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Socioeconomic determinants of hunters' participation in bush meat trade in Ibadan Oyo State Nigeria

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INFO

Keywords
profit
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wildlife trade

ABSTRACT

This study investigated the socio-economic determinants of hunters' participation in bush meat trade in Ibadan metropolis. Egbeda Local Government and Oluyole Local Government were purposively selected based on the intensity of bush meat trade there. Thirty percent of the population of registered hunters in these Local Government areas were randomly selected. A total of 126 respondents were interviewed through the use of a semi-structured questionnaire. Data obtained were analyzed through descriptive statistics and inferential analysis. The result revealed that (100%) of the respondents were men with majority (93.7%) of them within the age of 20-50 years. Majority (61%) had primary education while others (38%) had secondary education. Forty-four percent, 35% and 21% had 11-15, above 15 and below 10 years working experience respectively. More than half (61.5%) of the respondents engaged in hunting as their primary occupation while 14.3% combined farming with hunting. The average weekly profit made by hunters' ranges from N4,000 to N50,000. Pearson Correlation analysis shows no significant relationship between years of experience and weekly profit ($p<0.05$). It also showed a statistically significant relationship between weekly profit and the months of highest abundance of bush meat to hunters ($p<0.05$). The study concludes that wildlife trade in the study area is influenced by level of education, limited alternate source of income and the profitability of the trade. The study recommends that the Government should implement working policies that will help to regulate and reduce over exploitation of wildlife; enhance the efficiency of wildlife trade and ensure its continuity.

Palavras-chaves
lucro
motoristas
carne silvestre
comércio da vida selvagem

RESUMO

Determinantes socioeconômicos da participação dos caçadores no comércio de carne de caça no estado de Ibadan Oyo, Nigéria. Este estudo investigou os determinantes socioeconômicos da participação dos caçadores no comércio de carne de caça na metrópole de Ibadan. O Governo Local de Egbeda e o Governo Local de Oluyole foram propositadamente selecionados com base na intensidade do comércio de carne de caça lá. Trinta por cento da população de caçadores registrados nessas áreas do Governo Local foram selecionados aleatoriamente. Um total de 126 respondentes foram entrevistados por meio de um questionário semiestruturado. Os dados obtidos foram analisados por meio de estatística descritiva e análise inferencial. O resultado revelou que (100%) dos entrevistados eram homens com maioria (93,7%) deles na faixa etária de 20 a 50 anos. A maioria (61%) tinha o ensino fundamental e os demais (38%) o ensino médio. Quarenta e quatro por cento, 35% e 21% tinham 11-15, acima de 15 e abaixo de 10 anos de experiência de trabalho, respectivamente. Mais da metade (61,5%) dos entrevistados tinha a caça como ocupação principal, enquanto 14,3% combinavam a agricultura com a caça. O lucro médio semanal dos caçadores varia de N4.000 a N50.000. A análise de correlação de Pearson não mostra relação significativa entre anos de experiência e lucro semanal ($p<0,05$). Também mostrou uma relação estatisticamente significativa entre o lucro semanal e os meses de maior abundância de carne de caça aos caçadores ($p<0,05$). O estudo conclui que o comércio de vida selvagem na área de estudo é influenciado pelo nível de educação, fonte alternativa limitada de renda e a lucratividade do comércio. O estudo recomenda que o Governo implemente políticas de trabalho que ajudem a regular e reduzir a exploração excessiva da vida selvagem; aumentar a eficiência do comércio de vida selvagem e garantir a sua continuidade.

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INTRODUCTION

Bush meat is one of the most valued non timber forest products especially in Africa. It ranges from small sized terrestrial wild animal like bush rat to very big sized terrestrial wild animal like the Elephant. We also have some aquatic freshwater animals like the crocodile that are regarded as Bush meat. It has served as a vital source of animal protein, helping to fight against food insecurity in areas with little or no alternatives sources of protein (Fa and Nasi, 2015).

Bush meat has also served as a major source of income to hunters who engage in bush meat trade (Loibooki et al., 2013). This trade in its economic sense, has helped a lot of rural dwellers to afford to live above the poverty level or to supplement their other means of livelihood. The prices of wild animal and the profit made from the trade by the hunters is a source of motivation to continue trading.

However, this increase in bush meat trade has led to a major threat to the population of wild animals in existence. Wittemeyer et al. (2014) stated that wildlife populations in Africa is currently being faced with a lot of anthropogenic threats ranging from human population growth leading to land encroachment, habitat destruction and illegal hunting of wildlife. Akinsoratan et al. (2020) noted that the major urge for commercial scale bush meat trade goes beyond hunting for consumption but for the market sales derived by the hunters. Such turn out of event is a bigger threat to conservation beyond subsistence hunting (Duffy et al., 2016).

The need to study the social and economic drivers of hunters for participating in bush meat trade cannot be overemphasized. Unemployment or underemployment of hunters (Lindsey et al., 2011) are key economic factor that motivates bush meat hunting and trade. Some social factors that drives bush meat hunting and trade are ethnic groups, social status, taste and preferences. There is variance in the level of trade among different ethnic groups in Africa (Ceppi and Nielsen, 2014). Some also believe that they garner more prestige and social status from the copious number and enormous sizes of bush meat they are able to hunt (Lindsey et al., 2013). Gender is another predominant factor that drives hunting and trade of bush meat. Hunters are predominantly male, therefore, male children born into the family of a hunter automatically becomes the next hunter in line to continue the family business (Guy et al., 2004).

The main thrust of this research is to examine the social and economic factors that serves as determinants of hunters' participation in wildlife trade in Ibadan ranging from the age, gender, tribe, educational background, marital status, occupation and profit.

MATERIAL AND METHODS

This study was carried out in Egbeda Local Government and Oluyole Local Government within Ibadan metropolis. The areas were purposively selected based on the predominance of bush meat trade in those local governments. Ibadan is at longitude 7º 2' and 7º40'E and latitude 3º 35' and 4º 10'N is the largest indigenous city in tropical Africa and it is the capital of Oyo State, Nigeria. Ibadan is 128 km north-east of Lagos and 345 km south-west of Abuja, the Federal Capital Territory (Oduntan et al., 2016).

Egbeda Local Government is at longitude 3^0 58' and 2^0 88'E and latitude 7^0 22' and 46.55'N. It was carved out of Lagelu Local Government in 1989 with the administrative headquarters at Egbeda. The Local Government Area shares boundaries with Osun to the East, Lagelu Local Government to the North, Ibadan North east Local Government to the west and Ona Ara Local Government to the South. Egdeda Local Government consist of eleven wards and Asejire market is located within this Local Government.

Oluyole Local Government is at latitude 7°13'59.99" N and longitude 3°52'0.01" E. It is one of the oldest Local Government council in Oyo State. The Local Government has its headquarters at Idi-Ayunre Old Lagos/Ibadan road. It shares boundaries with four Local Government Area which are.; Ibadan South-West, Ibadan South-East, Ona-Ara and Ido all within Ibadan Metropolis. While it shares boarders with Ogun State through Egbeda-Obafemi, Odeda and Ijebu-North Local Government Areas. There are ten wards within the local government which includes Odo ona kekere where we can find one of the major bushmeat market in Ibadan.

Both primary and secondary data were used for this study. Primary data were obtained from hunters using semi-structured questionnaire. There are 11 wards at Egbeda Local Government, and 10 wards at Oluyole Local Government. This makes a total of 21 wards. We have an average number of 20 registered hunters in each wards. Therefore, the total estimated number of hunters in Oluyole and Egbeda Local Government is 420. Thirty percent of these population of registered hunters (n=126) was selected using random sampling. Data generated were analyzed using Statistical Package for Social Sciences (version 21). It was subjected to: Descriptive statistics such as frequency and percentage; Inferential statistics such as Correlation, ANOVA and Regression and the

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Statistical significance was at $\alpha_{0.05}$ (Arkkelin, 2014). Secondary data were obtained from published journals, previous research works, textbooks, internet and other publications relevant to this research work.

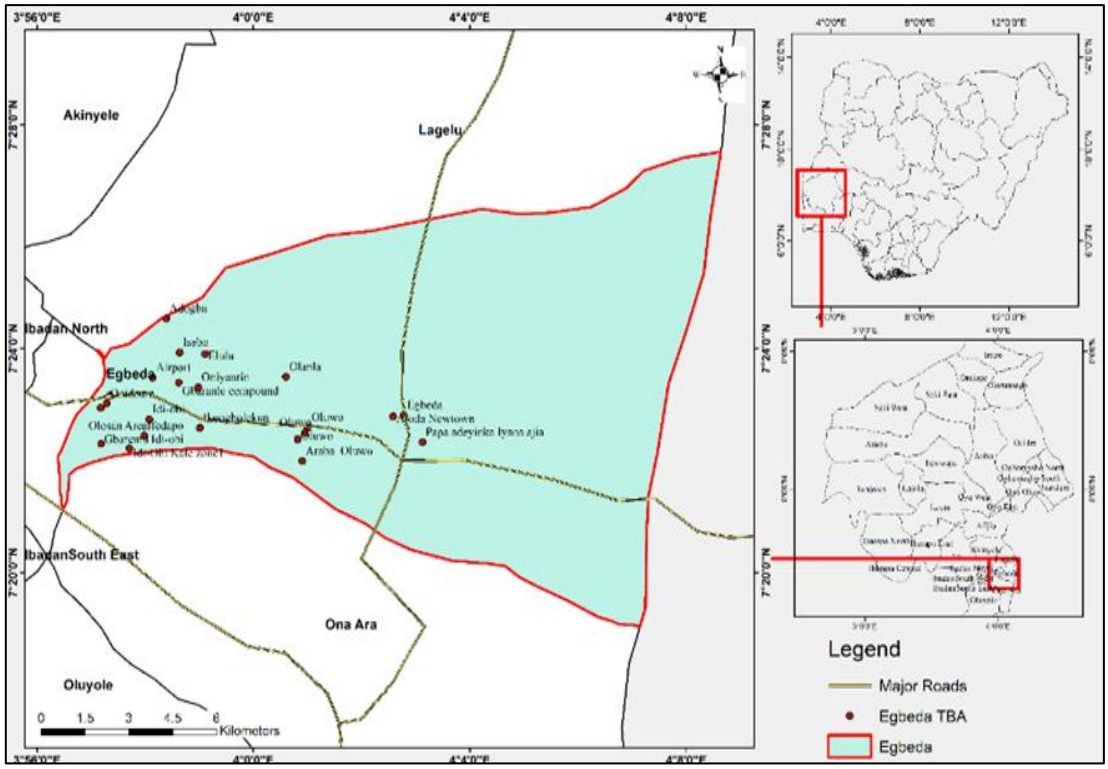

Figure 1 - Map of Egbeda local Government

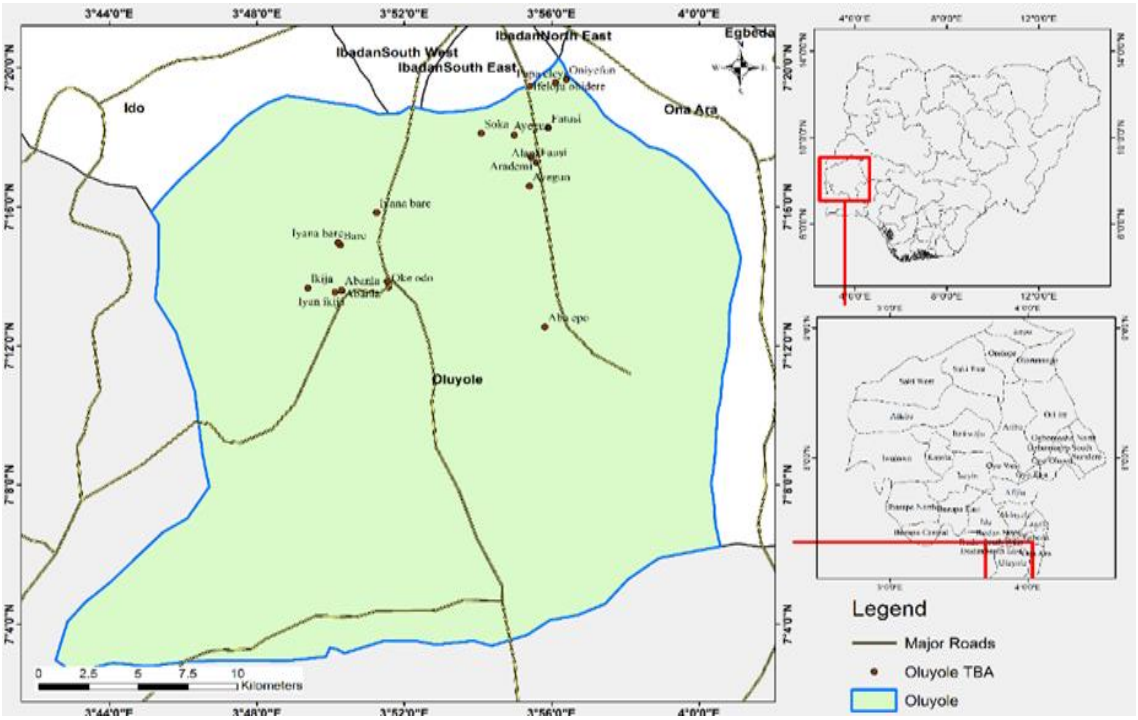

Figure 2 - Map of Oluyole local Government

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RESULTS AND DISCUSSION

Table 1 shows the socio-demographic characteristics of respondents. All (100%) of the actors involved in bush meat hunting are males. This is in line with the findings of Guy et al. (2004) in a survey of bush meat commodity chain in West Africa that states that all hunters are male.

Table 1 - Frequency distribution on demographic characteristics of bush meat hunters

Background Information	Label	Frequency (f)	Percentage
Sex	Male	126	100
	Female	0	0
Age	<20	-	-
	20-30	25	20
	31-40	55	43.7
	41-50	38	30
	>50	8	6.3
Education	Primary education	78	61.9
	Secondary education	48	38.1
Years of experience	<6	9	7
	6-10	18	14
	11-15	55	44
	16-20	20	16
	21-25	16	13
	>25	8	6

Majority (93.7%) of the bush meat hunters in the study area are within the economically active age of 20-50 years with those within the range of 31-40 (43.7%) predominating. This was also confirmed by the research carried out by Akinsorotan et al. (2020) in his research on dynamics and socio economic drivers of illegal l hunting of wild animals for consumption in Oba Hills Forest Reserves in Southwestern Nigeria stating that majority of the hunters fell within the active age group of 31-40.

Over 61% of the respondents had primary school leaving certificates while about 38% had the senior secondary school certificates. None of the respondents had tertiary education. This is in contrast with the findings of Adedapo and Adekunle (2013) that stated that most (76.7%) of those involved in bush meat sales in South-Eastern Nigeria had tertiary education. This will in a large way have a diverse effect on wildlife trade and also, it will tell on the level of understanding of the respondents about the term "Conservation". Osunsina et al. (2016) in the research on "Bush meat Harvest and Trade in Ikorodu Local Government" and also Adekunle et al. (2012) discussed that there is a significant relationship between level of education and the knowledge of wildlife conservation and sustainable use. The more educated those involved in the trade are, the more willing they are to conserve and sustainably utilize the wildlife resources.

Furthermore, it is shown in table 1 above that 44% of the respondents had working experience of 11-15 years, 35% had 16 years or more experience,14% had working experience ranging from 6-10 years while a few (7%) of them had less than 6 years working experience. This is similar to the result of Adefalu et al. (2012) that explained that majority (95%) of those involved in the trade of wildlife has more than 5 years working experience and this makes their perception about wildlife valid enough to be reckoned with.

Figure 3 below shows that more than half (65.1%) of the respondents' primary occupation is hunting only while 14.3% combined hunting with farming, 6.3% are primarily mechanics while another 6.3 are basically are truck drivers.

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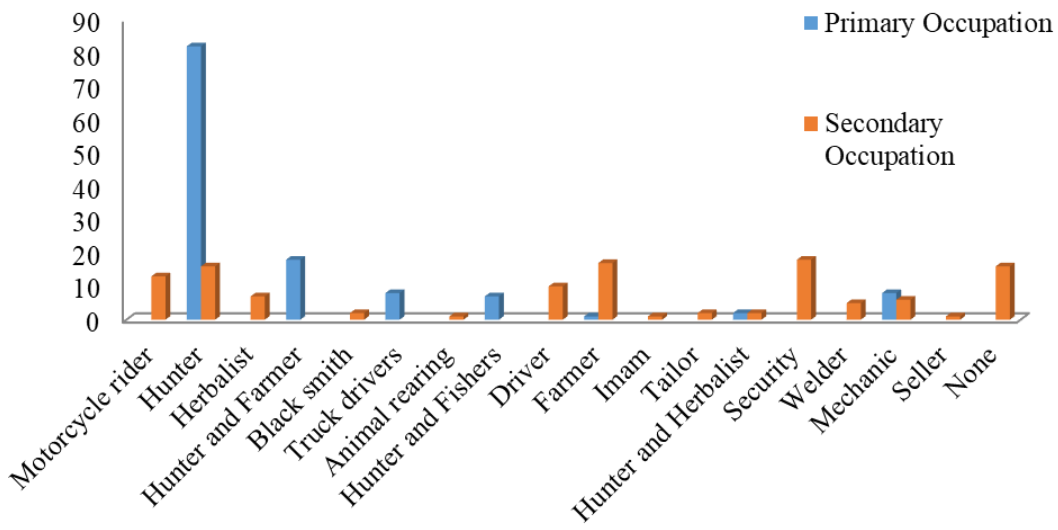

Figure 3 - Hunters' occupation

It also revealed that most of the respondents have one form of secondary occupation or the other that serves as subsidiary source of income to them apart from hunting and only 16 (12.7%) have no other source of income. Considering the diversity in the alternate sources of income amidst the respondent, we can infer that the income gotten from the other sources is not enough to sustain them hence, the need to keep hunting. The low level of education does not afford them the opportunity to get well paid jobs that could enhance their income earning abilities (Akinsorotan et al., 2020). This corroborate the findings that the more educated ones do not engage in hunting as much as those that are not so educated (Wilfred and MacColl, 2010; Moro et al., 2012).

Duffy et al. (2016) and Lindsey et al. (2013) also explained that most people involved in farming will most likely involve in hunting, using the money garnered from farming to get better hunting equipment. This is evidenced in the result in Figure 3 above that majority (14.3%) of those who chose farming as their primary occupation coupled it with hunting.

Figure 4 revealed that most (90.5%) of the hunters have abundant bush meat catch between December to March while the others (9.5%) said they have such abundance between April to July.

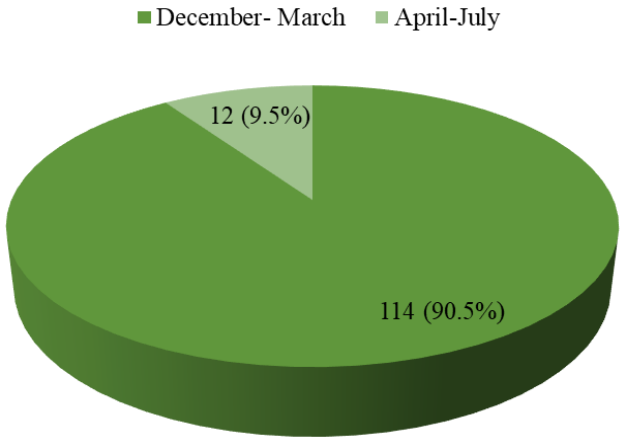

Figure 4 - Month of abundance of bushmeat

It shows that the highest sales do occur at Dry season and this is because at that season, there is little or no rain. The animals are forced to come out and search for food and water, making them highly exposed to predators (Bifarin et al., 2008). High degree of bush burning that occurs at dry season is also a reason for habitat loss of animals and this in turn make them more visible to the hunters.

Results in Table 2 above also revealed that the weekly profit made by bush meat hunters ranges from **N**4,000 ($9.69) to **N** 50,000 ($121).

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Table 2 - Frequency distribution showing profit made by Hunters

Questions	Response (₦)	Frequency	Percentage
How much do you make per week (Profit)	4,000	5	4.0
	5,000	5	4.0
	6,000	3	2.4
	7,000	3	2.4
	10,000	21	16.7
	12,000	10	7.9
	15,000	16	12.7
	20,000	24	19.0
	25,000	4	3.2
	30,000	9	7.1
	40,000	13	10.3
	50,000	4	3.2
	I can't say	6	4.8
	Depend on how well I kill	3	2.4

This reveals that trade in bush meat is very lucrative. Hence, a lot of bush meat traders will long to continue such business to help improve their means of livelihood. This is corroborated by the work of Osunsina et al. (2016). Adefalu et al. (2012) also stated that the range of profit made by bush meat traders ranges from as little as **N**5000 to above **N** 20,000. This further shows how profitable the trade of wildlife can be. However, if not properly managed can cause a great decline in number of animals in the wild and can result in extinction. This will in turn affect the bushmeat trade (Tee et al., 2012).

The results of Pearson Product Correlation in Table 3 shows that there is no statistically significant linear relationship (P<0.05) between the years of experience and weekly profit had.

Table 3 - Pearson correlations

Variables	R	N	P-value	Decision
Year of experience vs amount make per week	0.011	117	.909	Not Sig
Month of abundance of bush meat vs. Amount made per week	0.224	117	.015	Sig

Correlation is significant at the 0.05 level (2-tailed).

The Pearson correlation (r = 0.11) shows that though the magnitude of association is positive, it is weak. It also revealed that there is a statistically significant linear relationship (P<0.05) between the month (December-March) hunters experience abundance of bush meat and the weekly profit they have. It showed that the two variables are positively correlated (r=0.224), that is during the month of December till March there will be increase in the weekly profits made due to abundance of bush meat at such times.

CONCLUSIONS

The study concludes that, with the current scale of operation, wildlife trade in the study area is influenced by level of education, lack of substantial alternate source of income and the high profitability of the trade. The trade is highly profitable and has great potentials in contributing to the economic wellbeing of traders engaged it. The study recommends that the Government should implement working policies that will help to regulate and reduce over exploitation of wildlife and enhance the efficiency of wildlife trade as well as ensure the continuity of such trade.

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