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Marketing of Wooden Doors in Abeokuta Metropolis

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ABSTRACT

This paper reported the marketing of wooden doors in Abeokuta Metropolis. Data were collected through the use of structured Questionnaire administered to the traders in identified locations in Abeokuta metropolis. Descriptive statistics and budgetary techniques were used for the analysis of data collected. The results showed that marketing and trade in this product is male dominated and involved people in their active age of 26-35 years (59%). Majority of the respondents were married and most of them had formal education, at least up to secondary level. Most of the respondents were fulltime marketer and some of the marketer purchase wooden doors from Ijebu-ode and Ibadan at wholesale price. The common wood species used for doors are *Gmelina arborea*, *Tectona grandis*, *Mansonia altissima*, *mahogany (Khaya spp)*, *Cordia millenii*, *Nauclea diderrichii*. Majority of the respondent started the trade as apprentices. The analysis of cost and returns showed that the marketing of wooden doors is a very profitable business, the rate of returns on investment as a producer was (36.08%) and it was (16.20%) as a wholesaler/retailer. The results of Pearson chi-square showed that age, marital status, other occupations, source of capital, years of experience were the major factors by which variation in monthly profit can be explained and predicted; they were significant at 5% level. It can be concluded from this study that trade in wooden doors is a profitable venture and can provide fulltime employment. However, as the marketers depend on trees planted by the government, they might soon run out of business when the plantations are exhausted. Informed suggestions were offered towards the sustainable management of forest plantation and continued availability of raw materials for production.

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Introduction

Principally, forest is the source of construction materials in form of structural wood, plywood, particle board and also non-timber forest products (NTFPs) such as leaves, resins and medicinal plants. It is also a source of industrial chemicals including pulp and paper products. The forest and forest products contribute to national economic growth. According to Adeyoju (1995), up to the middle of 1970's before embargo was placed on log exportation and wood based products, forest industries earned substantial foreign exchange for the country estimated at 413 million naira annually. According to a recent estimate (F.A.O., 2010), forest related activities in Nigeria today accounts for only 25% of the country Gross Domestic Product (GDP).

Wood export peaked in 1950's with log and sawn wood and subsequently, veneer and plywood. This trend was maintained and sustained in the 1960's and 1970's. Between 1960-early 1970's Nigeria witnessed establishment of large scale wood processing companies such as African Timber and Plywood, Sapele; Epe Plywood, Epe; Nigeria Romania Wood Industry Ondo, and a host of others. Most of the companies were established on bilateral and multilateral basis and were equipped with state of art facilities (Ogunwusi, 2012). This promoted the growth of the economy through the supply of raw materials for the construction, furniture and packaging

industries. It also made Nigeria an exporter of wood products such as plywood, particle boards, furniture, etc (Ogunsanwo, 2010).

This study will provide information on how profitable wooden door is, vis-à-vis its sustainability.

Materials and Methods

The study area

The survey was carried out in Abeokuta metropolis, Abeokuta is the largest city and capital of Ogun State in southwest, Nigeria. It is situated on the East bank of the Ogun River, near a group of rocky outcrops in a wooded savanna; Abeokuta has a coordinate of 7.1608°N, 3.3483°E, 77kilometre, north of Lagos by railway, or 130kilometres, by water.

Method of Data collection: Data used for this study was obtained from the respondents through the use of structured questionnaire which were carpenters. A simple random sampling was employed in selecting the respondents. 100 copies of the questionnaire were administered in Abeokuta metropolis comprising of Odeda local government (20), Abeokuta south (30) and Abeokuta north local government (50). This was done based on their population.

Methods of Data analysis: Descriptive statistics were used to analyze the demographic characteristics of the respondents.

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Cost and Return analysis was used to measure the profitability and Rate of returns on investment (ROI), according to Popoola (1999), to measure the degree of profit.

Results And Discussion

Table 1. Socio-economic Characteristics of the Respondents.

S/N	Variables	Label	Frequency	Percentage
1.	Age	Below 26 years	7	7.0
		26 - 35 years	59	59.0
		Above 45 years	34	34.0
		Total	100	100
2.	Gender	Male	96	96.0
		Female	4	4.0
		Total	100	100
3.	Marital Status	Single	13	13.0
		Married	83	83.0
		Divorced	2	2.0
		Widowed	2	2.0
		Total	100	100.0
4.	Educational background	Primary	10	10.2
		Secondary	61	62.2
		Tertiary	27	27.6
		Total	98	100.0
5.	Source of Capital	Bank loan	4	27.0
		Cooperative	26	29.2
		Personal savings	26	29.2
		Others	13	14.6
		Total	89	100.0
6.	Other Occupation	Yes	57	57.0
		No	43	43.0
		Total	100	100

Source: Field Survey (2016)

Table 2. Various Wood Species Used For Doors and Their Attributes.

S/N	Variable	Label	Frequency	Percentage
1.	<i>Nauclea diderrichii</i>	Multicolour	9	22.5
		Thickest	7	17.5
		Very durable	24	60.5
		Total	40	100.0
2.	<i>(Mahogany) Khaya spp.</i>	Colourful	9	42.9
		Strong	5	23.8
		Very fine	7	33.3
		Total	21	100.0
3.	<i>Mansonia altissima</i>	Strong	15	68.2
		Very colourful	7	31.8
		Total	22	100.0
4.	<i>Gmelina arborea</i>	Common	1	6.3
		Soft	3	18.75
		Pale yellow	12	75.0
		Total	16	100.0
5.	<i>Tectona grandis</i>	Multicolour	3	60
		Strong	2	40
		Total	5	100
6.	<i>Cordia millenii</i>	Brownish colour	9	45.0
		Very strong	11	55.0
		Total	20	100.0

Source: Field Survey (2016)

Table 3. Constraints to Door Production.

Variable	Label	Frequency	Percentage
Constraint of door marketing	Miss-cut during machining	18	23.4
	Shortage of electricity	22	28.6
	Breakage due to miss- handling	20	26.0
	Plank scarcity	17	22.0
	Total	77	100

Source: Field Survey (2016)

Table 4. Monthly Profit of the Respondents.

S/N	Variable	Label	Frequency	Percentages
1.	Monthly profit	Below 10,000	30	30.0
2.		10,000-20,000	34	34.0
3.		20,000-30,000	30	30.0
4.		Above 30,000	6	6.0
5.		Total	100	100.0

Source: Field Survey (2016)

Table 5. Test of significance for variation in monthly income of the respondents.

Variables	Values	Degree of freedom (df)	Significance Value
Age *monthly income	15.719 ^a	6	.015
Marital Status *monthly income	24.438 ^a	9	.054
Other Occupation *monthly income	14.759 ^a	3	.002
Educational Status *monthly income	11.636 ^a	6	.071
Source of Capital *monthly income	18.240 ^a	9	.032
Producers point of purchase *monthly income	24.044 ^a	30	.770
Wholesalers/Retails point of purchase *monthly income	.276 ^a	1	.599
Years of Experience *monthly income	86.548 ^a	60	.014
Entrance into the Business *monthly income	2.500 ^a	3	.475

Source: Field Survey (2016)

Table 6. Producers' average monthly costs and return analysis of wooden doors marketing.

Variable	Amount (N)	% of Total Cost
Variable Cost		
Transportation	510.02	1.27
Rent	2,700.00	6.71
Production Cost	37,025.77	92.02
Total Variable Cost	40,235.79	100.0
Returns		
Total Revenue	54,753.00	
Net Profit	14,517.21	
% Rate of Return on Investment	36.08	

Source: Field Survey (2016)

Table 7. Wholesaler/ retailers' average monthly costs and return analysis of wooden doors marketing.

Variable	Amount (N)	% of Total Cost
Variable Cost		
Transportation	2,025.00	4.11
Rent	2,900.41	5.89
Purchase Cost	44,300.26	90.00

Total Variable Cost	49,225.67	100.00
Returns		
Total Revenue	57,200.59	
Net Profit	7,974.92	
% Rate of Return on Investment	16.20	

Source: Field Survey (2016)

Discussion and Conclusion

Table 1 shows the socio-economic characteristics of the respondents which include distributions based on some variables such as gender, age, marital status, level of education, other occupation, and source of capital. The analysis shows the respondents' to be predominantly male (96.0%) while (4.0%) was female. This much difference might be attributed to the tedious nature of sorting, arrangement and joining of planks which require lots of energy, ability to stay longer at work and initiative, the findings agrees with the assertion of Sekumade and Oluwatayo, (2011) that in Nigerian economy, most capital intensive and arduous jobs tend to be male-dominated. The average age range of door marketers between 26 to 35 years recorded the highest percentage (59.0%) which indicate that wooden door market in Abeokuta metropolis are dominated by active and agile people who are capable of doing the strenuous activities of wooden door business. The marital status of respondents also indicate that (83.0%) of the respondents were married, suggesting that marriage is a cherished value in the study area, Dikito-Watchmeiser (2001) opined that marital Status is an important factor in social rural participation and acceptance.

About (62.2%) of the respondents had secondary education as the highest level of education with just (10.2%) with primary education and (27.6%) with tertiary education; this shows that the respondents are educated to an appreciable level, marketers education will help in calculations of standard measurements during door processing, which is in agreement with Oladele, *et. al.* (2013) that Educational status affects skill acquisition and book keeping positively in small scale business. (57.0%) of the respondents has other business which implies that door marketers in Abeokuta metropolis do not only get their income from door marketing. The door marketers are in business to earn an improved quality of life

via profit on their investment. Investment in the marketing of wooden door is rewarding judging from the analysis of the cost and returns, the result from the rate of returns on investment shows that for every amount invested in the business as a producer; at least (36.08%) profit is made, and as a wholesaler or retailer at least (16.20%) is made, the ability of an enterprise to yield profit will certainly keep the business going, (Aiyeloja *et. al.*, 2013).

Most wooden door producers purchase lumber from sawmills closest to them as it was observed that most of the traders were producers (67.0%) whereby desired lumber to be used for door is purchased from a sawmill and immediately cut into desired length in the sawmill, the desired length are usually 2 by 4, 2 by 6 and 1 by 12 and later processed which involves the creating of joints (motice and tenon, grooving), shaping, molding, planning and the use of chemical for finishing, the main source of income for several thousands of households in Nigeria is from forest-based micro enterprise such as carpentry and furniture production which rely on sawn wood for raw material, (Onefeli, 2011). (25.0%) wholesaler and (8.0%) retailer identified Ibadan and Ijebu-Ode as their source of wooden doors, This type of market can be called producer-consumer market or local assembly market according to Akande *et. al.* (2010) because wooden doors produced or shipped to the wholesaler/retailer are openly displayed on a regular basis.

Most respondents said that producers make more profit than the wholesalers and retailers which was confirmed from the analysis that the producer's rate of return on investment (36.08%) is much higher than that of the wholesaler/retailer (16.20%), it was observed that the years of experience of most respondents were 6-10 years (43.6%), most respondents entered into the business as an apprentice (97.0%), most doors produced in Abeokuta were joinery doors (55.0%), this is because joinery doors are of higher demand than flush doors in Abeokuta Metropolis.

The Pearson chi-square analysis at 5% level was used to test the level of significance of some socio-economic characteristics of the respondents to their monthly profit. ($p \leq 0.05$) indicates that the test is significant at 5% level.

Table 8. Wholesalers'/retailers' average monthly costs and return analysis of wooden doors marketing on each wood species.

Species	Transportation(₦)	Rent per month(₦)	Cost price(₦)	TVC(₦)	Total Revenue(₦)	Net Profit(₦)	RORI%
<i>Gmelina arborea</i>	506.25	500.00	5237.5	6243.75	7500.00	1,256.25	20.12
<i>Tectona grandis</i>	506.25	500.00	5987.50	6993.75	7500.00	506.25	7.24
<i>Nuclea diderrichii</i>	506.25	500.00	6680.20	7686.25	8200.00	513.75	6.68
<i>Mansonia altissima</i>	506.25	500.00	7,100.00	8106.25	9,000.00	893.75	11.03
Mahogany (<i>Khaya spp</i>)	506.25	500.00	7,600.00	8,606.25	13,000.00	4,393.00	51.04

Source: Field Survey (2016)

Table 9. Producers' average monthly costs and return analysis of wooden doors marketing on each wood species.

Species	Transportation(₦)	Rent per month(₦)	Cost price(₦)	TVC(₦)	Total Revenue(₦)	Net Profit(₦)	RORI%
<i>Gmelina arborea</i>	220.02	500.00	5500.02	6220.04	7000.00	779.96	12.54
<i>Cordia millenii</i>	220.02	500.00	5700.00	6420.02	7500.00	1079.98	16.82
<i>Tectona grandis</i>	220.02	500.00	5500	6220.02	7000.00	779.98	12.54
Mahogany (<i>Khaya spp</i>)	220.02	500.00	8900.00	9620.02	15,000	5379.98	55.92
<i>Mansonia altissima</i>	220.02	500.00	7100.00	7820.02	12,000.00	4179.98	53.45
<i>Nauclea diderrichii</i>	220.02	500.00	6,800.00	7520.02	10,520.05	3000.03	39.89

Source: Field Survey (2016)

Regression result shows that at 5% level, other occupation was found to be significant to the level of profit of the respondents (0.002); this is because having a second hand business is a plus to the respondent which will also serve as a source of income. Source of capital (0.032), this was expected to affect the monthly profit of the respondents because the more the amount of capital invested the more will be the returns in investment. Years of experience (0.014), it is expected that the longer you stay in the business, the more the experience and level of profit. Age (0.015) was also significant because as one grows in the business so is it expected to have more experience and knowledge about the business.

Factors of wood preference by wooden door producers include quality (durability, resistant to fire and insect attack, attractive and good grain), availability, and price; this is in agreement with Aiyeloja *et al.*, (2011) findings that durability, workability and availability influence buyers preference for wood species in Nigeria. *Khaya spp.* (*Mahogany*) is prominent among the preferred species because it has an attractive colour and also strong, its heartwood is fairly uniform pink-to red brown darkening to a rich *Mahogany* brown; sapwood is lighter in colour, not always sharply defined. Texture moderately coarse; grain straight, interlocked, or irregular which makes it one of the best species ever.

Most respondent said *Nauclea diderrichii* is very durable (60.0%), this was confirmed by USDA (2013) that the Heartwood of *Nauclea diderrichii* is very durable but is moderately resistant to termites, sapwood may be liable to powder-post beetle attack but heartwood has high resistant to marine borers, *Mansonina altissima* has a heartwood yellow brown or dark gray brown colour, frequently with a purplish cast, often shows light and dark bands, very durable and highly resistant to termite attack its sapwood is whitish and sharply demarcated, (USDA, 2013) which was confirmed by the respondents that it is strong and has an attractive colour (68.2%). Generally, *Gmelina arborea* is rated as non-durable but moderately resistant to decay (Gangadharan, 2012), its heartwood is pale straw yellow, sometimes tinged with pink with no marked contrast between heartwood and sapwood, grain interlocked and texture moderately coarse, most respondent prefer *Gmelina arborea* for its pale yellow colour (75.0%), and the heartwood of *Cordia milleniis* pale golden brown to medium brown occasionally with a pinkish tint, sap wood is lighter in colour, it has a coarse texture and grain typically interlocked but most respondents preferred it for its strength (55.0%). Findings from this study showed that wooden door marketing has the prospects of sustaining livelihoods in a developing economy such as Nigeria. Forest based micro and small scale enterprise is one of the major employers of labour that generate income for households' upkeep both in the rural and urban centers' across the country, (Aiyeloja *et al.*, 2013).

Supply of timber sustainably remain an issue begging for attention, while policies for sustainable management of the forests is key against poverty in Nigeria., the government has also failed in the area of electricity supply, most manufacturers depend on alternate energy supply (Aku, 2010), standard grading of wood is less known and practice in Nigeria which leads to early deterioration of furniture in service. Effort should be made on the part of government to

ensure stable power supply of electricity, as this will generate income into the purse of government instead of purchasing generating plant in other to ensure constant power supply as an alternative, forest engineers should ensure a proper construction of forest roads so as to maintain the regular supply of logs in all seasons, improper grading of lumber could lead to knot fallout during machining thereby making the lumber useless which is a loss therefore there should be proper grading of lumber at the sawmill before it is being sold out. Afforestation and reforestation exercise should be encouraged especially with species that are highly endangered.

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