



## VALUE CHAIN OF RATTAN SPECIES FOR ECONOMIC DIVERSIFICATION IN NIGERIA: A REVIEW

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### ABSTRACT

Rattan based cottage industry is one of the enterprising solution to socioeconomic hardship and poverty alleviation strategies in Nigeria. However, rattan based industry has not been fully developed for economy diversification. This paper reviewed value chain potential of rattan species for economic diversification in Nigeria. The paper reviewed rattan as an important non timber forest product for rural livelihood improvement. The uses of rattan as contained in this article include art and handicraft; building construction and production of agricultural articles. The paper emphasized the role of rattan cottage enterprise in economic diversification. Based on the review, rattan industry if properly managed can contribute significantly to Nigeria foreign exchange earnings. It has potential to create employment opportunity in terms of rattan harvesting, transportation and processing. It was revealed that Rattan business activities can take the following forms raw rattan supply; small scale manufacturing; integrated rattan supplies and cane manufactured products. The constraints to rattan entrepreneurship development in Nigeria include shortage of rattan cane processing products; use of manually operated tools for rattan activities among the major actors, the collectors and processors; limited market; limited knowledge on the need for prospects of commercial cultivation of rattan; unfavorable policies among others. For the development of rattan subsector, the study recommends the establishment of rattan plantation; development of rattan-based micro enterprise: establishment of rattan rural resource centre and continuous research to ensure sustainability of rattan resources.

**Keywords:** Value chain; rattan; economic diversification; Nigeria

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### INTRODUCTION

Nigeria economy has been described as mono economy and over dependency on petroleum resources (Adepoju *et al.*, 2017). Bulk of Nigeria revenue is derived from oil export. The implication of this is that the economic fortune is tied to the boom and bust cycles of the oil market. However, the hope for the economy that is sustainable depends greatly affected and waned way below the expectation with larger percentage of labour force jobless and consistent increase in the unemployment rate. The current rate of unemployed people in Nigeria is alarming putting the global rate at 12.6%, South Africa's rate is currently 25.2%, in the case of Ghana it is about 14% while Nigeria unemployment estimate is around 37% (ILO, 2012). With economic hardship in Nigeria, the question of country economic pathway remains pertinent and subject of discussion.

Diversification of economic remains a viable option to alleviate the present economic hardship. In order to achieve the vision of becoming one of the largest economies in the world, efforts should be directed towards economic activities in which the country has comparative advantage and shift the country from present oil and gas reliance. Among the options for diversifying economy include agriculture, forestry, information and communication technology, tourism and mining among others. It is a matter of necessity to consider country-specific needs and circumstances before choosing an option for economic diversification. It is better to diversify the productive base of the economy with a specific target to reduce dependency on oil sector as well as sustaining the environment. Over dependent on a single commodity, in the case of Nigeria, has made the economy vulnerable to both internal and external shocks (Adepoju *et al.*, 2017).

Forestry is an important sub sector of the economy that can be harnessed to improve Nigeria economy (Idumah *et al.*, 2016). Forest provides many economic and social benefits. Forestry contributes about 2.5 per cent to the Nation's GDP. There are numerous forest products and services not necessarily accounted for in the country's GDP but are very important in the daily lives of the majority of Nigerians. The utilization and production of forestry wood and non wood products, energy, shelter and health needs, as well as generating income. Forest contains a great number of resources that can change economic future of any nation. Nigeria is blessed with abundant of forest resources. Sustainable production and production transformation of these resources are capable of transforming the present economic status through improvement in foreign exchange.

Non-Timber Forest Products (NTFPs) formed the larger part of rural economy. It is an important integral part of livelihood activities for a great number of living around the forested areas (Asfaw *et al.*, 2013). As one of the important non timber forest products (NTFPs), after timber, rattan forms an integral part of rural and tribal populace of many tropical countries (Renuka, 2000). Non timber forest products are not only the primary source of resources for industries in many part of the world, but they contribute significantly to the source of livelihood for the communities around the forest (Renuka, 2000). Rattan is widely recognized as an important domestic and internationally-trade commodity. The According to an estimate by the International Network for Bamboo and Rattan (INBAR), the global and local usage of rattan is worth US \$2.5 billion and according to Wulf and Ian (2000) the annual foreign trade of rattan was estimated to generate US \$4 billion annually. Also, seven hundred million people worldwide use rattan (Wulf and Ian (2000). The largest demand for rattan canes is for making furniture, for which they provide both frames and

decorative trimmings and facings. Uses of rattan cane among different products include the following mats, crafts and souvenirs. This important resource can also be used for riot control and judicial flogging Panayotou (1990). Without exaggeration rattan is one of the most important non wood forest resources products in the world (Panayotou, 1990). This paper reviewed the value addition to rattan for economic diversification in Nigeria.

### Overview of rattan species

Rattans are spiny and climbing palms belonging to the family palmae (Aracaceae) and a large sub-family calamoideae. The rattan plant derives its name from the Malaysia word “raut” which means “pare”. It has therefore been severally mentioned that the name is a reflection of how the products is being prepared, which includes surface peeling, to clean and splitting before being converted to numerous end- products (Dahunsi, 2000). According to Vorontsova *et al.* (2016), rattan belong to about 600 rattan species and has 8 genera and other 3 genera of climbing palms that resemble rattan having about 31 species in Asia-Pacific and Africa, among which *Eremospatha*, *Laccosperma*, and *Oncocalamus* are endemic genera restricted to Africa, while the remaining genera are distributed throughout the Asia-Pacific region (excepted African genera of Calamus).

Rattan has the ability to grow in diverse conditions though this varies with rattan species (Sunderland, 2001; Titi and Prameswari, 2018; Gonmadje *et al.*, 2018). It was revealed that rattans are clustering in Africa. This implied that they produce numerous stems from one individual (Sunderland, 2001; Mialoundama, 2020). These rattan stems or canes are covered at first by the tightly sheathing and often densely spiny leaf bases. According to Sunderland (2001), the diameter of rattan stems is relatively constant within species. This made it possible to distinguish between “small-diameter” (20 mm) species. Furthermore, the diameter of rattans can be found between 3 mm to 20 cm (Dransfield *et al.*, 2002). The length of the stem of some the species of rattans have been estimated to reach up to 175 m in length. The average stem length of rattan in Africa is between 30 and 50 m (Sunderland, 2001). On the average, the rattan canes can grow at the rate of 0.70 m per year (Sunderland, 2001). Factors that determine the growth of rattan include condition of the environment and the management techniques (Razali *et al.*, 1992; Sunderland, 2012). There is a wild distribution of rattans in Africa. This is as a result of rattan flexibility, and pliability, the utilization of rattan is across many sectors. The uses is not limited to the production of furniture, baskets, household materials and even bridges (Olawale and Wasiu, 2013; Myers, 2014; Gonmadje *et al.*, 2018).

In Nigeria, rattan was identified in 1968 by Hutchinson as *Calamus deerratus*. There are two variety of this specie with large diameter which is referred to as big cane by cane product makers while the other is known as small cane and ranges from 2-3cm in diameter while the later ranges from 0.2-1.5cm in diameter. Rattan canes have long flexible stems that through trees in the forest. Some have been known to reach about 50 meter in length. The canes are used for furniture, mat and hat making. Rattan provides raw materials for handicraft and cottage industries. Rattan is among the minor forest resources found in considerable quantity in Nigerian forests (Adewole and Onilude, 2011). Rattan species have numerous benefits to rural and urban economies in developed and developing nations. The role of rattan in small scale industries cannot be over emphasized. It contributes to the growth of national economies the world over (Ogechukwu, 2006). Rattan enterprises have a great value in terms of employment generation and foreign exchange earnings.

### Uses of rattan

Bamboo and rattan is a non-timber forest resource that has many uses and has commercial value for various products (Rahim and Idrus, 2018). Rattans are used to manufacture different products. The uses of rattan according to Olubanjo (2020) include the following:

- ✓ Arts and handicraft: Rattans are used for interior decoration. These include furniture, flower vases, wig holders, lampshade and stands, mirror picture frames, hand fans, shelves. Wardrobes, shopping and laundry baskets and walking sticks.
- ✓ Construction of building: Rattan are used traditionally to construct frames and walls. In mud houses it used as ceiling. It is also used in to construct barns and granaries.
- ✓ Agricultural Articles: Several agricultural items are produced from rattan for farm and on-farm activities. These include baskets, sieves, racks, winnowers, rope materials for tying ladders and trailing yam products.

### Value addition to rattan products: Untapped gold mine in Nigeria.

Rattan production is capable of providing sustainable income for rural farmers and enhances development of small and medium scale rattan industry. However, Nigeria rattan industry is not yet developed compared to other part of the world. Professor Hussaini Ibrahim, Director General, Raw Material Research and Development Council noted that if rattan industry is properly managed, it can contribute about ₦30 billion foreign exchange to the economy on annual basis. It has potential to generate employment opportunity in terms of harvesting, transportation and processing. Akinyemi *et al.* (2019) also reported that rattan based cottage enterprise is profitable. In Akinyemi *et al.* (2019) analysis, the average gross profit of rattan cottage entrepreneur was ₦1,635,030.95 obtained per annum by deducting total variable cost (TVC) from the total revenue (TR). The average net profit was ₦1,605,094.40K. The rate of return was 686.43% while the rate of return on investment was 586.4%. There are a great number of socioeconomic opportunities associated with rattan value chain in Nigeria. These opportunities include the following:

- ❖ Presence of local and international market for rattan products. There are local and intermediate collectors and traders that ensure urban market linkages

- ❖ Small and informal nature of rattan cottage enterprises. Rattan business requires low capital which is mostly financed through personal savings and soft loan for market expenses.
- ❖ Employment opportunities in rattan local labour market. It has been noted that rate of unemployment is reducing in the informal sector. Rattan provides employment for a great number of labour force in informal sector
- ❖ Rattan business activities can take the following forms
  - Raw rattan supply
  - Small scale manufacturing
  - Integrated rattan supplies and cane manufactured products

#### **Constraints to rattan value addition process in Nigeria**

The following constraints were identified among rattan stakeholders according to the survey conducted by Olabanjo (2002).

- Shortage of rattan cane processing products, particularly during the rainy season due to poor accessibility into forest and collection sites. There is high cost of production due to low supply.
- Use of manually operated tools for rattan activities among the major actors, the collectors and processors. This requires more investment in rattan business
- Limited market. The sales of cane products are low and seasonal. The producers reported that the demand is only manifested during the festive period. There is no provision or management for tapping cane craft market.
- Limited knowledge on the need for prospects of commercial cultivation of rattan.
- Unfavorable policies. Due to unfavorable policies such as export control and prices that could create high economic barriers for producers (Pswarayi-Riddihough and Jones, 1995; FAO, 1987).
- Lack of market information. Producers often lack information about their product prices in the local market or input to processing a desired product demand in the market, the amount of competition and the quality of the desired product. Then it is also caused by the low source of raw materials which is a result of small range production often have not enough land and stocks growing (Rahim and Idrus, 2018).

#### **Conclusion and Recommendations**

Rattan is a natural resource that is commonly found in developing countries with economic development requirements and requires rattan products as part of economic boost and strategies. It is a potential option for economic diversification particularly in Nigeria. The following suggestions are important for rattan product development.

- Rattan plantation establishment: It is essential to incorporate rattan plantation into afforestation programme. This will ensure continuous supply of rattan raw materials that will be transformed to finished and semi-finished products
- Development of rattan-based micro enterprise: This can be incorporated into developmental and poverty eradication programme.
- Establishment of rattan rural resource centre: This will ensure awareness creation and sustainable exploitation of rattan species
- Establishment of rattan training and skill acquisition centre: Skill acquisition and entrepreneurship development programmes particularly among the youths are capable of transforming the economy of a nation. In most developed countries, entrepreneurship, skill development and creativity have been identified as major determinants of economic growth. Skill acquisition for the development and improvement of small and medium scale enterprise will enhance economic growth; employment generation; empowerment and capacity building among the working population.
- There is need for continuous research to ensure sustainability of rattan resources. Study and research should be conducted on the durability and rattan yields. This should always be reviewed from time to time.

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