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THE SHARE OF TREE SALES IN THE INCOME OF RURAL HOUSEHOLDS IN DR CONGO: SURVEY CONDUCTED ON THE KISANGANI-LUBUTU AXES.

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ABSTRACT

The basic idea guiding this study was to determine the proportion of income from the sale of trees compared to that from other economic activities of rural families. In view of the results obtained, this was noted as low with a consequence of a low impact on their living conditions and on local development, ignorance of the scope of artisanal logging and fear of bearing the various investment costs (financial costs and administrative procedures) related to it were identified globally as key factors justifying the preference for the sale of trees by rural households, to the practice of their exploitation.

In addition, the results of this research have also noted that, contrary to the legislation in force, artisanal logger access to wood resources is generally based on the negotiation of tree feet than on that of a forest area.

KEYWORDS: Rural sale, trees, income and household.

INTRODUCTION

DR Congo's online capital is still little as the information available is good to be complete, and only rough estimates are possible. Studies reveal that Congo has about 86 million hectares of dense forest, of which about 60 million hectares are suitable for timber production (MECNEF 1977, FAO 2001; Debroux, 2007 cited by MECNT & WRI, 2010).

The sale of trees, which was generally negotiated in the 80s and 90s between forestry companies and local communities, is, since the 2000s to the present day, at the crossroads of the issues of transactions between them and artisanal operators. This is due both to the low level of investment by forest manufacturers, faced with the instability of the business climate, and to the collapse of the informal economy.

The local timber market has aroused great interest from various players in the artisanal sawmilling sector. In almost all poor countries, it responds to growing domestic demand and has a considerable impact on regional economies and the livelihoods of many citizens (Benneker et al., 2012).

Indeed, the artisanal wood sector became, a decade ago, an important sector of local development. Of all the economic activities that can generate income for local communities, artisanal logging can be able to trigger real development provided that it occupies a considerable, if not central, place among the types of economic activities carried out by it.

The use of natural resources in general, and woody resources in particular, includes the set of relationships of a society to the resources it uses, including representations of nature and the social relationship determined by the appropriation of resources, going beyond the strict framework of knowledge and production techniques, practices (Auclair, 1996).

The consideration that rural tree-selling households give to artisanal logging as a local income-generating economic activity would help to demonstrate that development is not always the result of an exogenous process. The facts, however, are far from proving.

Indeed, a good number of recent publications on artisanal timber exploitation throughout the country show that it contributes to an activity mainly carried out by persons other than rural households (Brenneker et al., 2012), which are generally involved in the sale of trees.

Following a study on the economic analysis of artisanal logging conducted in Province Orientale by Abdala et al. (cited by Lescuyer, 2010), it was nevertheless pointed out that there was a particular class of occasional loggers consisting of "rights holders". This class consists of traditional owners, interested mainly in white woods in order to meet small local demand and low prices.

This situation is similar throughout Africa: rural households prefer the local policy of selling trees to that of artisanal exploitation (Auzel et al., 2001; Lescuyer, Yembe-Yembe & Cerutti, 2011; Cerutti & Lescuyer, 2011; Lescuyer et al., 2011). Such an option demonstrates a certain ignorance of the real economic importance of the exploitation of the wood by themselves in relation to its sale. This has very little influence on the improvement of their living conditions and the development of their environments. It is known everywhere that externally imposed development limited to professional needs has most often failed (Hochet & N'gar, 1995). It is rather desirable to start from local organization, wealth, practices and local knowledge to understand and handle the mechanisms of locally sustainable development. Rural households, sellers of wood, are best able to design and participate in tailor-made policies that meet the

specificities and requirements of territories on the basis of wood richness (Auticier & al., 2011). Artisanal logging would recover considerable gains in rural household incomes than simply selling trees, which is limited to exchanging them for sums of money, which are usually disproportionate. This article examines the share of tree sales in the economic activities of rural households. To this end, it is important to know: What is the proportion of income from the sale of trees compared to other economic sources of income? Why do rural households prefer the sale of trees to the practice of artisanal logging for their local development? Finally, what is the impact of income from the sale of trees on local development?

The basic idea guiding this study is that the proportion of income from the sale of trees compared to that from other economic activities of rural households is low. Rural households would prefer selling to farming because they believe they are unable to bear the investment cost and related administrative demedications. As a result, they were unaware of the economic importance of artisanal timber mining. The more rural households prefer the sale of trees to the practice of artisanal logging on their own, the less positive the impact of income from this sale on their living conditions and local development. This sale would thus escape the added value of artisanal cutting for the benefit of artisanal farmers, buyers of tree feet.

2. METHODOLOGY

2.1. Study environment

This study took place on the Kisangani-Lubutu axis in a period from 23 to 05 September 2022. In total, the field investigations lasted 14 days.

The following table presents the selected villages.

No.	Hp	KISANGANI-LUBUTU AXIS
1	58	Wanie-Rukura
2	78	Babongombe
	99	Busukwatchema
3	112	Banunya
	105	Basukwandjongo
4	60	Babundje 2
	51	Katende
5	47	Mwambani
	33	Batiapanga
6	12	Kayete(between: Pk 60)
	5	Kayete (between: Pk 60)
7	58	Wanie-Rukura

Source: Ourselves

On this axis, the work consisted in collecting data at a radius of more than 120 km, i.e. in ten villages separated from 5 to 10 km. The choice of these environments is due to the criteria of accessibility and activity of sale of trees.

2.2. Data collection, processing and analysis.

At first glance, it should be recalled that the actual data collection was preceded by the literature search. This made it possible to take stock of the literature on the subject and to formulate the initial hypotheses in connection with the question studied.

This prerequisite laid, the truth work on the ground was initiated in order to materialize the study. Indeed, the data were collected on the basis of an ethnological approach which consisted of the following sequences: going into the field, carrying out the survey stay, cohabiting with the surveys in their respective environments and collecting information in the context of interactions with the concerned as the main actors whose actions, words and gestures count for the researchers (observers) comprehension survey was carried out using survey techniques, namely: semi-structured interviews and participatory observation. The information gathered through the informal exchanges (semi-structured nature) and the facts of experiences accumulated during the stay as a stakeholder in the rural life of the households studied, made it possible to carry out successfully the planned surveys. This collected data was entered, encoded and processed using Excel software. Their interpretation was facilitated by content analysis.

2.3. Sampling

The sample selected for this study was random, unweighted. Based on the criteria "head of household" and "sale of trees as an economic activity carried out", this sample consisted of 20 tree-selling households, for a total of 40 respondents. Technically speaking, on the Kisangani-Lubutu axis, 20 households were selected out of 10 villages at the rate of 2 households per village. The characteristics of these units are as follows:

2.3.1. Level of training

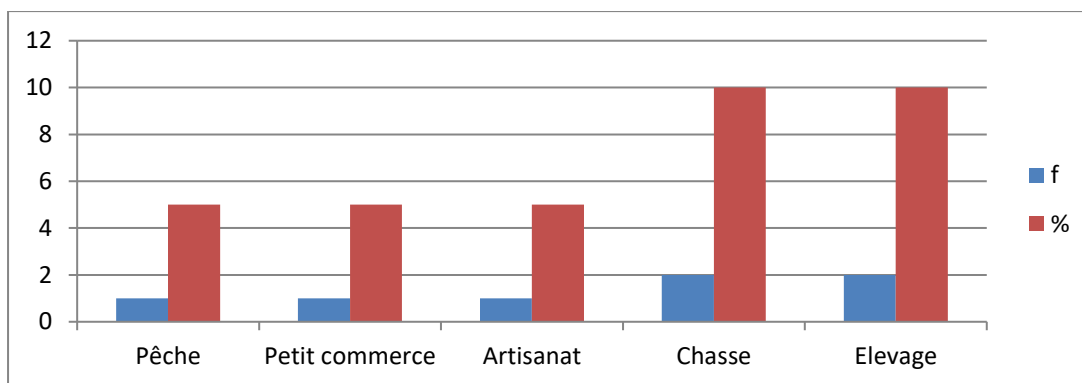
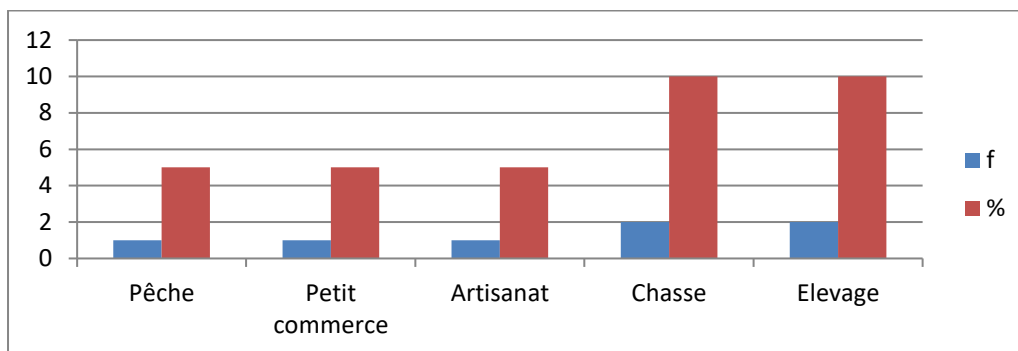


Figure 1. Level of education or education of respondents

It emerges from this figure that 50% of heads of household on the Kisangani-Lubutu axis have secondary education compared to only 10% of university students. Information gathered during interviews with heads of households revealed that this situation is related to the secondary influence of Catholic missionaries in the field of education. Indeed, the Belgian colonial policy dating back to the Congo Free State (EIC) under King Leopold II, consisted in the creation of schools on the occasion of the establishment of a church or chapel. In this regard, there was talk of chapel-schools, which made it possible to combat illiteracy in so-called indigenous circles. Nowadays, and particularly under the impact of the generalized crisis, we still recognize the effectiveness of the Catholic Church in organizing school activities and other social works (charitable: caritas) in both urban and rural areas of the DRC.

The 15% of respondents who are without level show that, regardless of the presence of school infrastructure installed by missionaries, the Kumu people, who are indigenous and mostly represented, remain the ones who give more importance to hunting than to studies.

2.3.2. Age groups

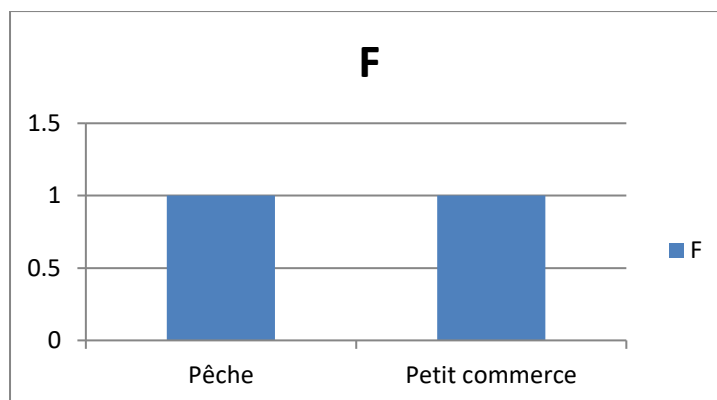


Source: Field information

Figure 2. Age groups of respondents

This graph reveals that 50% of the heads of households on this axis are still quite young. However; following contacts made during exchanges with the persons concerned; We were aware of the discrepancy between the declared chronological age and the physical appearance offered as objectively observable indicators of their health. Many, if not all, of them appear as old age. Their living conditions in rural areas, far less than those of their urban counterparts, already facing similar difficulties, would explain the premature aging. There is no need to recall the difficulties of access to medical care and drinking water, or even to a balanced diet for rural populations.

2.3.3. Sex



Source: Field information

Figure 3. Gender of surveys

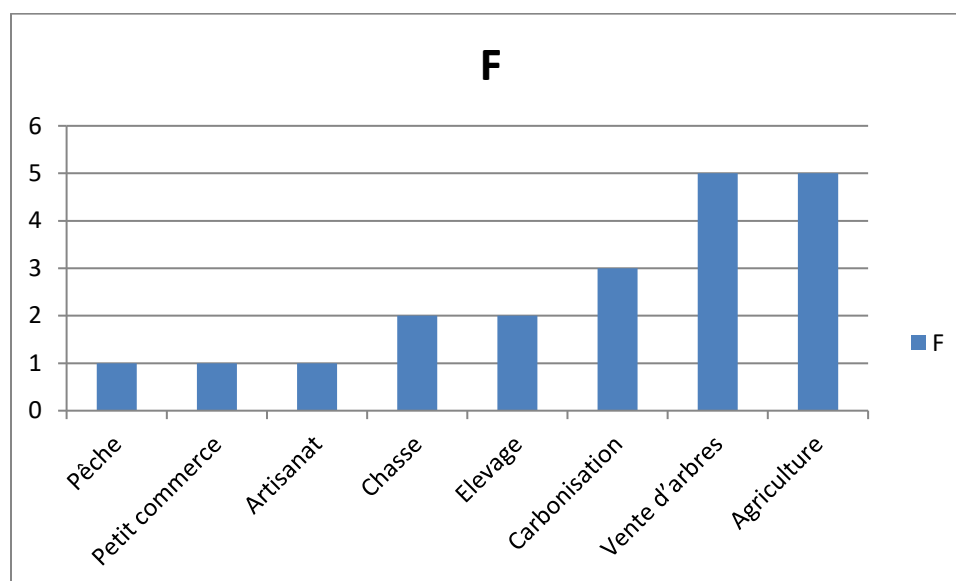
Only one household (5%) was a single parent with widowhood. This is a 47-year-old woman with 5 dependent children (including 3 daughters all married and become daughter-mothers with the family roof)

and no level of education. According to the data collected, she is a farmer and widow of more than 10 years. This case noted that the late father (Kumu tribe) of these children was among the parents who did not invest in their children's schooling.

3. OUTCOMES AND DISCUSSIONS

3.1. Activities at the center of the rural economy

Eight predominant activities are essentially the subject of the rural economy of the areas studied. These activities are classified decreasing in the following figure:



Source: Field data

Figure 4: Number of activities most frequented by respondents.

As shown in Figure 4, agriculture and artisanal logging are two main activities in which rural households (families) are engaged. While they practice the former themselves and sell the products, they prefer only to sell the feet of trees and not to engage in artisanal timber mining.

However, all other activities, namely carbonization, animal husbandry, hunting, handicrafts, petty trading and fishing are also practiced. For these, households also sell the products. With regard to the above-mentioned figure, it is noted that fishing is an activity of the last category. This marginal position of fishing is explained by the fact that the Kisangani-Lubutu axis has the most fishing activities because of the presence of large rivers or the Congo River: case of wanie-rukura.

The list of rural activities examined shows that agriculture occupies a prominent place for rural households.

In these circumstances, it can be argued that it is agricultural activity that forms the basis of the rural economy of the areas considered. Boussard (1965) rightly argues that constructing the problem of the rural economy means improving knowledge of the economic phenomena that manifest themselves in the agricultural sector, and in its relations with other sectors. This is the fundamental purpose of this economy. In the same vein, Jean-Baptiste Say (quoted by Boussard, 1965) believes that the economy is the study of how wealth is produced, distributed and consumed, and the rural economy focuses on the production, distribution and consumption of organic products, mainly food.

Admittedly, all activities are essentially related to agriculture, whose average annual income, according to data collected in the field, is \$ 400 USD. This amount is the amount received by a household against for example an average annual income of \$ 180 USD for the clan or community, income from the sale of trees.

3.2. Income from the sale of trees compared to other economic activities

Rural households on the Kisangani-Lubutu axis prefer the sale of trees to the practice of artisanal exploitation by themselves. According to field data, the average annual income from the sale of trees is much lower than in other economic activities. The following table provides an eloquent illustration of this.

Table 2: Average Annual Income

No.	Activity	Average annual revenue in \$ USD
1	Agriculture	400
2	Sale of trees	165
3	Carbonization	420
4	Breeding	340
5	Hunting	110
6	Handicraft	160
7	Small business	50
8	Fishing	200
9	Other	100

Source: Field data

This table reveals that, of all the economic activities undertaken by rural households in Kisangani-Lubutu, carbonization, consisting of making charcoal from wood energy occupies the^{1st} place compared to the others.

This activity generates, alone, an annual income of \$ 500 USD against \$ 165 USD made by the sale of trees. This means that the latter activity (selling trees), although preferred to the practice of artisanal timber mining, does not effectively consolidate the income of rural households.

As can be seen from the table that accounts for it, carbonization is followed by agriculture and livestock. Charring, being a generally unfavourable activity for sustainable forest management, raises concerns about the proportion it occupies in the rural economy.

However, it is the exploitation of timber, in accordance with timber regulations, that should benefit community members and their communities the most. Nevertheless, it should be noted that, contrary to the legislation in force, the reality on the ground reveals that artisanal logger's access to wood resources is generally based on the negotiation of tree feet than on that of a forest area.¹

In the case of animal husbandry, it was also found that it is an activity that brings an average income of \$ 350 USD, higher than those of other activities. It is also practiced on the Kisangani-Lubutu axis. This is because the Kumu people, traditionally, are hunters.

However, there is a real disparity in certain areas of activity on this road. This is particularly the case for the massive fishing practised on the Kisangani-Lubutu axis because of its geographical location parallel to the river, so that the same Kumu people dominate there. On this axis, the river and the presence of certain streams present themselves as opportunities affecting, in one way or another, the kumu culture. Hunting, on the other hand, is more the business of rural households not only because of its geographical alignment rich in wildlife, but also because of the basic forestry culture (hunting and agriculture) of the Kumu people.

3.3. Impact of income from tree sales on rural households and local development

Local development is defined as "a thoughtful and shared strategy aimed at establishing at the local level, in a territory with a human dimension previously defined by the promoters of the initiative, a social,

¹Decree No. 14/18 of 2 August 2014 *fixing the Allocation of forest concessions to local communities*; Order 025/CAB/MIN/ECN-DD/CT/00/RBM/2016 of 19/02/2016 laying down specific provisions relating to the management and exploitation of the forest concession of local communities.

economic, cultural and territorial cohesion aimed at improving the situation of all local actors without jeopardizing their future" (Menozzi, 2013).

This definition gives rise to a dimension of the participatory approach, which practically becomes one which can promote the stimulation of local development. It leads to taking into consideration the constraints and priorities of local actors in promoting their organization within the framework of local authorities, associations of uses or professional groups (M' Hamed, 1990).

It seems necessary to break with a model of interventionist intervention deeply rooted in structures and mentalities, to rely on social entities capable of being both relays of central power and autonomous cells for managing space (Fay, 1985).

This problem shows the interest of identifying and studying socio-spatial structures, most often informal, traditional or mutant, in any case operational in the appropriation of space and resources. The challenge is then to assess their impact on the environment, possibly to design the conditions for their transformation (regulatory framework, development strategies, etc.) so that they become the central actors in sustainable resource management.

On the axes studied, the impact of income from the sale of trees on local development has been lacklustre. The results revealed a lack of vision and stakeholder participation in the appropriation of wealth. According to the data collected, 87% of the subjects said that this income is generally used for food and sometimes for schooling. If the sale of trees can only be used for food, there is undoubtedly a serious problem of undercapitalization of the wood resource. This problem can be explained by two causes: either the lack of necessary information on tree marketing issues, or the insignificance of the actual return on sales. In all these cases, it becomes important that rural households are sufficiently informed to understand the impact of trees on their lives and environment.

Trees play a more important role in savings and security strategies as they can be used to obtain credit or repay debt, buy new household or investment assets, or to guarantee local development. With regard to credit, for example, the pledging or leasing of trees is practiced in Nepal, Nigeria, Sierra Leone and Ghana (Fort man & Bruce, 1998). In India, a banker is said to have granted a loan secured by trees (Auclair, 1996). Hill notes in his studies in Karnataka that the ability to lease small plots of land for tree planting provides poor farmers with a reliable form of credit. This is true and beneficial insofar as the amount paid to them at the beginning of the transaction is automatically reimbursed with the share of the net value of the wood sold (usually half) that goes to the owner of the trees (Auclair, 1996). So, if trees are well managed and exploited by rural people themselves, they can help rural people earn a little more than if they are exclusively sold. The more revenue from use accumulates, the more it will benefit the community

and actively involve it in local development.

The African Development Bank (AfDB) Africa Development Report 2002 examined the continent's socio-economic circumstances and prospects and examined in depth the problem of rural development for poverty reduction in Africa. Items discussed included prioritizing rural poverty, building the capacity and capacity of the rural poor, the need to make globalization, markets and institutions work for the poor, and the Bank Group's poverty reduction strategy. What is interesting is that in these reflections the interest in rural poverty was due to the fact that the commitment made by the international community, to halve poverty in mase by 2015, had required a massive effort by the rural populations of Africa (CENEAP, 2003). However, it must be noted that neither these objectives have been achieved nor rural communities have been able to master the challenges to get out of poverty.

CONCLUSION

The recent socio-economic crises are hitting the most market-dependent populations for their supplies, particularly poor urban households. These crises reinforce the need for the rural world to promote both agricultural and non-agricultural activities.

In connection with the seasonal nature of agriculture and the specializations of certain families, diversification or non-agricultural rural activities are appropriate to meet various needs of populations.

Indeed, the development of non-agricultural activities, and particularly artisanal logging in rural areas, is one of the ways to ensure that many households do not remain dependent on agricultural schedules, sometimes complex due to environmental issues, lugging them around for a long time in poverty.

The future of this activity lies at the heart of many issues. First, it is a question of deepening its growing role in the future of members of agricultural and/or rural families. Then we find the issue of training and education, essential factors in converting unskilled labour into skilled labour. Secondly, this activity is a major factor in facilitating exchanges and therefore synergies between town and country. Finally, it makes it possible to fight poverty by providing jobs and income and is a lever for local development.

On the Kisangani-Lubutu axes, the sale of trees occupies a prominent place compared to the practice of artisanal logging. However, its impact is low both on the living conditions of rural households and on the local development of rural entities. However, if they practiced this activity themselves, they would have more income than that obtained from the sale of trees alone, as the results of the study showed.

It is important to monitor how these issues are taken into account by the actors concerned and how public policies that are supposed to promote complementarities and convergences between agricultural, rural and urban development respond to them. This reflection, which is coming to an end, has therefore resolved to

identify and analyze the income generated by the sale of trees by rural households or families in the Kisangani region. The impact of this activity is low compared to the practice of artisanal logging by local actors themselves. The latter, to which rural households must be sensitized, is a potential vector for the revival of the rural economy and local development.

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