

Profitability Analysis of Timber Trade in Benue State, Nigeria: Implication for Poverty Alleviation

ABSTRACT

This study analysed the profitability of timber trade and also examined its effects on poverty in Benue State. Applying a multistage sampling technique, purposeful sampling at 30% sampling intensity and complete enumeration. Out of the 23 LGAs of the state, seven (7) LGAs were sampled. Thus, 164, 79 and 13 respondents from timber traders, chainsaw millers, and sawmillers adding up to 256 were randomly selected and interviewed to elicit data. Data collected were collated and analyzed using few descriptive statistics. Gross margin analysis, rate of return on Investment (RORI), gross ratio and (GR) were used in determining the profitability and effectiveness of timber trade in the study area. A mean monthly gross margin of ₦85,740.00, ₦320,570.00, and ₦275,080 was recorded by timber traders in zones A, B and C respectively. Similarly, Rates of Return on Investment were 22.13, 34.27 and 31.52. Also, chainsaw millers GM were; ₦39,688.00, ₦128,730.00, ₦84,480.00 with corresponding RORI of; 84.19, 43.93, 61.80. In the same order the GM of sawmillers were ₦320,130.00, ₦136,000.00 and ₦407,540.00 with RORI of; 87.17, 42.90, 63.93 were recorded in zones A, B and C respectively. Hence, timber trade is a viable enterprise in Benue State, therefore sustainable management is pertinent for continuous supply of the resource base.

Keywords: Timber trade, Profitability, Poverty Alleviation

1. INTRODUCTION

Forest resources contribute significantly to livelihoods and poverty alleviation especially in developing economies [1]. This support among others is usually through conversion of forests to agricultural uses, employment and income derived from a diverse range of timber and non-timber products as well as ecosystem services [2,3,4,5]. Timber resources have contributed to industrial revolution and development, not only of wood based industries but also a pivot that propels the development of other industries such as construction and engineering [6, 7, 8].

Over the years, timber industry has contributed significantly to the socio-economic development of Nigeria; ranking among the highest revenue and employment generating sectors [8,9]. It has also been a major contributor to the national gross domestic product (GDP) [10]. [11] also noted that the forestry sector used to contribute at least two-thirds of the GDP in addition to providing employment for thousands of Nigerians in the 1970s. [12] assert that and timber trade is profitable and thus a formidable tool for poverty alleviation.

38 Timber products are industrial round wood, sawnwood, wood based panels, pulp and paper. The
39 forest estate of Nigeria occupies 10 percent of the total land area of the country with about 75 percent
40 located in the savannah zone and 25 percent in high forest zone [12]. Round wood production in
41 Nigeria comes mostly from the natural high forest zone of the country, in particular from the Southern
42 states of Nigeria [13]. Plantations constitute one fifth of the forest while the rest are natural forests [14].
43 Harvesting of industrial woods is carried out by mill operators, independent registered loggers and by
44 poachers. Sawn wood is the most diversified and it serves as raw material for the production of
45 furniture and furniture components, floor parquets and other secondary wood products. This remains
46 the most prominent of all wood product trade. A lot of people are engaged in production and trade
47 because of the quick profit return on investment with little risk unlike the secondary processing for
48 export. This product forms the raw material base for the secondary processing industry intended for
49 the export market [15].

50 [16] study on Chain Sawmilling in the tropics reveals that timber trade generates income for a range of
51 participants in the timber trade chain, including rural people, transporters and urban traders. They
52 continued that in some cases, the income from chainsaw operations represents a substantial
53 proportion of household income; many examples provided by the authors showed that it may be much
54 higher than income from alternative work. This corroborates earlier report by [17] in a study on
55 chainsaw milling in Benue State. He also maintained that though chainsaw milling is illegal in the state,
56 it provides employment for both families and hired labour, thereby improving household and social
57 well-being. Again he noted that, the wages earned compare favourably with those of the average
58 skilled worker, and are far higher than the less than US\$1 on which more than 60% of Nigerians
59 subsist.

60 Timber marketing for instance constitutes a reliable source of livelihood for many of the Nigerian poor
61 in rural and urban areas, It provides employment and income derived from a diverse range of timber
62 marketing activities, like loading, offloading, transportation, processing among others [2,3,4,5].The
63 human poverty index HPI-I value of 38.8% for Nigeria ranks the country 75th among 103 developing
64 countries [18,19]. Hence, for the majority of poor Nigerian households, sustainable development of
65 timber resources and improving timber trade is key to enhancing well-being and escape from poverty.
66 It is the deprivation of well-being as a result of lack of income or consumption, low level of education
67 and health [20]. Poverty line is threshold of income below which one is considered poor. Hence

income level that falls on less than US\$ 2 per day is considered to below the poverty line. A study by National Bureau of Statistics [21] in Nigeria shows that the incidence of poverty rose from 26.1 percent to 46.3 percent between 1980 and 1985; and 42.7 percent to 65.6 percent between 1992 and 1996, and 54.4 and 69.0 percent from 2004 to 2010 while that of Benue State is 38.6 percent. That means one out every three persons is poor in Benue State. Hence, for the majority of poor Nigerian households, sustainable development of timber resources and improving timber trade is key in enhancing well-being and escape from poverty. Thus, this study analyses the profitability of timber trade and its contribution to poverty alleviation in the study area.

2. METHODOLOGY

The survey study was carried out in Benue State, located at longitudes 6°35' E and 10°E and latitudes 6°30' N and 8°10' N within the guinea savanna area of Nigeria with a total land mass of 30,955 km² [22].

The study population comprised timber traders, chainsaw operators and saw millers in Benue State. Applying a sampling intensity of 30%, seven (7) LGAs were sampled from the 23 LGAs of the state for the study. Thus two (2) LGAs in zone A, two (2) in B and three (3) in zone C were purposively sampled based on the concentration of timber markets and trading activities. These LGA's were Konshisha and Kwande, in Zone A., Makurdi and Gboko in Zone B, Otukpo, Okpokwu, and Oju in Zone C. From these LGAs, respondents from the sub population; timber traders, chainsaw millers and saw millers were sampled for data collection. Thus, timber traders, Chainsaw millers were selected using 30% sampling intensity, while complete enumeration was applied to collect data from Saw millers because only 13 sawmills were available in these locations. Multistage sampling technique, purposive sampling and complete enumeration were applied to determine the study sample drawn from the three geopolitical zones in the state; Zone 'A', Zone 'B' and Zone 'C'.

Data for the study were collected using semi-structured questionnaire, personal observations and focus group discussions. Three sets of semi-structured questionnaires were designed and administered on timber traders, chainsaw millers and saw millers from the sampled LGAs. The preference of semi – structured questionnaire was to provide for the respondents personal opinion. Hence a face to face interview was conducted with the respondents individually and in groups by with the assistance of research assistants.

2.1 ANALYTICAL TECHNIQUES

Descriptive statistics such as percentages and frequency distribution were utilized in analysing respondents' socioeconomic characteristics. Gross margin analysis, Gross Ratio (GR) and Rate of Return on Investment (RORI) were utilized in Timber trade profitability analysis, while parametric analysis, Foster-Greer-Thorbecke (FGT) poverty index were used for poverty assessment. They are widely used because they are consistent and additively decomposable [23]. Gross margin is more appropriate in measuring the operating efficiency in enterprises that have similar requirements for capital and labour and comparing enterprises performance but does not measure total profitability. Gross ratio measures the expensiveness of a business activity. It is adjudged to be better instrument for measuring efficiency of an enterprise.

2.1.1 Model Specification

Gross margin

Gross margin is defined as the difference between Gross Income (GI) and Total Variable costs (TVC). According to Tee [24], the model is as follows.

$$\text{Gross margin} = \text{GI} - \text{TVC} \dots\dots\dots(1)$$

GM = Gross Margin

GI = Gross Income, an equivalent of Total revenue

TVC = Total Variable Costs (Transportation, Tariffs, Association levies, permits, tax, loading/offloading etc.).

Gross ratio (GR)

This is the total expenses divided by the gross income (GI), given as

$$\text{GR} = \text{GC/GI or TVC/GI} \dots\dots\dots (2)$$

The ratio shows the percentage or proportion of total physical cost that constitutes the gross income. A less than 1 ratio is desirable for any production business. The lower the ratio the higher the return per Naira invested. The gross cost and gross income values calculated above are applied in this equation for the determination of gross ratio.

Rate of return on investment (RORI)

The Rate of Return on Investment (RORI) depicts the level of profitability of an investment and is an important criterion in determining the choice of investment. According to McCarthy [25], Arene [26] and Alao and Kuje [27], it is given by the following relationship:

$$\text{RORI} = \frac{\text{TR} - \text{TC}}{\text{TC}} \times \frac{100}{1} \dots\dots\dots (3)$$

where:

TR= Total revenue, an equivalent of Gross income (GI)

TC = Total cost, an equivalent of Gross cost (GC). Thus equation (4) becomes;

$$RORI = GI - \frac{GC}{1} \times \frac{100}{1} \dots\dots\dots (4)$$

Foster-Greer-Thorbecke (FGT) Poverty Model

In developing poverty profile, this study adopted the Foster, Greer and Thorbecke (FGT), [23] class of poverty measure, which represents the level of income below which households are considered to be poor. The FGT class of poverty measure is defined as:

$$P_{\alpha} = \frac{1}{N} \sum_{i=1}^q \left(\frac{Z - Y_i}{Z} \right)^{\alpha}$$

Where,

N = total number of respondents; Y_i = household income; H = Headcount; Z = poverty line (\$2 per day = N332); q = number of households with income less than Z; α = Poverty Aversion Parameter Index which takes on the values of 0, 1 and 2 representing incidence of poverty, poverty gap and severity of poverty respectively [23]. The measure relates to different dimension of the incidence of poverty;

If $\alpha = 0$, FGT is reduced to $P_{\alpha} = \frac{H}{N}$

which is the proportion of the population, that falls below the poverty line. This is called the head count or incidence of poverty. If $\alpha = 1$ FGT becomes

$$P_1 = \frac{1}{N} \sum_{i=1}^q \left(\frac{Z - Y_i}{Z} \right)^1$$

which is the depth of poverty. It is the percentage of income required to bring each individual below the poverty line up to the poverty line. If $\alpha = 2$ FGT becomes

$$P_2 = \frac{1}{N} \sum_{i=1}^q \left(\frac{Z - Y_i}{Z} \right)^2$$

which is the Severity of Poverty. It is indicated by giving longer weight to the extremely (core) poor. It is achieved by squaring the gap between their income and the poverty line to increase its weigh in the overall poverty measure.

3. RESULTS AND DISCUSSION

3.1 Socio Economic Characteristics of Timber dealers in Benue State, Nigeria.

The age distribution of respondents presented in Table 1 showed that 85.7% (i.e 43.8% + 41.9%) of the timber traders fell within the age bracket ≤ 30 to 40 years, while 14.43 % (i.e. 12.5% + 1.9%) fell between 41 ≥ 50 years. Similarly for chainsaw millers 80.8 % fell within the age bracket of ≤ 30 to 40 years, and the remaining 19.2 % were between 41 years and above. However, in the case of sawmillers, 77 % were 41 years and above, and the remaining 23 % fell within the age bracket of ≤ 30 to 40 years.

In terms of marital status, 62.5% of the timber traders were married, and 37.5 % were single. Similarly 75.3% of the chainsaw millers were married, while 20.5% were single and 4.2% widowed. As regards sawmillers, 92.7% were married while 7.7% were single.

Based on gender, 99.4% of the timber traders were male and 0.6% were female while 100% of chainsaw millers and sawmillers were males.

Educational status distribution of the respondents shows that 2.5% of timber traders had no formal education, 8.8% had primary education, and 65.6% had secondary education, while 23.1% had tertiary education. Similarly the highest proportion (72.6%) of chainsaw millers had secondary education followed by those with primary education (20.5%), tertiary education (6.9%) while 5.5% had no formal education. For sawmillers 76.9% attained secondary education, 23.1% attended tertiary education. None of the respondents indicated for non-formal and primary education.

In terms of ethnic composition distribution a higher proportion (50.6%) of the timber traders were Igbo. This was followed by Tiv(23.1%), Idoma(16.2%), Iggede (4.4%), Yoruba (2.5%) and Igala (1.2%). Others were Yala (0.6%), Hausa (0.6%), and Ijaw (0.6%). Similarly, a larger proportion(65.8%) of the chainsaw millers were Tiv, 3.7% were Idoma, 12.3% Iggede, 5.5% Igbo while Igala and Sura, constituted 1.4% each. For sawmillers, Yoruba had the highest proportion of 69.2% followed by Tiv with 15.4% and then Idoma and Iggede, with 7.7% each.

The distribution of timber traders based on years of experience showed that larger proportion 69.4% of the respondent had ≤ 5 to 10 years of experience, while 30.6% had more than 10 years experience. For chainsaw millers, a greater proportion of respondents of 69.8% had ≤ 5 to 10 years while 30.1%

185 had more than 10 years of experience. For sawmillers the results revealed that a greater proportion of
 186 69.2% had ≤ 5 to 10 years experience, while 30.8% had 11 to 16 had more than 10 years of
 187 experience.

188 Table 1: Socio Economic Characteristics of Respondents in the Study Area.

Variable/Category	Timber Traders		Chainsaw Operators		Sawmillers	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Gender						
Male	159	99.4	73	100.0	13	100
Female	1	0.6	0	0.0	0	0
Total	160	100.0	73	100.0	13	100.0
Age (Years)						
≤ 30	70	43.7	27	37.0	1	7.7
31 – 40	67	41.9	32	43.8	2	15.4
41 - 50	20	12.5	12	16.5	4	30.7
≥ 51 years	3	1.9	2	2.7	6	46.1
Total	160	100.0	73	100.0	13	100.0
Marital Status						
Married	100	62.5	55	75.3	12	92.3
Single	60	37.5	15	20.5	1	7.7
Widowed	0	0.0	3	4.2	0	0.0
Total	160	100.0	73	100.0	13	100.0
Educational Status						
No formal Education	4	2.5	4	5.5	0.0	0.0
Primary	14	8.8	15	20.5	0.0	0.0
Secondary	105	65.6	53	72.6	10	76.9
Tertiary	37	23.1	5	6.9	3	23.1
Total	160	100.0	73	100.0	13	100.0
Ethnic Composition						
Tiv	37	23.1	48	65.8	2	15.4
Idoma	26	16.2	10	13.7	1	7.7
Igede	7	4.4	9	12.3	1	7.7
Igala	2	1.2	1	1.4	0	0
Igbo	81	50.6	4	5.5	0	0
Yoruba	4	2.5	0	0	9	69.2
Yala	1	0.6	0	0	0	0
Hausa	1	0.6	0	0	0	0
Ijaw	1	0.6	0	0	0	0
Sura	0	0	1	1.4	0	0
Total	160	100.0	73	100.0	13	100.0
Working Experience (years)						
≤ 5	38	23.8	22	30.1	2	15.4
6 – 10	73	45.6	29	39.7	7	53.8
11 – 15	32	20.0	16	21.9	2	15.4
≥ 16	17	10.6	6	8.2	2	15.4
Total	160	100.0	73	100.0	13	100.0

189 Source: Field survey, 2013.

190 3.2 Profitability Analysis

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The monthly average gross margin (GM) for timber traders was determined to be ₦85,750.00 for Zone A, ₦320,570.00 for Zone B and ₦275,060.00 for Zone C. Similarly that of chainsaw millers and sawmillers were obtained to be ₦39,688.00, ₦128,730.00 and ₦84,480.00, for zones A, B, and C respectively. For sawmillers it was ₦320,130.00, ₦136,000.00 and ₦407,540.00, respectively (Table 2). The result therefore revealed that timber traders in zone 'B' generated the highest mean GM from their trading activities followed by those in zone 'C' while the least GM from their was generated in zone 'A'. Similarly chainsaw millers in zone 'B' generated the highest mean GM followed by those in zone 'C' and then 'A'. For sawmillers, trade in zone 'C' had the highest mean GM, this was followed by sawmillers in zone 'A' while zone 'B' had the lowest mean GM from their trading activities. Of all the timber dealers, sawmillers generated a higher GM in all the zones except for timber traders in zone B. This means sawmillers generated higher incomes followed by timber traders while chainsaw millers generated the least. This has a positive socio-economic implication for the timber dealers, as this high gross margin is capable of improving the status of the respondents.

The results of RORI and GR values showed that timber traders in zone 'B' had highest RORI of 34.27 % with the least GR of 0.74. This was followed those in zone 'C' with 31.52 % and higher GR of 0.76 while zone 'A' had the least RORI of 22.13 % with the highest GR of 0.82. Similarly, chainsaw millers RORI of zone A is the highest (84.19 %) but the lowest GR of 0.54 among the zones, followed by those in zone C with a RORI of 61.80 % with the highest GR of 0.62 while zone 'B' had the least RORI in the three zones with a corresponding higher GR of 0.56.

In the same vein sawmillers in zone 'A' had the highest RORI of 84.19% but the lowest GR of 0.54 among the zones. This was followed by sawmillers in zone 'C' with a RORI of 63.98% with a lower GR of 0.61 while sawmillers in zone 'B' had the least RORI of 42.90% but with the highest GR of 0.70 among the zones.

Table 2: Gross Margin Analysis of Timber Trade Participants in Benue State.

Market Location	Mean Gross Income (₦)	Mean Total Variable Cost (₦)	Mean Gross Margin (₦)	Rate of Return to Investment	Gross Ratio
	<i>Timber Traders</i>	<i>Timber Traders</i>	<i>Timber Traders</i>	<i>Timber Traders</i>	<i>Timber Traders</i>
Zone A	473,240.00	387,490.00	85,750.00	22.13	0.82
Zone B	1,255,900.00	935,330.00	320,570.00	34.27	0.74
Zone C	1,147,800.00	872,720.00	275,080.00	31.52	0.76
Total					

	<i>Chainsaw millers</i>	<i>Chainsaw millers</i>	<i>Chainsaw millers</i>	<i>Chainsaw millers</i>	<i>Chainsaw millers</i>
Zone A	86,828.00	47,140.00	39,688.00	84.19	0.54
Zone B	292,970.00	164,240.00	128,730.00	43.94	0.56
Zone C	221,170.00	136,690.00	84,480.00	61.80	0.62
Total					
	<i>Sawmillers</i>	<i>Sawmillers</i>	<i>Sawmillers</i>	<i>Sawmillers</i>	<i>Sawmillers</i>
Zone A	687,370.00	367,240.00	320,130.00	87.17	0.53
Zone B	453,000.00	317,000.00	136,000.00	42.90	0.70
Zone C	1,044,500.00	636,930.00	407,540.00	63.98	0.61
Total					

Source: Field Survey, 2013.

4.3 Poverty situation among Timber traders in Benue State

The poverty situation among the respondents is presented in Table 3. According to the results of FGT poverty measures, 1.4% timber traders, 1.2% of chainsaw millers in the study area were extremely poor, while the poverty gap was 0.006 for timber traders, 0.004 chainsaw millers. This implies that about 0.6% and 0.4% of the timber traders and chainsaw millers respectively are below the poverty line. Furthermore, the result revealed severity of poverty at 0.003 for timber traders and 0.0002 for chainsaw millers; implying that about 0.3% and 0.02% of timber traders and chainsaw millers respectively are severely poor in the study area. The FGT poverty measure reveals that non of the sawmillers were poor Table 3.

Table 3: FGT Poverty Measure

	Poverty incidence $\alpha = 0$	Poverty gap $\alpha = 1$	Poverty severity $\alpha = 2$
Timber traders	0.014	0.006	0.003
Chainsaw millers	0.012	0.004	0.0002
Sawmillers	0.000	0.000	0.000

Source: Data analysis, 2013 US\$= ₦166

The study revealed that timber traders, chainsaw millers and sawmillers were male and only one female timber trader was involved in the business enterprise. It is thus a male- dominated occupation. The dominance of male over female in timber marketing was attributed to the tedious nature of the business. This finding corroborates the earlier view expressed by [11] and [28], that dominance of the trade by men is due to the fact that it's operation is tedious, and this tends to discourage most women from engaging in the enterprise.

The fact that majority of the timber traders fall within the active age distribution of 30 -40 years further justify the above claim. These youths are gainfully employed and can earn their livelihood from timber business in spite of the enormous strength and energy required for this kind of business; their youthful exuberance can match the toils involved. The relatively low proportion of youths in the sawmilling enterprise could be attributed to the high financial involvement in the business, which most youths could possibly not have. The study revealed that a greater proportion of the timber traders, chainsaw millers and sawmillers were married. The larger proportion of married families implies that timber trade is perhaps a secured livelihood activity in the area; and could sustain their responsibilities to wives, children, and other family members under their care. Though the business is male dominated access is not limited to men. It was observed that the business has positive impact on poverty alleviation since the proceeds are used by respondents for education, health and the well-being of family members and hence poverty alleviation.

The relatively larger proportion of literate respondents over the illiterate in timber business seems to be a blessing. According to [29] timber business requires some degree of literacy due to measurements and simple calculation involved in plank processing from round wood into different sizes. The respondents would also be more amenable to development policies required to be implementable. This however means that those illiterate may not optimally profit from the business.

This also implies that timber trade is perhaps a profitable venture that engages the educated and provides alternative source of income and employment.

In the same vein a greater proportion of the sawmillers had primary education than tertiary education. The implication is that greater proportions of these market actors are educated and can communicate in English. However timber traders and sawmillers acquired higher levels of education than chainsaw millers. The higher profitability and income from the enterprise may have attracted individuals with higher educational status to get involved in the enterprise compared to income from white collar jobs that in most cases do not guarantee above average quality of life in Nigeria [30].

The trading activities in timber marketing in Benue State were profitable. At the end of every month of trading, a timber trader goes home with N85,754, N320,570 and N275,060.00 in zones A, B and C respectively. Similarly, the chainsaw millers also go home on average with N39,688.00, N128,730.00 and N84,474 in zones A, B and C respectively. In a similar manner, sawmillers go home with N320,130.00, N136,000.00 and N407,540.00 respectively. The product of respective monthly quantity

of the timber sold and the corresponding unit cost of its production. The GM values are far higher than the national minimum wage; this justifies timber trade as a viable enterprise for sustainable livelihood. Based on the gross margins (GMs), and their trend in all the timber traded, timber traders in zone 'B' had the highest average GM which implies that the timber market in the zone is more efficient, that is the extent to which the financial returns are capable of offsetting costs is higher compared to timber markets in the others zones. This could be attributed to its high population and cosmopolitan nature compared to the other zones. The cosmopolitan and higher population of this zone could result to higher demand, construction activities and higher magnitude of trading activities which could in turn lead to higher rates of returns. All things been equal timber traders in zone 'A' generated higher profits from sales compared to those in zones and 'B' and 'C'. The RORI and GR values also support the above conclusion.

Therefore, GR of 0.82 for timber traders in zone 'A' means 82% of the total income generated is used in off-setting marketing costs. By implication the profit made from timber sales is 18% over the capital invested. That is one naira invested will generate 18 kobo or 0.18 naira as profit thus raising the amount invested to N1.18. The result showed high values of GR and low values of RORI for timber traders but the GM was positive and high. The implication of these results is that, not high profit margin does accrue to timber traders because the high GR value implies that too much expenses were incurred in offsetting marketing costs; transportation, loading, off-loading, taxes, purchasing costs among others. This cost gulped as high as 82% of the gross benefits realized by timber trader. The same explanation applies to in timber traders in zone B and C and chainsaw millers and sawmillers.

Based on the GR, RORI and GM concepts together with their observed values, it can be safely concluded that, the observed differences in the level of profit generated and hence efficiency in marketing across the three market segments is due to the interaction between quantities of wood supplied, producer prices and marketing cost components. These factors are the parameters that can affect returns from any marketing activity.

Generally, the three groups of marketers had a fair profit margin, but relatively timber traders realized higher profit margins as the GM indicates. This is similar to [12] findings in Kano State which revealed that timber business can generate between N5, 000 to 450,000 per month and can generate even one hundred thousand naira per day based on demand and season. Furthermore, the findings of [14] on Analysis of Sawn Timber Enterprise in Benin Metropolis Edo State, Nigeria, revealed the highest gross

margin per month of N816,000.00 and the lowest of N360,000.00. While that of [28] on Economic Analysis of Plank Production in Gboyin Local Government Area of Ekiti State, Nigeria reported a gross margin of N281,052.00. According to the findings by [17] in Benue state, incomes from chainsaw milling range between \$2.50 and \$80 per day, and range between \$75 and \$2,400 per month. This shows that the income from this study of ₦84,298 amounts to \$526.86 per month. [31] also made a similar observation from the study on profitability, prospect and constraints of Sawmill Industry in Kaduna State. His finding revealed a monthly net income to be ₦118, 789.40 while the rate of return on investment was calculated to be 50.18%. This is therefore an indication that timber business is generally profitable in Benue State.

Based on the magnitude of GMs of timber traders and chainsaw millers in the zones, the zone B is more efficient followed by zone C and then zone A. This means that all things being equal, timber traders in zone B generated higher profits from their sales compared to traders in other zones. This variation in the gross margin between the zones could be attributed to greater risk and differences in capital investment, high demand due to the cosmopolitan nature of the zone B, which leads to high turnover rates.

Also the variation in the GMs could be due the high population nature of the urban areas which results to high patronage trade activities. In addition it can be attributed to availability of capital and the market size for planks. In the same vein, urban consumers require additional timber processing services. These factors call for higher return for timber dealers in urban areas. With more capital, sales become higher giving rise to more return. From the profitability index applied, it is evident that the enterprise in the study area was highly profitable for lumber marketers.

4. CONCLUSION AND RECOMMENDATION

Findings from this study showed that timber trade is profitable and generate income for the participants as greater proportion are above poverty line. This confirms that timber trade contribute to raising incomes and poverty alleviation of the participants.

Therefore measure for sustainable management of timber resources is germane in promoting forest based micro and small scale enterprise which could provide employment that can generate income for improvement of well-being. Deliberate efforts should be made to encourage the marketers in investing in regeneration of forest trees in the state.

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