



NON-TIMBER FOREST PRODUCTS AND POVERTY REDUCTION POLICY FRAMEWORK IN IKENNE LOCAL GOVERNMENT AREA, OGUN STATE, NIGERIA

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ABSTRACT

This study aimed at using NTFPs businesses in Ikenne Local Government Area (LGA) to develop a poverty reduction policy framework for the region. Among many other NTFPs in the LGA, wrap leaf, fire wood and charcoal were adopted for this study. The design was the survey methodology, in which five communities were surveyed. Twenty questionnaires were administered in each of the communities, out of which eighty- eight were returned, consisting of Ilisan (25%), Ikenne (21.59%), Iperu (19.32%), Ogere (11.36%) and Irolu (22.73%). The main outcome measurement was to evaluate how investment in NTFPs impacted the local economy of Ikenne LGA, in the light of creation of employment and generation of income, consequent to reduction of poverty. At both the 5% and 1% (1-tail) significance levels, the selected correlated variables were significant and linearly correlated. Consequently, and based also on the < 0.05 values of all the p - values, the educational qualification and type of NTFP, source of collection and total sale per week, bundle buying cost and bundle price etc, were significantly correlated. However, the correlation coefficient showed a disaggregated effect on the individual communities. Generally, only the uneducated are investing in NTFPs. Ilisan was highest for primary, while Ikenne recorded the highest of 47.4% for non-formal education. Due to percentage differentials among the communities in the aforementioned causative variables, there were different empirical evidences in the communities' total sale per week, net profit per week, benefit derived and help from benefit. Currently, NTFPs business yields low economic advantage to the local investors. The financial benefits in the form of income and profit are used for feeding, savings, educational and tax purposes. The full potential of NTFPs is far from being realized in IKenne LGA. Much

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improvement in poverty reduction will be achieved when the major constraints are addressed and the prohibitive or in some cases, the nonexistent government policies are reconsidered.

Key Words: Ikenne LGA and Non – timber forest products (NTFP).

JEL classification: R1, R11, R28.

INTRODUCTION

Non- Timber Forest Products (NTFP) are non- wood products that are procured from the forest, which include all botanical forest products. Other terms synonymous with NTFPs include special forest product, non wood forest product, minor forest product, alternative forest product and secondary forest product. These NTFPs are components of the forest system that exist in nature and are generally not cultivated. Though they are non-timber but can be of wood (Ros-Tonen and Wiersum, 2003). Non- Timber Forest Products are plants or plant parts that have high economic or consumption value sufficient to encourage their collection from the forest. They are harvested from the forest for personal use or for commercial purposes, they are useful within the household or are marketed. Non-Timber Forest Products are diverse in nature.

Since the early 1990s, the role of Non-Timber Forest Products for sustainable forest use and poverty alleviation have received increasing attention. They constitute a critical component of food security; they serve as an important source of income for the poor in many developing countries (Adepoju and Salau, 2007). Gbadebo and Gloria,(1990), reported that from economic viewpoint, NTFPs are equally important as wood based products. However, findings diverge on the number of available NTFPs. (Emery, 1998), argues that there are about 138 identified products which are classified into edible (honey, mushroom, vegetables, fruits and nuts, etc.) and non-edible (ornamental plants, medicinal plants, wrapping leaves etc.), while (Hammett and Chamberlin, 1998) claimed that 150 types are significant in international trade, among which are plants and plant materials used for food, fuel, storage and fodder, medicine, cottage, biochemical as well as animals, birds, reptiles and fish for food and feather.

They are being acknowledged for their role in sustainable development and conservation of ecosystem. Up to 80 percent of the population in developing countries depend on Non-Timber Forest Products for subsistence.

In Nigeria, food security of rural dwellers has improved by growing trees in the home gardens and on farms. Leaves, rafter, honey, sap, gum from the small scale industries are important sources of income (Okafor, Omoradion and Amaja, 1994). Due to the diverse varieties of species obtained from Non-Timber Forest Products, a lot of households were able to meet their immediate needs by collecting these products from nearby forests. Other households earn income to meet other needs through the marketing of Non- Timber Forest Products.

In the past, many efforts were concentrated on cushioning the effect of poverty on the populace, over the years; there has been improvement in the method of tackling the problem of poverty. Due to the fact that poverty has many dimensions, it had been looked at through variety of indicators such as level of income and consumption. Partly because the capital-intensive sector cannot cope with the unemployment situation especially in the rural region of developing and underdeveloped countries of Africa, (Sheil and Wunder, 2002), Nigeria has been rated among the 19 poorest nations of the world with a Human Development Index of 0.448 in 2008. At present, poverty in Nigeria manifest itself in various ways which include; hunger, economic hardship, general low standard of living, unemployment, increase in social vices, poor health condition etc. Poverty is largely situated in rural areas of Nigeria, where the poorest people live, where the major source of livelihood is primarily agriculture (Ariyo, 2010). Larger percentage of Ikenne Local Government Area dwellers are farmers or petty traders with high degree of illiteracy or secondary school drop-out, this contributes to the level of unemployment among the dwellers in the area. Non-Timber Forest Products have played a vital role in sustainable livelihood and poverty alleviation among rural dwellers (Sheil and Wunder, 2002). If harnessed adequately, NTFPs will create new employment opportunities and hence, increase the per capita consumption and reduce poverty in the community. (Kashif and Samina, 2012). In regards to return on investment, there is empirical evidence that agricultural exports can be as lucrative and profitable as any other sector of the Nigerian economy. (Adebile and Amusan, 2011). This is because agricultural activities like NTFPs create income for investors, which is directly related to the development of the locality. (Pradeep and Poonam, 2011).

Given the above this study seeks to assess the involvement of people in the exploitation of NTFPs in Ikenne LGA. To determine income generated from the business of NTFPs by the inhabitants of the study area and to develop a poverty reduction policy framework for the Local Government, inferring from the economic yields of the NTFPs business.

Statement of the Problem

Ikenne LGA is populated by mainly uneducated people, who cannot find employment in the few secondary schools and the fewer banks in the locality. More so, due the success of Babcock University at Ilisan, the population of Ikenne LGA is increasing rapidly, which impacts negatively on poverty rate in the area. Again, the people of Remo land are very fond of party and merry making; these require a steady income generation. Alternatively, such lifestyle is a negative function hard of work and business acumen.

Energy in the form of heat is indispensable in domestic lives and industrial activities. Our present daily comfort and prosperity can only be sustained by undisturbed supply of energy in form of heat. The world's demand for energy has increased to staggering proportion in recent years owing to increase in population. This has led to the adoption of fuel wood as the cheap and affordable source of energy since electricity as a source of energy and other fossil fuel products (kerosene and gas) are too expensive for many rural dwellers (Yakubu and Iduma, 2002).

Theoretical Basis of the Study

Many theories of poverty exist. Such as those that address individual deficiencies, cultural belief systems, geographical disparities, cyclical interdependencies, which can be due to closure of a company, which can deepen the poverty level of an individual or when an employee loses an employment, this will introduce a cumulative causation, which will lead to the employees' poverty (Bradshaw, 2006) and that of the person's household.

The economic, political and social distortions theory of poverty looks at how the economic system can cause people to have limited opportunities and resources with which to achieve the required income to maintain their well-being. This theory removes the stress of poverty on individual deficiencies, cultural beliefs, geographical locations and cyclical dependencies. While these may have their roles in poverty depth, the economic situation of a locality can address and correct them. This means that the economic system of a locality is an indirect function of the performance of its citizens. Hence, when the economic system is structured to encourage huge differentials in wealth, education and training (Rao, 2011), then poverty will increase, despite individual strength, cultural belief and geographical advantages. The people that experience such poverty issues show signs of wage stagnation (Solow, 2012) and thus, they will not grow economically. The above situation fits the rural dwellers of Ikenne LGA . They are poor with low income and subsistent living standard. However, the NTFPs provide an economic route out of poverty into a growing rural economy.

LITERATURE REVIEW

NTFPs are important non-wood products that are procured from the forest, they exist in nature. Though the products are useful, but their consumption, marketing, production and utilization patterns are not well defined due to their peculiar characteristics of plasticity to different uses. (Adepoju and Salau, 2007 and Aderounmu, Ladipo, Adebisi, Adewisi and Oyeleke, 2002). Firewood for example has been relevant in the human advancement (Meregini, 2002), it provide warmth and actual food cooking in settled habitation.. Wild food and other items from the forest provided food, shelter, medicine and materials for ceremonies and worship. When people began to domesticate plants and animals, they became less dependent on wild food and other forest materials. However, in the 1990s, there was a dramatic increase in demand for natural products including those of non-timber forest products which are traceable to a number of factors, which include a growing interest in alternative medicines, and homeopathy (Hammett and Chamberlin,1998). (Ros-Tonen and Wiersum, 2003) claims that as early as 1990s, the role of NTFPs for sustainable forest use and poverty alleviation has received increased attention for its important benefits such as goods (food, fodder, fuel, medicine, construction materials and small wood for tools and handicrafts), income and employment. The reduction of poverty will imply among other changes, the reduction of unemployment and inequality through investment in NTFPs , this will increase the living standard of the local populace. (Akhakpe, Fatile and Igbokwe-Ibeto,

2012). Compared to timber, the harvesting of Non-Timber Forest Products seemed to be possible without major damage to the forest and its environmental services and biological diversity.

From the economic point of view, NTFPs are equally important as wood based products. They are also increasingly being acknowledged for their role in sustainable development and conservation of ecosystem. Up to 80% of the population in developing countries depend on Non-Timber Forest Products for subsistence both economically and for nutrition (Gbadebo and Gloria, 1999). Non-Timber Forest Products make significant contribution to the national and rural economy in Nigeria; it forms an integral part of the rural economy providing goods and services as well as items of trade. (Arnold, 1995) reported that with the rise of extractive reserves in Brazil, community forestry in Nepal, joint forest management in India and similar initiatives in many other countries, local people are gaining access to significant benefits from non-timber forest products. These products are often common property resources like fuel wood, fodder, charcoal, poles, medicinal plants and a variety of foodstuff such as fruits and nuts, etc. The NTFPs mini-sector is rapidly growing, perhaps faster than the timber industry and it is expected to grow more in the future. Thus, (Shankar, 2011), argues that the rural areas of Nepal live on NTFPs, with an attendant increasing commercial demand in the area. The market for forest products other than tree has mushroomed by nearly 20% annually over the past years.

Description of the Study Area and Methodology

This study was carried out in Ikenne Local Government Area of Ogun state. The Local Government Area with its headquarters in Ikenne-Remo is one of the twenty (20) Local Government Areas that make up the present Ogun State (see Figure 1) in the South- Western Geo-Political zone of Nigeria. The Local Government was carved out of the defunct Remo Local Government in September 1991, spacing about 137.13km. It is bounded in the West by Obafemi-Owode Local Government, in the South by Sagamu Local Government, in the East by Odogbolu Local Government and in the North by Remo- North Local Government. (see Figure 2). Ikenne Local Government Area comprises Iperu- Remo, Ilisan- Remo, Ogere- Remo, Irolu- Remo and Ikenne- Remo. The inhabitants are mainly of Remo origin with trading and farming as their predominant occupation. The Local Government Area has a population of 202,980 (National Population Commission, 2006)

Figure 1: A map of Ogun State showing Ikenne Local Government Area.

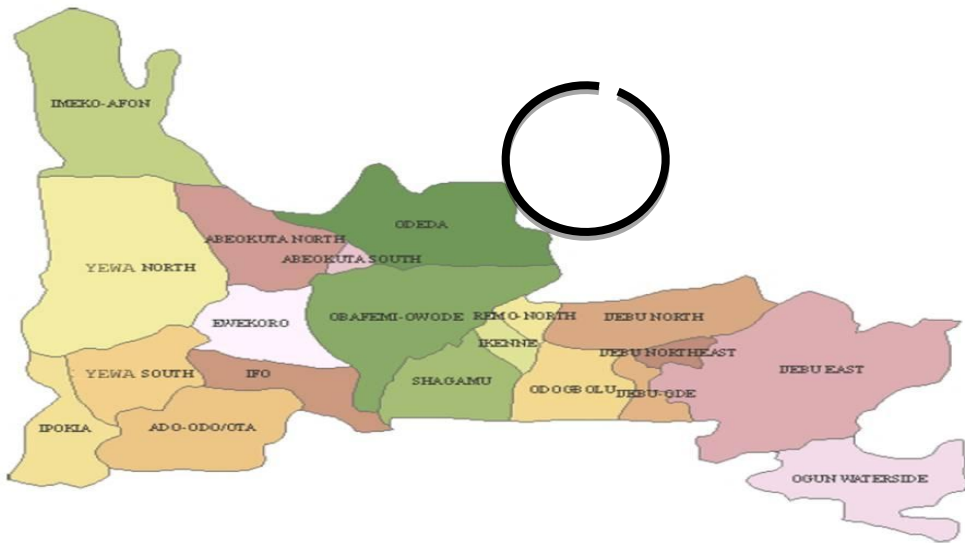
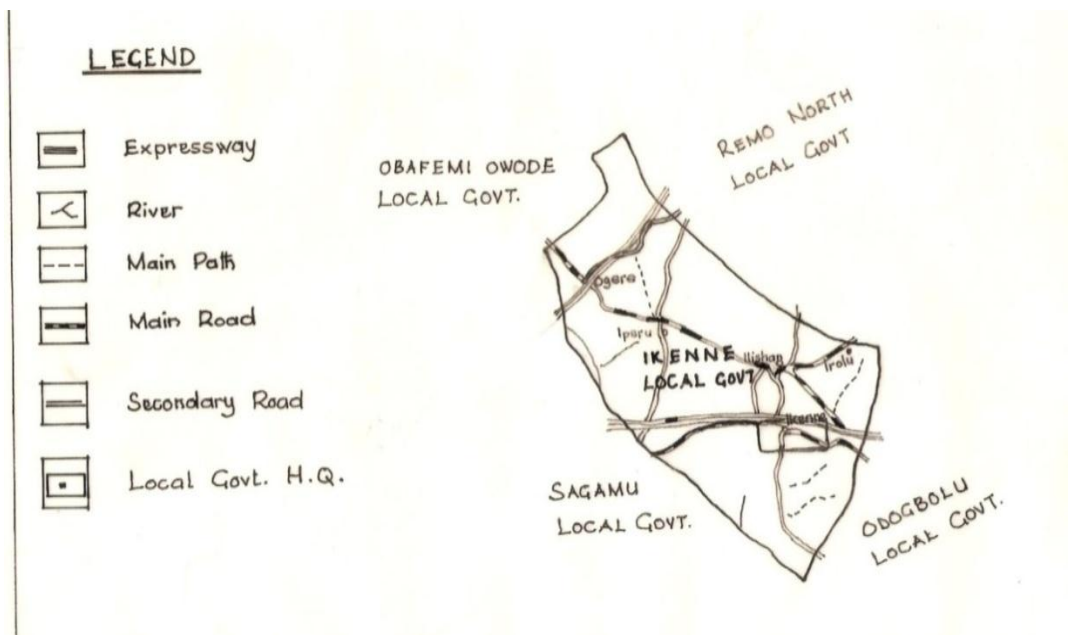


Figure 2: An extract map of Ikenne Local Government Area



Source- An extract, Ikenne Master Plan, 2012

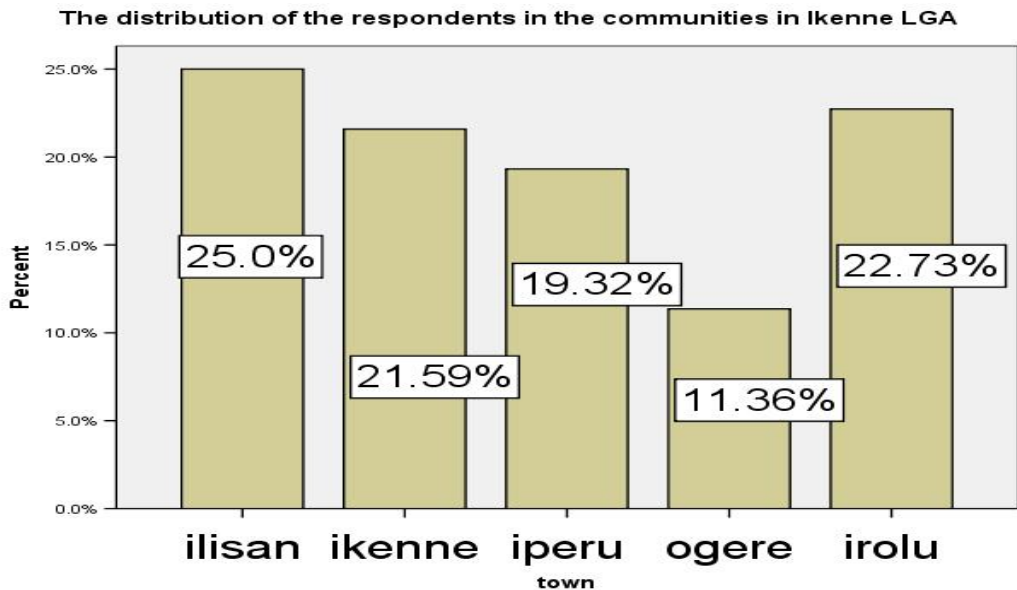
The area is endowed with good climate typical of rainforest, which makes it favourable for the people to engage in exploitation of NTFPs and farming. Cash crops such as cola-nut, rubber and timber are planted and harvested.

There are quite few Non- Timber Forest Products identified in this study area and there are sponge, cola-nut, palm oil, fruits, vegetables, bush meat, edible insects, leaves, nuts, etc. But three (3)

products, which are : wrapping leaves, (*Thaumatococcus danielli* (Benn.) Benth.) (see appendix one and two), charcoal (see appendix three) and fire wood (see appendix four and five, six and seven) will be investigated for this study. This study will evaluate the sustainability potential of these selected products.

The study adopted is the survey method. Thus, Ilisan, Ikenne, Iperu, Ogere and Irolu communities were surveyed. Twenty questionnaires were administered in each community. The dealers in NTFP are not yet unionized, so it was difficult getting them to survey. Hence, most of them were surveyed on the site of their business environment. Out of 100 questionnaires administered, 88 were returned. The percentage distribution of the collation shows that Ilisan was the highest participants, with Ogere being the least. (see figure 3)

Figure-3:



Source: Adeleye and Okezie, 2012.

The returned questionnaires were coded, using a code guide, from which a code manual was constructed. This was used to prepare an SPSS worksheet. The Pearson Correlation coefficient was used to compare selected variables, to determine positive (> 0) or negative (< 0) relationships. The p-values were used to evaluate the probability of obtaining correlation coefficient as extreme as the observed ones. Frequencies were used to empirically evaluate the correlation coefficients analysis, as per the empirical evidences in each of the communities.

DATA ANALYSIS AND DISCUSSIONS

Table-1: Pearson correlation coefficients analysis of NTFP in Ikenne LGA

Correlated variables	Pearson correlation coefficients	p-values
Educational qualification and type of NTFP	.197*	.033
Educational qualification and total sale per week	.231*	.015
Type of NTFP and source of collection	.291**	.003
Type of NTFP and gender	.208*	.026
Type of NTFP and bundle buying cost	.426**	.000
Type of NTFP and bundle price	.196*	.036
Type of NTFP and total sale per week	.197*	.033
Source of collection and total sale per week	.276**	.005
Source of collection and level of involvement in business	.183*	.044
Means of collection and bundle buying cost	.220*	.020
Means of collection and Government policies affecting business	.230*	.016
Bundle buying cost and bundle price	.356**	.000
Bundle buying cost and transport cost to Point Of Sales (POS)	.177*	.049
Bundle buying cost and total sale per week	.235*	.014
Bundle buying cost and help from benefit	.295**	.003
Production unit measurement and unit, quantity and size	(.196)*	.034
Production unit measurement and level of involvement in business	.237*	.034
Unit, quantity and size and bundle price	.195*	.034
Unit, quantity and size and transport to POS	.203*	.029
Unit, quantity and size and total sale per week	.353**	.000
Unit, quantity and size and help from benefit	.395**	.000
Bundle price and total sale per week	.471**	.000
Bundle price and net profit /income per week	.190*	.038
Bundle price and help from benefit	.500**	.000
Transport of POS and transport cost ton POS	.208*	.026
Transport of POS and total sale per week	.257**	.008
Transport of POS and net profit/ income per week	.242*	.012
Transport of POS and help from benefit	.232*	.015
Transport of POS and level of involvement in business	.247*	.010
Transport cost to POS and bundle buying cost	.177*	.049
Transport cost to POS and level of involvement in business	(.250)**	.009
Total sale per week and source of collection	.276**	.005
Total sale per week and bundle buying cost	.235*	.014
Total sale per week and unit, quantity and size	.353**	.000
Total sale per week and bundle price	.471**	.000
Total sale per week and transport to POS	.257**	.008
Total sale per week and net profit/ income per week	.407**	.000
Total sale per week and benefit derived	.192*	.037
Total sale per week and help from benefit	.377**	.000
Total sale per week and major constraints	.248**	.010
Net profit / income per week and transport to POS	.242*	.012
Net profit / income per week and total sale per week	.407**	.000
Net profit / income per week and help from benefit	.296**	.003
Net profit / income per week and level of involvement in	.306**	.002

business		
Benefit derived and total sale per week	.192*	.037
Benefit derived and help from benefit	.203*	.029
Benefit derived and government policies affecting business	(.202)*	.030
Help from benefit and bundle buying cost	.295**	.033
Help from benefit and unit, quality/ size	.395**	.000
Level of involvement in business and source of collection	.183*	.044
Level of involvement in business and production unit cost measurement	.237*	.013
Level of involvement in business and transport to POS	.247*	.010
Level of involvement in business and transport cost to POS	(.250)**	.009
Level of involvement in business and net profit/income per week	.306**	.002
Level of involvement in business and help from benefit	.194*	.035
Major constraints and government policies affecting business	.216*	.022
Government policies affecting business and benefit derived	(.202)*	.030

Source: Adeleye and Okezie, 2012.

Note: * means that correlation is significant at 5% (1 tail) and ** implies that correlation is significant at 1% (1 tail).

Looking at 5% and 1% levels of significance, the selected correlation coefficients were all significant. Those of production unit measurement and unit, quantity / size; transport cost to Place of Sale (POS) and level of involvement in business; benefit derived and government policies affecting business; level of involvement in business and transport cost to POS and government policies affecting business and benefit derived have negative relationships. Thus, increment in one variable will imply the decrease of the other. For example, more bad or discouraging government policies will reduce the benefit derived from NTFP businesses. Aside from these indirect relationships, the rest of the variables correlated are positive. This means that increment in one variable will also increase the other one. For instance, the acquirement of higher education will improve the type of NTFP traded in. This will also improve packaging and customer relationships. On the contrary, low education will reduce them.

The p-values measure the strength of the correlation coefficients. As a rule, p-values < 0.05 means that there is linear correlation and the relation is strong. When the p-values are large, there may be linear correlation, but the correlation is not significant. At the stage of the SPSS processing of data, the variables whose p-values were greater than 0.05 did not have the asterisks(s), which showed that they were not significant, hence they were dropped. Consequently, all the correlation coefficients in table 1, are significant and the two variables are linearly correlated at the 1-tail of either 5% (*) or 1% (**) levels of significance.

Depending on the direction of the correlation coefficient, the economic advantage of NTFPs can either be attained or disadvantaged. Some examples will clarify. When a dealer in NTFPs has acquired high education, there will be a corresponding increase in volume of sales per week. This

will multiply into higher profit and business expansion and thus, lead to the creation of employment, generation of income and reduction of poverty in the LGA. In Tanzania, NTFPs contributed to both monetary and non monetary benefits (Giliba, Lupala, Mafuru, Kayombo and Mwendwa, 2010).

However, increase in the transport cost to POS, can reduce the level of involvement of an investor in NTFPs. This is because involvement in business is dependent on amount of working capital at hand, but increment in the transport cost to POS depletes the working capital of the investor, which reduces quantity bought and sold. This is why increase in net profit also increases the involvement in business.

The above analysis may appear to indicate that NTFPs business is booming in Ikenne LGA and that the communities are immensely benefitted. But these general benefits vary from one community to another. Thus, there is need to briefly evaluate each of the communities, to see how the signs of own-correlation coefficients play out in the empirical business experiences of the individual community investors.

EMPIRICAL IMPLICATIONS OF THE CORRELATION COEFFICIENTS ANALYSIS OF NTFPS BUSINESS IN IKENNE LGA

Table-2: Combined percentage frequency distribution of selected variables in the NTFPs business, Ikenne, LGA.

VARIABLES/ COMMUNITIES	ILISAN	IKENNE	IPERU	OGERE	IROLU
Educational qualification					
Non formal	45.5	47.4	41.2	40.0	45.0
Primary	40.9	31.6	29.4	30.0	35.0
Secondary	9.1	15.8	29.4	30.0	20.0
Others	4.5	47.4	0		0
Type of NTFP					
Wrap leaf	50.0	84.2	47.1	30.0	5.0
Firewood	27.3	5.3	35.3	60.0	90.0
Charcoal	22.7	5.3	11.8	10.0	5.0
Others	0	0	5.9	0	0
Source of collection					
Natural forest	31.8	26.3	58.8	20.0	55.0
Cultivated farm	9.1	21.1	17.6	30.0	25.0
Bush	4.5	36.8	0	40.0	15.0
Market	40.9	10.5	11.8	10.0	5.0
Others	4.5	26.3	11.8	0	0
Bundle buying cost					
50-100	40.9	57.9	29.4	10.0	10.0
101-150	27.3	5.3	5.9	10.0	70.0
151-200	13.6	0	17.6	10.0	15.0
201-250	4.5	15.8	5.9	10.0	5.0

<251	0	0	5.9	0	0
Bundle price					
100-200	50.0	68.4	58.8	40.0	100.0
201-300	40.9	15.8	23.5	20.0	0
301-400	4.5	0	5.9	10.0	0
>401	4.5	0	11.8	30.0	0
Transport to POS					
Human labour	27.3	42.1	5.9	20.0	15.0
Motorcycle	4.5	5.3	0	0	35.0
Car	22.7	10.5	17.6	0	20.0
Truck	18.2	15.8	29.4	30.0	0
Personal	27.3	15.8	47.1	50.0	30.0
Transport cost to POS					
<500	54.5	15.8	17.6	30.0	50.0
501-1000	9.1	5.3	52.9	10.0	10.0
1001-1500	9.1	15.8	5.9	20.0	0
1501-2000	0	0	5.9	0	0
None	4.5	0	5.9	0	40.0
Total sale per week					
<2500	13.6	84.2	0	20.0	80.0
2501-5000	22.7	10.5	52.9	20.0	15.0
5001-7500	40.9	0	17.6	30.0	0
7501-10000	18.2	0	5.9	30.0	0
>10000	4.5	0	11.8	0	0
Net profit per week					
<1000	63.6	94.7	64.7	30.0	85.0
1001-2000	27.3	0	29.4	30.0	10.0
2001-3000	0	0	0	20.0	5.0
3001-4000	4.5	0	0	20.0	0
Benefit derived					
Income	27.3	36.8	17.6	90.0	90.0
Employment	4.5	0	0	0	5.0
Profit	54.5	47.4	23.5	0	0
Improve standard of living	13.6	10.5	58.8	10.0	0
Help from benefit					
self/dependent education	4.5	5.3	0	0	0
Feeding	22.7	52.6	29.4	20.0	40.0
Feeding and savings	31.8	31.6	41.2	30.0	25.0
Self/dependent education, feeding, tax payment and savings	13.6	5.3	5.9	10.0	0
Self/dependent education, feeding, tax payment, savings, house rent and meeting social needs	27.3	0	23.5	40.0	0
Level of involvement in business					
Full time	68.2	42.1	88.2	20.0	95.0
Part time	31.8	52.6	11.8	80.0	5.0
Major constraints					
Scarcity	9.1	15.8	5.9	10.0	30.0
Transportation	18.2	10.5	0	40.0	10.0

Completion	18.2	21.1	35.3	10.0	15.0
Availability of substitutes	27.3	21.1	23.5	20.0	15.0
change effect	22.7	26.3	35.3	20.0	10.0
Government policies affecting business					
High tax	4.5	0	0	0	0
Produce fees	13.6	5.3	11.8	0	0
Laws governing access into forest reserves	18.2	5.3	5.9	20.0	0
None	40.9	63.2	70.6	70.0	100.0
Others	4.5	0	0	0	0

Source: Adeleye and Okezie, 2012.

Note: groups that do not add up to 100% are due to missing variables.

All the surveyed communities had high non formal and primary educational qualifications. Ikenne was the highest in non formal education, while Ilisan recorded the highest in primary education. Ogere had the highest of secondary education. This shows that as at present, NTFP business is highly populated by investors who have low educational qualifications. Generally, educational qualification in the LGA is low, thus, the local citizens were unable to understand market demands, and they could not apply professional ethics in their businesses, which are needed for business growth. (Mariah, Ghulam and Mah, 2012). At 84.2%, the wrap leaf business was most invested in by Ikenne investors, followed by Ilisan, 50%. However, the community performed the least in firewood and charcoal businesses. Irolu investors recorded 90% in firewood business, seconded by Ogere. More percentages of the surveyed are collecting their wrap leaf and firewood from natural forests. This is reflected in the percentages of 31.8%, 26.3%, 58.8%, 20% and 55% for Ilisan, Ikenne, Iperu, Ogere and Irolu, respectively. Alternatively, the cultivated farm sources for the communities are 9.1%, 21.1%, 17.6%, 30% and 25%. Ilisan sourced 40% of its NTFPs from the market, while Ogere also sourced 40% of its materials from the bush. The cost of a bundle of NTFP is on the average ₦ 50 – 100³. This is reflected in the high percentages of 40.9% in Ilisan, 57.9% in Ikenne, 29.4% and 10% for Ogere and Irolu. However, for the cost of ₦ 101 – 150 per bundle showed an outlier of 70%. But the sale price is mainly ₦ 100 – 200 per bundle. This implies a gross profit of ₦ 50 to ₦ 100 per bundle. However. In Ilisan, Iperu and Ogere, the profit is higher, because sales price per bundle was up to ₦ 201 – 300.

To convey the NTFPs items from the source of collection to the market are mainly through: for Ilisan, human labour, car and personal means, such as own-carriage, and house helps. For Ikenne, the source was mainly human labour. The preferences of Iperu and Ogere are truck and personal sources. Finally, Irolu prefer motorcycle and personal sources. Costs of transport to POS are cheapest at Ilisan, with a 54.5%. For the rest of the communities, the price is highest at ₦ 1501 – 2000 in Iperu for 5.9% and least at < ₦ 500 in Irolu, by 50%. The transport cost though highly

³ Currently, one dollar exchanges for ₦ 156.

differential among the communities, is encouraging to NTFP business progress and improvement. This is directly in net profit per week. At Ilisan, 63.6% made a profit of < ₦ 1000, while 94.7% made the same profit per week. Iperu, Ogere and Irolu showed the same profit range, but at 64.7%, 30% and 85%, respectively. These are small amounts in annual values, which only benefits the investors in income (Ogere and Irolu), profit (Ilisan and Ikenne), and improving living standard (Iperu). These benefits are largely used in feeding, and/or savings. This shows that the full potentials of NTFPs have not been realized in the Ikenne LGA. Even at that, at Ilisan, Iperu and Ogere, part of the small amount of the benefits are still used to pay for tax, such as produce rates. Most of the investors in NTFPs are on full time bases. This was the case for Ilisan (68.2%), Iperu (88.2%), and Irolu (95.0%). However, Ogere has a high record of part time involvement in business of 80%. This high full time involvement and the small monetary benefits show that the time value of money for the investors is not realized. As a result, they will be unable to meet with future costs/expenses from the investment of their time in NTFPs.

The main constraints to the investors in NTFPs are transportation, competition, availability of substitutes and seasonal change effects. Transportation fares are increasing and often not adequate, while competition and availability of substitutes highlight the inadequacies of the investors. Seasonal change effects are difficult to manage because there are no available technologies (such as irrigation etc), to provide alternatives to climax statics. Tax is a problem at Ilisan. But laws governing access into forest reserves practically encumber the entire communities surveyed, except Irolu, which record a none government policy in its area.

The above disaggregation of NTFPs investment analysis in Ikenne LGA shows that the general correlation coefficients do not hold true the same way for each of the communities that make up the LGA. The differentiating variables are educational qualifications, type of NTFP traded in, sources of collection, costs and prices of transport and bundles of wares and major constraints affecting business performance in each community. Finally, government policies are relevant to their businesses, but they were either not available or when present, are anti-NTFPs business. Nevertheless, since 1989, the World Bank, Canadian International Development Agency (CIDA) among others has accepted NTFPs as a viable ecological option of economic development. They conclude that they have the potential to address rural poverty. (Ahenkan and Boon, 2011). However, the Ikenne LGA has not contextualised this idea into its business plans.

POLICY RECOMMENDATIONS AND CONCLUDING REMARKS

Four major problems arise from this study. First, there is the disaggregation problem of some variables in the communities surveyed. Second, the NTFPs business attracts only the uneducated in Ikenne LGA, this does not indicate a hope of business growth and expansion. Third, there is a negative evidence of seasonal change effect and fourth, government policies are either nonexistent or when instituted, they are anti- NTFPs business.

The policy frame work should be designed to address these problems. The managers of the LGA should encourage the dealers in NTFPS to organise themselves into unions. This will help to establish a constructive connection between them and the Local Government. So that they can be trained in the management of tropical forest, so as to improve the yield from the business and thus, meet with the local demand and even seek international market. This will be possible if the educated citizens can be attracted to the NTFPs business in Ikenne LGA. To achieve this, two methods may be used. First, the local investors can be trained by the Ministry of Environment of Ogun state. This can be achieved through its Department of Non-Timber Forest programme. Currently, this department is saddled with the task of Conservation and Development of wildlife in the State, honey production (Apiculture) etc. So there is need to increase the duties of the Ministry and thus include the products (wrap leaf, charcoal and firewood) under discussion into its programme. Second, the LGA can establish a special training and development programme in NTFPs, for National Youth Service Corps (NYSC) members serving in its zone. After which they will be granted soft loans to establish their own businesses. This will impact positively on employment and income generation among the beneficiaries and other citizens of the LGA. To aid in off-season production, the LGA leadership may partner with some technical experts to provide irrigational facilities for the growth of wrap leaf during dry seasons. Also, there is need to provide large storage facilities for the firewood and charcoal during rainy seasons. This will make NTFPs products available throughout the year in the LGA. More so, it will multiply the income of the investors and even attract more investors, which will create healthy competition and stabilize price in the long-run. The local government appears not to see any future in NTFPs business. This may be why it does not have good policy framework for the mini-sector. The LGA administration should therefore establish a bottom-top policy model that will encourage current investors in NTFPs and attract more investors.

It has been shown that NTFPs has economic advantages for the rural dwellers of Ikenne LGA. However, the full potential has not been attained. The locality is blessed with rich amount of NTFPs, which the local investors cannot scratch without external help. If the right policy framework is designed and put into operation, this mini-sector will reduce the poverty level in the locality by half, through employment creation and income generation.

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Appendix one: A Thaumatococcus danielli (Benn.) Beth plantation at Iperu



Appendix two: A truck loaded with wrapping leaves for sale on a market day in Ilisan.



Appendix three: Bags of charcoal for sale at Ilisan



Appendix four: A tree bought and uprooted by an Ilisan firewood seller



Appendix five: a truck loaded with firewood for sale at Ogere



Appendix six: Bundles of firewood exhibited for sale in an Ilisan compound



Appendix seven: Bundles of firewood exhibited for sale in an Ilisan compound

