STRUCTURE, CONDUCT AND PERFORMANCE ANALYSIS OF HONEY MARKETS IN OYO STATE, NIGERIA

Arowolo, O.V., Kabir G. B., *Fatoki, O. A. and Oguntoye T. O.

Department of Forest Economics and Extension, Forestry Research Institute of Nigeria,
Jericho Hills, Ibadan, Oyo State.
Corresponding Author*: *gobite2002@yahoo.com;* +2347032255018

ABSTRACT

This study specifically investigated, marketing practices, channels of honey distribution and performance. Multi-stage sampling technique was used to select respondents from the four (4) agricultural zones in Oyo State. These included Ibadan/Ibarapa, Saki, Oyo and Ogbomoso zones using honey sellers as respondents. Two hundred and forty four (244) respondents were selected. Data were collected with the aid of structured questionnaire and analyzed using descriptive statistics to describe socio-economic characteristic, marketing practices and channels of honey distribution. Multiple regression analysis was used to determine the relationship between marketing performance and socio- economic characteristics of respondents. The result showed that average age of the respondents was 46.5 years. Majority (84%) were married with average household size of 6 members. About 72.5 percent were males with average marketing experience of 7.5 years while an average year of schooling was 12.8. Conduct analysis revealed that majority (90.6%) of respondents claimed to brand their honey using customized containers and labels. Marketing efficiency was 173 percent which implies that the respondents covered the cost of marketing and made a margin above 100 %. Adulteration of honey and lack of access to finance were the major constraints faced by honey marketers. Furthermore, years of schooling (p=0.01), marketing experience (p=0.001), source of honey (p=0.005), credit access (p=0.01) and household size (p=0.005) were factors influencing marketing efficiency of the respondents. The study concluded that honey marketing was a profitable enterprise in the study area. The study recommended that timely and affordable loans/credit should be made available to the marketers so as to improve marketing efficiency.

Keywords: Honey, marketing, efficiency, distribution and Oyo state.

INTRODUCTION

Honey and other bee products play an important role in human nutrition and health. There are over 90.5 million beehives in the world, as at 2015, 1.83 million metric tons of honey and were produced and the global honey market was valued about US$7 billion in 2016 (Shahbandeh, 2019). Honey has long been used as one of man's most highly desired foods (Peterson. 2006). It is used in baking, as a medicine, as addition in various beverages and as a substitute for sugar in some commercial beverages. As an antimicrobial agent, honey may have the ability for curing variety of ailments (Knox. 2004). Beekeeping has been found to improve poverty in Nigeria (Adedeji and Omoba. 2016), it also increases incomes in the rural communities and

benefit the country's economic situation. Beekeeping provides an excellent service for farmers by crops pollination as honey bees are the main pollinator for most plants. Bee keeping makes up the cline of productions that comprises agribusiness. It is also known as apiculture (Onwumere *et al*. 2012). Bee keeping is the process of rearing or keeping of bees with the objective of exploring its products such as honey, pollen grain, propolis, and comb (Onwumere *et al*. 2012). Apiculture is the management of bees in a hive in a method that it`s process of development processes will be carefully noticed and can be controlled (Oyeleye 2003).

Human beings have been rearing bees for honey production since 4,000 B.C (Halil and Nuray 2007). Africa and other equatorial region countries in the Caribbean and pacific, have highly appropriate habitat for bees. According to Oluwaseun (2009) the common Africa honey bee in Nigeria is *Apis Mellifera adansonni*. The most recent yearly estimation of honey production and marketing was more than 4000 tones, yet Nigeria's productions seems not to be significant as it was not acknowledged by the Food and Agriculture Organization (Shahbandeh, 2019). This work therefore looked into the structure, conduct and performance of honey market in Oyo State Nigeria with a view to assisting policy makers in the inclusion of the product as a major resource that can boost the country's internally generated revenue if it is well harnessed.

The development of reliable and stable market structure has been a relevant element in commercialization and specialization in the agricultural sector. In order to study the functioning of markets many researchers have applied the structure-conduct-performance paradigm. Subsequently, it was applied in the functioning of markets in agricultural sector, and served as a tool to evaluate the performance of the commercial system. The framework distinguishes between three related level; the structure of the market, the conduct of the market, and the performance of the market. A market is the set of actual and potential buyers of a product. These buyers have distinct needs or wants that can be quenched through exchange. Consequently, market size is dependent on the number of people who show the lack, have capabilities useable for exchange, and are inclined towards offering these capabilities in exchange for their want. Primarily, the term market represents the place where buyers and sellers meet together for exchange of their goods, such as a village square. Economists use the term to denote an aggregation of buyers and sellers who conduct business in a specific product category, as in the housing market or the grain market (Philip *et al.,* 1999).

Structure of the market, is the degree of product differentiation and barriers to entry/exit are assessed. Product differentiation refers to the process of distinguising of a products or service from others in the market in order to make it more attractive to a particular target market (Michail, 2011). Policies are often confused through enforcement problem such as tariffs and outright ban on importation. Indigenous mechanism such as season, ability of buyers to bargain and the concept of demand and supply characterized the Nigerian honey market. To close-up the demand and supply gap, the sustainable honey production depends largely on its market structure and performance**.** Presently in Nigeria, production of honey to this time is at its developing stage, though its consciousness was being gotten far back as early 1950s. This could be attributed to ineffective and deficient information on the enterprise (Adedeji and Omoba 2016).

Various studies have been carried out on profitability, production, technical efficiency of honey production as well as chemical/physical characterization of Nigerian honey (Aburime *et al*., 2006; Adedeji and Omoba (2016); Adeola *et al*., 2011; Adebiyi *et al*., 2004). Other studies have also been carried out extensively on value chain and economic analysis of honey production (Animene *et al.,* 2007 and Moses, 2015). Meanwhile, little or no study has been done to assess the structure, conduct and performance of honey marketing in Nigeria. Hence, this study will avail us the opportunity to discover the challenges faced by honey marketers in the study area so as to be able to make appropriate recommendations to the marketers and other stakeholders. It is against the backdrop mentioned aove that the study provided answers to these research questions – what are the marketing practices and channels of honey distributions?, are marketing functions efficiently performed?, what are the factors influencing marketing performance? What are challenges of honey marketing?. The objectives of the study are to examine the marketing practices and channels of honey distribution, analyse marketing efficiency of the respondents, determine the factors influencing marketing performance and identify the challenges to honey marketing activities in the study area.

MATERIALS AND METHODS
Study Area
The study was conducted in Oyo State Nigeria. Oyo State is situated in the South-Western part of

Nigeria. It is located between latitudes 7 ^{0}3 and 9 ^{0}12 North of the equator and longitudes 2 ^{0}47' and 4^0 23' east of the Meridian. It is bounded on the West by Republic of Benin, on the North by Kwara State, on the East by Osun State and on the South by Ogun State. The population of Oyo State as at 2006 was 5,591,589 million by National Population Commission (NPC). It is made up of 33 local government areas, and the state capital is Ibadan. Oyo state covers a land area of 27, 000 square kilometres. The state do experience two different seasons in a year, namely; wet season and dry season. The pattern of rainfall is noticeably steady ranging between 1,211mm in the far North and 1,264mm in the south at Ibadan in the last two decades. They early rainfall at average is calculated to be between 1,194mm in the North and 1,278mm in the South. The average temperature is 27^0 C. The cultivation of tree crops such as cocoa, kola, oil palm and citrus as well as arable crops like maize, yam, cassava and rice is favoured in parts of the state with high relative humidity. The State was divided into four agricultural zones and twenty eight blocks for convenience of administration by Oyo State Agricultural Development Project (OYSADEP). The agricultural zones are Ibadan/Ibarapa (9 blocks), Ogbomosho (5 blocks), Oyo (5 blocks) and Saki (9 blocks).

Sampling Technique and Sample Size
Population of the study includes all honey marketers in Oyo State. The study made use of all the 4 Agricultural Zones in Oyo State because honey marketers are found in all the zones. These include Ibadan/Ibarapa, Saki, Oyo and Ogbomoso zones. Preliminary findings revealed that there are well established honey marketers' associations in each of the agricultural zones. Therefore, the comprehensive list was collected from Honey Marketers' Association secretariat of each zone for the purpose of this study. Since complete list was available in each zone, random sampling technique was used to select respondents. Fifty percent (50%) honey marketers on each list were selected. Going by this, sample size consists 98 of the respondents from Ibadan/Ibarapa zone, 67of the respondents from Saki, 45 of the respondents in Ogbomoso and 34 of the respondents in Oyo zone. This makes a total of two hundred and forty four (244)

respondents used for the study. The data collected for this study were basically from primary source.

Method of Data Collection
The data collected for this study were basically from primary source. The data collected by administering copies of structured questionnaire to the selected marketers in the study area. Information collected include respondents' socio-economic characteristics, pattern of sellers' concentration, marketing practices and channels of distribution as well as challenges to honey marketing.

Analytical Techniques
A combination of analytical tools was employed for this study. These include descriptive statistics, multiple regression analyses and marketing efficiency.

Descriptive Statistics
This includes frequency table, means and percentages. Socio-economic characteristics (objective 1) like age, education qualification, marital status, household size, years of experience etc. were analyzed using descriptive statistics. Also, marketing activities and channels of distribution (objective 2) as well challenges to marketing activities (objective 5) were analyzed through descriptive statistics.

Marketing Efficiency (ME)
Marketing efficiency is a measure of market performance. Marketing efficiency most widely used measures are conventional output to input ratio; Shepherd's ratio of value (price) of marketed goods to the marketing cost (Shepherd, 1965); and Acharya's modified marketing efficiency formula (Acharya and Agarwal, 2001). However, all these measures do not consider explicitly the loss in the produce during the marketing process. As loss reduction in itself is one of the relevant parameters of efficiency, there is a necessity to give consideration to this factor expressly in the analysis to ameliorate marketing efficiency ratios measures used for the comparison of alternate markets or channels.

Empirical Assessment of Marketing Efficiency
Marketing efficiency (ME) is computed as:
ME = TR/TC x 100 ………. 1

ME = (Value added by respondent ÷ Cost of marketing) × 100% … 2

Marketing efficiency can be defined as the maximization of the ratio of output to input in marketing. Efficient marketing optimizes the ratio between inputs and outputs. Marketing inputs here include the resources used in marketing of product whereas marketing output is the benefits or satisfaction created or the value added to the commodity as it moves through the marketing chain. Therefore for this study, value added by respondent is computed as Price (in ₦) received by the respondent (price paid by the consumers) less the price received by the preceding marketer in the supply chain.

Therefore:

$$\text{M.E.} = \frac{(\text{Total revenue} - \text{purchase cost of honey})}{(\text{Total cost of marketing})} \times 100\%$$

… 3

When ME = 100%, it connotes that the respondent just recovered the cost incurred in carrying out the marketing services, when ME > 100% implies that the respondent covered the cost of marketing and made a margin above the 100% (higher value of ME denotes higher level of efficiency), while ME < 100% indicates that the respondent is operating at a loss.

Multiple Regression Analysis

This was used to estimate statistical relationship between market performance and socio economic characteristics of respondents. The use of ordinary least square (OLS) multiple regression analysis was mode under the assumption that the data collected fulfilled the assumption of multiple regression model. These assumptions include absence of multicollinarity among independent variables, normally distributed error term with zero mean and constant variance and non-auto-regression disturbance (Kautsoyiannis, 1977).

The general functional form postulated is implicitly presented by;

$Y = F(X_1, X_2 \ X_3, X_4, X_5, \text{---------} X_{10} + U)$ … 4

Where;

Y = Marketing Efficiency; X_1 = Sex (male =1, female= 0)

X_2 = Age

X_3 = household size (Actual)

X_4 = Marital status (single =1, married = 2…,)

X_5 = Years of schooling (Actual)

X_6 = monthly income from other source

X_7 = Marketing experience (years)

X_8 = Credit Access (Actual amount in ₦)

X_9 = Member of organization

X_{10} = Source of honey (directly from farm = 1, from other marketing agents = 0)

U = error term

RESULTS

Socio-economic Characteristics of the Respondents

Table 1 showed that many of the respondents (34.4%) are within the age bracket 41-50years, 27.9% are within the range of 31-40years, 20.5% are within the range of 51-60years, 6.2% are less than the 30years, while the remaining 11% are above 60years. The result on gender showed that 72.5% of the respondents were male while 27.5% were female. Marital status revealed that majority of the respondents (84.0%) in the study area were married, 5.7% were single, 3.7% claimed to be divorced, 2.5% were widowed and 4.1% of the respondents were separated. Religion distribution revealed that 54.5% of the respondents were practicing Christianity, 43.4% practices Islam and 2.1% were traditional worshipers. Table 1 presented the finding that honey marketers in the area of study had one form of formal education or the other ranging from primary, secondary or tertiary education as against 8.6% that claimed not to have any form of formal education. Primary occupation revealed that 42.2% of the respondents were farmers. The mean household size of the respondents was 6.1 members. Result as presented in Table 1 revealed that many of the respondents (54.5%) had been in honey business for 6-15 years while 42.2% of the respondents claimed less than or equal to 5years. The mean marketing experience was 7.5years while the mean income earned monthly was ₦42,860.

Table 1: Socio-economic Characteristics of Respondents

Variable	Frequency	Percentage	Mean
Age			
≤30	15	6.2	46.5
31 – 40	68	27.9	
41 – 50	84	34.4	
51 – 60	50	20.5	
Above 60	27	11.1	
Gender			
Male	177	72.5	
Female	67	27.5	
Marital Status			
Single	14	5.7	
Married	205	84.0	
Separated	10	4.1	
Divorced	9	3.7	
Widowed	6	2.5	
Religion			
Christianity	133	54.5	
Islamic	106	43.4	
Traditional	5	2.1	
Educational level			
No formal education	21	8.6	
Primary education	20	8.2	
Secondary education	128	52.5	
Tertiary education	75	30.7	
Primary occupation			
Trading	51	20.9	
Farming	103	42.2	
Civil servant	57	23.4	
Artisan	25	10.3	
Private business	8	3.4	
Household size			
≤5	97	39.8	6.1
6 - 10	136	55.7	
Above 10	11	4.5	
Marketing experience			
≤5	103	42.2	
6 – 15	133	54.5	
16 - 25	8	3.5	
Monthly income			
≤20000	63	21.8	42,860
20001 – 40000	101	41.4	
40001 – 60000	47	19.3	
60001 – 80000	17	7.0	
Above 80000	16	6.6	

Marketing Practices and Channel of Honey Distribution

Table 2 shows that most (79.1%) of the respondents source their capital through personal savings, while 5.7% of the respondents got their capital from relatives, 3.3% of the respondents got their capital from friends, 4.1% from professional money lenders, 11.5% got their capital from cooperative organizations and 3.7% of the respondents from commercial banks. The study revealed that 78.3% of marketers got their honey from personal apiary,

45.5% from direct producers while 5.3% got their honey from honey wholesalers.

The result revealed of honey transaction bought by marketers that (50.4%) of the respondents transact table honey which is the refined honey, 47.1% transact crude/comb honey while 28.7% transact strained. Storage of honey revealed that most of the respondents (95.9%) stored their honey while (4.1%) did not store their honey. This finding reveals that most of them store for the scarce period because harvesting of honey is not year round. Table 2 shows that (65.6%) of the respondents used plastic containers to stored their honey, 16% used bottle, 14.8% used both bottle and plastic containers to stored and 3.7% used pot. The finding reveals that most of the respondents used plastic keg to store their honey especially the wholesalers. Majority (77.0%) of the respondents make use of bottle to package their honey, 11.9% used pot, 8.6% used sack while 3.3% used plastic. In the study area most 94.7% of the respondents do advertised their honey business while 5.3% doesn't advertised.

Result in table 2 shows that 54.5% of the respondents used label for their branding in the
.

study area, 30.3% used customized containers, and 5.8% used both containers and label while 9.4% do not have any brand. These are mainly those that sell at the road side and some local market. This finding reveals that most of the respondents used label branding for their products and services. They believe it makes their honey to outstand others. Result shows that 65.5% of the respondents used family labour, 15.6% used hired labour while 18.9% used both family and hired labour. The result on Table 2 shows that 92.6% of the respondents belong to a social organization which is bee keeping association while 7.4% does not belong to any of such. As reported that (0.8%) source credit through relative/friends, (4.5%) gets credit through professional lenders while others (2.5%) cooperative society, (0.8%) commercial bank and (6.6%) used micro finance bank. As presented in Table 2, some respondents (45.5%) made use of fellow trader/ marketer to obtain information regarding stock order and other price related information, 41.0% acquired information on radio, and 24.2% get theirs from other mass media while 8.2% obtain their information through personal observation.

Table 2: Marketing Practices and Channels of Honey Distribution

Variables	Frequency	Percentage
Source of Fund		
Personal savings	193	79.1
Relatives	14	5.7
Friends	8	3.3
Professional money lenders	10	4.1
Cooperative society	28	11.5
Commercial bank	9	3.7
Total	*262	
Source of Honey		
Personal apiary	191	78.3
Direct producers	111	45.5
wholesalers	13	5.3
Total	*315	
Storage type		
Bottle	39	16.0
Plastic	160	65.6
Bottle and plastic	36	8.0
Pot	9	3.7

Table 2: Cont.

Variables	Frequency	Percentage
Packaging material		
Plastic	8	3.3
Sack	21	8.6
Pot	29	11.9
Bottle	188	77.0
Total	*233	
Form of honey transacted		
Strained	70	28.7
Crude/comb	115	47.1
Table	123	50.4
Total	*308	
Advertisement		
No	13	5.3
Yes	231	93.5
Branding method		
Customized containers	74	30.3
Label	133	54.5
Containers and label	14	5.7
Others	23	9.4
Labour used		
Family labour	160	65.6
Hired labour	38	15.6
Family and hired labour	46	18.9
Membership of association		
Beekeeping association	193	79.1
Social association	35	14.3
Marketing association	59	24.2
Total	*287	
Credit/source		
Relative/friends	2	0.8
Professional lenders	11	4.5
Cooperative society	6	2.5
Commercial bank	2	0.8
Microfinance	16	6.6
Total	*37	
Source of information		
TV	59	24.2
Radio	100	41.0
Other trader	111	45.5
Personal observation	20	8.2
Total	*290	

Multiple response

Market Efficiency Analysis (performance)

Since the Marketing Efficiency (ME) is > 100%, this implies that the respondent covered the cost of marketing and made a margin above the 100%, hence honey marketers performed associated functions efficiently in the study area.

Table 3: Marketing Efficiency (performance)

Variable	Amount
Total Revenue (TR)	₦ 79327.05
Total Cost (TC)	₦ 45931.28
Marketing Efficiency (ME)	173%

Factors Influencing Marketing Performance

The result of the regression analysis (table 4) shows that semi-log functional form is fitted in the estimation of ordinary least square regression. R^2 of 0.59 indicated that the model specify could explain up to 59% of variation in the dependent variable included in the model. The F-value was 11.43 and significant at 1 percent level of significance and this shows the goodness of fit of the model. The estimated regression coefficient of household size (X_3) was significant at 5% and positively related to marketing efficiency. Years of schooling (X_5) were positive and significant at 10%. The study revealed that marketing experience in years(X_7) was positive and significant at 1% level of probability. This implies that increase in years of experience would increase the efficiency of honey marketers. Source of honey (X_{10}) was positively significant at 5%. The study further revealed credit access (X_8) was positively significant at 10%.

Table 4: Multiple Regression Analysis Result

Variable	Coefficient	Standard. Error	t-value
Gender	-12.42303	15.69152	-0.79
Age	-.4158727	.68952	-0.60
Household size	.696754	.3018908	2.31**
Married	-28.96293	20.99012	-1.38
Years of schooling	.0081998	.0048995	1.67*
Monthly income from other source	.0000857	.0002251	0.38
Marketing experience	1.556328	.1840105	8.46***
Credit Access	.1646278	.0960291	1.71*
Member of organization	-14.69619	21.83794	-0.67
Source of honey	45.18143	22.53813	2.00**
Constant	177.424	40.31319	4.40
R^2	0.593.		

Note: (*), (**) and (***) are significant at 10%, 5% and 1% respectively
F value = 11.43(significant at 1%)

Challenges of Honey Marketing

Result of the data analysis revealed that the challenges faced by the marketers of honey include Adulteration which is 90.9% of the respondents in the study area, Other challenges include transportation (35.3%), others challenges (29.5%), low demand (27.1%), financial constraint (25.4%), lack of coordination (`18.9%), lack of information (18.9%), unstable market price(11.1%) and inadequate/ storage (8.2%) .

Table 5: Frequency distribution of the respondent based on their challenges

Problem	Frequency	Percentage (%)
Adulteration	222	90.9
Transportation	86	35.3
Others Challenges	72	29.5
Low demand	66	27.1
Financial constraint	62	25.4
Lack of information	46	18. 9
Lack of coordination	46	18.9
Unstable market price	27	11.1
Inadequate /Storage	20	8.2
Total	647*	

*Multiple responses

DISCUSSION

The age distribution of the respondents indicates that majority of them are still in their active working age. This can impact business aggressiveness of the respondents positively. This result is in agreement with the findings of Mshelia *et al*., (2013) where he found that about 66% of the respondents were between 30-49years of age. In the study area, more males are involved in honey production/sales/marketing enterprise. This indicates that male gender is more involved in Non-timber forest products (NTFPs) in the study area. This could be as a result of primitive system of honey production which predisposes mostly the men to practice. This conformed to findings of Afees *et al*. (2013) in which men were 82% of the respondents in their research work on economic analysis of modern honey production. Married individuals are actively involved in different activities of honey business contributing to improve welfare to the household. The result is strongly in line with the findings of Afeez *et al*., (2012) where 90% of respondents were reported to be married. The result of the study further revealed that religious affiliation does not pose a threat to the demand for NTFPs. This agrees with Famuyide *et al.*, (2013) who found 52.7% of their respondents were Christians. In their research on assessment and sustainable management of NTFPs used as food and medicine among dwellers in the urban area of Oyo state, Nigeria. The trade is not a religions-biased. The education distribution of the respondents implied that majority of honey marketers in Oyo are educated. This result is supported by the findings of

Musa et al (2014) where 75% of the respondents were educated.

The findings of primary occupation gives an indication that majority of the respondents spend more time in farming activities alongside with gathering and collection of NTFPs in order to boost the welfare of the households. This corroborates with findings of Mshelia *et al*., (2013) in their work on profitability analysis of honey marketing in Ganye and Toungo Local Government Area of Adamawa State, where 74% respondents were farmers. This study reveals that respondents had relatively large household size; the size of the household is expected to affect the amount of farm labour, determines the food and nutritional requirements of household and often affects household's food security. The result shows that most of the population explosion occurs in rural areas. However, they are important in the supply of family labour after schooling hours particularly in bee production, harvesting, processing and marketing. This corroborates with findings of Moses (2015) in study on "Value Chain and Economic Analysis of Honey Production in Nkwanta North and South Districts of the Volta Region" where 5.6 was reported as the mean household size of their respondents. Finding from this study reveals that a lot of marketers sell adulterated honey which can be harmful for human consumption. This is in line with the findings of Onwumere (2012) where 31.25% was adulterated in honey.

Honey marketers in the study area have to make their own savings if they really want to continue in the business. The result corresponds with the findings of Mshelia *et al.*,(2013) on their research titled "Profitability Analysis of Honey Marketing in Ganye and Toungo Local Government Areas of Adamawa State, Nigeria", where (78%) of the respondents use their personal savings as source of capital. This is also supported by Oladejo (2016) where (80.0%) of the respondents used their personal saving to finance their business. The result of the study also implies that most of the respondents transact honey that has been refined and bottled. The findings of the study also indicate that majority of the respondents in the study area used family labour in performing marketing activities. This will enhance them to spend little on labour cost and increase their performance which may therefore bring an increase in the level of the marketer's income. This corroborates the findings of Adeola, (2011) where 55.1% used family labour for their marketing activities. Marketing efficiency of the respondents increases with increase in household size. This means the more the family size, the less respondents spent on labour cost, as household members help in marketing activities. The study shows that the higher the educational qualification, the higher their marketing efficiency (performance rate). Education is one of the relevant variables in marketing because it influences decision in marketing activities. Respondents that got their honey from personal apiary have better marketing efficiency than from other sources, this could be base on the fact that they have good quality of honey, not adulterated honey and timeliness to have access to honey at any particular period for sales. Honey marketers that have access to credit are found to be more efficient than the group that had no access to credit. The regression result revealed that all the significant variables are positively related to the marketing efficiency of the honey marketers. This is a likelihood that the honey marketing efficiency will increase. It was therefore inferred that year of schooling, number of years in the marketing of honey, household size, source of honey and credit access are the major determinants of honey marketing efficiency in the area of study.

CONCLUSION
The study concluded that market structure for honey in the study area tends towards imperfect competition. Honey marketing functions are performed efficiently in the study area. The prominent marketing challenge faced by the respondents is adulteration of product. Determinants of marketing efficiency in the study area include; household size, years of schooling, marketing experience, credit access and source of honey. All significant variables have positive relationship with the marketing efficiency of the respondents.

Recommendations
1. Based on the finding that the year of schooling affect marketing efficiency the more educated the respondents the more efficient they are, therefore, this study recommends that government and non-governmental organization should assist marketers through enlightenment campaigns, adult education seminars and workshops. This will improve the marketing system in all ramifications.
2. Based on the finding that access to credit facilities improves marketing efficiency, government and non-governmental organizations should assist marketers by providing timely and affordable loans/credit.
3. The study further recommends that each marketer should be given a unique identification number so as differentiate their product from adulterated one. The marketing environment where the honey is being marketed should always be monitored by the environmental health workers to ensure cleanliness and ensure that there is proper hygienic state as honey is edible.

REFERENCES
Aburime, I.L.; Omotesho, O.A. and Ibrahim, H. (2006): An Analysis of Technical Efficiency of Beekeeping Farms in Oyo state, Nigeria. *European Journal of Social Science,* **1**: 1 - 8.

Adebiyi, F.M, Akpan, I., Obiajunwa E.I., Olaniyi H. B.(2004). Chemical and Physical Characterization of Nigerian Honey. *Pakistan Journal of Nutrition* vol. **3**: PP 278-281.

Adedeji, N.K and Omoba O. J. (2016).An assessment of profitability of honeyproduction

in Edo State, Nigeria. *African Journal of Agricultural Economics and Rural Development.* **4** (6): 442 – 445.

Adeola A.O, Bifarin, J. and Folayan J. A (2011): profitability of Honey Marketing in Ibadan Metropolis of Oyo State, Nigeria: *Journal of Agricultural Science,* vol. **2**(2): 113-119.

Afees, B. A.,Olufunmi, A and Saidat, A.A. (2013) .Economic Analysis of Modern Honey Production in Ibarapa East Local Government Area of Oyo State:*International Conference on Sustainable Environment and Agriculture;DOI: 10.7763/IPCBEE.* 57(8)**:** 166-169.

Animene, C.P (2007). Economic Analysis of Honey Production in Edo state Nigeria. An Unpublished HND Research Report submitted to the Department of Agricultural Extension and Management, Federal College of Agriculture, Akure. PP. 39.

Azeez F.A.,Akankuku A.I., And Ojo O.B.(2012).Assessment of Honey Production As a Means of Sustainable Livelihood In Ibadan Metropolis; *Continental .Agricultural Economics,* vol. **6** (1): 46–51.

Famuyide, O.O., Adebayo, O., Bolaji-Olutunji, K.A., Awe, F., Owoeye, A.Y., Awodele, D.O. and Adeyemo, A. (2013): Assessment and Sustainable Management of Non-timber Dorest Products Used as Food and Medicine Among Urban Dwellers in Oyo State; *Journal of Horticulture and forestry*, vol. **5**(11), 186-193.

FAO (1996). Food and Agricultural Organization, Production year book. Food and Agriculture Organization of United Nation, Rome, PP. 4-11.

Halil, K and Nuray K. (2007). "Factor Affecting Honey Production in Apiculture in Turkey" *Journal of Applied Science Research,* vol. 3: PP 983-987.

Knox,A.,(2004). Harnessing Honey Healing Power. (http//news.bbc.co.uk/1/hi/health/378767.stm).

Moses M.J.(2015): Value Chain and Economic Analysis of Honey Production in Nkwanta North and South Districts of the Volta Region; A Thesis Submitted to the Department of Agricultural Economics, Agribusiness and Extension, College of Agriculture And Natural Resources in Partial Fulfilment of the requirements for the degree of Master of Philosophy.

Mshelia, S.I., Dia Y.Z and Ahmed.,M.A.(2013). Profitability Analysis of Honey Marketing in Ganye and Toungo Local Government Areas of Adamawa State, Nigeria; *Middle-East Journal of Scientific Research,* vol. **13**(2): PP 207-212

Musa D Baba, Jamilu S Dabai, Ishaq D Sanchi, Amina Y Sabo (2014). Profitability of Traditional Honey Production InZuru Emirate, Kebbi State, Nigeria.*World Rural Observation*; vol. **6**(3): 44-49. ISSN: 1944-6543 (Print); ISSN:1944-6551 (Online). http://www.sciencepub.net/rural. 6

Oladejo, Joana Adefemi(2016): Profitability Analysis Of Cassava Tuber Marketing In Oyo State, Nigeria: Implication For Sustainable Development Goals; *Science and Agriculture,* vol. **16**(2): PP 67-73.

Oluwaseun T. O, (2009). Economics of Honey production in Ijebu Division of Ogun State. UnpublishedMsc.Thesis, OlabisiOnabanjo University, Ogun State, Nigeria.

Onwumere J., F. Onwukwe., C.S. Alamba (2012).Comparative Analyses of Modern and Traditional Bee Keeping Entrepreneurships in Abia State, Nigeria. *Journal of Economics and Sustainable Development*; Vol.**3**: No.13, ISSN 2222-2855 (Online)

Oyeleye, B. (2003). Honey production in Nigeria.A Three-day Beekeeping and Honey Production Training Workshop conducted by Centre for Bee Research and Development (CEBRAD), Ibadan, held at the Faculty of Agriculture, University of Ilorin.

Paterson, P.D. (2006). The Tropical Agriculturalist: Beekeeping. Wageningen: Macmillan Publishers Limited, PP: 1-5.

Philip.K,Gary,A., John,S and Veronica W.(1999).Principles of Marketing; second Wuropean Edition Published;ISBN0-13-26225 PP 4-8.

Shanbandeh, M. (2019). Honey market worldwide and in the U.S. – Statistics and Facts, Statista report.