

MICRO-ECONOMIC ANALYSIS OF MARKETING SELECTED NON-TIMBER FOREST PRODUCTS (NTFPs) IN AWGU AGRICULTURAL ZONE OF ENUGU STATE, NIGERIA

ABSTRACT

Non-timber forest products have ~~been seen to be~~ the capable of providing food, ~~being~~, source of livelihood and income ~~generation especially to~~ for the rural households. This study investigated the micro-economic analysis of the marketing of selected non-timber forest products (NTFPs) in Awgu Agricultural zone, Enugu state of Nigeria. ~~Majorly the~~ The study sought ~~out~~ the socio-economic characteristics of the respondents, identified some of the NTFPs ~~in the study area~~, and ascertained the profitability of NTFP marketing as well as the constraints ~~facing them~~ in the study area. ~~With the use of data collection instrument~~, 90 respondents were interviewed from ~~five (5)~~ 5 main rural markets across the two local government areas in the study area. Data were analyzed using descriptive statistics, net income analysis, benefit cost ratio, and profitability index. Results indicates that NTFP marketing is profitable with a gross margin of, ₦9,000 for bitter kola, ₦4,500 for ogbono, ₦1,200 for utazi, ₦1,300 for ukazi, ₦6,000 for grass cutter, also a net income of ₦7,297; ₦2,797; ₦309; ₦409 and ₦2,330 respectively for them. The benefit cost ratio result also shows that for every ₦1 the marketer puts into marketing these selected NTFPs, ₦1.20kobo; ₦1.20kobo; ₦1.10kobo; ₦1.10kobo and ₦1.60kobo ~~is wete~~ realized for; bitter kola, ogbono, utazi, ukazi, and grasscutter respectively.

KEYWORDS: Non-timber forest products, marketing, profitable, Awgu, Enugu state, Nigeria.

1.0 INTRODUCTION

Non-timber forest products (NTFPs) are ~~all the~~ biological ~~material products which are~~ that may be extracted from natural ecosystems; ~~other than timber. These include vegetable s, fruits, medicinal plants, nuts, managed plantations, etc., and being~~ utilized ~~and marketed by~~ within the households, ~~be marketed. These NTFPs seemed to~~ or have social, cultural or religious significance ~~among rural dwellers~~. Adepoju and Salau (2007) defined ~~perceived~~ NTFPs as plants or plant parts that have perceived economic or consumption value ~~to which~~ encourage their collection and removal from the forest. ~~FAO (2008) gave it a more comprehensive definition; as F~~ forest materials ~~are~~ derived from soil mineral, water, fauna and flora resources other than round wood (sawn wood) (FAO, 2008). People living in forest areas depend on non-timber forest products for their livelihood, ~~and~~ in spite of its importance, their commercial value is low (Nzeh *et al.*, 2015). One of the difficulties ~~encountered by~~ for small-scale collectors who seek to commercialize NTFPs is that often the markets for these products are relatively complex compared to those for timber and traditional agricultural goods. Prices for NTFPs vary across different locations as well as over time as reported by Nzeh *et al.*, 2015, ~~all t~~ These factors contribute to complexity of NTFP markets, ~~leading to the problem of food insecurity by~~ influencing the household income of the people dependent on it. Poor tribal colonies in the study region

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40 mainly depend on NTFPs for their livelihood and earn substantial income from these products.
41
42 Therefore, in other to meet with the growing demand for these non-timber forest products, there
43 is need to investigate the dominant NTFPs in the area, the multiple use, economic value,
44 profitability and problems associated with the marketing of these NTFPs.There is need~~Thus, it~~
~~becomes~~
4544 ~~pertinent~~ for the research to be geared in the direction of micro-economic analysis of the
4645 marketing of selected non-timber forest products in the study area. The research specifically;
4746 examined the socio-economic characteristics of the respondents in NTFP marketers in Awgu

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agricultural zone, identified the various NTFPs available in the study area, determined the cost and return analysis of NTFPs gathering and marketing in the study area, and identified the constraints faced by the marketers of NTFPs in Awgu agricultural zone.

2.0 CONCEPTUAL FRAMEWORK OF THE STUDY

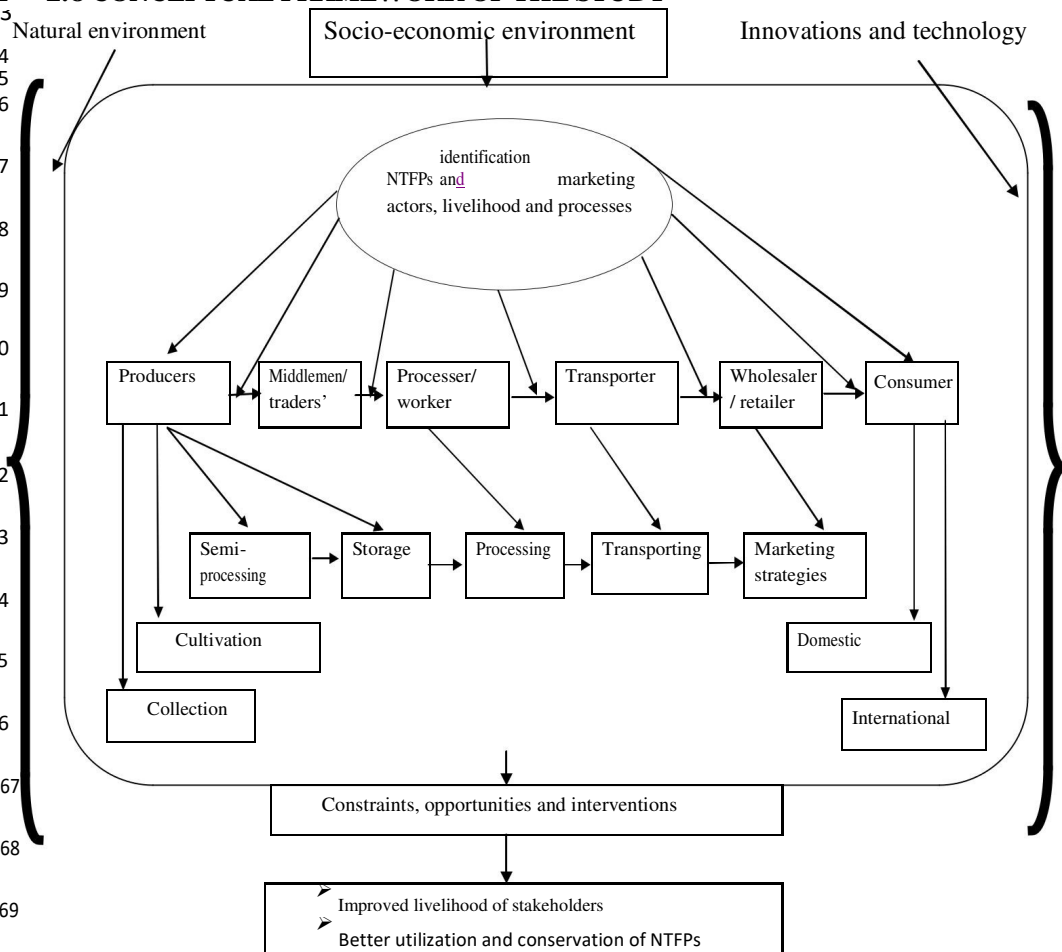


Figure 12: Flowchart illustration of the conceptual framework - The production-to-consumption systems (PCS) approach

Source: Adapted from Belcher, (1998).

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3.0 ANALYTICAL FRAMEWORK OF THE STUDY

There are a number of approaches that can be used to analyze data gotten in a research work. The first set of common, simple but important analytical tool used in data analysis is the descriptive statistical

77 tool (McNally and Othman, (2002). These include tables, graphs, charts, frequency distributions,
 78 percentages, mean and standard deviation among others. ~~On the other hand, s~~Some specific
 objectives
 79 and some quantitative data require in-depth analysis and may need extended analytical tools than the
 80 simple descriptive statistical tool for better understanding.
 81 The Concept of Net Income (NI) Analysis;

82 **Total Costs (TC):** ~~Is it is~~calculated as; $TFC + TVC$.

83 **Average Variable Costs (AVC):**
$$\frac{\text{total variable cost}}{\text{output}} = \frac{TVC}{Q}$$

84 **Average Fixed Costs (AFC):**
$$\frac{\text{total fixed cost}}{\text{output}} = \frac{TFC}{Q}$$

85 **Average Total Cost (ATC):**
$$\frac{\text{total costs}}{\text{output}} = \frac{TC}{Q}$$

86 **Marginal Costs (MC):**
$$\frac{\text{change in total cost}}{\text{change in output}} = \frac{\Delta TC}{\Delta Q}$$

87 Hence, net income model: ~~is stated as;~~

88 $NI = TR - TC$

89 $TC = TVC + TFC$

90 Where,

91 NI = Net Income

92 TR = Total Revenue

93 TC = Total Cost

94 TVC = Total Variable Cost

95 TFC = Total Fixed Cost

96 The profitability index will further be used to measure the profitability of NTFP marketing in the
 97 study area. The profitability index model as used by Ibekwe *et al.* (2012) is expressed as:

98 $PI = \frac{NI}{TR}$ Where,

99 PI = Profitability Index

100 NI = Net Income

101 TR = Total Revenue.

102 4.0 METHODOLOGY

103 The study was conducted in Awgu agricultural zone ~~in under~~ Enugu State of Nigeria. ~~Enugu state was~~
 104 ~~which~~ was created out of the former Anambra State in 1991 ~~with its capital in Enugu city. According to Ukwu et al, 1998~~
 105 ~~in Nzeh 2012~~, Enugu State is located in the south-eastern region of Nigeria. It is bounded in the north by Kogi and Benue States, in
 106 the east by Ebonyi and Abia States, in the south by Ebonyi, Abia and Anambra, and in the west by
 107 Anambra State (Ukwu et al, 1998, Nzeh, 2012). Its total land area is 7,161km² with a population of
 108 3,367,837 according to (NPC, 2006). It consists of six ~~agricultural zones namely;~~ (Awgu, Udi, Nsukka, Enugu-Ezike, Enugu, and
 109 Agbani agricultural zones) ~~respectively~~. Awgu agricultural zone consists of three local government
 110 areas (~~L.G.ALGA~~), they include; Aninri, Awgu, and Oji River. The zone is bounded in the north by Udi
 111 and Nkanu West ~~L.G.As~~LGAs, in the west by Oji River L.G.A and share border with Isochi ~~L.G.ALGA~~ of
 112 Abia state in the south. Awgu agricultural zone lies within the guinea savannah vegetation zone. ~~Vegetation in the~~
 113 ~~study area varies with topography. The natural vegetation is denser at the valley and sparse at the top~~
 114 ~~of the hills.~~

115
 116 Combinations of purposive and random sampling were employed to select respondents for the study.
 117 Aninri and Oji River local governments were purposively selected because of the density of the forest
 118 there which can account for presence of NTFP marketers.

119
 120 Meanwhile, nkwo Inyi and eke egbo Achi, rural markets in Oji River L.G.A were selected purposively,
 121 while as orie Oduma, eke Ukete were selected purposively from Aninri L.G.A for this study.

122
 123 All the () in NTPTs constituted the population for the study. Both purposive and multistage simple random
 124 sampling techniques were employed to select () for the study. First, one (Agwu) Agricultural Zone was purposively
 125 selected because the topography varies in the study area ; with large quantity of NTPTs in the zone. It has natural
 126 denser vegetation with valley sparse at the top of the hills. In the second stage, two (Aninri and Oji-River) Local
 127 Government Areas were purposively selected from Agwu agricultural zones because of the forest density
 128 which could account for the presence of NTFP marketers.
 129 In the third stage, two rural markets were selected from each LGA, giving a total of four rural markets. Finally,
 130 () were purposively selected from each rural markets since the actual population frame of the () was unknown for the
 131 study. A total of () were used for the study.

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5.o RESULTS AND FINDINGS

5.o.1 Socio-Economic Characteristics of Respondents in the study area

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132 Table 1: Distribution of respondents according to socio-economic characteristics of NTFPs marketers
133 in the study area

Variables	Frequency (n=90)	Percentage (%)	Mean ($\bar{x}$)
Sex			
Male	28	31.1	
Female	62	68.9	
Total	90	100.0	
Age (Years)			
≤20	29	32.2	
21-30	16	17.8	
31-40	11	12.2	35.9
41-50	6	6.7	
51-60	20	22.2	
≥61	8	8.9	
Total	90	100.0	
Marital Status			
Single	40	44.4	
Married	25	27.8	
Divorced	0	0.0	
Widowed	25	27.8	
Total	90	100.0	
Religious Affiliation			
Christian	88	97.8	
Traditionalist	2	2.2	
Total	90	100.0	
Household Size (Members persons)			
≤4	40	44.4	
5-8	43	47.8	
9-12	5	5.6	5
≥-13	2	2.2	
Total	90	100.0	
Educational Qualification			
None formal education	27	30.0	
Primary education	7	7.8	
Secondary education	51	56.7	
NCE/OND	5	5.6	
Total	90	100.0	
Primary Occupation			
Crop Farming	40	44.4	
Animal Farming	6	6.7	
Trading	24	26.7	
Crop And Animal Farming	6	6.7	
NTFP Farming	12	13.3	

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Civil servant	2	2.2	
Total	90	100.0	
NTFPs Marketing experience in year(s)			
≤5	31	34.4	
6-10	27	30.0	
10-15	20	22.2	8.9
≥16	12	13.3	
Total	90	100.0	

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Source: Field survey, 2017.

Table 2: Distribution of some major NTFPs present in the Study Area

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S/N	English name	Common name	Scientific name	Plant part in use
1	African guinea Pepper	Uda	<i>Xylopia aethiopica</i>	Seed
2	African nutmeg	Ehuru	<i>Mandora myistica</i>	Seed/nut
3	African star apple	Udara	<i>Chrysophyllum albidum</i>	Fruit
4	Bitter kola	Akilu	<i>Garcinia cola</i>	Fruit
5	Bitter leaf	Onugbu	<i>Vernomia amygdllania</i>	Leaf
6	Black pepper	Ose oji	<i>Piper guineensis schum</i>	Seed
7	African bush mango	Ogbono	<i>Irvingia gabonensis</i>	Fruit
8	Wild spinach	Ukazi	<i>Gnetum africanum</i>	Leaf
9	Bush buck	Utazi	<i>Gongronema latifolium</i>	Leaf
10	Guinea cubeb	Uziza	<i>Piper guineense</i>	Leaf
11	Oilbean seed	Ugba	<i>Pentachlethra macrophylla</i>	Seed
12	Mushroom	Ero	<i>Agaricus bosporium</i>	Plant
13	Kolanut	Mkpuru-oji	<i>Cola accuminata</i>	Fruit
14	Wild mango	Ugiri	<i>Irvingia wombolu</i>	Fruit
15	Oil palm	Mkpuru-akwu	<i>Elaies guinensis</i>	Fruit
16	Fuelwood	Nku	NA	Twig

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17	Elephant grass	Achara	<i>Pennisetum purpureum</i>	Leaf
18	Native pear	Ube	<i>Dacryodes edulis</i>	Fruit
19	Grasscutter	Nchi	<i>Thryonomys swinderianus</i>	Animal
20	Snail	Eju	<i>Achatina achatina</i>	Animal
21	Winged termites	Aku	<i>Isoptera blattodea</i>	Insect
22	NA	Upaka	NA	Fruit

Source: Field survey, 2017.

NA**- not available

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5.0.2 Cost and Return Analysis of NTFPs the Marketing of These NTFPs in the Study Area

Table 3: Distribution of cost and returns analysis for Selected NTFPs marketed in the study Area

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S/No	Items	Non-timber forest product and cost (N)				
		Bitter Kola	Ogbono	Utazi	Ukazi	Grasscutter
A	Total Revenue	45,000/ 50kg	15,000/ 20kg	4,500/ 4kg or 2 heads	5,000/ 4kg or 2 heads	6,000/ 3 Animals
B	Variable Cost					
i)	Cost of goods	35,000	10,00	3,200	3,600	-
ii)	Processing cost	-	-	-	-	-
iii)	Nylon bags/sacks	500	100	50	50	-
iv)	Transportation	500	200	-	-	-
C	Total variable cost	36,000	10,500	3,300	3,700	-
D	Fixed cost					
v)	Depreciation on equipment					
a)	Basket	720	720	-	-	-
b)	Basin	-	-	343	343	-
c)	Knife	-	-	137	137	137
d)	Cutlass	-	-	-	-	590
e)	Cutting board	-	-	100	100	-
f)	Stool	-	-	311	311	-
g)	Table and stool	983	983	-	-	-
g)	Animal trap	-	-	-	-	2,949
E	Total Fixed Cost	1,703	1,703	891	891	3,670
F	Total Cost	37,703	12,203	4,191	4,591	3,670
G	Gross margin	9,000	4,500	1,200	1,300	6,000
H	Net Income	7,297	2,797	309	409	2,330

I	Profitability Index	0.16	0.19	0.07	0.08	0.39
J	Benefit Cost Ratio	1.2	1.2	1.1	1.1	1.6

Source: Field Survey, 2017.

5.0.3 NTFPs marketing and its constraints in the study area

Table 4: Distribution of NTFPS marketing constraints as perceived by the respondents according their marketing constraints in the study area

Constraints	Frequency	Percentage
Transportation		
Yes	50	55.6
No	40	44.4
Total	90	100.0
Bad roads		
Yes	55	61.1
No	35	38.9
Total	90	100.0
Lack of fund		
Yes	65	72.2
No	25	27.8
Total	90	100.0
Lack Inadequate of market		
Yes	39	43.3
No	51	56.7
Total	90	100.0
Lack of Insufficient harvesting tools		
Yes	2	2.2
No	88	97.8
Total	90	100.0
Government policy		
Yes	2	2.2
No	88	97.8
	90	100.0
Seasonality of the product		
Yes	70	77.8
No	20	22.2
Total	90	100.0
All of the above listed constraints		
Yes	2	2.2
No	88	97.8
Total	90	100.0

Multiple responses Recorded**

Source: Field Survey, 2017.

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5.1. DISCUSSION OF RESULTS

The ~~Table 1~~ above shows that 68.9% of the ~~respondents were~~ females, while the remaining 31.1% ~~are~~ were males. This implies that greater ~~proportion numbers~~ of ~~those the~~ involved in NTFPs marketing ~~were~~ are females. ~~Though more~~ ~~mean out rightly~~ that females dominate males in the study area. Rather, it can be attributed to the ~~that~~ females ~~are being~~ more interested in the marketing of NTFPs than males (Nzeh, 2012).

~~Also in the same~~ ~~Table 1~~ ~~also above it indicated~~ reveal that a bulk about 32.2% of the respondents fall into the age range of ~~≤20years, 22.2% of them were in the age range and constitute 32.2%. The age bracket of 51-60years made up 22.2%, 17.8% of them were in age range of 21-30years, constituted 12.2% of them were in age range of 17.8%, 31-40years, made up 12.2%, 6.7% of them were in age range 41-50years rounded up to 6.7%, while 8.9% of the respondents were in the old age group of age range of ≥61years constituted 8.9%. The mean age was 39.5.~~ The result of the analysis ~~shows-revealed that majority of the respondents were in their active age, and are energetic to handle the tasks entailed in non-timber forest products that the teenagers dominate the marketing of non-timber forest products in the study area, in conjunction with the almost aged ones. The findings could imply that older marketers could involve the youths who are in their productive age, and could withstand the tasks in NTFPs marketing.~~

~~This presupposes that as the adults females in the study area got these NTFPs, they require much of the services of their children and aged ones in their households to assist them in its marketing as they proceed to harvest more of the NTFPs. The table 1 further indicated that the mean age of those involve in the marketing of these products is 39.5, which is at the productive age in any activities including that of agrarian and non-agrarian marketing like NTFPs.~~

~~As further indicated in Findings in~~ table 1, ~~show that greater proportion (97.8%) of the respondents are christians while 2.2% of them were are traditionalists. This implies that majority of the respondents are Christians.~~

~~The analysis from this result shows that a greater number of the respondents are christians, while as traditionalists are at lower rate. The primary occupation of respondents usually represents those activities which occupy at least up to 50% of the working time of the households to support their financial base. Table 1 also contains the distribution of respondents with regards to their primary~~

~~occupation in the study area. The table 1 shows that About 44.4% of the respondents' reported that their~~

~~primary occupation is was crop farming, also the same table 1 that 26.7% of them were into said that their primary~~

~~occupation is trading, 13.3% of them were into NTFPs farming, 6.7% of the respondents were into animal farming anf crop farming. Added to this, 6.7% of the respondents reported they have crop and animal farming respectively as their primary occupation; but while 2.2% of the respondents were stated they are~~

~~civil servants. From the table 1 above, notwithstanding that higher percentage of the respondents had their secondary education, one can see that only 2.2% of them are engaged in public service as their primary occupation. This is expected due to lack of white-collar job in the country especially in the study area.~~

~~The same~~ ~~Table 1~~ also shows that about 34.4% of the respondents in the study area reported that ~~they had~~ have experience in NTFP marketing. ~~The same table 1 shows that 30% of them had said that~~

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183182 have 6-10 years of experience, but 22.2% of them had consists of those that fall into the bracket of 11-15 years of

184183 experience, while as finally 13.3% of the respondents had reported to have ≥15 years of experience in NTFPs marketing. This Results revealing fewer years of experience, implies could confirm the earlier finding (Table 1) that more youths are involved in NTFPs marketing.

185 that greater proportion of the respondents had few years of experience in NTFP marketing. This could to the fact that teenagers are more involved in NTFP marketing in the study area.

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189 From the In Table 3 above, the results of the analysis carried out shows that total revenue of ₦45,000, ₦15,000, ₦4,500, ₦5,000, and ₦6,000 was gotten from the sales of bitter kola, ogbono, utazi leaf, ukazi leaf, and nchi a gross margin of; ₦9,000 for bitter kola, ₦4,500 for ogbono, ₦1,200 for utazi, ₦1,300 for ukazi, ₦6,000 for grasscutter, also a net income of ₦7,297, ₦2,797, ₦309, ₦409, ₦2,330 respectively for them.

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The benefit cost ratio ~~result also~~ shows that for every ₦1 the marketer puts into marketing ~~these~~ selected NTFPs, ₦2.0kobo, ₦1.20kobo, ₦1.10kobo, ₦1.10kobo, ₦1.60kobo is realized for; bitter kola, ogbono, utazi, ukazi, and grass cutter respectively.

~~The respondents are faced with quite a number of constraints as can be seen from table 4. From the Table 4 reveal that ,majority (77.8%) of the respondents agreed that seasonality of the product is a major constraint facing the affecting the availability of the product NTFPs, while 72.2% of the respondents perceived .Lack of fund as is another a constraint in NTFPs marketing which~~

~~constitutes 72.2% as stated by the respondents,while 61.1% of the respondents perceived bad roads as constraints in NTFPs marketing. Critical analysis of the same table 4 indicated that bad road constituting 61.1% was reported as major constraints by the NTFPs marketers in the study area.~~

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6. SUMMARY, CONCLUSION AND RECOMMENDATION

The study investigated the micro-economic implication of the marketing of selected non-timber forest products (NTFPs) in Awgu agricultural zone of Enugu State, Nigeria. The summary of the study was much in terms of food and their provision of income and employment by the NTFPs in Awgu agricultural zone of Enugu State, Nigeria especially in the recent time. The profitability index of bitter kola, ogbono, utazi leaf, ukazi leaf, and nchi shows that NTFP marketing is a profitable and lucrative venture in the study area.

The NTFPs marketers as the research shows are faced with certain constraints ranging from lack of organized transportation system, bad roads, and seasonality of the products among others. The study recommends among others that both state and zonal government of the study area should tackle these named problems among others. The government should construct and maintain feeder roads to enhance access of the urban marketers to the rural areas.

This will in turn solve the problem of bad road and increase the income of the NTFP traders as there would be higher demand for their product, and as well there should be provision of credit facilities which should be made available and accessible to these NTFP marketers. There should be provision of new improved varieties by research institutes so as to tackle the problem of seasonality of the products and its sustainability. This if adequately addressed would enhance the trading capacities of these marketers of the NTFPs in the study area. This will also promote further processing of these NTFPs which will serve as revenue earner for the local communities in Agwu agricultural zone, Enugu State and the nation at large.

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REFERENCES

Adepoju, A. A. and Salau, A. S. (2007). Economic valuation of non-timber forestry products (NTFPS). *Munich Personal Repec Archive (MPRA)* paper no. 2689, posted 07 November 2007/02:40 online at <http://mpra.ub.uni-muenchen.de/2689>, Retrieved March 2017.

Belcher, B.M. (1998). A production-to-consumption systems approach: lessons from the Bamboo and Rattan sectors in Asia. In E. Wallenberg and A. Ingles (eds.), *Incomes from the Forest. Methods for the development and conservation of forest products for local communities*, CIFOR, IUCN, Bogor, Indonesia.

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239 240 Food and Agriculture Organisation (FAO) (2008). Non-wood forest products in Nigeria. Retrieved March, 2017 from: www.Fao.Org

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- 241
242 McNalley, R., and Othman, M.S.H. (2002). Environmental Economics; A practical guide. Malaysia:
243 WWF-UK.
244
- 245 National population commission (NPC, 2006). Population figure of republic of Nigeria, Abuja. (Retrieved from <http://www.npc.gov>)
246 National Population Commission (NPC). (2006). Nigeria census figure.
- 247 Nzeh, E. C., Eboh, E., Nweze, N.J. (2015). Status and trends of deforestation: An insight and lessons
248 from Enugu State, Nigeria. Net Journal of Agricultural Science (JAS), 3(1):
23-31. Available online
249 <http://www.netjournals.org/pdf/NJAS/2015/1/15-011.pdf>. ISSN: 2315-9766.
250
- 251 Nzeh, C. E (2012). Economic analysis of Deforestation in Enugu State, Nigeria. An unpublished Ph.D
252 thesis submitted to Department of Agricultural Economics, University of Nigeria, Nsukka.
253
- 254 Ibekwe et al., (2012)
- 255 Ukwu et al

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