



## Variation in forest dependency and determining factors in Bamenda I council, North West region, Cameroon

Variation de la dépendance forestière et facteurs déterminants dans le conseil de Bamenda I, région du nord-ouest, Cameroun

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### Abstract:

The present study focuses on variations in forest dependency among households in Bamenda I municipality in Cameroon's North western region. Forest variations were measured through forest dependency and socio-economic factors determining attitudes of the local community of Bamenda I towards its conservation, which actually formed the specific objectives of the study. Data for the study were obtained through primary and secondary sources using a mixed design method of inquiry, which combines both quantitative and qualitative approaches to explore data on forest variations dependency in the study area. Purposive and systematic sampling techniques were equally employed for the sample population of 155 using Miller & Brewer Sample determination Method (2003). The data generated were analyzed using descriptive and inferential statistics. Results from analysis showed that households depended on a good number of forest resources ranging from fuel wood, medicinal plants, beekeeping and for water resources. Forest dependency was discovered to be largely influenced by socio-economic variables such as family size, large land ownership among others. The researcher used logistic regression to analyze forest dependency and determining factors. The statistics revealed that age ( $p = .001$ ), marital status ( $p = .044$ ), educational level ( $P = .008$ ) and length of residency ( $P = .275$ ) significantly influenced forest dependency that was predicted since the calculated  $p$ -values were not up to the significant level ( $.05$ ) that was placed, but family size ( $p = .627$ ) did not add significantly to the model. The study ends up by recommending researchers to carry out more in-depth studies on community-forest relations especially evaluating communities' socio-demographic and economic activities that influence them to exploit forest resources. When this base line study is carried out, it will be easy to determine if communities are over exploiting forest resources and the kind of measures to be put in place to limit over exploitation.

### Résumé:

La présente étude traite des variations de la dépendance forestière dans les ménages de l'arrondissement de Bamenda 1er, région du Nord-ouest Cameroun. L'objectif de cette étude est de mesurer les variations forestières à partir de la dépendance forestière combinée aux facteurs socio-économiques qui déterminent le comportement des populations locales de Bamenda 1er en matière de conservation forestière. Les données de l'étude ont été obtenues à partir de sources primaires et secondaires. La méthode d'enquête mixte qui combine des approches quantitatives et qualitatives en vue d'explorer les données sur la dépendance des variations des forêts dans la zone d'étude a été exploitée. Les techniques d'échantillonnage raisonnées et systématiques ont également été utilisées. La méthode de détermination d'échantillons de Miller & Brewer (2003) a servi au choix des 155 personnes qui constituent l'échantillon. Les données générées ont été analysées à l'aide des statistiques descriptive et inférentielle. Les résultats des analyses montrent qu'un bon nombre des ménages dépend de ressources forestières telles que le bois de chauffage, les plantes médicinales, l'apiculture et les ressources en eau. Il a été constaté que la dépendance vis-à-vis de la forêt est largement influencée par des variables sociodémographiques comme la taille de la famille et la propriété foncière. L'analyse de régression a servi à déterminer la dépendance des forêts et les facteurs déterminants. Les analyses statistiques révèlent que l'âge ( $p = ,001$ ), l'état matrimonial ( $p = ,044$ ), le niveau d'éducation ( $P = ,008$ ) et la durée de résidence ( $P = ,0275$ ) influencent de manière significative la dépendance à la forêt telle que prévue, car les valeurs  $p$ -calculées ne correspondent pas au niveau significatif ( $0,05$ ) qui avait été retenue. La taille de la famille ( $p = 0,627$ ) ne contribue pas de manière significative au modèle. Cette étude pilote recommande aux chercheurs de procéder aux travaux plus approfondis sur les relations entre les ménages de Bamenda I et les forêts. Elle suggère également d'évaluer les activités sociodémographiques et économiques de ces mêmes ménages afin de déterminer leurs influences sur l'exploitation des ressources forestières. Les conclusions de la présente étude permettront de déterminer si les ménages de Bamenda I surexploitent les ressources forestières ainsi que le type de mesures à mettre en place pour limiter la surexploitation.

### Keywords / Mots clés

Forest dependency, variations, determining factors, socio-economic  
Dépendance forestière, variations, facteurs déterminants, socioéconomique

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## INTRODUCTION

From the beginning of human existence on the planet earth, forest is considered to have played primordial role in human survival as people across communities depend on it for their diverse livelihood sustainability. Several studies have revealed mixed results on communities' attitudes and forest conservation. Some findings especially those of Ansong and Roskaft (2011), Badola et al. (2012) and Genc et al. (2012), found out that local communities had positive attitudes towards forest while others have demonstrated contrary attitudes to those of positive views Obuaet al. (1998), Shibia (2010), Takon et al. (2013) and Ofoegbu et al (2017).

According to Zar et al (2017), FAO, (2015), Cavendish, (2002), and Lee, (1994), Forest dependency is defined and measured on the basis of overlapping categories such as the extraction and production of forest products and the economics of the use of "non-consumptive" natural resources for amenities. Each of these benefits has a different relationship with people and is mediated by social structures that allow people to receive them; FAO, (2015), Cavendish, (2002), and Lee, (1994). In this study, forest dependency is considered, people's dependence on the forest for sustenance, specifically the forest, and the collected varieties of forest products usually used by people to meet their basic needs such as subsistence.

World Bank report (2002), Mamo et al (2007), Inoni et al (2009), Shibia et al (2010); opined that about 1.6 billion people globally are substantially reliant on forests. In developing countries in Asia, 68 % of the population largely depend on forest resources for their basic needs, especially for shelter, fodder, fuel wood, seasonal food and hunting for livelihoods sustenance (FAO, 2014). Also, most countries in developing countries of Africa especially countries of the Sub-Saharan region exploit their forest mostly for the benefit of Western countries. Robinson, (2009) clearly stated that Cameroon's forests are home to nearly four million persons belonging to the Bantu ethnic group, as well as to the last indigenous populations of the African rainforest, the so-called "Pygmies". The logging and timber processing industry as observed by Cerutti and Fomété, (2008) is also said to be highly concentrated with more than 80% of national timber extraction being generated by fewer than 20 large, predominantly European companies. Recently, Chinese operators have established themselves, either through the acquisition of European interests or by acting as contractors for national interests (Karsenty and Debroux, 1997).

The works of Levang et al. (2015) also indicated that in the forested part of Cameroon; most household derived income from forest activities linked to hunting, gathering, artisanal logging and salaried employment in forest industries. Makoudjou et al. (2017) stipulated in their piece of work that the East and Southern regions of Cameroon are highly considered as forest concession areas in the country, they conducted research work within these areas and concluded that more than 77% of the households are dependent on forest resources drawn through three main activities: gathering, hunting and logging.

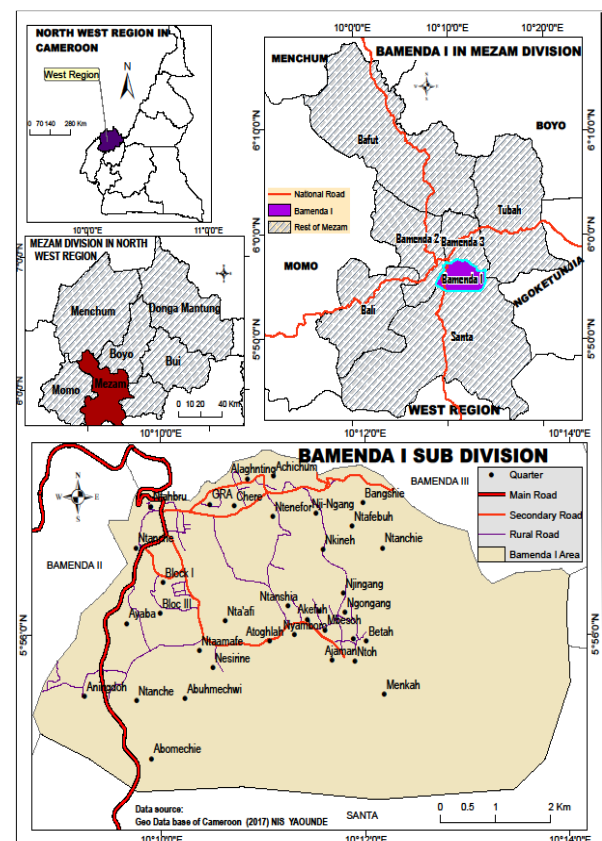
However, it is not new that forests provide diverse stream of benefits to humans such as timber, fuel wood, fodder, non-timber forest products (NTFPs), recreational experience as a direct benefit and indirectly provide for things such as biodiversity, air and water quality, carbon sequestration, and

other ecological services (Masozera, 2002; Adam and EL Tayeb, 2014). However, what has been of great challenge to most governments have been the conservation attitudes because they were over dependent on these resources, and especially since timber exploitation is gradually disappearing most forest species on the planet earth. All this has a serious consequence on the human environment.

In the North Western Region of Cameroon, a good number of forest reserves have survived for ages upon which the community depends for diverse livelihood purposes. Within the Region, mountain forest reserves such as the Kilum/Ijim forest, Bafut-Ngamba forest, Mendankwe communal forest reserve, the Kimbi Game Reserve, Mbei and Mbiame, Mbessa, and Bali Ngamba forest reserve, are well known for their socio-economic and cultural importance. The communities found within these forested areas utilized the forest resources for fuel wood, medicinal plants, hunting, fodder, beekeeping, craft and wooden utensils, timber, fruits and vegetable. Regardless of the potentials communal forest reserves offer across local communities in the North West Region, little or no research has been conducted on the variations in forest dependency by the communities, taking into consideration as well the conservation attitudes. It is within this framework that this study brings out the case of Bamenda I to form a base line for further researches into this domain in the region as well as beyond.

## STUDY AREA

The study is undertaken in the Bamenda I sub-divisional council of the North West Region, Cameroon (fig.1).



Source: Geo Data base of Cameroon (2017) NIS Yaoundé  
Figure 1: Location map of Bamenda I

The Municipality was created in 2007 through a presidential degree alongside the Bamenda II and III Sub-councils within the Bamenda City Council. Bamenda I Sub-divisional council is within the territorial limits of the Bamendakwe village. It is bounded by Balikumbat subdivision to the east, Tubah subdivision to the north east, Bamenda III sub-divisional council to the North, Santa subdivision to the south and Bamenda II sub-divisional council to the southwest. The council has a total surface area of 2581hectares. At the moment, Bamenda is the gateway in and out of Bamenda and to the rest of the North West Region, and through the West Region to other parts of Cameroon.

## METHODOLOGY

A quantitative and qualitative research designs were used to explore data on the variations in forest dependency and household's conservation attitudes. The quantitative method involved the use of survey where semi-structured questionnaires were administered to the sampled household population and field observations on the variation in forest dependency. For the purpose of in-depth analysis of the results from the quantitative analysis, a further approach called the qualitative method, which included informant interviews with stakeholders such as the local village heads of Bamenda I, the state authorities like the Mayor and the Divisional Officer of Bamenda I, was conducted. The study result was obtained from the responses of the survey questionnaires, which were administered to the sampled households. A semi-structured questionnaire was administered to the respondents through face-to-face interviews, conducted by the researchers at the sample household's home at a convenient agreed time by the respondents. For clarity and honest responses from the respondents, the researchers helped to explain the study purpose and objectives and some difficult key questions to the respondents with respect to all ethical procedures.

A simple random sampling technique was used to draw 155 households to form part of the study survey. This was done based on the subjective discretion of the researchers to tackle only those households who were directly involved in forest related activities. With the systematic random sampling, every fifth household from the take-off point in the study area was sampled and the unit of analysis was the household head, and in exceptional circumstances, any household member who was 18 years and above was considered in line of the household head.

Data collected from the field was summarized using descriptive and inferential statistics. Descriptive statistics is presented on frequencies tables, charts, graphs, maps and photograph for clarity. The hypothesis used in the work was tested with logistic regression using Statistical Package for Social Science (SPSS), version 20 and Pearson moment correlation coefficient was also used to test the relation between the forest dependent variables and conservation attitudes of the respondents.

The logistic regression analysis is applied to test a dependent variable (Y) on more independent variables (X1, Xii....Xn). The regression equation used to estimate forest dependency is stated as follows:

$$\text{Logit} [P_i / (1 - P_i)] = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki}$$

Where, subscript

i = ith observation in the sample;

p = probability of the outcome

$\beta_0$  = the intercept term; and

$\beta_1, \beta_2, \dots, \beta_k$  = the coefficients associated with each explanatory variable X1, X2, ..., Xk.

$$\text{Logit}(p) = b_i X_i, b_{Xii}, \dots$$

Hence, the cut-off point value of 0.5 was used in this study to denote the significance level. The forest dependency value of  $\leq 0.5$  therefore denotes low dependency while a value of  $\geq 0.5$  indicates high dependency.

## STATEMENT OF THE PROBLEM

In Sub-Saharan African countries and Cameroon in particular, forests offer important opportunities related to the multiple uses and functions they provide across communities that depend on them for livelihood sustenance. In Cameroon, research works have been conducted relating to forest exploitation from the time of colonial expansion. The research work of Robinson (2009) looks into the logging situation in Cameroon especially on power issues, impacts on local populations, and the problem of illegality. The article further elaborates on exploitation of Cameroon forest by a handful of European countries for their trade benefits but not much was mentioned on domestic forest uses by the local communities which this work seeks to address.

The North Western Grass fields of Cameroon comprises of mountainous forest patches and one of such forest communities is found in Bamenda I council in Mezam division. In Bameneda I, forest resources play a crucial role for many livelihoods around forest reserves. The population of Bamenda I especially destitute households, depend on forest related activities for income diversification. The rural population utilizes forest resources in diverse ways, varying from fuel wood, medicinal plants usage, fruits and vegetables, beehive keeping, craft and utensils, water, fodder and other uses. However, the population pressure on forest resources is leading to forest clearance with consequent reduction in the natural forest cover. Given the numerous uses of the forest by the households, there is need to understand the conservation attitudes of the local community households for long-term sustainable management of forest resources in Bamenda I. Therefore, the variation in the uses of forest resource and various conservation views by households of Bamenda I call for concern for the researcher to examine the variation in forest dependency and conservation attitudes across communities in Bamenda I municipal council.

## RESULTS AND DISCUSSION

### VARIATION IN FOREST DEPENDENCY AMONG HOUSEHOLDS IN BAMENDA I

Apart from the fact that Bamenda I command administrative functioning in Bamenda City, nearly all of its indigenous inhabitants depend on forest resources for livelihood. A good number of forest related activities were identified during fieldwork on which the local population highly depend upon for daily livelihood sustenance. The variations in forest dependency among the households in the council area include fuel wood, medicinal plant harvesting, bee keeping, timber extraction, craftwork, fodder fruits and vegetables among others.

Based on the data collected, variations in forest dependency in Bamenda I was classified into preferences. From the responses acquired from 155 sample respondents, the sampled households

considered fuel wood, only 5.8% moderately considered, while the least preference recorded none. Medicinal plants were highly preferred by 61 (39.4%), moderately preferred by 66 (42.6%) and least preferred by 28 (18.1%). This shows that the forest in Bamenda 1 is very rich in medicinal plants.

Another valuable forest resource activity in the study area was bee keeping which was highly preferred by the sampled respondents at 31 (20.0%), moderately preferred by 61 (39.4%) and an average majority of 63 (40.6%) least preferred bee keeping. Timber exploitation was highly preferred by 84 (54.2%) of the sample, moderately accepted at 26 (16.8%) and least preferred at 45 (29.0%). It should be noted the timber exploitation here is mostly for house construction and for electric poles especially eucalyptus. Households in Bamenda I also exploited the forest for craftwork, from the information gathered during fieldwork, 42.6% said they highly preferred craftwork as a reason why they exploit the forest, 20.0% moderately preferred while 37.4% of the sample least preferred craftwork.

Variations in forest dependency	Preferences						Total valid	Total %
	HP	%	MP	%	LP	%		
Fuel wood	146	94.2	9	5.8	0	0	155	100
Medicinal	61	39.4	66	42.6	28	18.1	155	100
Bee-keeping	31	20.0	61	39.4	63	40.6	155	100
Timber (poles)	84	54.2	26	16.8	45	29.0	155	100
Craftwork	66	42.6	31	20.0	58	37.4	155	100
Water resource	35	23.2	68	43.9	51	32.9	155	100
Fruit/vegetation	60	38.7	23	14.8	72	46.5	155	100
Tourism	43	27.7	67	43.2	45	29.0	155	100
Fodder	71	45.8	33	21.3	51	32.9	155	100

NOTE: HP = highly preferred, MP = moderately preferred, LP = Least preferred

Source: Fieldwork computation, 2020

Table 1: Variations in forest dependency in Bamenda I

The sample respondent's opinions were also sort on the aspects of water resources, fruits and vegetables, tourism and fodder on how they depended on these activities as a motive to exploit the forest. From the list of sampled respondents as presented on table 1, water resources was preferred by 23.2%, those who moderately preferred water resources to exploit forest came highest in this category with 43.9% sampled respondents, while 32.9% cases least preferred it. Fruits and vegetables were highly preferred at 60 (38.7%), moderately preferred at 23 (14.8%) and least preferred at 72 (46.5%). In essence, majority of the sampled respondents did not consider fruits and vegetables as a priority motive for exploiting forest in Bamenda I. Tourism recorded 27.5° of highly preferred sampled cases, 43.2% moderate preferred cases and 29.0% least preferred. Fodder was highly preferred by 45.8%, moderately preferred by 21.3% and least preferred by 32.9% sampled respondents.

#### DETERMINING FACTORS OF FOREST DEPENDENCY IN BAMENDA I MUNICIPALITY

From fieldwork analysis, five determining factors were noted to influence forest dependency by households in Bamenda I. These determining factors included age, marital status and family size, length of residency, and level of education. The findings as presented on table 2, show that the age group that mostly determines livelihood dependency on forest resources in Bamenda I was the one above 66 years. This age group recorded 50.9%; seconded by those who fall below 25 years of age, with a total rate of 32.3% and followed by the middle age group made up of those from 26-65 who recorded just 16.8%.

The findings proved that marital status also influence forest dependency, especially polygamous homes. This is because

these homes have large family sizes with many children and consequently the lack of adequate means to satisfy everyone in the household by the household head. From the 155 households selected for the study, 118 respondents rating 76.1% were positively in favour of polygamy as the most determining factor of forest dependency in Bamenda I. The sampled respondents who acknowledged polygamy and widower as determining factors gave a total of 19 and 18, rating 12.3% and 11.6% respectively. Table 2 also reveals findings for family size as a determining factor of forest dependency. The results of the study indicate that family size was most preferred to have determined forest dependency with households of above 10 family members. From field inquiry, 82 sampled respondents rating 52.9% actually accepted the fact. Families with 6-10 member households respectively, accepted at 36.1% rate. Family of 1-5 was the least in this category of responses with just 17 respondents given 11.0%.

S/N	Determinant factors	Variables	Effectives	Percentage (%)	Valid	Total %
1	Age group	Less 25	50	32.3	155	100
		26-65	26	16.8		
		66 above	79	50.9		
2	Marital status	Monogamy	19	12.3	155	100
		Polygamy	118	76.1		
		Widow	18	11.6		
3	Family size	1-5	17	11.0	155	100
		6-10	56	36.1		
		10 above	82	52.9		
4	Level of education	No education	73	47.1	155	100
		Primary	9	5.8		
		Secondary	39	25.2		
		Tertiary	34	21.9		

Source: Author's fieldwork computation

Table 2: Determinant factors of forest dependency in Bamenda I his category of responses with just 17 respondents given 11.0%.

Forest dependency is also largely influenced by household's level of education. Those with no formal education were observed to be more likely to depend on forest, this was because they do not have any job experience or knowledge to work as civil servant or in the private sectors, and as such, they have to depend on natural resources like forest closer to their surrounding environment for survival. From the fieldwork results as presented on table 2, 73 sample respondents recording 47.1% agreed that no formal education is the most determining factor of forest dependency, 9 respondents, that is 5.8%, recorded for primary, 39 respondents at 25.2% rating recorded for secondary while those with tertiary education were considered as influencing forest dependency at 21.9%.

#### ATTITUDES OF LOCAL COMMUNITIES OF BAMENDA I TOWARDS FOREST CONSERVATION

Descriptive analysis as presented on table 3 suggests that households in Bamenda I have strong positive attitudes towards forest conservation. From the analysis, it was found that 148 (95.5%) of the sample households agreed to the fact that conservation of forest was important for future generations and perpetuation of livelihood sustenance. Only 7 (4.5%) sample cases claim neutral. Those who held the view that conservation was necessarily practiced protecting ancestral/indigenous forest were 37 (23.9%); those who agreed, 45 (29.0%) stood neutral while a greater majority of households 73 (47.1%) were in total disagreement.

A reasonable number of sampled respondents agreed that conservation of forest was a good strategy for continues income generation in the forest sector in Bamenda I. They claimed that as the forest is cut down for varied purposes, more trees are

planted so as not to run short in supply for forest products in future. On this note, 105 (67.7%) of the randomly selected respondents in the study area agreed that forest is conserved for income generation, 42 (27.1%) cases were neutral while 8 (5.2%) disagreed with this conservation attitude.

Attitudes	A	%	N	%	D	%
Conservation of forest is important for future generation	148	95.5	7	4.5	0	0
Conservation is practiced to protect ancestral/indigenous forest	37	23.9	45	29.0	73	47.1
Awareness of forest conservation in the area for income generation	105	67.7	42	27.1	8	5.2
Setting plant forest areas in the community	79	51.0	68	43.9	8	5.2
Conservation is a way of promoting environmental sustainability	139	87.7	9	5.8	10	6.5
Value forest for eco-tourism	146	94.2	9	5.8	0	0

Note: A= Agree, N = Neutral, D = Disagree. Total valid = 155, Total % = 100%

Source: Author's fieldwork computation, 2020

Table 3: Attitude of community members towards forest conservation in Bamenda I

Table 3 further reveal that 79 (51.0%) sample respondents considered setting up community forest areas in the community as a measure to conserve forest, 68 (43.9%) of the sample were neutral in the responses while 8 (5.2%) disagreed. In response to the option of those who considered conserving forest a means of promoting environmental sustainability, 139 (87.7%) agreed, 9 (5.8%) were neutral while 10 (6.5%) disagreed. For those who value forest for eco-tourism, 146 (94.2%) of the sampled households agree to it while only nine (5.8%) respondents claimed neutral.

#### TEST OF HYPOTHESIS

The hypothesis was stated as:

H0: Determining factors have no significant influence on forest dependency by households in Bamenda I

H1: Determining factors have significantly influence forest dependency by households in Bamenda I

The hypothesis was tested with logistic regression to analyze forest dependency on influencing determining factors. The forest dependency index as the dependent variable in the logistic regression model was first converted to a dichotomous dummy variable by separating the "supportive" dependency index scores from the "unsupportive" scores at the median. Due to the dichotomous dummy variables of the forest dependency, the variable was assigned a value of "1" (supportive) if the household forest dependency index is  $\geq 0.05$  and a value of "0" (unsupportive) if the household forest dependency index is less than 0.05. The dependent variable, forest dependency, used in the logistic regression model is a binary variable. The regression equation used to estimate forest dependency is stated as follows:

$$\ln [P_i / (1 - P_i)] = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki}$$

Where, subscript

$i$  =  $i$ th observation in the sample.

$p$  = probability of the outcome

$\beta_0$  = the intercept term; and

$\beta_1, \beta_2, \beta_k$  = the coefficient associated with each explanatory variable  $X_1, X_2, \dots$ .

In this study, the researcher wants to find out whether forest dependency can be predicted based on age, marital status, family size, length of stay of residents and educational level. To

this end, the researcher engaged 155 sample participants to perform the exercise. From the test of the hypothesis as indicated on table 4, the t test was used to determine the statistical significance for each of the independent variables. The statistical significance of the test is found in the "Sig." column. From these results it can be seen that age ( $p = .001$ ), marital status ( $p = .044$ ), educational level ( $P = .008$ ) and length of residency ( $P = .275$ ) significantly determined forest dependency since the calculated p-values were not up to the significant level (.05) that was placed, but family size ( $p = .627$ ) did not add significantly to the model.

Based on the results above, the results of the study can be reported as follows: Generally, a logistic regression was performed to ascertain if age, marital status, family size, length of residency and level of education can determine forest dependency in Bamenda I. The logistic regression model was statistically significant ( $t = 10.573 = .000, p < .0005$ ).

Model	Non standardize Coefficients		Standardize coefficients	t	Sig.	Collinearity statistics	
	A	Standard error	Bêta			Tolerance	VIF
(Constant)	18.464	1.746		10.573	.000		
Age	.674	.202	.318	3.332	.001	.642	1.557
Marital status	-1.541	.757	-.193	-2.034	.044	.651	1.537
Family size	.250	.514	.041	.486	.627	.827	1.209
Education level	.691	.258	.220	2.672	.008	.859	1.164
Length of residency	-.253	.231	-.108	-1.096	.275	.606	1.650

a. Dependent variable: Forest dependency

Source: Author's fieldwork computation, 2020

Table 4: Regression test for Forest dependency Coefficients<sup>a</sup>

#### DISCUSSION OF FINDINGS

Results from the present study on variations in forest dependency and determining factors in Bamenda I are in accordance with the findings of previous studies and reaffirm that age, marital status, family size and length of stay of residents play significant roles in determining households' livelihoods dependency on forest resources. The study looks into the variations in forest resource dependency with some components contributing more than others do. Fuel wood consumption was the most utilized forest resource, seconded by timber especially electric poles collection, fodder, craftwork, medicinal plants harvesting, fruits and vegetable harvest and eco-tourism respectively. This finding concurs with those of Adhikari et al. (2004) and Shiba et al. (2012) whose study also indicated that households in rural community depend on forest resources such as fuel wood, timber, fodder, medicinal plants, especially for cultural and recreational purposes.

The study also observed that determining factors such as age, marital status, length of stay and level of education greatly determines households' forest dependency. This is totally in agreement with Ofoegbu et al. (2017) who observed in a study of socio-economic factors that animal husbandry skills, years of residence in the community and age significantly influenced households' dependence on forests resources. The empirical works of Fisher (2004); Mamo et al. (2007); Inoni (2009), have shown that the size of households is a major determining factor of household's forest dependency, though the present study showed the contrary since family size was significant at a p-value of .627 slightly above the critical level of significance .05 that was placed for the study.

## CONCLUSION AND RECOMMENDATION

The findings from the study have indicated that there exist great variations in forest dependency in Bamenda I. It is found that determining factors such as age, marital status, and length of stay of residents as well as educational level of households play significant role in determining forest dependency. For example, households that had above 10 members in the family were more likely to depend on forest resources for livelihood sustainability. This was the same for length of resident; the longer the duration of residence in the community; the more like that the households would tend to depend on forest resources.

The study recommends further in-depth studies on community-forest relations, especially evaluating communities' socio-demographic and socio-economic factors that influence them to exploit forest resources. When this base line study is carried out, it will be easier to determine if communities are over exploiting forest resources and the kind of measures to be put in place to limit over exploitation at community level.

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