested on a 50 kg cowpea/month a gain of

N0.32k was realized. However, inadequate funds may not be unconnected with the reason for the lack of expansion of their businesses. This may be due to inaccessibility of credit facilities from financial institutions. Most roads in rural areas are not motorable and where they are available, they are in bad condition which makes transportation providers charge exorbitant fares. Inadequate processing/storage facilities result in losses during storage by pest/diseases which adversely affects the net income of the marketers. Marketers sometimes are unable to conduct their business activities due to insecurity from incessant attacks by armed bandits' or ethno-religious crisis in most parts of Southern Taraba where the study area is located.

## **Conclusion and Recommendations**

Cowpea marketing is highly profitable in the study area. Most of the cowpea marketers are young adult men who are married and were formally educated with years of marketing experience. Cowpea marketing is affected by inadequate funds, poor transportation networks, inadequate market infrastructure, price fluctuation and insecurity among others. Cowpea marketers are encouraged to join or form cooperative societies so as to access funds from government and financial institutions so as to expand their business. Government should construct and as well as rehabilitate the existing roads to make them motorable for easy transportation of farm products from the area. Basic infrastructural facilities such as portable water, electricity, communication facilities, fire services etc. should be provided in the markets for efficient marketing service in the area. Also adequate security measures should be taken to curtail the problems of arm bandits and ethno-religious crisis in the area.

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