



Economic Analysis of Wonderful Kola (*Hydrocotyle asiata*) Marketing in Kaduna North Local Government Area of Kaduna State, Nigeria

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ABSTRACT

The study examines the economic analysis of *Hydrocotyle asiata* in Kaduna, North Local Government Area of Kaduna State. One hundred (100) questionnaires were randomly administered and forty-one (41) were retrieved from the respondents. Descriptive statistics, farm budgetary techniques and marketing efficiency were used to analyze the data collected. The results show that 60.98% of all sellers were male, while that of female was 39.02%. In addition, 48.78% of the marketers were aged between 31 – 40 years and a majority, 68.29% are married. Furthermore, 43.90% of all these individuals had at least primary education, while 4.88% had no formal education. The traders were also found to be faced with challenges of transportation, seasonality, storage, price fluctuation and pest infestation. The marketing of kola (*Hydrocotyle asiata*) in the study area is profitable and efficient, with a net income of eleven thousand eight hundred and fifty-one naira, twelve kobo (N11,851.12) per annum and a marketing efficiency of 40.40. However, it is recommended that adequate storage facilities be provided to check excessive dryness of the kola and pest infestation during storage. Moreover, the marketers should form a cooperative group in order to access loan and credit facilities from government so as to boost and improve their market.

Keyword: Economic, *Hydrocotyle asiata*, Kaduna, North Marketing

1. INTRODUCTION

Wonderful kola (*Hydrocotyle asiata*) is a small herbaceous plant of family Maekinoaceae. It is a non-timber forest product (NTFP), a native of India, Sri Lanka,

Northern Australia, Indonesia, Iran, Malaysia, Philippines and Africa (En, Wikipedia, 2012). It grows in tropical swampy areas; the stems are slender, creeping, stolens, green to reddish green in colour, connecting plants to each other. The flowers are small, sessile and dark pink in colour, the fruits are clustered with joint carpel along sub cylinder curved and less in length much laterally compressed, readily separating into two (2) indehiscent (mericarps) and the seeds are solitary in each mericarp, pendulous embryo which are laterally compressed (En, Wikipedia, 2012).

Wonderful kolanut is regarded as one of the most rejuvenating herbs in ayurvede and is used to cure / treat ailment (Middlepath.com, 2013). It is used for the treatment of many diseases like cough, chest pain, waist pain, irregular menstruation, internal pile material, ejaculation problem, premature aging, memory improvement, blood cleansing (Olawoyin, 2013). Its economic significance has reached an alarming rate in pharmaceutical industries in the production of drugs that cure, control and improves blood circulation, strengthens veins and capillaries (Olufemi, 2012). Olukosi, *et. al.*, 2005 defined marketing as the performance of all business activities that evolved into the forward flow of good and service like *Hydrocotyle asiata* from the point of agricultural production to the hands of ultimate consumers. Marketing of wonderful kolanut supplement production in that it makes what is produced available to consumers and use the time, place and form required. Olukosi and Isitor (1995) stated that within the marketing system, prices, allocation of resources, income distribution and capital formation are determined. Therefore, marketing will have significance effects on the production of a given commodity on consumer prices, on adoption of improved technology, in production and marketing methods and infact upon the growth and development of the entire economy. The broad objective of this study is to evaluate the economic analysis of *Hydrocotyle asiata* marketing in Kaduna North Local Government Area of Kaduna State. The specific objectives are to: identify the socio-economic characteristics influencing wonderful kolanut marketing in Kaduna North local government, determine the gross margin and marketing efficiency of wonderful kolanut in the study area and identify the problems encountered in marketing wonderful kolanut (*Hydrocotyle asiata*) in the study area.

2. MATERIALS AND METHODS

Study area

The study was conducted in Kaduna North Local Government Area of Kaduna State. The local government area is located between latitude 9°N and 12°N and longitude 6°E and 9°E of the prime meridian. The vegetation in the local government area is guinea savanna. The study area occupies major part of the agricultural economy of the State (FOS, 1996). Farming and livestock rearing are their main occupation. The local government covers an area of about 445.650 km² with a projected population of 368,250 people (NPC, 2006).

Data collection and sources

The data used for this study were collected by using structured questionnaires. The questionnaires were designed to collect the following:

- (i) Socio-economic characteristics of sampled respondents (I.e. age, marital status, gender, educational background, etc.)

(ii) Marketing information that will be relevant to this study such as price of output, income generated, cost incurred, etc.

Sampling procedure

A total of one hundred (100) questionnaires were randomly administered among the marketers of *Hydrocotyle asiata* in local government area and forty one (41) was retrieved.

Analytical technique

The following tools of analysis were employed:

- (i) Simple descriptive statistics
- (ii) Farm budgetary technique
- (iii) Marketing efficiency

Simple Descriptive Statistics

This was used to have a summary description of data collected. This involves the use of central tendency such as percentages, means and frequency distribution.

Farm Budgetary Technique

The net-farm income was used to determine the profitability of wonderful kolanut and it is given as:

$$GM = TR - TVC$$

where:

GM = Gross Margins

TR = Total Revenue

TVC = Total Variable Cost

Thus, GM is the difference between gross farm income (GI) and Total Variable Cost.

Marketing Efficiency

The efficiency of resources used in the production of wonderful kolanut was determined using model adopted from Okunmadewa *et. al.*, (2000).

$$\text{Marketing Efficiency} = \frac{\text{Total Sales}}{\text{Total Marketing}}$$

3. RESULTS AND DISCUSSION

Some socio-economic characteristics are known to influence marketing of *Hydrocotyle asiata* in Kaduna North local government area of Kaduna State. The variables analyzed include: age, marital status, gender and educational status. Table 1 revealed that 48.78% of the sampled respondents were between the age brackets of 31 – 40 years. This implies that

they are at the middle and economically active age which could have positive effect on their standard of living. The age distribution of the respondents determines their productivity or managerial ability in any business enterprise. This is especially true in traditional society of Nigeria. This result agrees with the finding of Sodimu, *et. al.*, (2010) which showed that age influence the profitability in several ways. 68.29% of sampled respondents are married, while 24.40% are single. 60.98% are male and 39.02% are female. 43.90% of the respondents had primary education, 24.40% had secondary education, 14.63% had Quranic education, 12.20% had tertiary education while 4.88% had no formal education. Sodimu, *et. al.*, (2012) observed that formal education has positive influence on marketing and profitability of goods.

Table 1. Demographic Characteristics of Sampled Marketers

Variable	Respondents	Percentage
Age in Years		
10 – 20	3	7.31
21 – 30	6	14.63
31 – 40	20	48.78
41 – 50	10	24.40
51 above	2	4.88
Marital Status		
Married	28	68.29
Single	10	24.40
Divorced	1	2.43
Widowed	2	4.83
Gender		
Male	25	60.98
Female	16	39.02
Educational Level		
Primary Education	18	43.90
Secondary Education	10	24.40
Tertiary Education	5	12.20
Quranic Education	6	14.63
No Formal Education	2	4.88
Total	41	100

Source: Field Survey Data, 2014

Table 2 showed the various cost incurred and the revenue generated from the sales, were estimated based on the prevailing marketing prices at the period of survey. Due to the fact the sampled traders are small scale, their fixed cost is negligible, thus, only the variables

are considered. The total variable cost gives an average value of N6,650.48 and the net income N11,851.12. The value of marketing efficiency revealed that the marketing of *Hydrocotyle asiata* in Kaduna North local government area is efficient with an estimated value of 40:40.

Table 2. Gross Margin Analysis

Variables	Estimated Mean Cost (N)
Transportation Cost (TC)	4,350.23
Commission Cost (CC)	2,300.25
Total Variable Cost (TVC)	6,650.48
Gross Income (GI)	18,501.60
Total	11,851.12

Source: Field Survey Data, 2014

Table 3 revealed that 24.39% of the traders are faced with problems of transportation, price fluctuation and pest infestation. Other traders complained about seasonality (14.63%) and storage (12.20%).

Table 3. Marketing Problems Encountered by the Traders

Problems Encountered	Frequency	Percentage
Transportation	10	24.39
Seasonability	6	14.63
Storage	5	12.20
Price Fluctuation	10	24.39
Pest Infestation	10	24.39
Total	41	100

Source: Field Survey Data, 2014

4. CONCLUSION

The study has shown that *Hydrocotyle asiata* marketing is profitable with a net income of N11,851.12 per annum. Marketing of *Hydrocotyle asiata* is efficient with an estimated market efficiency of 40.40. Based on these findings, the following recommendations are made; government should provide good road network for the production areas, government

should provide good storage facilities as appropriate for traders to check excessive dryness of the kola and pest infestation. The extension workers should organized workshops, seminars for the traders as appropriate.

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