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Socio-economic characteristics of charcoal marketers in bodija market of Ibadan, Oyo state, Nigeria

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ABSTRACT

The paper analyzed the socio economic characteristics of charcoal marketers in Bodija market of Ibadan, Oyo State, Nigeria. Primary data was used for the study. The data was collected using structured questionnaires administered to 57 charcoal marketers from different parts of the market. Data were collected on the socio-economic characteristics of the marketers such as age, marital status, educational status, gender, cost and returns. Both descriptive and inferential statistics were employed to analyze the data and regression analysis was used to examine the relationship between gross margin and socio economic characteristics of the marketers. The result indicated that most of the marketers fall between two age groups which are the active age group (21-40 years) and the aged (>50 years). Female (73.7%) dominated charcoal market in the study area. Similarly, 73.7% of the marketers were married and used the business to support their home. One-fourth of the marketers have no formal education. Majority has primary and secondary school education (68.4%) and only 7% has tertiary education. Marketing is very important for any marketers to flourish in charcoal business with a minimum of 1-5 years experience. Yoruba is the dominating tribe in charcoal business in the study area. Wholesalers (42.1%), retailers (29.8%) and those that act as both wholesalers and retailers altogether, that is, wholesaler/retailers (26.3%) are mostly found actively engaged in charcoal business in the study area with only 1.8% of the producer/processors. Charcoal market association is very strong in the study area as 98.2% of the marketers are aware of the association and fully participate as members. Sex, marital status and amount of capital set up owned by the marketers have significant impacts on the gross margin realized in the business. It is therefore recommended that there should be the creation of proper awareness on the prospect of charcoal business among young people; this will be an avenue to alleviate the scourge of unemployment in the study area and in the country at large.

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Introduction

Charcoal industry is a multibillion dollar global industry. Over 40million metric tonnes of charcoal are consumed globally and approximately 2.4billion people rely on wood and charcoal for their daily fuel. Nigeria currently ranks second to Brazil in the production of charcoal. The western countries particularly prefer Nigeria's charcoal, as the country is rich in tropical hardwood, which burns slower and is hotter. Nigeria currently exports 380,000 metric tonnes of charcoal annually^[11].

For decades, charcoal has been an important source of energy with wide acceptance in global market. Charcoal is one of the mostly used urban fuels in African continent as well as some developed countries. Hence, it is a major source of income for these countries and her dwellers. The production, transport and combustion of charcoal constitute a critical energy and economic cycle in the economies of many developing nations^[9]

Half of the world's population uses biomass for cooking hence, million tones of charcoal is being consumed every year worldwide. Developing countries account for nearly all of this consumption in which Nigeria is one; and Africa alone consumes half of the world's production. Nigerian charcoal is in high demand among EU countries because they are of good quality, easy to light and can burn for a long time^[3] [1] found out in their recent studies on charcoal that charcoal enterprise is

usually carried out on part time basis. This implies that charcoal business is playing a vital role in meeting the socio economic needs of most people that involve in it. Similarly, charcoal is the oldest after fire wood old in Ibadan though some other energy sources such as wood, liquefied natural gases (LNG) and kerosene are also being regularly.

Wood charcoal is in high demand in different parts of the world especially in Europe. Nigeria is one of the African countries where it is easiest and cheapest to export charcoal. It cost an average of N680000 to export a 40ft container of charcoal (bulk)^[10]. Charcoal is also one of those products available in commercial quantity as several tons are always readily available for export especially during dry season. Wood Charcoal of Nigerian origin is no doubt one of the best in the world and this made it to be highly sought after^[10]

Charcoal enterprise as well as other endeavor concerning renewable energy sources is an important aspect of rural economies. This is because domestic energy consumption is the major component of economies of most sub-Saharan Africa. However the scope for other forms of renewable energy is limited due to lack of technological breakthrough and invention. Thus, charcoal remains the most important source of energy for domestic and small scale commercial processing and food preparation namely: sugar, roasting of yam, maize, and plantain

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and so on^[8]. Increase in demand from the international market has made the charcoal industry an important part of the Nigerian economy, with local suppliers scarcely able to meet demand in Europe and America^[11]. Agro forest as natural resources improves the socio-economic livelihood of rural people through income generation; improve human welfare, supply of food and nutrition, fire wood, fogger for animal consumption as well as employment generation^[6]. Return on Investment on wood charcoal export is an average of 30% per transaction^[10]. Data gathered from 500 commercial charcoal producers and 50 charcoal buyers in Ghana indicated that commercial charcoal production is a major source of livelihood. While charcoal producers earned monthly incomes of about GH¢200, the buyers' earned between GH¢82 - 2 343 per month^[5]. Increase in firewood and other non timber forest product such as charcoal was reported to include rural and urban poverty, low agricultural productivity, inequalities in land holding and security of tenure, collapse of traditional resource sharing produces, rapid urbanization, sharp division in the social-economic role of women and men^[7]. On a local scale, the effects of charcoal use are mostly related to inefficiency of production, forestry and land degradation, and the transportation distances. Because most of the energy of the fuel woods is lost in the production process, charcoal users ultimately use much more fuel wood than direct fuel wood users.

In Nigeria, the rural people and even charcoal producers are too poor to use charcoal, and the demand for charcoal is found most in the urban areas. Although charcoal policies, kiln production and improvements have been studied to some extent, many aspects of the socio-economic characteristics of the marketers have received little or no attention. This study will therefore bridge such gap in knowledge. It will also be a vital tool for policy makers. The intent of this study is to examine the influence of gross margin on the socio-economic characteristics of charcoal marketers as well as the influence of socio-economic characteristics of the marketers on the business in Bodija Market of Oyo state, south-western, Nigeria.

Methodology

Study area

The study area of the research is Bodija market which is located in the Ibadan North Local Government area of Oyo State, Nigeria. It is about one kilometer from the University of Ibadan along the road to the State Government's Secretariat which is also about one kilometer away. It is the main recipient and distributor of all goods (which range from forest products to agricultural products as well as industrial goods) that moved from different parts of the country to Ibadan metropolis and some parts of the Yoruba south west. Bodija market is also one of the largest food markets in Nigeria. It is composed of thousands of independent sellers who compete for sales^[2]. All major food items are sold in different sections and there are also sections for charcoal marketers while other non timber forest products such as fuel wood, palm-kernel and so on scattered through-out the market. The market serves as an important meeting point for both buyers and sellers in south west Nigeria and this makes it suitable as the study area.

Primary data was used for the study. Data were collected on the economic- characteristics of the marketers such as age, marital status, educational level and gender. Also, data on cost and returns on charcoal marketing were also gathered. Data for the study were obtained from a total sample of 57 randomly selected respondents through interviews schedules, application of structured questionnaires and personal observations.

Analytical Techniques

Descriptive statistics such as frequency counts and percentages were used in the study. While inferential statistics such as gross margin and regression analyses were used to interpret the data. In the analysis, gross margin was the regress and the regressors were the socio-economic characteristics. The implicit form of the equation in this:

$$GM: f(x_1, x_2, x_3, x_4, x_5, x_6, x_7, +thi) \quad [8,9]$$

Where;

GM = Gross margin (₦) of the marketers.(regress)

X_1 = Age of respondents (years)

X_2 = Marketing experience in years

X_3 = Educational status (years)

X_4 = Sex (D=1, if male and 0 if female)

X_5 = Marital status (D= 1, if married and 0 if otherwise)

D= Dummy variable.

F = the functional relationship.

Results and interpretation

Table 1: Socio-Economic Characteristics of Charcoal Marketers

Characteristics	Frequency	Percentage
Age in years		
21-30	11	19.3
31-40	21	36.8
41-50	11	19.3
>50	14	24.6
Total	57	100.0
Gender		
Male	9	15.8
Female	48	84.2
Total	57	100.0
Marital Status		
Single	9	15.8
Married	42	73.7
Widow	3	5.3
Divorced	3	5.3
Total	57	100.0
Educational Status		
No formal Education	14	24.6
Primary Education	21	36.8
Secondary Education	18	31.6
Tertiary	4	7.0
Total	57	100.0
Marketing Experience (years)		
1-5	15	26.3
6-10	24	42.1
11-15	11	19.3
16-20	7	12.3
Total	57	100.0
Tribe of marketers		
Yoruba	55	96.5
Igbo	1	1.8
Hausa	1	1.8
Total	57	100.0
Types of sellers		
Producer/ Processor	1	1.8
Wholesaler	24	42.1
Retailers	17	29.8
Wholesalers/Retailers	15	26.3
Total	57	100.0
Marketing Association		
Yes	56	98.2
No	1	1.8
Total	57	100.0

Source: Field survey, 2014

Socio-economic characteristics of charcoal marketers

Table 1 shows that most of the marketers fall between two age groups which are the active age group (21-40 years) and the

aged (>50 years). The active group dominates the production and wholesaling section due to the rigorous activities it entails such as travelling, loading and off loading, distribution and so on while the retail section was dominated by the aged due to the sedentary nature. The result also reveals that charcoal business is for both the young (31-40 years old) and the aged (more than 50 years) though there are more young people (56.1%) than the older ones (43.9%). This shows that age is a critical role in the business of charcoal marketing: the more energetic an individual is the higher the possibility of his or her to perform better than the very young or the very old marketers but both young and old are still welcomed in the business. This result therefore confirms earlier finding that charcoal business can be done by both young and old people depending on the aspect of the business an individual want to specialize in^[14].

Table 1 also revealed that 73.7 percent of the marketers were females and 26.3 percent was males. This hence implies that charcoal marketing is a female dominated business in the study area. Most of these females were young and active and this enables them to be able to withstand the rigorous nature of the business. This suggests that charcoal enterprise is more emotional; as females are the one that mostly use and demand for charcoal so, female marketers are the ones that know the best way to handle their gender. The males (15.8%) mostly dominates the production section while the females are mostly found in wholesaling, retailing and some serve as wholesaler and retailer at the same time. Hence, there exist more females than males in the business.

Table 1 also revealed that majority (73.7%) of the marketers were married. This result is in line with the report that married people have more responsibility such as the provision of foods, education and health and well being of their spouses and children. This may be why the business is dominated by the married people unlike the case for the singles who may not likely have other people to take care of beside themselves^[1]. The result also revealed that (15.8%) of the marketers were singles while 5.3 percent were both widow and divorced respectively. This suggests that charcoal business is highly accommodating as anybody with whatever marital status can find a place in it. Hence, charcoal business can be done by anyone who is ready to put in his best just like in any other business^[3].

Multiple Regressions Analysis

Four functional forms were tried and linear functions gave the best fit, hence it was selected as the lead equation. Its explicit form is thus presented:

$$GM: = - 12605.954 - 4059.176X_1 + 34528.046X_2 (1.846)^{xxx} - 14815.766X_3 (-1.298)^{xxx} - 7580.375X_4 + 8444.630X_5 + 0.303X_6(3.918)^x$$

From the regression result, six explanatory variables were used which include age, sex, marital status, educational level, marketing experience and capital set up. Three of these variables namely; sex, marital status and capital set up all contributed significantly to the gross margin (Table 2)

Table 2. Regression Analysis of Gross Margin on Charcoal

Variables	Parameters	Coefficient	T-Ratio
Constant			-0.233
Age	(X ₁)	-0.077	-0.495
Sex	(X ₂)	0.234	1.846 ^{xxx}
Marital status	(X ₃)	-0.180	-1.298 ^{xxx}
Educational status	(X ₄)	-0.120	-0.899
Marketing experience	(X ₅)	0.146	1.028
Capital set up	(X ₆)	0.485	3.918 ^x

Source: Field Survey, 2014

x, xx, xxx indicate 1%, 5% and 10% level of significant.

The variables included in the model have explained 54.4% of the variations in the dependent variable (gross margin) as revealed by the coefficient of multiple determination (R²) the regression is significant at 1% level as shown by the magnitude of F statistics.

The coefficient of multiple regression or determination is 0.5440 and it is significantly high at 1 percent including high relevance of the independent variables in explaining the model implies that 54.4% of the variation in the gross value of the gross margin is accounted for by the independent variables included in the model which are age, sex, marital status, educational level, marketing experience and capital set up. From the regression results obtained, it is observed that only the coefficient of the value of capital set up is significant at 1 percent. Also half of the regression coefficient has positive indicators while the other half has negative indicators. Those with positive indicators include sex, marketing experience and capital set up while those with negative indicators are age, marital status and educational status. The regression coefficient of sex is positive and significant. It thus implies that sex (gender) has a significant impact on the value of gross margin which may be true in the sense that men are believed to be physically stronger than women and this gives them an advantage in processing, sourcing and marketing of charcoal than women, this increase their gross margin; it also implies that, the higher their processing, sourcing and marketing activities, the higher the gross margin they realized.

Similarly, the regression coefficient of marketing experience is positive but not significant. This implies that the higher the marketing experience a marketer has, the higher the gross margin such marketer will realize. Also, the regression coefficient of capital set up is positive and significant. This indicates that the amount of capital set up of a marketer has significant effects on the gross margin realize from charcoal business. It thus implies that a marketer with high capital set has the tendency of making high gross margin because such marketer will be able to operate at higher level, enjoy economies of large scales and little risks.

The regression results also revealed that the coefficient of age is negative and not significant. This revealed that young charcoal marketers realized more gross margin than the older ones because the younger ones will be able to withstand the business stress, they are energetic to take more risks and have more aspirations to go all way out in making more revenue with little investment unlike the older ones. The regression coefficient of marital status is similarly negative but significant. This implies that marital status of marketers has significant impact on the gross margins make in the business. This may be true in the sense that single marketers are free to put all their efforts, energy and time in the business so as to enjoy higher returns since there is little or no distraction from family members. They have their time, capital and decisions to themselves and are likely able to do their best in making it in the business than the married marketers who may be distracted and encumbered by the family responsibilities. This implies that the more a marketer involve in family affairs at the expense of the business, the lower the gross margin they realize but the more a marketer avoid distraction from family ties and responsibilities, so as to give himself fully to the business, the higher the gross margin he will make.

Also, the regression coefficient of educational status is negative and not significant. This implies that educational status has no significant impact on the gross margin but the higher the

educational status of a marketer, the lower the gross margin that will be realized and vice-versa.

Conclusion and recommendation

The result analysis shows that most of the charcoal marketers in the study area are in their mid years between 20 – 40 years while 43.9% are between 41 and above. Female marketers dominate charcoal market in the study area. Charcoal business is for everyone no matter the marital status though married marketers are found dominating in the study area. One-fourth of the marketers have no formal education. Majority has primary and secondary school education (68.4%) and only 7% has tertiary education.

Marketing is very important for any marketers to flourish in charcoal business with a minimum of 1-5 years experience. Yoruba is the dominating tribe in charcoal business in the study area. Wholesalers (42.1%), retailers (29.8%) and those that act as both wholesalers and retailers altogether, that is, wholesaler/retailers (26.3%) are mostly found actively engaged in charcoal business in the study area with only 1.8% of the producer/ processors. Charcoal market association is very strong in the study area as 98.2% of the marketers are aware of the association and fully participate as members. Sex, marital status and amount of capital set up owned by the marketers have significant impacts on the gross margin realized in the business. It is therefore recommended that there should creation of proper awareness on the prospect of charcoal business among young people; this will be an avenue to alleviate the scourge of unemployment in the study area and in the country at large. Similarly, more men should be encouraged to venture into the business. Government should provide financial support for charcoal marketers in form of loan, credits or subsidy. Government should train the members of charcoal market association forming co-operative society so that the association can also help her members with financial support.

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