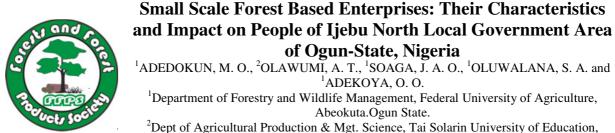
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Abstract

A research was conducted in Ijebu-North Local Government Area of Ogun State to give preliminary information on the magnitude, characteristics and contribution of small-scale forest based enterprises to rural employment through structured questionnaire and interview guide. The enterprises were characterized by very small size, heavy reliance on entrepreneur and family labour, technological simplicity of operations and rural location bias. Furniture, logging and carpentry were found to be the commonest among the small scale forest based enterprises. A range of problems facing small scale forest based enterprises was identified and a number of solutions were suggested. The regression analysis showed that SSFBEs in Awa town had the highest impact on the people; the coefficient of determination (R^2) value was 73.2% which was followed by Ago-Iwoye town with R^2 value of 71.3%. Oru town and Ijebu-Igbo town had R^2 value of 69.2% while Ilaporu town has the least impact with R^2 value of 51.3%. SSFBEs had a positive impact on the people of Ijebu-north local government area as the coefficient of determination (R^2) for all the five towns was 71.4% which indicated that SSFBE was a profitable business in the local government area. It was therefore concluded that Small scale enterprises play an important role as an occupation on people of Ijebu-North Local Government Area. There is need to promote this enterprise by extending support and incentives to the people involved.

Key words: Small-scale forest based enterprise, Characteristics, Impact

Introduction

Small-scale forest-based enterprises exist in most countries. They differ from largescale forest industries in a number of important respects. Generally, they serve markets which are not reached by large-scale forest industries. Their linkages with the rest of the economy are mainly with the rural/agricultural sector rather than the urban/industrial sector and they are affected by government policies in quite different ways than large forest industries (FAO, 1985). Like other rural small-scale industries, small scale forest based industries have been largely neglected. Industrialization in the developing world has focused on large industries which led to the popular but misleading impression that rural industries are either insignificant or absent. It is therefore necessary to examine the impact of these wood-based enterprises on the rural economy.

Most countries focus on promoting large industries and building up an urban/industrial infrastructure. Policies and measures to encourage this not only neglect the particular needs of small-scale enterprises, but inadvertently discriminate against them. Large industries currently benefit exclusively in large measure than small ones from easy access to institutional credit or credit guarantees, favourable import duties, access to foreign exchange and training systems run by governments. The wood-based industry is characterized by the production of large number of different products. The most important, after all, is the production of sawn wood, veneer, boards (plywood, particle board, and fibre board), furniture, carpentry and wooden houses. Over the last two decades, the wood-based industry has been transformed in terms of sophistication, diversity and production. There have been increased automation, quality control and production added timber products.

The principal problems faced by smallscale forest-based enterprises tend to be weakness of demand, limited supply of skilled manpower and shortage of finance. It is now becoming apparent that small-scale forest-based enterprises are a much more important component of the forest industrial sector than has been generally recognized. More attention is therefore required towards meeting their particular needs. Information on these smallscale forest based enterprises is therefore needed in order to provide better support in situation with developmental potential. The focus of the study is to assess the impact of some common small-scale forest based enterprises on the rural employment of some selected towns (Ago-Iwoye, Awa, Ijebu-Igbo, Oru and Ilaporu) in Ijebu-North local government area of Ogun Selected characteristics state. of these enterprises were also studied.

There is no single universally accepted definition of what comprises a small-scale enterprise. A distinction is usually made small cottage activities between very characterized by household location and traditional artisanal techniques and somewhat larger workshop enterprises employing some modern techniques. Though the different categories overlap, it is useful to distinguish differences in the economic role and potential of these different categories of enterprise. Smallscale forest based enterprises are defined as enterprises that utilize any material or product occurring in forests, woodlands, or trees outside of forests and woodlands.

Many rural dwellers, and particularly economically disadvantaged, earn a the significant proportion of their incomes from gathering. trading. processing and manufacturing forest based products. For example, forest users gather such products as fuel wood, rattan, bamboo, fibers, medicines, gums and various foods. Forests also lend themselves well to small-scale rural processing and manufacturing enterprises. These types of enterprises use wood and non-wood products for furniture and implement making; reeds and vines for handicraft, mat, and basket production; wood for making of charcoal, seeds and nuts for production of certain oils; and bark for tannin processing. Fuel wood is also a very important forest product used for brewing beer, smoking meats, and making bricks (Falconer and Arnold, 1989).

Small scale forest based enterprise are characterized by very small size, heavy reliance on entrepreneurs and members of their families

technological for labour, simplicity of operations, low capital intensity, limited industrial and managerial skills, seasonality of activities (especially for the smallest ones), and rural bias (Arnold et. al., 1987). Enterprises seldom occur as unique, separate entities; entrepreneurs generally choose to operate their enterprises as supplements to other activities. SSFBEs are generally closely linked with agriculture and normally one cycle in the seasonal pattern of agricultural operations. Kilby and Liedholm (1986), and Haggblade and Hazell (1989) have estimated that between 20 and 45 percent of full-time employment in rural areas of developing countries is non farm work. In addition, they have also estimated that from 30 to 50 percent of rural household income is earned from non farm work. Studies have shown that small-scale forest based activities comprise a significant portion of the small enterprise sector in developing countries.

Small-scale forest-based enterprises are one of the non-farm income opportunities that have emerged as an important component in rural development. It does not only provide additional income to farm families but also serve as link between agriculture and industries. Thus, there is an urgent need to promote this enterprise through policies and program that ensured sustained availability of raw materials and assistance to rural communities for participation in forest resource management to improve the economic well being of those engaged in them and also to support the larger industries. In view of this, this study seeks to evaluate the characteristics and impact of small scale forest based enterprises on the people of Ijebu-North Local Government Area. The study describes the demographic characteristics of respondents, the characteristics of the small-scale industries and finally the impact of the enterprise on rural people through regression analysis.

Materials and Methods

The study was carried out in Ijebu-Ode Local Government Area of Ogun State where small-scale forest based industries is concentrated. A list of all the registered industries was collected from the study area. A purposive sampling technique was used to select a total of one hundred (100) small-scale forest based industry. Twenty respondents were selected from each of the five towns - Ago-Iwoye, Oru, Awa, Ilaporu, Ijebu-Igbo. The questionnaire was used as the interview guide to obtain information on the respondents' demographic characteristics, type of enterprise, number of labour, size of enterprise, type of machineries as well as information to determine the impact of small scale forest based enterprise on the people in the study area.

Data collected were analyzed using descriptive statistics and Regression analysis. The implicit form model specification for the regression analysis was

Yi = F (X_1 , X_2 , X_3 , X_4 , X_5 , μ) the independent variables used for regression are:

Y= Income

 $X_1 = Age$

X₂= Educational level

X₃= Initial capital

 X_4 = Tax amount

X₅= Profit

The lead equation was determined after considering

- The Signs and magnitude of the coefficients (b's)
- The coefficient of determination (\mathbf{R}^2)
- The significance of the coefficients as measured by t-test

• The overall significance of the equation (F-test)

Results

Table 1 showed the demographic distribution of the respondents. 100% of the respondents were male. 57% of the respondents were above 45 years of age, 32% were between ages 36-45yrs, and 10% were between ages 26-35yrs while 1% of the respondents were below of 25 years. Twenty percent (20%) of the respondent has no formal education, 60% were primary school certificate holder while 20% were secondary school certificate holder. The diversification of table also shows the respondents small-scale wood-based in enterprises; 43% of the respondents were involved in carpentry, 31% were involved in furniture while 26% of the respondents were involved in sawmilling. Marital status revealed, 98% of the respondents were married while 2% were single. It also showed that 84% of the respondents have a family size of above 5 which is the largest in the group. Sixty-eight percent (68 %) of the respondents have their number of labour/apprentice below five (5) which is the largest.

	Characteristics	Frequency	Percentage
Gender	Male	100	100
	Female	-	-
Age (years)	Less than 25	1	1.0
	26 - 35	10	10.0
	36 - 45	32	32.0
	Above 45	57	57.0
Tribe	Yoruba	100	100.0
	Igbo	-	-
	Hausa	-	-
Level of Education	No formal education	20	20.0
	Primary education	60	60.0
	Secondary education	20	20.0
Occupation	Carpentry	43	43.0
•	Furniture making	31	31.0
	Sawmilling	26	26.0
Marital Status	Single	2	2.0
	Married	98	98.0
Family size	< 3	1	1.0
-	4	10	10.0
	5	5	5.0
	>5	84	84.0

Table 1: Socio-economic Characteristics of Respondents

Table 2 shows the characteristics of the SSFBE's. 72% are classified as small, which though is the focus of the research, but they might have been hindered from enlarging because of short of funds. Majority of the enterprise (75%) are involved in the use of simple tools, this could also be because of inability to afford the cost heavy machines. Table 3 shows the regression analysis of SSFBEs in Ago-Iwoye town. The R² value of 71.3% indicated that SSFBEs have a positive

impact on the people. The following variables family size (b2) is significant at 0.01 level, initial capital and tax (b3 and b5) are equally significant at 0.05 level based on double function interpretation. Consequently the variables contributed 71.3% of the variation on the income of SSFBEs in the study area. It could therefore be deduced that the variables have positive elasticity on income of SSFBEs in the local government area.

	Characteristics	Frequency	Percentage
Type of enterprise	Carpentry	42	42.0
	Furniture making	33	33.0
	Sawmilling	25	25.0
	Wood carving	00	0.00
Size of enterprise	Large	16	16.0
	Medium	12	12.0
	Small	72	72.0
Type of machineries	Simple tools	75	75.0
	Heavy duty equipment	25	25.0
Number of labour	< 5	68	68.0
	6 – 10	12	12.0
	11 - 15	10	10.0
	>15	10	10.0

Table 2: Characteristics of Selected Forest -based Industries

Table 3: Regression Analysis of Small Scale Forest Based Enterprise in Ago – Iwoye Town

Function form	Constant	b1	b2	b3	b4	b5	\mathbb{R}^2	Adjusted R ²
Double log function	13.140 (0.000)	0.137 (0.141)	0.472 (0.000)	-0.110 (0.024)*	-0.066 (0.493)	-0.118 (0.054)*	0.713	0.844
Semi log function	5.707 (0.000)	0.247 (0.141)*	0.572 (0.001)	-0.011 (0.235)*	-0.666 (0.695)*	-0.468 (0.04)	0.546	0.298
Linear function	-1.330 (0.187)*	0.360 (0.720)*	3.733 (0.000)	-1.422 (0.159)*	1.109 (0.271)*	-1.035 (0.304)*	0.405	0.164

* - Significant at 0.05 level; Parenthesis showed the probability value of significant variables

Table 4 shows the regression analysis of SSFBEs in Oru town. The R^2 value of 69.2% indicated that SSFBEs have a positive impact on the people. The following variables - age (b1) is significant at 0.01 level, , initial capital and tax (b3 and b4) are equally significant at 0.05% level, while b5 (profit) is significant at 0.01 level based on double function interpretation. Consequently the variables

contributed 69.2% of the variation on the income of SSFBEs in the study area. It could therefore be deduced that the variables have positive elasticity on income of SSFBEs in the local government area.

The regression analysis of SSFBEs in Awa town is presented in Tables 5. The R^2 value of 73.2% indicated that SSFBEs have a positive impact on the people. The following variables - Age (b1), initial capital (b3), tax (b4) and profit (b5) are equally significant at 0.01 level. Consequently the variables contributed 73.2% of the variation on the income of SSFBEs in the study area. It could therefore be deduced that the variables have positive elasticity on income of SSFBEs in the local government area.

Table 6 shows the regression analysis of SSFBEs in Ilaporu town. The R^2 value of 51.3% indicated that SSFBEs have a positive impact on

the people. The following variables – tax (b4) and profit (b5), educational level (2) are significant at 0.05level, while age is significant at 0.10. Consequently the variables contributed 51 .3% of the variation on the income of SSFBEs in the study area. It could therefore be deduced that the variables have positive elasticity on income of SSFBEs in the local government area.

Table 4: Regression	Analysis of	of Small Scal	e Forest Based	l Enterprise in	in Oru Town

Function form	Constant	b1	b2	b3	b4	b5	R^2	Adjusted R ²	F
Double log function	7.420 (0.000)	0.254 (0.001)	0.580 (0.956)*	-0.250 (0.004)*	-0.766 (0.003)*	-0.188 (0.054)*	0692	0.435	
Semi log function	5.173 (0.000)	0.622 (0.141)*	0.572 (0.001)	-0.011 (0.235)*	-0.666 (0.695)*	-0.468 (0.04)	0.472	0.687	1.696
Linear function	10.173 (4.604)*	0.778 (0.720)*	0.728 (0.000)	-1.422 (0.159)*	2.263 (0.271)*	-1.035 (0.304)*	0.400	0.632	1.374

* - Significant at 0.05 level; Parenthesis showed the probability value of significant variables

Function form	Constant	b1	b2	b3	b4	b5	\mathbb{R}^2	Adjusted R ²
Double	22.03	0.254	0.580	-0.740	-0.766	-0.188	0.732	0.855
function	(0.004)	(0.001)	$(0.624)^*$	(0.004)*	$(0.003)^*$	(0.054)*		
Semi log	5.173	0.622	0.572	-0.011	-0.666	-0.468	0.472	0.687
function	(0.004)	(0.663)	(0.542)*	(0.415)	(0.948)	(0.181)*		
Linear	2.102	0.256	0.728	-1.422	2.263	-1.035	0.483	0.695
function	(4.604)	(0.764)	(0.416)	(0.483)*	(0.571)*	(0.304)		

Table 5: Regression Analysis of Small Scale Forest Based Enterprise in in Awa Town

* - Significant at 0.05 level; Parenthesis showed the probability value of significant variables

Table 6: Regression A	Analysis of Smal	l Scale Forest Based	Enterprise in I	aporu Town

Function form	Constant	b1	b2	b3	b4	b5	R^2	Adjusted R^2
Double log function	2.451 (0.014)	0.365 (0.101)	0.850 (0.050)*	0.517 (0.183)*	-0.203 (0.063)	-0.085 (0.049)*	0.513	0.345
Semi log	4.604	0.627	0.218	0.521	-0.495	-0.868	0.505	0.256
function Linear	(0.100) 1.102	(0.185) 0.486	(0.547) 0.562	(0.415) -1.422	(0.008) 2.263	(0.523) -1.035	0.237	0.487
function	(3.250)	(0.524)	(0.416)	(0.483)	(0.571)	(0.304)		

* - Significant at 0.05 level; Parenthesis showed the probability value of significant variables

Table 7 shows the regression analysis of SSFBEs in Ijebu- Igbo town. The R^2 value of 69.2% indicated that SSFBEs have a positive impact on the people. The following variables – age (b1) tax (b4) and profit (b5), are significant

at 0.05%level, consequently the variables contributed 69.2% of the variation on the income of SSFBEs in the study area. It could therefore be deduced that the variables have

positive elasticity on income of SSFBEs in the local government area.

Table 8 shows the summary of the regression analysis of SSFBEs in Ijebu –North Local Government Area. The double log

function regression equation shows that age (b1), tax (b4) and profit (b5) are significant at 0.05% significant level This is in line with findings in Ago-Iwoye, Oru, Awa Ilaporu and Ijebu-Igbo township.

Table 7: Regression Analysis of Small Scale Forest Based Enter	erprise in Ijebu-Igbo Town
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Function form	Constant	b1	b2	b3	b4	b5	\mathbb{R}^2	Adjusted R ²	F
Double log	-0.728	-1.569	0.512	0.324	0.215	0.516	0.692	0.435	4.226
function	(0.014)	(0.004)*	(0.778)	(1.475)	(0.009)*	(0.003)*	0.422	0 (57	2 522
Semi log function	0.214 (0.100)	0.756 (0.495)	0.142 (0.547)	0.659 (0.415)	-0.215 (0.008)	-0.914 (0.523)*	0.432	0.657	3.533
Linear	-11.58	0.945	1.452	-0.219	2.263	0.368	0.137	0.370	1.345
function	(3.137)	(0.173)	(0.616)	(0.848)*	(0.571)*	(0.116)			

* - Significant at 0.05 level; Parenthesis showed the probability value of significant variables

Table 8: Regression Analysis of Small-Scale Forest Based Enterprises in the five towns.

Function form	Constant	b1	b2	b3	b4	b5	\mathbb{R}^2	Adjusted R ²	F
Double log function	-0.628 (0.018)	-1.469 (0.006)*	0.512 (0.778)	0.324 (1.475)	0.314 (0.009)*	0.612 (0.004)*	0.714	0.425	4.222
Semi log function	0.214 (0.100)	0.756 (0.495)	0.142 (0.547)	0.659 (0.415)	-0.215 (0.008)	-0.914 (0.523)*	0.432	0.657	3.533
Linear function	-11.58 (3.137)	0.945 (0.173)	1.452 (0.616)	-0.219 (0.848)*	2.263 (0.571)*	0.368 (0.116)	0.137	0.370	1.345

* - Significant at 0.05 level; Parenthesis showed the probability value of significant variables

Discussion

The study shows that small scale industries have contributed immensely towards alleviating unemployment problems in the country, especially in rural areas. The same has been reported by Kilby and Liedholm (1986), Haggblade and Hazell (1989) and Inoni, 2009 that between 20 and 45 percent of full time employment in rural areas of developing countries is in non-farm work. The size of the enterprise is small, majority of which utilize simple tools for processing operation and the level of operation is often dependent on the season of the year. (Fiesseha, 1987 and Soaga et. al., 2010). The seasonality of SSFBEs often leads to demand exceeding supply at certain periods of the year (Arnold et al. 1987).

In the saw milling and furniture industry, between five and seven persons

working in the enterprises were mostly informal apprentices, along with the owners. Accordingly to FAO (1987) report on the contribution of forest based industries in Zambia, specifically about 16 percent of the owners of SSFBEs maintained that they were unemployed before embarking on their forest based activities. The enterprises use small and medium machines with variations in the equipment used due to production capacity. Furniture and carpentry use small machines while sawmills use mediumequipment indicating considerable sized variations among the enterprises. Consequently, Fiesseha, (1987) noted that these industries provide cheap and effective practical on the job technical and business training for workers due to variation in capacity.

This study has revealed the status of the size, characteristics and impact of small scale

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forest based enterprises on people within their area of location. These enterprises are sources of income to those engaged in them. Indeed the enterprises were small in size and offer employment opportunities. In many developing countries where there are SSFBEs activities, they represent one of the largest rural employers outside of agriculture. In Jamaica and Zambia, for instance employment in SSFBEs ranges from 14-29 percent respectively of the total manufacturing employment in those countries (FAO, 1987). The number of SSFBEs continues to be on the increase due to expanding population. SSFBEs are an important part of the economic well-being involving rural and urban households. The contribution of SSFBEs to the rising population in developing countries could be expressed in terms of nutrition, health, food security, agriculture. forestry. rural development, and livelihoods in both rural and urban areas.

There are five central policy lessons emerging from this study. First, SSFBEs require educational support in terms of business, managerial and organizational skills. Without knowledge and skills to complement the enterprise, the business risks failure. Second, SSFBEs require trusting relationships within communities, in the form of associations, cooperatives and other types of organizations, to better facilitate benefit distribution. Third, rural forest users require improved forest access rights to support SSFBEs. Fourth, SSFBEs require increased access to market and infrastructure networks, which would contribute to enterprise profitability.

Consequently, SSFBEs require improvement in fiscal policy measures in terms of savings and credits facilities to contribute to SSFBE sustainability. If government policies have been properly directed more in support of SSFBEs, entrepreneurs will be better trained, and more studies conducted to effectively develop these enterprises. This will ultimately lead to significant improvements in livelihoods of urban and rural households through sustainable forest use and increased income generation.

From this study, it could be recommended that government policy on small scale enterprises should be well focused and properly implemented to address the constraints militating against these enterprises. This is with a view to promote this enterprise by extending support and incentives to the people involved.

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