



Structure, Conduct and Performance of Timber Market in Ife East Local Government of Osun State, Nigeria

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ABSTRACT: The study focused on the structure, conduct and performance of timber market in Ife-east Local Governments of Oyo state. The major objective of this study is to assess the marketing pattern of timber in the study areas. The research method used for achieving the general objectives involved Descriptive Statistics and Gini Coefficient. Variations were observed in the price of the timber of the same species but different size because price determination is based on bargaining power. The result showed majority of respondents (58.8%) had secondary education, Muslim was dominant (54.6%) in the timber marketing and majority of marketers had regular supply of their product. Government policy, high cost of transportation, inadequate credit facilities and high cost of energy and power were some of the constraints faced by timber marketers in the study area. The use of modern equipment and machines are needed to replace the outdated equipment in order to increase the output and profit. The level of access to credit facilities should be improved upon by encouraging the respondent to form cooperative societies so that they can mobilize enough working capital for their business.

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Nigeria forests are naturally endowed with plant and animal species (flora and fauna) and for this reason it has been protected for timber production. Timber can be described as wood in a form suitable for construction or carpentry, joinery or reconversion to manufacturing purpose. Timber has been used as a building material for over 400,000 years and it is very common and best known material for house construction including ramming of floors, walls and roofs. According to (Cumming *et al.*, 2005) timber accounts for about half of worldwide wood consumption. Timber marketing is an asset in the economy of timber. According to (Lintu, 2005) marketing provides a means through which people can create efficient economic value for their resources and products. Consequently, efficiency in timber marketing is an economic asset to the forestry sub-sector for a sustained resource production, distribution and consumption. An efficient marketing system of timber will provide a means for maximizing products values and also stimulating equitable distribution of its economic benefits among the different actors in the market. (Agustion and Poopola, 2011). Sawmill is a critical industry whose performance not only has direct implementation for present livelihood but vast majority of the industries round wood produced in Nigeria. Most existing sawmill comprise old and

poorly maintenance horizontal band saws that are manually pushed against stationary logs. This technology is outdated, it is unsuitable for smaller logs available today, its lumber recovery is estimated at only 40-45%, and it does not allow sawing for grade. For example, Nigeria's timber sector contributes an estimated US\$39 billion annual in foreign exchange by supplying wood fuel to meet 80% of the country's total energy needs (FAO, 2005) Market structure deals with how a market is organized. It defines the marketing system of different types of enterprises, their behavior and the relationship, as well as the relationship among various sellers and buyers, and between buyers and sellers. Market structure is therefore concerned with the organizational characteristics of a market, which influence the nature of competition and pricing with the market. It can further explain which segment of the market possesses the largest share of the market or business. Concentration, which shows the nature of the market and the pricing system, is very important in market structure analysis (Okereke, 2011). From the foregoing, a good market structure influences the efficiency of a market. Thus, (Adeyeye and Dittoh, 2006) maintained that an efficient and good marketing system can only operate where there is good market structure and conduct in place and it is fully utilized.

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Consequently, market structure, conduct and performance are instrumental to the efficient market function which serves as a tool for distribution of products for economic development of a nation. According to (Crammer and Jensen, 2002) market structure is a description of the activities of buyers and sellers in the market. Market conducts deal with the behaviour that exits among buyers and sellers in the market. It is also a source of livelihood of many Nigeria.

MATERIALS AND METHODS

Area of study: The study was carried out in Ife East of Osun state, Nigeria. Ife East is a local government area in Osun state, with headquarters in OkeOgbo in Ile Ife. The local government area is in Osun East senatorial district. Ife East local government area also forms a federal constituency alongside Ife Central, Ife North and Ife South local government areas. Ife East local government area covers an area of 172km². The local

government area is bounded to the north by Ife Central local government area, to the east by Atakumosa west local government area, to the south by Ife South local government area, and to the West by Ife north Local government area Latitudes 7°28'N and 7°45'N and longitudes 4°30'E and 4°34'E. Ife East is a rural area with settlements where agriculture is occupied by most. Ife has an undulating terrain underlain by metamorphic rocks and characterized by two types of soils, deep clay soils on the upper slopes and sandy soils on the lower parts. Within the tropical savanna climate zone of West Africa, It has average rainfall of 1,000–1,250 mm (39–49 in) usually from March to October and a mean relative humidity of 75% to 100%. Ife is east of the city of Ibadan and connected to it through the Ife-Ibadan highway; Ife is also 40 km (25 mi) from Osogbo and has road networks to other cities such as Ede, Ondo and Ilesha. There is the Opariver and reservoir, that serves as a water treatment facility for OAU College

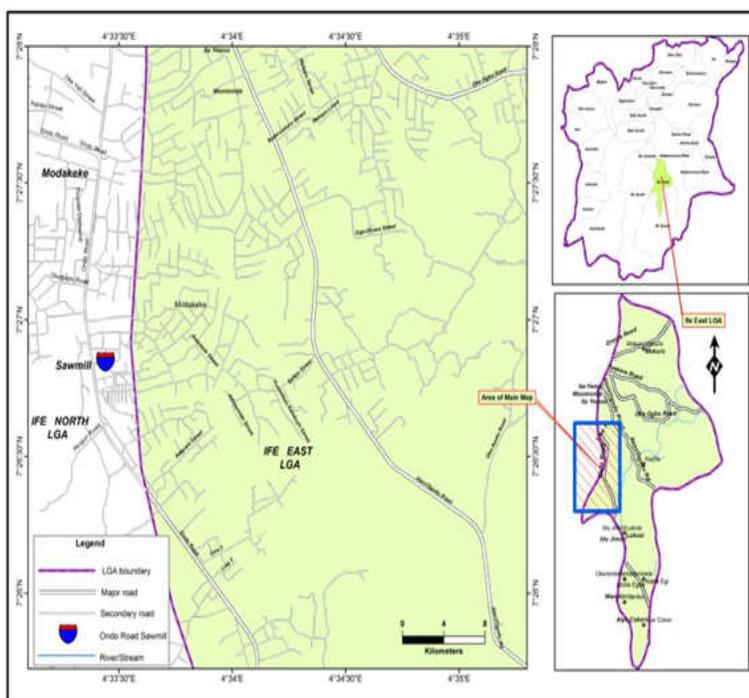


Fig 1 Map of the study area.

Sample technique: multistage sampling was used in this study. In the first stage, Ife east local government was purposively chosen. The reason being that it has the largest forest coverage area and housed the highest saw-mills and forest reserves in the area. Secondly, five saw-mills were randomly selected from the local government which are Arowo sawmill, Ifesowapo sawmill, Atagijere sawmills, Ajowa sawmill and Oluwatoyin sawmill. Thirdly, twenty (20) timber

marketers were randomly selected from each sawmill. Altogether one hundred questionnaire were administered out of each ninety seven were retrieved. Data was collected with the administration of structured questionnaire. Secondary data was collected from publications and journals. The data was collected from 100 timber marketers in the Ife east local government area through personal interview. 100

questionnaires were administered out of which 97 were retrieved.

Method of data analysis: Data was analysed using Descriptive statistics Gini Coefficient. The computation of Gini Coefficient has the following relationship

$$GC = 1 - \sum XY$$

Where GC =Gini Coefficient; X = % of cattle sellers; Y = Cumulative of income from sellers; $\sum XY$ =Summation of XY

RESULTS AND DISCUSSIONS

Socio-economic characteristics of the respondent: Table 1 present the result of the socio demographic characteristics of the respondent. The result revealed that 44.3% are of age 40-49 and 50-59 respectively while 8.2%are of age 60 above and 3.1% are of age 30-49. The result showed that majority were adult. This result corroborate the findings of (Okumadewa *et al.*, 2000, Babatunde, 2019) which stated that those in the age range of 40-50 years of age were productive and have the power to produce work The result revealed that most of the timber marketers were male (67%), which means majority of the respondent were male and they have more energy to carry out the task. This result is in agreement with (Olawumi and Okunlola, 2015, Babatunde *et al.*, 2017) when they stated that majority of the respondent in Ondo sawmill were male and the result disagree with (Alfred and Akitade, 2002) when they opined that sawn wood marketing were dominated by female. The result further revealed that 60.8% were married while 16.5% were divorced, 15.5% were single and 7.2% were window and widower. Marital status determine the level of household size which by extension may indicate the available labour supply, family, income composition and savings pattern (Mafimimisebi *et al.*,2000) opined that marital status of a person determines the degree of responsibility of that person in the society and further submit that, marital status is very important as it helps to have an idea of a marketing participant’s devotion to the marketing process and the likely outcome of this on his or her business activities. Marriage confers responsibility (Akinbile, 2007,Babatunde,2019) Furthermore 58.8% of the respondent had secondary education, 27.8%, 11.3% have primary and tertiary education respectively while 2.1% had no formal education. Formal education for most market stake holders confers a wide range of opportunities and advantages for success in life compared with illiteracy.(Babatunde,2019) Based on a prior, it is expected that higher levels of educational attainment

by a markets dynamics and thus better profit from use of sound business principles and wise business decisions. Education enhances the efficiency of trade business (Oluyole and Usman, 2006). This study contradicts earlier study by (Alfred and Akinade, 2002) on wood marketing where majority of the sellers were illiterate

Table 1: socio economic characteristics of respondent in selected local government

Gender	Frequency	Percentage
Male	65	67
Female	32	33
Total	97	100
Age		
30 yrs	0	0
30-39yrs	03	3.1
40-49yrs	43	44.3
50-59yrs	43	44.3
60yrs above	08	8.2
Total	97	100
Marital Status		
Single	22	22.7
Married	59	60.8
Divorced	16	16.5
Total	97	100
Education Background		
No formal education	02	2.1
Primary school	27	27.8
Secondary school	57	58.8
Tertiary education	11	11.3
Total	97	100
Religion		
Christianity	44	45.4
Islam	53	54.6
Total	97	100

Table 2 present of the distribution of respondent towards structure and conduct of timber market. The results shows that 17.5% of the marketers were wholesalers while 20.6% were retailers and 61.9% operate both types of business. This result shows that the majority of the respondents were both retailers and wholesalers this show that the market nature is tending towards monopoly with majority combining both wholesale and retail business together. The results further show that 97.9% of the marketers had regular supply of timber while 2.1% of the industry had no regular supply of the products. This implies that the timber business is not a seasonal business.

About 53.6% and 32% transport their products by truck and lorry respectively, while 14.4% transported their products by car. The result shows that majority of the respondents transported their product by truck. This result is in agreement with Agbonlahor (2010) who found out that majority of small holder timber mills in Ogun state owned their trucks for transport purposes. The results again show that 9.2% had between 1-5years experience, 30.8% had between 6-10years experience while 60% of timber had above

10years experience. This result implies that many of the marketers have been in the timber market business for a long period of time which made them to be efficient in the marketing of timber.

Table2: Distribution of respondent towards Structure and Conduct of timber market

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
Ownership of Business		
Retailers	20	20.6
Wholesalers	17	17.5
Both	60	61.9
Total	97	100
Supply of product		
Regular supply	95	97.9
Not regular	02	2.1
Total	97	100
Means of transportation		
Truck	52	53.6
Lorry	31	32
Car	14	14.4
Total	97	100
Years of Experience		
1-5years	09	9.2
6-10years	30	30.8
Above 10 years	58	60.0
Total	97	100
No of Workers		
1-3workers	20	20.6
4-5workers	27	27.8
Above6workers	50	51.5
Total	97	100
Membership of Association		
Yes	95	97.9
No	02	2.1
Total	97	100

Source: field survey 2019

The results showed that 20.6% had between 1-3 workers, 27.8% had 4-5 workers while 51.5% had more than 6 workers in the timber business. This result implies that the majority of the industry had above 6 workers and this could contribute to the output of their production. The reveals the structure of the timber business, 97.9% of the respondents belong to association, while 2.1% of the respondent did not belong to any association. This means that before any of the timber marketers can operates in the market, he or she must belong to associations like sawyers associations, timber marketer association, sawmilling association and timber seller association. This result agreed with (Usman *et al* 2013) who stated that majority of the respondent in Ebute Metta belong to association. The structure of a market helps in price determination and price fixing of a products. i.e the marketers cannot sell their product anyhow because they belong to an association. This lead to high profit accruing to the stake holders in the market at the expense of buyers, who will find it difficult to haggle prices of these products. Therefore, the timber business or market in the study area is not determined and controlled by the forces of demand and supply

which results into imperfect market structure since the timber sellers or marketers are the price marker signifying monopoly.

Table 3Distribution of respondents towards market performance

<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
Business Ownership		
Sole proprietorship	52	53.6
Partnership	35	36.1
Cooperative society	10	10.3
Cooperation	97	100
Total		
Nature of Business		
Ownership		
Private	97	100
Public	0	0
Total	97	100
Business operation capital		
Less than ₦ 500,000	05	5.2
₦500,001- ₦1,000000	25	25.8
₦1,000001- ₦ 5,000000	50	51.5
Above ₦ 5,000000	17	17.5
Total	97	100
Annual income		
Less than ₦ 5,000000	10	10.3
₦1,000000- ₦ 2,000000	42	43.3
₦2,000001- ₦ 3,000000	31	32
₦3,000001- ₦4000000	5	5.2
Above ₦ 4000000	8	8.2
Total	97	100

This is in contract to (Sambe *et al.*, 2016) who stated that sawmill market structure in Benue tends towards olig. The table3 revealed 53.6% were sole proprietor, 36,1% and 10.3% were partnership and cooperative society respectively. It revealed from the result that majority of the respondent were sole proprietor owner of the business in the study area. The result also reveal that 5.2% realized ₦3, 000001- ₦ 4,000000 per annum, 8.2% realized above ₦ 4,000000 per annum and 32% realized ₦2, 000001- ₦ 3000,000 as annual income while 43.3% realised ₦1, 000000- ₦2, 000000 This result implies that majority of respondent realized ₦1, 000,000- ₦ 2,000000 as annual income.

The result agreed with (Babatunde,2018) who found that annual income earned by timber industry in Ijebu North Local Government was well above the Federal Government approved minimum wage According to the result there is enough profit from sales of timber product in the market. This implies that both young and old people could invest in timber business as a means of livelihood which points to the fact that this business could help raise the standard of living through reduction of poverty and unemployment in our society. This result show that the market performance of the nature of the business tends towards monopoly. The result also shows that 5.2% had access to less than N 500,000 to start their business, 17.5% had access to above ₦ 5,000000, and

43.3% had access to ₦1, 000000–₦2, 000000. This implies that even though the timber business is capital intensive, anybody amount less than ₦500,000 can invest on the business as a means of livelihood. This result is in agreement with (Akanni and Adetayo, 2011) which found out that amount of working capital for a business enterprise often determines the level of output and accruable profit margin.

*Table 4 Structure and conduct of timber marketers in the study area:*The market structure in the study area was determined by Gini coefficient. Gini coefficient was applied to measure the relative degree of income distribution among the timber sellers. The values of Gini coefficient greater than 0.3445 are high indicating inequitable distribution of income/sales (Dillion and Herdeker 1993).The Gini coefficients for timber marketer in the study area is 0.375 .This value

indicate higher level of concentration and consequently high in efficiency in the market structure. This is in agreement with Mafimisebi *et al.*, (2006) on the analysis of the fundamental in Palm oil marketing in Osun State, Nigeria which had Gini coefficient of 0.4680, and also in agreement with the work of Afolabi (2006) on the assessment of palm oil marketing in Ondo State, Nigeria which got 0.4166 for Gini Coefficient. With these high levels of concentration, the market structure can be described as imperfect market which could be monopoly. In this market structure, the sellers determine the price rather than the forces of demand and supply and the outcomes will be bad performance as a result of control of certain stakeholders which are basically sellers in most cases, this result agreed with Usman *et al.*, 2014

Table 4: Computation of Gini Coefficient for Timber Sellers in Ife East Local Government

Income sales	Number of sellers	% of sellers (%X)	Cumulative frequency	Cumulative % Of sellers	Total sales	% of total sales	Cumulative % of total sale(Y)	XY
50,000-70,000	32	33	32	12.3	768000	26.2	26.2	0.08646
70,001-100,000	22	22.7	54	20.8	829,000	28.2	54.4	0.123488
101,001-130,000	23	23.7	77	29.6	1,008,000	34.3	88.7	0.210219
131,001-160000	20	20.6	97	37.3	332,000	11.3	100	0.206
Total	97	100	260	100	2,937,000	100		0.626167

$$GC = 1 - \sum XY; GC = 1 - 0.626167; GC = 0.373833$$

Table 5: Constraints Facing the Timber Business

Constraint	Frequency	%
Government Policy	6	6.2
Inadequate facilities in market	5	5.2
High cost of energy and power	19	19.6
Inadequate credit facilities	18	18.6
High transportation cost	19	19.6
Government policy and high transport cost	16	16.5
Inadequate credit facilities and high transport cost	14	14.4

Source: Field survey, 2019

Constraints facing the Timber Business in the Study Area: Table 5 shows that timber industry in Ife East Local Government encountered several constraints. About 19.6% of the timber industry had high cost of energy and power, 18.6% had inadequate credit facilities, 19.6%% incurred high transportation cost while about 6.2% complained of unfavourable government policy about timber industry. The timber industry faced with high cost of energy and power as one of major constraint, this is due to the epileptic power supply and invariably high cost of procuring diesel and petrol to power their machine and also their access to credit facility was poor due to high interest rates charged by the commercial banks .High cost of transportation was also a major constraint resulting

from bad road network in many rural areas and cities where they source their timbers and the available transport tend to exploit the respondents by charging exorbitant fare. This result corroborate the position of Akanni and Adetayo (2011) who observed that access to credit facilities and high cost of energy affected the sawmilling timber industries in Ijebu ode.

Conclusion: In the context of the results obtained from this study timber business are important sources of income to many households in Nigeria and the study area in particular. It is however experiencing major setbacks .For instance, problem of inadequate credit facilities may be addressed by coming together of the timber business men and women to form cooperative

societies so that they can have access to sufficient credit facilities that could be mobilized for their business operations. Adequate investment should also be made in the energy and power sector so that the timber industry operators can profitably and sustainably keep on operating their business.

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