

# Socio-Economic Contributions Of Wood-Based Cottage Industries To Livelihoods And Industrial Development In Ogun State, Nigeria

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**Abstract:** In view of the Sustainable Development Goals (SDGs) or Global Goals numbers 1, 2, 3 and 15 aiming at ending poverty in all its forms everywhere; end hunger; achieve food security and improved nutrition and promote well-being for all at all ages and protect; restore and promote sustainable use of terrestrial ecosystems; sustainably manage forests; combat desertification and halt biodiversity loss; a survey was carried out to assess the roles of wood-based cottage industries in attaining the Sustainable Development Goals (SDGs) in Nigeria with the aid of a questionnaire administered on two hundred (200) purposively selected respondents in Odogbolu Local Government Area of Ogun State. Data generated were analysed and presented using descriptive statistics, budgetary technique and Chi Square Analysis. I found out that majority (88%) are within the active age (25-50 years), even-gendered (50% each) of which 92% are married with 60% having 1-5 persons in their household. All had one form of education or the other and a greater part (68%) are operating and depending on wood-based cottage industry as sole source of livelihood. The principal source of wood sold among the respondents is forest reserves (98%) and each of them engage 10 to 24 workers earning between N2000 (\$6.56) and N 5000 (\$16.39) on a daily basis. Proprietors make a Gross Margin of N 28,334 (\$ 78.71) per day. Funds are sourced through cooperatives (56%), personal savings (16%) and friends and relations (14%). Government assistance is sought in the areas of infrastructures, access to land and more forest reserves. Chi Square results reveals that there is a significant difference between output per day and the marital status (0.037, > P0.05) and years of experience (0.005, > P0.05) at 5% probability level. The study concludes that, at the current scale of operation, wood-based cottage industries in the study area are generally profitable and has the potential to contribute significantly to the economic wellbeing of the entrepreneurs engaged in it, provide employment for the teeming population as well as boost infrastructural development of the Ogun State, Nigeria given enabling environment. The study recommends government intervention in the areas of provision of basic amenities, public enlightenments and establishment of more forest reserves to ensure sustainable supply of raw materials for the sustainable development of wood-based cottage industries, supportive policies, better access to finance, tailored service and markets, and secure forest access and tenure for sustainable forest enterprise development

**Keywords:** Cottage Industry, Development, Livelihood, Gross Margin, Forest

## 1. INTRODUCTION

The loss forest ecosystem and by implication, its services have been due to climate change, pollution, overexploitation, land use change and urbanization (Millennium Ecosystem Assessment (MEA), 2005). A cottage industry is a small-scale industry carried out at home by family members using their own resources including equipment for a sustainable living.

It is an aspect of traditional small-scale forest-based processing enterprises which depend on wood and non-wood products as a main raw material (Soaga, Oluwalana and Adekunle, 2010). Kingston (2005) described a forest ecosystem as an environment comprising of species (such as smaller plants, fungi, bacteria and animals) as well as physical and chemical processes such as energy flow and nutrient cycling. Forests are central to all human life because they provide a diverse range of resources, they store carbon, aid in regulating the planet climate, purify water and mitigate natural hazards such as floods.

Forests are vital for life on the earth as they are not just the green cover, we need to make earth beautiful but they perform many functions essential for our survival and sustenance (Paul, 2005). Kalu (2005) reveals that Nigeria benefited immensely from forest especially timber products before the advent of commercial exploration of petroleum. The Gross Domestic Product (GDP) of forestry compares favourably with other aspects of agriculture like fisheries. Forestry sector provides employment opportunities for thousands of Nigerians

(Okeje, 2008) as about 80% of rural populations are engaged in agroforestry and other related industries (Osanyinmere, 2008).

Global demand for many forest products has grown with rising income, urbanization and industrialization (Igbal, 2005). Poulton and Pole (2001) stated that there are developed markets and global international trade valued at 7.5-9 billion US Dollars per annum with another 100billions in processed medicine and medicinal plants (Simula, 1990). The annual value of fuel wood and wood-based forest products to the global economy is estimated to be more than US\$400 000 million, or about 2 percent of gross domestic product (Schmincke, 1995).

Wood processing is an engineering field comprising of the production of forest products such as pulp and paper, construction materials. Small Scale Forest Based Industries process a large part of their raw materials from forest and supply some to the main markets for use in the rural areas of developing countries (Fisseha, 1987, FAO, 2005). They are enterprises that utilize any material or product that is derived from the forest and woodlands for income and employment generation (Olatunji, 2004).

The main thrust of this research is to examine the practices and economic contributions of wood-based cottage industries to the livelihoods of the residents of Odogbolu Local Government area of Ogun State, Nigeria with a view to unravelling the socio-demographic characteristics of the stakeholders, describe the various forest-based cottage industries, estimate costs and return structure in the

business as well as reveal its contributions towards economic development of the study area.

## 2. RESEARCH METHODOLOGY

### 2.1. The Study area

Odogbolu Local Government Area of Ogun is one of the 20 Local Government areas of Ogun State located on latitude 60 50'N and longitude 30 46'E with a population of over 100,000 (NPC, 2006). It is about 61Km South-west of Ibadan and 100Km North of Lagos. It has a humid weather with an average temperature of about 27.40 C and annual rainfall of 128 cm in the Southern part and 105 cm in the Northern part. The LGA is the nerve Centre for cloth weaving and dyeing, trading and carving. Some of its important agricultural products are maize, cassava, yam and livestock. It has the highest forest-based industries (about 300) and there are many local forests and carpenters in the town. It is also an educational Center with several educational institutions including Tai Solarin University of Education and Ogun State College of Health Technology among others.

### 2.2. Sampling and Data Collection Procedure

Both primary and secondary data were used for this study. Primary data were obtained through purposive sampling of two hundred (200) respondents in Odogbolu Local Government Area of Ogun State with the aid of a well-structured questionnaire. Data

generated were analysed and presented using descriptive statistics, budgetary technique and Chi Square Analysis. Secondary data were sourced from published journals, textbooks, previous research works, internet and other publications relevant to the research focus.

## 3. RESULTS

**Table 1: Socio-demographic  
Characteristics of Respondents (N= 200)**

Variable	Frequency	Percentage
<b>Age</b>		
21-30	25	12.5
31-40	60	30
41-50	91	45.5
51 and Above	44	22
<b>Sex</b>		
Male	100	50
Female	100	50
<b>Marital Status</b>		
Single	8	4
Married	184	92
Widow	8	4
<b>Household Size</b>		
1-5	120	60
6-10	80	40
<b>Literacy Level</b>		
Adult Education	12	6
Primary Education	16	8
Secondary Education	76	38
Tertiary Education	96	48
<b>Subsidiary Occupation</b>		
Civil Servant	32	16
Pensioner	16	8
Farming	16	8
No other Occupation	136	68

**Table 2: Major Types and Sources of Wood Sold by Respondents**

Local Name	English Name	Botanical Name	Major	Minor
Kokoigbo	Poplar Wood	<i>Liriodendron tulipifera</i>	Yes	-
Eru	Oak Wood	<i>Pachyelasma tessmanii</i>	Yes	-
Omo	Birch Wood	<i>Cordial millenii</i>	Yes	-
Ekki	Hemlock Wood	<i>Lophira lanceolata</i>	Yes	-
Okilolo Wood	Cedar Wood	<i>Cedrela odorata</i>	-	Yes
Mansonia Wood	Mansonia Wood	<i>Mansonia altissima</i>	-	Yes
Mahogany Wood	Mahogany Wood	<i>Swietenia macrophylla</i>	-	Yes
Obi Wood	Fir Wood	<i>Pseudosuga</i>	-	Yes
Sanmi Wood	Pine Wood	<i>Pinus achinata</i>	-	Yes
Gmelina	Gmelina Wood	<i>Gmelina arborea</i>	Yes	-

**Table 3: Sources of Wood Sold**

Source	Frequency	Percentage
Forest Reserve	196	98
Local/Community Forest	4	2

**Table 4: Employment and Income Generation**

Employment/Average No of Workers	Frequency	Percentage
1-3	64	32
4-5	40	20
Above 5	96	48
Average Wage of workers per day (N)		
400-2000	60	30
2100-3000	44	22
3100-10000	4	2
11000-50000	8	4
Above 50000	88	44

**Table 5: Budgetary Analysis of Cost and Return Structure of Wood-Based Cottage Industry**

Items	Amount (N)
<b>Fixed Costs</b>	
Sheds/Overheads	5,000
Fixed Cost Depreciated (Machine) @ 10%	5,000
<b>Total Fixed Cost</b>	<b>10,000</b>
<b>Variable Costs</b>	
Labor wage	3,522
Wood purchase	2,324
Machine Hire	1000
Shop rent	1200
<b>Total Variable Cost</b>	<b>8,046</b>
<b>Total Cost</b>	<b>18,046</b>
<b>Total Revenue</b>	<b>36,380</b>
Net Income	18,334 (\$ <b>50.93</b> )
Total Gross Margin/Day	28,334 (\$ <b>78.71</b> )
Gross Margin/Month (Assuming 25 working days/Month)	708,350 (\$ <b>1,967.64</b> )
Gross Margin/Year	2, 896, 560 (\$ <b>23,611.67</b> )

**Table 6: Business Information of Respondents**

Item	Frequency	Percentage
<b>Scarcity of Materials/Wood</b>		
Yes	76	38
No	124	62
<b>Major Problem Encountered</b>		
Inadequate Finance	52	26
Economic Instability/Inadequate supply of wood	140	70
Rainfall	8	4
<b>Sources of Funds</b>		
Personal Savings	52	26
Friends and Family Relations	36	18
Co-operatives	112	56

**Table 7: Chi Square Analysis of the Relationship between Socio-demographic Characteristics and Output per Day**

Variable	F-value (p< 0.05)	Result	Decision
Marital Status	37.750	0.169	NS
Household Size	10.691	0.710	NS
Religion	20.071	0.862	NS
Literacy Level	47.705	0.252	NS
Occupation	59.979	0.037	S
Year of Experience	48.359	0.005	S
Nature of Practice	18.092	0.154	NS

#### 4. DISCUSSIONS

Table 1 shows the socio-demographic characteristics of respondents. Majority (88%) of the stakeholders/operators of the wood-based cottage industries in the study area are within the economically active age of between 21 and 50 years with those within 41-50 years predominating and constituting 45.5%. This is in line with the findings of Soaga, et al (2010) in a survey of traditional forest industries in Ogun State of Nigeria.

Evenness (50% each) in gender was observed in the business with 92% married respondent implying they are men and women with responsibilities. This is in line with the findings of Adekunle, et al. (2014)

in which they reported that the level of participation of in wood marketing defies gender bias as both sexes are found at every stage of the process which also signifies the lucrativeness of the business.

In another vein, the respondents maintain a household size of 1-5 persons (60%) and 6-10 persons (40%) which may be due to high labour requirements in the enterprise. Local wood plays a key role in the livelihoods of the residents. Timber products constituted the base for small scale industries in many communities. For example, a study conducted in Mozambique in 2001 found that there were 147 wood-based industries employing an average of 60 workers each (Eureka, 2001).

In terms of literacy level, all the respondents possess one form of formal education or the other though those with tertiary (48%) and secondary education (38%) are in the majority. This high level of literacy is expected to enhance their business managerial abilities.

A higher part (68%) of the respondents have made wood-based cottage industries their permanent and sole source of livelihoods. The small-scale enterprises have certain micro-economic characteristics that are known to generate 'multiplier effect' of increased economic benefits in rural economies resulting in higher incomes, higher consumption and improved terms of trade (Elson, 2010).

The respondents principally (98%) sourced wood for the business from Government forest reserves; only 2% are sourced from private/community forests as indicated in Table 3.

Okunomo and Achoja (2010) examined the impact of African Timber and Plywood industry on Sapele community, Nigeria. They concluded that sawmill industry created significant impact on Sapele community through the provision of social amenities and wood supply. Abdullahi (1999) indicated that furniture industry alone represented 80% of the wood-based industries in Nigeria implying that wood-based cottage industries are main source of employment in Nigeria.

In terms of employment generation, 48% of the wood-based cottage industries gainfully employs above 5, 32% engages 1-3 workers while 20% employs an average of 5

individuals. This shows that most of the wood-based cottage industries are operating as micro enterprises in line with the grouping by Small Medium Enterprises Development Agency of Nigeria (SMEDAN, 2012). Olawuni and Okunola (2014) reported that the presence of sawmills in Ife area provided employment to the people of the area as well as contributed to infrastructural developments such as well, access roads, electricity among others. In another vein, Adeniyi (1999) stated that the economic importance of sawn timber marketing includes meeting the needs of the people for construction, fuel wood and provision of employment as well as revenue for the stakeholders.

Table 6 reveals the business information of the stakeholders in wood-based cottage industries in the study area, 62% indicated that wood resources are currently not scarce in the study area though 38% confirmed otherwise. The principal constraints facing the respondents in the business are economic instability or inadequate supply of raw material/wood (70%), inadequate finance (26%) and excessive rainfall (4%).

In terms of sources of funding for business, the respondents got funds from Cooperatives (56%), personal savings (26%) and friends and relatives (18%). This implies that the potential for expansion and use of modern facilities for efficiency and profitability is there for the stakeholders given access to cooperative funding although sourcing funds from banks will impact more positively on their scale of operations as reported by Adekunle, et al. (2014). It is generally difficult to raise capital for the forest



industries due to their small size and difficulty in assessing risks by would-be investors (Canby, 2001) and this limits technology adoption, deter efficiency of operation, economy of scale and, hence, profitability of the business. The small size of the forest industries restricts the development of suppliers, subcontractors, service providers and other efficiency gains (FAO, 2011). FAO (2011) indicated that the competing demands for land are now sometimes referred to as the '5-Fs'- food, (animal) feeds, forest (for conservation), fibre and fuel – and there is growing interest in how these demands will be met in future.

The results of the budgetary analysis reveals that an average wood-based industry practitioner earns a total revenue of N18,334 (\$ 50.93) per day, a gross margin of N 28,334 (\$ 78.71) per day, a gross margin of N 708,350 (\$ 1,967.64) per month and a gross margin of N 2, 896, 560 (\$ 23,611.67) per annum. This implies that the business is a viable venture that can readily be scaled up to boost the livelihood of the residents of the study area and the economy of the Nigerian nation in general which is in line with Alamgirrr, Mezbahuddin and Jashimuddin (2007) projection of a total expected annual income from making bamboo articles to a family in their study area to be USD 1,078.

To strengthen small and medium forest enterprises; Governments can play a critical role in strengthening SMFEs to reduce poverty. They can grant and enforce legal access to forest resources. They can simplify bureaucratic procedures for obtaining natural resource quotas and SMFEs registration. Financial incentives, including

tax breaks for start-up SMFEs and local or green purchasing policies are additional positive steps (Donavan, et al; 2000).

## 5. CONCLUSION

The study concludes that, with the current scale of operation, wood-based cottage industries in the study area are generally profitable and has the potential to contribute significantly to the economic wellbeing of the entrepreneurs engaged in it, provides employment for the teeming population as well as boost infrastructural development of the Ogun State, Nigeria as well as West African sub-region given necessary and essential enabling environment. The study recommends provision of enabling environment in terms of supportive policies, better access to finance, tailored service and markets, and secure forest access and tenure-all crucial for the initial steps in forest enterprise development.

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