

Socio-Economic Analysis of the Rattan Sector in Bamenda II Municipal Council, North West Region, Cameroon

Gideon Samba, Japhet Chiane Beng Kuma

Department of Geography, The University of Bamenda, HTTC, Bambili, Bamenda, Cameroon

ABSTRACT

The city of Bamenda is known for its increasing oriented cash-based business activities of which the rattan sector has proven its strength in the domain of socio-economic development and income generating to those involved in the sector. This research work thus looks into the socio-economic analysis of the rattan sector in Bamenda II municipal council. To achieve the main aim of the study, five specific objectives were set to identify the socio-economic activities of the rattan sector in Bamenda II, assess the impacts of the rattan sector on socio-economic development, examine the impacts of rattan activities on artisan income generation, assess the challenges faced by the rattan sector as well as to identify measures that can be adopted for a sustainable management of the rattan sector in Bamenda II. The research student exploited data for the study from primary and secondary sources using a mixed design method of inquiry which combines both quantitative and qualitative approaches to explore data on rattan sector and related activities in the domain. Purposive sampling technique was employed to all the artisan population that was identified in the sector, the researcher surveyed a total number of 134 artisans across the Municipal council of Bamenda II. The data generated were analysed using descriptive and inferential statistics using Statistical Package for Social Sciences (SPSS) version 20. The major results of the findings indicate that the rattan sector has significant effect on socio-economic development in Bamenda II, and rattan activities have significant impact on artisan income generation. The researcher used Non-parametric correlation and regression statistics to determine if rattan sector has any significant impact on socio-economic development and that if rattan activities have any significant impact on the artisans income. The hypotheses were tested at a significant level of .05. The results showed that the calculated p-value .001 for both hypotheses was not up to the significant level .05 placed for the study. This therefore accepts the fact that rattan sector and its activities have significant effect on socio-economic development and on artisan income respectively. Based on this finding and following the challenges that were raised, the study therefore strongly recommends that the government and the municipal council should enact appropriate policies to promote the potentials of the rattan sector in Bamenda II Municipal council for sustainable management of the sector.

How to cite this paper: Gideon Samba | Japhet Chiane Beng Kuma "Socio-Economic Analysis of the Rattan Sector in Bamenda II Municipal Council, North West Region, Cameroon"

Published in
International Journal
of Trend in Scientific
Research and
Development

(ijtsrd), ISSN: 2456-
6470, Volume-4 |

Issue-6, October 2020, pp.319-327, URL:
www.ijtsrd.com/papers/ijtsrd33372.pdf



Copyright © 2020 by author(s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



1. INTRODUCTION

Rattan furniture has become one of the most important accessories especially in people's homes of the less developed countries. The activity has vigorously gained grounds after timber furniture and is usually seen in homes, offices and social infrastructure buildings such as schools, hotels, hospitals, as well as in green garden areas. However, their contribution in enhancing and beautifying these places has not gone unnoticed. Furniture are in various forms, such as, doors, tables, chairs, decorations, cabinets and shelves, cupboards, beds, baskets, drums, etc.

Rattans are best known as climbing palms which belong to the subfamily 'Calamoideae'. It is estimated that more than 600 different species exist in the world (Asmussen et al. 2006), and are characterised by overlapping flexible wooden stems (Uhl and Dransfield 1987). Several attempts have been met in West and Central Africa to improve the rattan sector

especially with development focused towards farmer-based trials having as principal objectives on-farm cultivation through rattan product intensification. In the tropical rainforests of Africa and Asia, it is observed that rattan palms grow naturally as climbers (Enefiok N. (2018)). At ripen stage, the products are harvested, processed and transformed into furniture and handicrafts. In greater part of Asian village communities such as Laos, Cambodia and Vietnam, they rely heavily on rattan trade, which contributes cash income of up to 50% to support household livelihood of the indigenous population, thus making rattan a major contributor to poverty alleviation. In Central Africa countries of Ghana and Cameroon the rattan activity has become a major foreign exchange earner (Ogunwusi, 2012).

According to Enefiok N. (2018), rattan palms grow naturally as climbers in the tropical rainforests of Africa and Asia and

are harvested, processed and used in making furniture and handicrafts. Village communities in Laos, Cambodia and Vietnam rely heavily on rattan trade, which contributes cash income of up to 50% in the villages, thus, making rattan a major contributor to poverty alleviation in rural areas. It is a major foreign exchange earner in Central Africa, Ghana and Cameroon (Ogunwusi, 2012).

Ngui et al., (2011) opined that furniture has the highest value-added component among the major wood-based products of which rattan is a very vital component. It has been recorded by ITTO/ ITC, (2005) that the furniture industries make a substantial contribution to development in tropical countries, producing important economic benefits and playing a significant role in promoting economic growth. The exploitation of Non-Timber Products like rattan has greatly contributed to people's livelihood sustenance around Sub-Sahara Africa. In Central Africa and Cameroon in particular especially in its Bamenda region, the presence of rattan products have greatly influence the livelihood strategies of the forest-dwelling population for decades as the product provides artisans daily needs, employment opportunity and cash base income (Arnold and Ruiz-Pérez 1998).

Following projections from Calibre Consultants and SSC University of Reading (2000), it was estimated that among one-in-four to one-in-six of the world's poorest people depend directly or indirectly on forests for their daily needs. They indicated that more than 350 million people living in the Tropical region actually depend on timber and forests products with a minimum of 50% household needs, providing 10% jobs (Ames 1998). In land cover regions of 44.6% forests cover (FAO 2007), it was estimated that approximately 62% of the indigenous population depends on forests products to meet their needs for subsistence, employment and cash income (Tieguhong et al. 2009, Tieguhong and Ndoye 2004 and 2006, Arnold and Ruiz-Perez 1998). In most parts of Cameroons rural villages, the rural population depend mostly on NTFPs for subsistence and cash base income. At the level of households, forest products directly provide roughly 8 million estimates to the rural poor with traditional medicines, food, domestic energy and construction materials (Topa et al. 2009).

Forest resources and especially the Non-Timber Forest Products (NTFPs) have long contributed to subsistence needs of the rural people in Cameroon through the provision of goods and services such as: food, medicines, materials, tools, fodder, cosmetics, and cultural objects to people (Ngansop et al., 2019). Bamboo and rattan were recently classified in Decision n° 0209/D/MINFOF/CAB of 26 April 2019, as Non-Special Forest Products (NSFP) under NTFPs in Cameroon with no threatened status. Bamboo and rattan are well-known and multipurpose materials, which are found across Cameroon's diverse ecosystems, from dry to humid tropical and Afromontane forests (Ingram et al, 2011).

As resources that can be transformed into many value-added products, rattan can significantly contribute to Cameroon's socio-economic development agenda (Malin, N., and J. Boehland, 2006). Unfortunately, bamboo and rattan despite being considered as the most easy domesticated forested food products and renewable resource for the rural population, figured as the utmost neglected Non-Timber

Forest Products (NTFPs) in most Central Africa countries that has suffered a lot of setbacks (Tabot-Tabot, 2006; Ingram, V. and G. Bongers (2009). Understanding the arrangements actually governing how NTFPs are harvested and commercialized, and their environmental and socio-economic impacts, is vital if their trade is to continue sustainably and provide opportunities for development (Shackleton CM, Shackleton SE 2004). Within this context, a review of existing policies, strategies, national plans, programmes, and activities directly or indirectly linked to the bamboo and rattan sector is necessary. The analyses of current policies or programmes became critically important to enhance knowledge on existing information to that effect, which could be harness to propose a national bamboo and rattan policy for Cameroon

Among the NTFPs, rattan is exploited, transformed, marketed and used in Bamenda and to an extent, a minor quantity marketed out of Bamenda. Rattan and its finish products is more or less recent sector still developing though with an increasing demand. In spite of its enormous potential, the development of the rattan sector in tropical Africa and especially in the Bamenda grass fields seems to have been neglected a situation in contrast to many countries in Southeast Asia. There is therefore an urgent need for research into this sector to contribute to literature on the socio-economic potentials of the sector.

However, despite rattans wide coverage in many parts of Africa, very little scholarly articles have written about rattan in Cameroon given its wide potentials in the nation's rural communities. International Journal of Bamboo and Rattan have limited data about the sector in Bamenda city. It is within this perspective that the researcher carried out a socio-economic analysis of the rattan sector in Bamenda II Municipality in the Grass field region of Cameroon to contribute to the already existing literature about rattan in the region.

2. Statement of the research problem

Rattan activities have contributed to the livelihood sustainability of more than one billion people all over the world and most especially in low income developing countries. The activity provides fuel wood, kitchen utensils, building materials, shelter belts, fencing, chairs and many other domestic products. Nowadays, rattan products are used as industrial raw material for pulp and paper factories.

3. In Sub-Sahara African countries most especially Cameroon, little attention is paid to the rattan sector, this explains why the sector has remained underdeveloped for decades. In the city of Bamenda, the sector had remained dormant as it was considered not having substantial benefits in terms of generating revenue. This assumption is fast changing as people are increasingly involved in the sector and gaining knowledge of proper management techniques of rattan which could sustain the local economy as well as provide for livelihood sustainability. The socio-economic role of rattan in particular and forestry in general boils down to poverty alleviation, generation of employment, income and improved standard of living in general. The use of rattan products and other forest resources by the rural people possess a great potential to reduce rural poverty and unemployment. The forest and its resources (rattan) together with the benefits they provide in the form of

income, watershed and environmental protection enable the rural people to secure a stable livelihood. Rattans have enormous potential to rural economies in Cameroon and Bamenda II in particular. However, this sector is neglected, consequently, the industry is threatened by, poor quality raw rattan stems, inconsistent quality of products and national policies which tend to impede the industry and dampen the aspirations of collectors, weavers and traders. Though strives are being made to organise these sectors for

effective and adaptable technologies in the areas of management, planting, harvesting, processing, product development and competitive marketing. Primary stakeholders should be empowered to take up the challenge and advocate for positive changes to do away with such obsolete aspects in the sector. This study therefore seeks to carry out a socio-economic analysis of the rattan sector in the Bamenda II Municipal council.

3.1. Study area

Bamenda II subdivision is located in the North West Region of Cameroon, precisely in Mezam Division. The precise location of Bamenda II falls geographically, between longitude 10° 0' 8" to 10° -12' 0" East and latitude 5° 55' to 6° 10' 0" N of the equator and covers a surface area of about 79.23Km². Bamenda II is bordered to the north by Bafut as its neighbouring boundary, by Bamenda I and Bamenda III to the East, Bali and Mbengwi to the West, and finally Santa to the Southern part. The sub-division was created by presidential decree No 2007/1171 of 24 April 2007 alongside the Bamenda I and II sub councils within the Bamenda City Council.

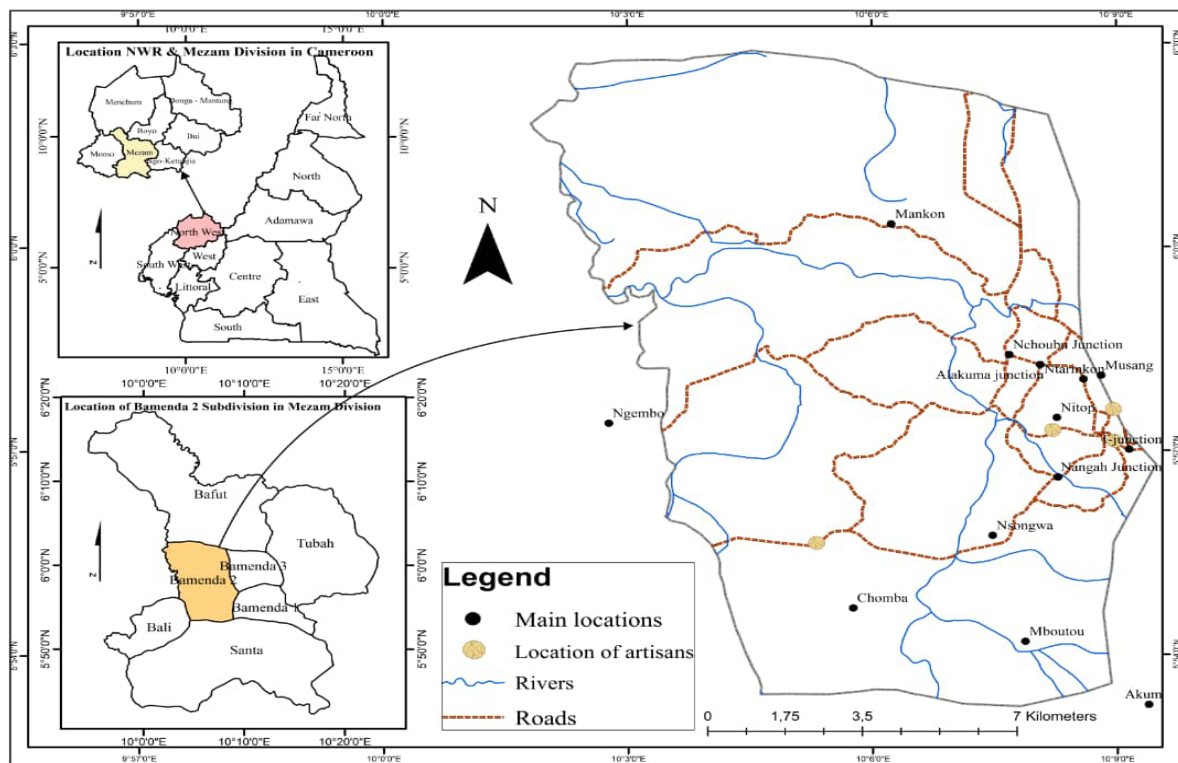


Figure 1- Location of Bamenda II in Mezam Division, Cameroon
 Source: adapted from Bamenda city council map, 2019

4. Methodology

The study adopted a quantitative and qualitative research approach to explore data on rattan artisans small scale industries within Bamenda II and how it has contributed to socio-economic development. Data on rattan product activities was collected, rattan furniture activities such as craftwork, baskets and chair making, fabrication of kitchen utensils, furniture sets, manufacture of baby's cots, musical instrument and decorated flower baskets and other related activities base on rattan products were all taken into consideration. Data for the study was derived through both primary and secondary sources and the target group for the study exclusively included rattan artisans of Bamenda II. This consisted of rattan artisans that owned furniture workshops, and the workers in each of the rattan sectors that were identified. Bamenda II has a base population of 295053 Inhabitants according to Bamenda City Council Population Statistic Department (BCCPSD), (2015). Out of this total population, 134 rattan artisans were identified which form the base population of the study. The study adopted purposive sampling technique; the decision to sample only the artisans was based on the subjective discretion of the researcher to select areas or elements from the population which met the criteria established. The study area itself was chosen purposively despite the fact that there existed other centres where rattan activities were practiced.

Direct administration of questionnaires was adopted, this helped interpret some difficult items to respondents, and immediately the respondents ticked the questions of choice, the questionnaire was retrieved immediately. A visual communication with images, colour pictures and graphs was also employed in the study for better understanding of the topic, and presentation of the results.

Data collected from the field was treated with the aid of descriptive and inferential statistics. The descriptive statistics is presented in the form of tables, charts, frequencies, percentages, graphs, maps and photograph for clarity. The hypothesis used in the work was tested with simple linear regression using Statistical Package for Social Science (SPSS), version 20 at a significant level of 0.05. The researcher used the regression statistics for the hypothesis stated to understand whether there is any significant impact of rattan activities on artisans’ income generation in Bamenda II. The simple regression formula was given as:

$$t = \frac{rs\sqrt{n-2}}{1-rs^2} \quad t = \frac{rs\sqrt{n-2}}{1-rs^2}$$

where

t = Student's t statistic; under the null hypothesis of independence t is a random quantile of the t-distribution with (n - 2) degrees of freedom,

r_s = the Spearman correlation coefficient,

n= the number of bivariate observations

5. Results and Discussion

Rattan furniture is common in Bamenda II with most of its inhabitants using rattan finished products such as cane chairs, tables, baby’s cot and kitchen utensils. Rattan has become an increasingly cash-base business and most inhabitants in Bamenda II have increasingly taken up activities within this sector for their livelihood sustainability given the increased socio-political tension that has continued within this part of the region for some time now.

5.1. Rattan artefacts production in Bamenda II

A good number of rattan articles are produced by rattan artisans in Bamenda II among which the researcher identified seven prominent rattan products: baskets, chairs, baby’s cot, musical instrument, kitchen utensils and decorated kits and jars. The opinion of the artisans was sampled on the presence of this rattan furniture’s within the four rattan working centres that were identified. Table 1 describe the expressions of the sample artisans on the fabrication and availability of these products at the work places. They were simply asked to say yes or no, as revealed on the table, an absolute majority confirmed the production of cane chairs, baskets, TV stands and shelves, baby cots, musical instruments (drums, whistle and flutes), kitchen utensils and Decoration kits and flower jars by a rating of 90.3, 85.8, 96.3, 65.7, 74.6, 81.3, and 66.4 per cents respectively. While on the contrary, 9.7%, 14.2%, 3.7%, 34.5%, 25.4%, 18.7% and 33.6% sample artisans did not consider the production of rattan products in Bamend II.

Table 1: Rattan products produced in Bamenda

SN	Rattan products	Yes	%	No	%	Valid	Total %
1	Rattan Bed	121	90.3	13	9.7	134	100
2	Baskets	115	85.8	19	14.2	134	100
3	Cane chairs, TV stands, Shelves	129	96.3	5	3.7	134	100
4	Baby’s cot	88	65.7	46	34.5	134	100
5	Musical instruments (drums, whistle, flutes)	100	74.6	34	25.4	134	100
6	Kitchen utensils	109	81.3	25	18.7	134	100
7	Decoration kits, flower jars	89	66.4	45	33.6	134	100

Source: Author’s fieldwork computation, 2020

Following the sample responses from the rattan artisans as concerns table 1 and judging from the frequencies and percentages of responses, it can be established here that the listed items on the table constitute rattan artefacts produced in Bamenda II.

5.2. Rattan product ranking in Bamenda II

The research finding as presented on table 2 sorted to know the most preferred, less preferred and least preferred rattan product by the sampling of artisan’s opinions. This was done to know which of the product was in high demand in the local markets. From the statistics presented, rattan bed was noted to be most preferable at 82.8%, less preferable at 17.2% while no case was recorded for the least preferred. Basket making was most preferred at 55.2% sample artisans, less preferred by 38.8% and was only least preferred by 6.0%. Opinion of the sample artisans was also sorted on cane chairs, TV stands and shelves where majority of the artisans 86.6% confirmed it was the most preferred rattan products fabricated in Bamenda II, 13.4% considered it to be less preferred while no case was recorded for least preferred.

As to the production and marketing of baby scots, 33.6% of the sample artisans said it was most preferred; this opinion was superseded by those who said it was a less preferred activity recording 63.4%. Only 3.0% considered baby scot as being least preferable. Another considerable rattan product in the municipality of Bamenda II was musical instruments such as drums, flutes, offering baskets. This set of musical instruments were said to be most preferred by 62.7% sample artisans, it was less preferable by 37.7% while no artisan considered it to be least preferable. As seen on the table, concerning the opinion of sampled artisans, kitchen utensils were most preferred at 47.8%, less preferred at 41.8% and 11.2% was registered for those

who least preferred the activity. The last items on which artisan's opinion was sampled included decoration kits, skulls, jars and caskets. These rattan products were considered most preferred by 73.1% of the sample artisans, it was less preferred by 41.0% and least preferred by 11.2%.

Generally, judging from the opinion of the artisans and taking into consideration all the rattan products, it can be said that overall, cane chairs, TV stands and shelves are the most preferable items produced in the municipality. This may be linked to the high demand of these products by customers.

Table 2: Rattan product ranking in Bamenda II

SN	Products from rattan	Product ranking						Valid
		MP	%	Less P	%	Least P	%	
1	Furniture sets	111	82.8	23	17.2	00	00	134
2	Basket making	74	55.2	52	38.8	8	6.0	134
3	Cane chairs, TV stand and shelves	116	86.6	18	13.4	00	00	134
4	Baby cots	45	33.6	85	63.4	4	3.0	134
5	Musical instruments (drums, flutes)	84	62.7	50	37.3	00	00	134
6	Kitchen utensils	64	47.8	55	41.0	15	11.2	134
7	Decorated kits, skulls, jars and caskets	98	73.1	17	12.7	19	14.2	134

Note: MP=Most preferred, Less P= Less Preferred, Least P=Least Preferred

Source: Author's fieldwork computation, 2020

5.3. Location of rattan production centres and sources of raw materials in Bamenda II

Rattan artefacts production in Bamenda II is carried out across four zones as seen on table 3, and within each of these zones are a good number of artisans who work within separate shops but the materials are exhibited in the same location site where buyers come for the product that attracts them. During field observation, the researcher observed that the artisans received rattan raw materials from two different sources Mamfe and Bafoussam with the bulk raw materials coming from Mamfe in the southwest and the rest from within Bafoussam in the west region.

It is observed that the rattan raw materials are received at various production zones in bundles. As presented on table 3, the rattan raw materials are received once a month, data collected from the artisans indicates that Zone one which is the Food market (Fish pond hill) area receives the highest share of the imported rattan raw materials estimated at 382 bundles (54.0%) per month, Zone two located at Metta quarter obtains 157 (22.2%) rattan bundles per month, Zone three, at Nitop 4 collects 100 (14.2%) while Zone four situated at Mile 90 receives 68 (9.6%) bundles per month.

Table 3: Site location of rattan production centres in Bamenda II

Zones	Location	Number of artisans	Monthly estimates of rattan materials (in bundles)	Sources of raw materials
Zone One	Food market(Fish pond hill)	53 (39.6%)	382 (54.0%)	Mamfe, Bafoussam
Zone Two	Meta quarter	39 (29.1%)	157 (22.2%)	Mamfe, Bafoussam
Zone Three	Nitop 4	25 (18.6%)	100 (14.2%)	Mamfe
Zone Four	Mile 90	17 (12.7%)	68 (9.6%)	Mamfe
Total		134 (100%)	707 (100%)	

Source: Author's fieldwork secondary data compilation, 2020

Figure 2, the analytical map of the rattan production zones and the flow of rattan raw material to the artefact production centres in Bamenda II. Within the four zones of rattan production identified, Food market (Fish pond hill) is shown on the map as the zone with highest number of artisan (53) as demarcated by its area circumference as being the largest circle. Metta quarter is represented as the second in terms of the artisan sector with 39 artisans; this is follow by the Nitop and Mile 90 with 25 and 17 artisans respectively.

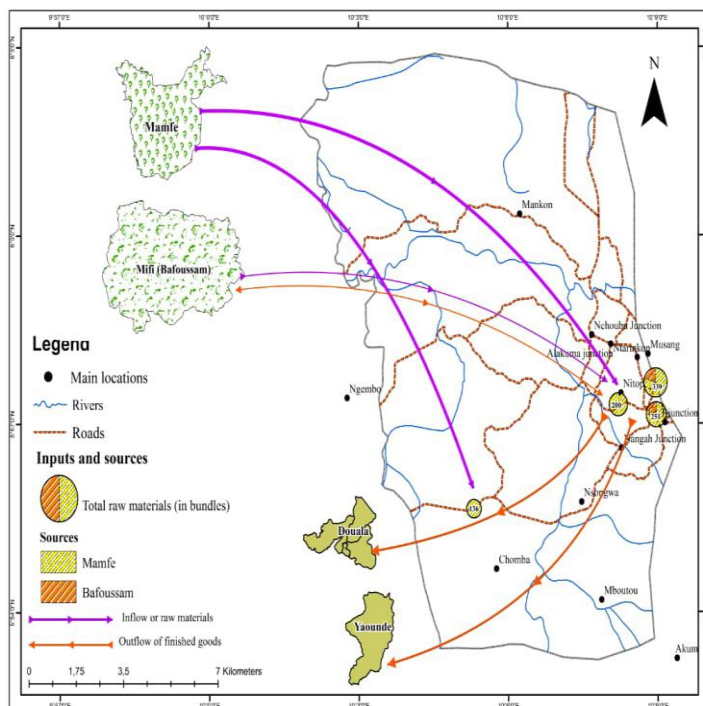






Figure 2: The flow map of rattan raw materials into Bamenda II
Source: Authors realization from GIS and Google Earth, 2020



The figure further demonstrates the flow of rattan raw materials from extraction sources to transformation zones as well to distribution centres out of Bamenda. As seen from the flow of rattan raw materials, majority coming from Mamfe and distributed to all the four rattan production zones in Bamenda II. Those from Bafoussaam are received in Food market and Metta quarter zones.

5.4. Rattan finished products and estimated unit prices within Bamenda II

It was observed during fieldwork of the study that imported rattan raw materials from Mamfe and Bafoussam are process, transformed to rattan finished products such as cane chairs, beds, tables, hair skull, and shelves in the production zones or workshops. The rattan artisans in the sector weave the cane products, split some into twines were it is used to build the hair skull, baskets and decoration of coffins. Nearly every part of the rattan cane is exploited for different uses in the cane workshops. It takes one to two week to complete some products like beds and a set of chairs, while others like kitchen utensils, hair skull, baskets, cane, and cupboards can be completed in a few days. It is the same for the prices, the longer the duration the higher the price of the product. Table 4 shows some rattan finished products in Bamenda II, their specification, and approximate duration of fabrication as well as estimated prices in FCFA.

Table 4: Rattan finished product specification and estimated selling prices

Products	Specifications	Approximate duration of fabrication	Estimated unit prize in CFA francs
 <p>Bed</p>	1m 90 by 1m 40	1week	70000/100000f
 <p>Set of Cane Chairs</p>	1 triplet, 1 double, 2 single and a central table	2 weeks	75000frs
 <p>Hair skull basket</p>	Diameter of 15cm made of soft rattan material	2 hours/basket	2500frs
 <p>Kitchen utensils</p>	Rounded trays, rectangular tray and basket	Daily	1500frs

 <p>Cane cupboard</p>	1m wide 50cm long	3 to 5 days	17000frs
 <p>Coffin decoration</p>	15cm wide 1.8m long	3day	150000frs

Source: Author’s fieldwork investigation, 2020

Customers who are attracted by any of the products displayed on the table may stop by the workshops to buy or make arrangements for the artefacts to be fabricated. Usually, the prices are negotiable depending on the bargaining power of the buyer and the seller but each of the products has a base price only known by the artisans.

5.5. Estimated monthly income of artisans from rattan activities in Bamenda II

Figure 3 displays the estimated monthly incomes obtained by artisans from the sale of rattan products. An absolute majority of 64 (47.7%) of the artisans make above 100,000 FCFA over a period of one month from the businesses, 30 (22.39%) make an estimated sum of between 86,000-100,000 FCFA per month, 25 (18.66%) of them receive between 76,000-85,000 FCA. Only 15 (11.19%) artisans receive between 56,000-75,000 FCFA monthly. Given the statistics of artisans monthly income and the fact that majority earned above 100,000FCFA per month is an indication that rattan business is highly profitable.

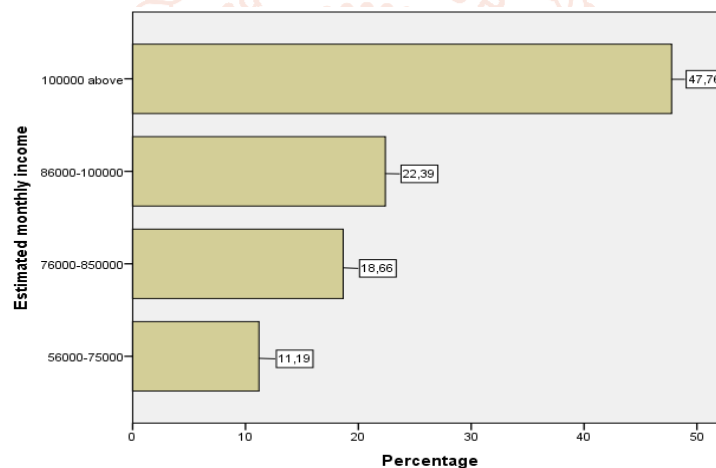


Figure 3: Estimated monthly income from rattan activities
Source: Author’s fieldwork computation, 2020

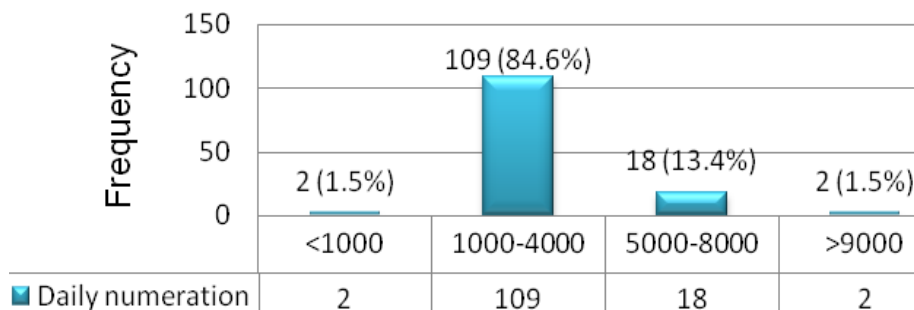


Figure 4: Daily numeration by artisans towards household’s up-keep
Source: Author’s fieldwork computation, 2020

As indicated on figure 4, obvious that artisans do support their households with money for family well-being. Most of the artisans opined that they give money to their wives to buy food stuff in the house and also for children and households member living with them especially transport for those members who are going to school under their care. As can be seen on the figure, an absolute majority of 109 (84.6%) of the rattan artisans remit between 1000-4000 FCFA as daily remuneration back to homes. The rattan artisans who send home between 5000-8000 CFA for family up-keep registered 18 (13.4%), while those artisans who remit <1000 and >9000 FCFA represented 2 (1.5%) respectively.

5.6. Test of hypothesis

H_0 : There exist no significant relation between rattan activities and artisan income generation in Bamenda II

H_1 : There exist significant relation between rattan activities and artisan income generation in Bamenda II

Decision rule: "If the sample findings are unlikely, given the null hypothesis (H_0), the researcher rejects the null hypothesis. Typically, this involves comparing the P-value to the significance level (.05), and rejecting the null hypothesis when the P-value is less than the significance level in favour of the alternative (H_1)".

Simple linear regression was used in testing the hypothesis at a .05 level of significance to determine if rattan activities such as cane chair making, baskets fabrication and beds exert any impact on artisan's income generation. From the linear regression statistics, the calculated P-values = .001 gave a perfect result since it was not up to the critical level of significance .05 thus, the alternative hypothesis (H_1) was automatically uphold given that the calculated p-values .001 met the decision rule.

Furthermore, as described from table 5 below, the t test was used in testing the null hypothesis, as an example, for $H_0: b_1=0$, $H_1: b_1 \neq 0$, we have $t = 63.343$ for rattan activities and $t = 66.490$ for artisan income. But since the p -value (Sig. = .001) for the t test is less than .05, we reject the null hypothesis of $H_0: b_1=0$, noting that at $\alpha=.05$ level, we will accept the null hypothesis, also noting that the value of test = 0 = 95% confidence interval.

Table 5: Simple Linear regression for rattan activities impact on artisan income generation in Bamenda II

Values	Value of test = 0					
	t	ddl	Sig. (-tailed)	Average Difference	Interval of confidence 95% difference	
					Lower band	Upper band
Rattan activities	63.343	133	.000	9.65672	9.3552	9.9583
Income generation	66.490	133	.000	6.06716	5.8867	6.2477

The results are based on 134 bootstrap samples

Source: Author's fieldwork computation, 2020

6. Discussion of finding

The major findings of the study is that, rattan sector has significant effects on socio-economic development of Bamenda II municipal council, those rattan products such as beds, cane chairs making, tables, TV stands and kitchen utensils among others have had significant effect on artisan's income generation.

The present study has found many elements in other works, Ngui et al., (2011) opined that furniture has the highest value-added component among major wood-based products of which rattan is a very vital component. It has been recorded by ITTO/ ITC, (2005) that the furniture industry makes a substantial contribution to development in tropical countries, producing important economic benefits and playing a significant role in promoting economic growth. The exploitation of Non-Timber Products like rattan has contributed in no small measure to the livelihood sustainability of many people around the Sub-Sahara Africa. The findings of Ngui are in line with the results of the present study in the same lame light of socio-economic development. This study reveals that rattan activities have promoted the craft/arts sectors, infrastructural development and improved living standards of the rattan artisans. These are aspects of development which Ngui have also captured in his work.

Adewole and Onilude's (2011) study also corroborate with the present research by highlighting the abundance of rattan in the Niger Delta regions of Nigeria including Rivers State. He stated that rattan is an important and rewarding off farm activity for subsistence farming communities among the rural populations of developing countries especially in sub-Sahara Africa which have generated substantial income for livelihood sustainability. Their finding tie with the finding of this study that the artisans in Bamenda II make enough income from the rattan sector, the fact that the artisans give

daily remunerations for the wellbeing of their families is a clear indication of the profitability of the rattan sector.

As proposed by Cropper, (2006), a good number of constraints vary from technical, economic, policy and marketing, and could militate against successful development of the rattan industry in Nigeria. In view of the economic, ecological and socio-cultural importance of the sector to above half a million people involved in rattan harvesting, processing and marketing in Sub-Saharan Africa. He concluded that despite the challenges, strategies are taken to ensure increased effectiveness and yields of the rattan enterprise. According to Liese, (2002), the rattan sector has also suffered from poor method of gathering and processing. In as much as rattan canes have been used for centuries, the harvesting and processing methods applied remain traditional and underdeveloped. This research have also notes the fact that challenges facing the rattan sector in Bamenda II and suggested sustainable measures for sector were also in line with what most authors have outlined in their research works.

Conclusion

The result from the study has indicated that rattan the sector in Bamenda II has significantly impacted on the income rattan artisans. Notwithstanding the impact, many challenges were identified which affect the rattan furniture sector especially the challenges of low demand of rattan products, low prices offer by customers for rattan products, lack of innovative techniques and lack of capital among others. Despite these challenges, the artisans have put in their best to maintain the sector couple with the socio-political instability that is ravaging the region and Bamenda II in particular. A Good number of sustainable measures are proposed and reacted upon by the rattan artisans for government and municipal council authorities to take action in order to safe rattan the sector from collapsing in Bamenda

II. It is believed that if the recommendations suggested are effectively implemented by the government and municipal authorities, it could lead to sustainable, durable management of the rattan sector in Bamenda II and beyond.

References

- [1] Adewole A. N & Onilude A. M. (2011). An Overview of Rattan Distribution in four states in South-south part of Nigeria World Rural Observations 2011:3(2).
- [2] Arnold, J. E. M. and Ruíz Pérez, M. (1998). The role of non-timber forest products in conservation and development. In: Wollenberg, E, and Ingles, A. (eds.). Incomes from the forest: methods for the development and conservation of forest products for local communities: 17 - 41. CIFOR, Bogor, Indonesia.
- [3] Asmussen, C. B., Dransfield, J., Deickmann, V., Barfod, A. S., Pintaud, J. C. and Baker, W. J. (2006). A new sub-family classification of the palm family (Arecaceae): evidence from plastid DNA phylogeny. Botanical Journal of the Linnean Society 151: 15–38.
- [4] Cropper, A. (2006). Why we need African forest. The International Forestry Review 8(1) 1-3
- [5] Enefiok, N. (2018). Forest: Its wealth and future. Department of Forestry and Natural Environmental Management University of Uyo, Nigeria
- [6] FAO, (2007). Fire Management – Global Assessment 2006. FAO Forestry Paper 151. Rome, Italy.
- [7] Ingram, V. and G. Bongers (2009). Valuation of Non-Timber Forest Product Chains in the Congo Basin: A methodology for valuation. Project GCP/RAF/408/EC « Mobilisation et Renforcement des Capacités des Petites et Moyennes Entreprises impliquées dans les Filières des Produits Forestiers Non Ligneux en Afrique Centrale ». CIFOR. Yaounde, Cameroon, FAO-CIFOR-SNV-World Agroforestry Center-COMIFAC: 80.
- [8] Ingram, V., O. Ndoye, D. M. Iponga, J.C. Tieguhong, and R. Nasi. (2011). Produit forestier non-ligneux : Contribution aux économies nationales et stratégies pour développement durable. In Les Forêts du Bassin du Congo—Etat des Forêts 2010, ed. C. de Wasseige, D. Devers, P. de Marcken, A.R. Eba'a, R. Nasi, and P. Mayaux. Luxembourg: Office des Publications de l'Union Européenne.
- [9] International Trade Centre UNCTAD/ WTO (ITC) and International Tropical Timber Organisation (ITTO). (2005). International Wooden Furniture Markets: A Review Geneva; ITC/ ITTO, xxxii, p.233
- [10] Liese W. (2002). Challenges and constraints in rattan processing and utilization in Asia. Unasyva No.25-Rattan Vol.522001/2
- [11] Malin, N., and J. Boehland. (2006). Bamboo construction: Is the grass always greener? Environmental Building News, March 2006.
- [12] Nganso, T. M.; Elvire Hortense Biyé, +2 authors Djomo Cédric Chimi, (2019). Using transect sampling to determine the distribution of some key non-timber forest products across habitat types near Boumba-Bek National Park, South-east Cameroon
- [13] Ngui, K. S, A. Agrawal and J. P. Voon (2011): Challenges Impeding Competitiveness of the Wooden Furniture Manufacturing Industry: the Case of Furniture Industry in Sarawak, Malaysia. Australian Journal of Basic and Applied Sciences, 5(9): 1135-1145
- [14] Ogunwusi, A. and I. Olife (2012). Enhancing Productivity of Forest Industry through Industrial Clusters Concept. Industrial Engineering Letters Vol 2, No.8, www.iiste.org,
- [15] Shackleton CM, Shackleton SE (2004) The importance of non-timber forest products in rural livelihood security and as safety nets: a review of evidence from South African. S Afr J Sci 100:658–664
- [16] Tabot Tabot, E. (2006). Strengthening forward and backward linkages in the Rattan and Bamboo sectors in Africa: the case of South West Region of Cameroon. INBAR Workshop on Rattan and Bamboo, China.
- [17] Tieguhong, J. C. & Ndoye, O. (2004). Development of trade and marketing of non-wood forest products for poverty alleviation in Africa. Paper presented at the Workshop on Lessons Learnt on Sustainable Forest Management in Africa, Uppsala, Sweden, 18–22 October.
- [18] Tieguhong, J.C. & Ndoye, O. (2006). Transforming subsistence products to propellers of sustainable rural development: non-timber forest products (NTFPs) production and trade in Cameroon. In Africa – escaping the primary commodities dilemma. African Development Perspective Yearbook, Vol. 11, Unit 1, pp. 107–137. Münster, Germany, Lit Verlag.
- [19] Tieguhong, J. C; O. Ndoye, P. Vantomme, S. Grouwels, J. Zwolinski and J. Masuch, (2009). Coping with crisis in Central Africa: enhanced role for non-wood forest products
- [20] Topa, G., Karsenty, A., Megevand, C., Debroux, L., (2009). Forêts tropicales humides du Cameroun: une décennie de réforme. World Bank — Program on Forests (PROFOR), Washington, DC (Available online: <http://www.profor.info/profor/sites/profor.info/files/Forets-tropicales.pdf>; accessed on December 14th, 2011).
- [21] Uhl, N. & Dransfield, J. (1987). Genera Palmarum. Allen Press. Kansas. USA.