ASSESSING TYPES OF FURNITURE -MAKING INDUSTRIES AND PREFERRED WOODY SPECIES FOR THEIR PRODUCTS IN OREDO LOCAL GOVERNMENT AREA, EDO STATE, NIGERIA

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BENIN CITY

NOVEMBER, 2025

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A PROJECT SUBMITTED TO THE DEPARTMENT OF FOREST RESOURCES AND WILDLIFE MANAGEMENT, FACULTY OF AGRICULTURE, UNIVERSITY OF BENIN, BENIN CITY. IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELOR OF FOREST RESOURCES AND WILDLIFE MANAGEMENT DEGREE HONOUR

NOVEMBER, 2025

CERTIFICATION

This is to certify that Joy OBIAZI (Miss) with Matriculation Number AGR2004398 of the Department of Forest Resources and Wildlife Management, Faculty of Agriculture, University of Benin City, carried out this research work.

Prof. A.A. Erakhrumen	**Dr. (Mrs.) N. Osadolor**
Project Supervisor	Head of Department
Date	**Date**

DEDICATION

This work is dedicated to God Almighty for the strength and grace to carry it out up until its completion, for this I say very big thank you lord.

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My profound gratitude and acknowledgement to my supervisor Prof. A.A. Erakhrumen for his immense support, assistance, suggestion and guidance. I appreciate my Course Adviser Dr. (Mrs.) N. Osadolor

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My most sincere gratitude goes to my beloved parents Mr. and Mrs. Obiazi for their endless love, prayers, and unwavering support throughout my academic journey. Your sacrifices and encouragement have been my greatest source of strength.

To my wonderful siblings Bro. Wisdom, Rita and Marvellous, thank you for your constant motivation, patience and understanding. Your belief in me and your words of encouragement, even in difficult times, kept me going. I will not fail to mention the love and concern shown to me by my friends, course mates and family of love Catholic Charismatic Renewal in Nigeria, Student's community, Paul, Joseph, Bertilla, Tega, Rachel, Christy, precious and my ever-caring mama (Jide Anayo). May God bless you all.

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ABSTRACT

This study was carried out to assess the type of furniture-making industries, their preferred woody species, prioritization of woody species based on availability and commonly used and estimate volume of wood used monthly and yearly by these furniture industries. Data was collected through questionnaires and interviews, eighty (80) questionnaires were distributed to 16 furniture-making industries in Oredo Local Government Area. All the data collected were analysed and presented using descriptive statistics such as frequencies, percentages and charts.

This result showed that age of respondent ranged between 18-55years. Also, the result showed that the years of experience of the respondents ranged between 1-15 years. This revealed that 7 industries were small-scale, 6 were medium-scale and 3 were large-scale. A total of 10 woody species from 7 plant family were identified as being utilized by the sampled furniture industries. The most preferred woody species was *Cordia millenii*, followed by *Khaya ivorensis* and the least preferred is *Guarea cedrata* followed by *Mansonia altissima.* The estimated volume of wood utilized monthly by the industries ranged from 0.6m^3 to 10.81m^3 with a total monthly volume of 113.94m^3 and a mean of 7.12±0.84m^3 per outlet and also, the estimated yearly usage ranged from 10.6m^3 to 106.2m^3 culminating in a total annual volume of 1062.2m^3 and a mean of 66.39±8.1m^3 per outlet. This study revealed that furniture making is an economically viable and steadily growing craft within Oredo Local Government Area, largely sustained by small-scale and medium-scale industries. To ensure long-term resource availability and industrial growth, there is a pressing need for reforestation initiatives, sustainable wood sourcing practices, and policy interventions that promote responsible utilization of forest resources in Oredo Local Government Area.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of study

Furniture plays a vital role in human life, serving both aesthetic and functional purposes in various spaces. Beyond its practical uses, the furniture industry also generates income, create employment opportunities and fosters craftmanship. Furniture comes in diverse forms, including doors, tables, chairs, decorative items, cabinets, shelves, cupboards, beds, windows and roofing material. (Adedokun *et al.*, 2017)

Wood has been a primary construction material for centuries and its value endures due to its unique beauty, varied figures and colour blends. (Metterm, 1986; Ohagwu and Ogwuishiwu, 2011). Among wood-based products, furniture is the most value-added component (Ngui *et al.*, 2011). The characteristics of wood, such as strength, hardness, durability and appearance, vary significantly between tree species (Wood Products, 2008). These distinct properties make wood a preferred material for furniture making.

The furniture industry is a significant contributor to the economy of Nigeria, providing employment opportunities and generating revenue. Furniture making is a traditional craft in Nigeria, with a long history dating back to the pre-colonial era. The industry has evolved overtime, with the introduction of modern technologies and machinery. However, the industry still relies heavily on traditional skills and techniques. The demand for furniture products in Nigeria is high, driven by a growing population and an increasing need for housing and office furniture. The industry is dominated by small-scale, medium-scale and large-scale enterprises, which rely on local wood resources for their raw materials. It is essential to assess the type of furniture making industries and preferred woody species for their products. This will provide valuable insights into the industry

dynamics and help to identify opportunities for sustainable development and environmental conservation.

1.2 Statement of Problem

The furniture industries in Oredo Local Government Area faces challenges in sustainable wood resources management, as the demand for specific wood species for furniture production put pressure on local forest ecosystem. However, there is lack of comprehensive information on the types of furniture making industries operating in the area and the preferred woody species used for their products. This knowledge gap hinders efforts to promote sustainable forest management, conserve valuables tree species and support long-term viability of the furniture industry.

The selection of wood species in furniture production significantly impacts product quality, durability, cost and consumer satisfaction. However, furniture-makers preferences for specific wood species are influenced by various factors including availability, workability, aesthetics, sustainability and market demand. Despite the importance of wood selection, there is limited research on which wood species are most preferred by furniture-makers and the reason behind this preference, how factors like cost, durability, grain pattern, regional differences (due to local availability or cultural preferences) and environmental concerns influences their choices.

1.3 Justification of Study

This study will provide current and localized data on wood usage trends, helping policy makers and industry stakeholders in making informed decisions. Edo state has faced rapid deforestation due to illegal logging. This study can highlight which trees need sustainable management or replacement with alternative that could serve as substitute, reducing pressure on endangered tree species. This aligns with Nigeria's National forest policy and

global effort (UIV sustainable development Goals-SDG 15: Life on Land) to promote responsible wood utilization.

Previous study on wood usage in Nigeria have mostly focused on general timber trade rather than specific industrial demand and this study will document Oredo Local Government Area furniture industry structure and wood preference for future studies on wood sustainability and industry trend.

This study is timely and necessary because it addresses critical gaps in understanding wood demand, industry trend and sustainability challenges in Oredo Local Government Area. The findings will benefit researchers, policy makers, environmentalists and business owners, ensuring informed decision for economic growth and ecological balance.

1.4 Scope of the study

This study is limited to assessing the type of furniture-making industries in Oredo Local Government Area, Edo state, Nigeria. It focuses on identifying and categorizing the different scales of operation (small, medium, or large). The research also investigates the preferred woody species used in furniture production within the study area and the reasons for their preferences.

1.5 Objective of study

The main objective of this project is to carry out an assessment on the types of furniture making industries and preferred wood species in making their products in Oredo Local Government Area of Edo state, Nigeria.

The specific objectives are to:

1. assess the type of furniture-making industries based on size and product output
2. list woody species utilized by these furniture-making industries
3. prioritize these woody species based on availability and most commonly used

4. estimate volume of wood used monthly and yearly by these furniture-making industries

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Furniture making

Furniture making is an integral aspect of design, craftsmanship, and culture, reflecting not only functionality but also artistry and historical context. Historically, furniture making can be traced back to ancient civilizations where functionality dictated design. According to Engel (2015), furniture initially served basic purposes – seating, sleeping, and storage. The evolution of furniture styles, such as the ornate styles of the Renaissance and the minimalist designs of the Modern era, illustrates changing cultural values and technological capabilities. For instance, the introduction of mechanized woodworking tools during the Industrial Revolution significantly transformed furniture production, allowing for mass production while reducing costs (Penfold, 2017)

The furniture-making industry has witnessed significant technological advancements over the years. Computer-Aided Design (CAD) software has transformed how designers create and visualize furniture. By allowing intricate designs and variations to be easily executed, CAD has expanded the complexity and creativity in furniture design (Ferguson, 2019). Furthermore, innovations like CNC (Computer Numerical Control) machines have revolutionized production processes. These machines can cut, carve, and shape materials with precision, allowing for detailed engravings and reducing material waste (Lee and Kwan, 2021). The integration of smart technology in furniture, such as IoT-connected furniture, is becoming more prevalent, catering to a tech-savvy consumer market (Bishop, 2022).

With the growing emphasis on sustainability, many furniture makers are adopting eco-friendly practices. Sustainable sourcing of materials is paramount, encouraging the use of reclaimed wood, sustainably-harvested timber, and non-toxic finishes (Smith and Anderson, 2020). Furthermore, designers are increasingly creating furniture that can be easily disassembled and recycled at the end of its lifespan (Lal and Drew, 2021).

Several studies have explored consumer attitudes towards sustainable furniture. Reports indicate a growing preference for eco-friendly products, with consumers willing to pay a premium for sustainable furniture options (Huang *et al*., 2021). This shift in consumer behavior is encouraging manufacturers to focus on sustainability as a core aspect of their business model

Furniture making is a complex interplay of history, material science, technology, sustainability, and consumer behavior. As the industry continues to evolve, the integration of advanced technologies and a focus on sustainable practices are becoming essential components of furniture design and production. Understanding these dynamics

2.2 Furniture making in Nigeria

Nigeria's furniture manufacturing sector is a vital component of the nation's economy, generating employment and catering to both domestic and international demand. With abundant timber resources, skilled artisans, and an increasing appetite for high-quality furniture, the industry holds a prominent position in Africa's market. However, obstacles such as poor infrastructure, rising production expenses, and competition from foreign imports limit its growth (Adewole, 2019).

The furniture sector plays a notable role in Nigeria's Gross Domestic Product and workforce development. Data from the Manufacturers Association of Nigeria (MAN, 2022) indicate that the wood and furniture industry represents approximately 5% of the country's

manufacturing output. It sustains livelihoods for carpenters, designers, and sales professionals, benefiting numerous families (Adeyemi and Ojo, 2020), especially in Oredo Local Government Area, Benin City.

The craft of furniture-making in Nigeria has transitioned from traditional handiwork to modern industrial techniques. Early artisans relied on locally sourced woods like mahogany, iroko, and obeche to produce functional and decorative items (Oguntona and Akinbogun, 2020). As urbanization accelerated and economic conditions improved, the need for modern furniture grew, spurring the rise of small and medium-sized furniture businesses (SMFEs) in key cities such as Lagos, Abuja, and Port Harcourt (Oluwajuyitan *et al*., 2021).

2.3 Types of furniture making industry

Abdullah, (2003) reported that facilities for furniture production in Nigeria range in size from large scale industries to medium and small- scale factories. Mass production typically involves large-scale operations that focus on efficiency and cost-effectiveness, often utilizing engineered wood products such as particleboard and MDF (medium-density fiberboard) (Haberli *et al*., 2019). In contrast, custom furniture and artisans prioritize craftsmanship and unique designs, often using solid wood species that are locally sourced (Benson, 2020). The custom furniture which involve medium size furniture industry combines artisanal craftsmanship with industrial efficiency, catering to clients seeking personalized, high quality pieces. These businesses balance scalability and market demands while emphasizing customization. The small-scale furniture workshop is often defined by limited production size and artisanal focus, blend traditional craftsmanship with modern innovation and attributed to wide availability of wood and possibility of using simple tools for producing furniture.

2.4 Preferred woody species

The choice of wood species in furniture making is influenced by diverse factors, including physical properties, availability, and market demand. Commonly preferred species include *Cordia millenii*, *Terminalia ivorensis*, *Tectona grandis*, and mahogany each offering distinct characteristics that cater to different consumer preferences (Davis, 2018). For instance, *Cordia millenii* is favored for its strength and durability, versatility and prominent grain patterns making it suitable for modern design and heavy-use cabinets, Mahogany is celebrated for its rich ,reddish-brown colour and resistance to warping, it is staple in Luxury furniture, Teak is popular for outdoor furniture due to its weather-resistant properties and oil content, ensuring longevity, Bamboo gains attention as an eco-friendly alternative, offering rapid growth, sustainability and unique aesthetic quality (Miller, 2019). A study by Zhang *et al*., (2020) found that regional preference for woody species vary significantly, with tropical hardwoods. However, the overexploitation of these species poses sustainability risks, driving a transition towards more environment friendly options (Lee and Kim,2021).

These preferred woody species reveal a complex interplay of factors influencing material selection. While traditional species remain popular, there is a growing trend towards sustainability and the use of alternative materials.

2.5 Trends influencing choice of wood species

There is a growing trend towards sustainability in the furniture industry, with consumers and manufacturers alike becoming more conscious of the environmental impact of their choices. This has led to preference for species that are sustainably sourced or certified to ensure responsible management of forest resources (Kirkpatrick and McCarthy, 2013). The local availability of certain wood species significantly influences choice. In regions where specific woods are readily available and affordable, manufacturers often opt for

those species to keep costs low. For instance, hardwoods may be favoured in places like Nigeria where they are abundant (Lucas and Olorunnisola, 2002).

The visual appeals of different wood species play a crucial role in furniture design. Consumer often look for woods with attractive grain patterns, colours, and finishes. Species like walnut, cherry and oak are commonly selected for their rich aesthetics (Smith, 2019).

Durability is an essential factor in the choice of wood for furniture. Species that offers strong mechanical properties and resilience to wear and tear, such as teak or mahogany, are often preferred for high quality pieces that are expected to last (Ellis *et al*., 2004).

In many regions, traditional practices and cultural significance influences wood species choice. Certain woods may be preferred due to historical significance or local customs, impacting the production styles and types of furniture made (Ashton, 2016).

The rise of technology in manufacturing has led to increase in the use of engineered wood products, such as laminated veneer lumber (LVL) and particleboard. These materials provide alternative to solid wood and can often enhance the performance characteristics of furniture (Gunnarsson, 2020).

2.6 Challenges in the furniture making Industry

The furniture making industry faces several challenges related to the sourcing of woody species. Deforestation and illegal logging are significant issues that threaten the sustainability of wood resources (FAO, 2020). Additionally, the increasing demand for furniture has led to a rise in the use of synthetic materials, which can impact the traditional wood furniture market.

Moreover, the covid-19 pandemic has disrupted supply chains, affecting the availability of certain woody species and leading to increased prices (Thompsons,2022). This situation has risks associated with global supply chains (Anderson and brown, 2023).

CHAPTER THREE

3.0 MATERIALS AND METHODS

3.1 Description of study area

The research was conducted in Oredo Local Government Area (LGA), situated in the southern part of Edo State, Nigeria. Oredo serves as a central urban LGA, encompassing the city center of Benin City, which also functions as the capital of Edo State. Oredo has become a commercial hub for artisanal and industrial woodworking activities. As of the latest available data, there are 32 furniture manufacturing industries operating in Oredo Local Government Area, namely; B.I. Benjoh Furniture (Nig) Co, Solid Minds Interiors, Skywide Diamond Corporate Limited, General furniture, Gold Furnishers Ltd, SAM Standard Furniture, Allwell Furniture Co, AY Furniture Works, Godswill furniture, Elvis O Exotic Furniture and Interiors, Greenland Furniture Ltd, Kings furniture, Jude furniture, Pedro furniture, Classic Furniture Nigeria, Pa Joe furniture, City Homes Furniture Ltd, Royal Crest Furniture Company, Isaac furniture, Wilfred furniture, Empir Furniture Company, Nurudeen furniture, New Era Furniture Ltd, Elite Home Furniture, Samson furniture, De Oyibo's furniture, Glory Wood Works, Royal Oak Furniture, Supreme Furniture Ventures, Diamond Wood Furniture, Trustworthy Furniture Ltd, Uvie Vicks furniture. The 16 selected furniture industries are located around 6º34'68" N latitude and 5º61'92" E longitude. These LGA encompass both densely populated urban neighbourhoods and semi-urban areas where local manufacturing and crafts thrive. The area experiences a tropical climate characterized by two main seasons: the rainy season and the dry season.

Average annual temperatures range between 20°C and 30°C, with high humidity levels, especially during the wet season.

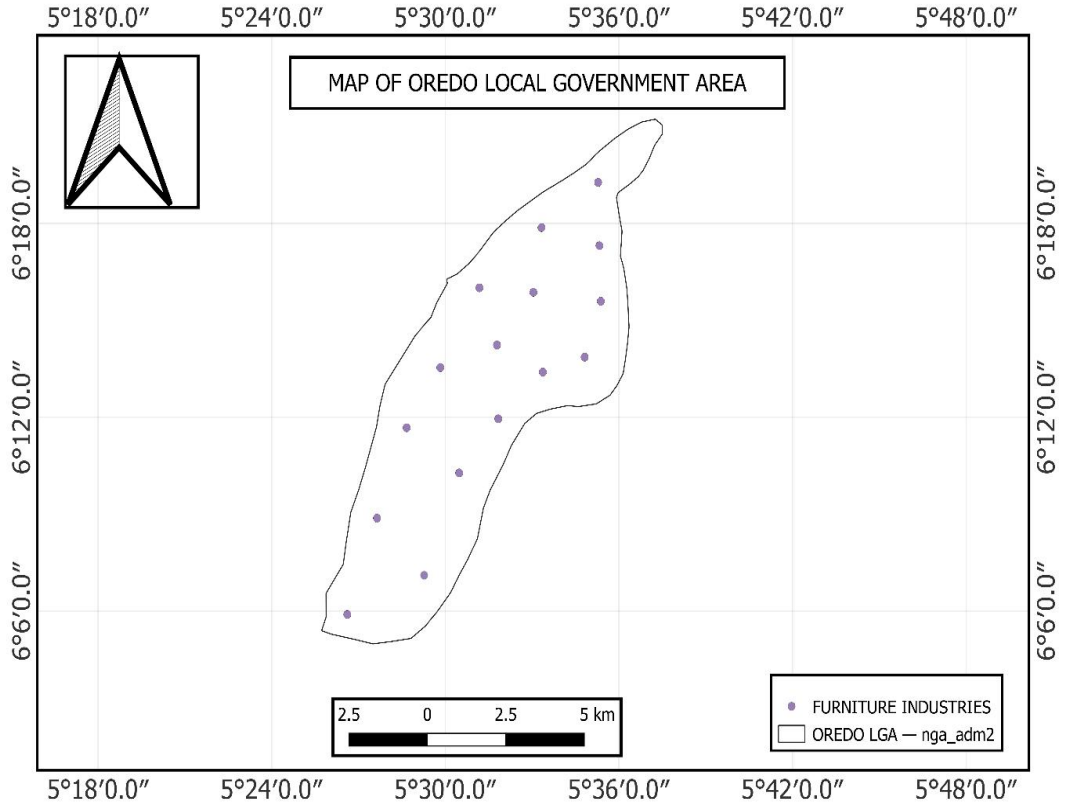


Figure 1: Map of Oredo Local Government Area showing sixteen (16) Furniture Industries

3.2 Methodology

3.2 Sampling Techniques

A simple random sampling method was adopted. A comprehensive list of 32 known furniture-making industries was compiled through field visits (reconnaissance survey) and from the literature. Each furniture-making industry was assigned a number. A sample size of 16 industries was selected using a random number generator, ensuring each had equal chance of selection, thus eliminating selection bias, and a total of 50% sampling intensity was applied to the total number of sample size.

3.3 Data collection

Data was collected using questionnaires and interviews, administered directly to the selected furniture-makers. The questionnaire was divided into sections: Demographic and background information, business scale assessment, woody species utilization by furniture making industries, prioritization and usage of wood species in furniture production and assessment on the volume of wood utilized. A total of 80 questionnaire was distributed to furniture makers in Oredo Local Government Area.

Table 3.1: Sampling Design

Furniture-making industry	No. of furniture-markers	No. of questionnaire administered
AD Best furniture	3	2
General furnirure	5	4
Godswill furniture	6	5
Kings furniture	4	3
Jude furniture	6	5
Pedro furniture	4	3
Pa Joe furniture	2	2
Isaac furniture	5	4
Wilfred furniture	8	7
Nurudeen furniture	13	11
AY furniture	6	5
Samson furniture	10	8
De Oyibo's furniture	7	6
Glory wood furniture	4	3
Allwell furniture	10	8
Uvie vicks furniture	5	4
Total	98	80

3.4 Data analysis

The data collected was analyzed and descriptive statistics such as frequencies, percentages and charts were used to present the data obtained from types of furniture making industries and the preferred wood species across different industries sizes.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Demographic details of respondents

The ages of furniture makers in the study area range between 18 and 55 years. While, a total of seventy-three (73) and two (2) of the respondents are males and females respectively. Seventy-one (71) and three (3) of the respondents are secondary and primary education respectively (Table 1).

Table 4.1: Demographic background of respondents

Industry Name	Age Range	Male	Female	No Formal Education	Primary	Secondary	Tertiary	Yrs of Experience
A.D	25 - 55	3	0	0	0	3	0	1 - 12
G.F	26 - 36	5	0	0	1	5	0	6 - 15
G.W	18 - 34	7	0	0	0	6	0	6 - 15
K.F	25 - 44	4	0	1	0	3	0	6 - 15
J.F	25 - 44	5	0	0	0	5	0	1 - 15
P.F	26 - 36	4	0	0	0	4	0	6 - 10
I.F	25	1	0	0	0	1	0	1 - 5
P.J	25 - 34	4	0	0	0	4	0	1 - 10
W.F	25 - 34	7	0	0	0	7	0	1 - 10
N.F	25 - 45	7	0	0	0	7	0	1 - 12
A.Y	26 - 34	4	1	0	0	5	0	1 - 10
S.F	18 - 34	8	0	0	0	8	0	1 - 10
D.O	25 - 34	5	0	0	1	4	0	1 - 10
G.L	25 - 44	2	1	0	0	3	0	1 - 5
A.F	25 - 34	4	0	0	1	3	0	1 - 10
U.V	18 - 55	3	0	0	0	3	0	1 - 12
TOTAL		**73**	**2**	**1**	**3**	**71**	**0**	

Abbreviations of Industry Names

A.D. = AD Best Furniture, G.F. = General Furniture, G.W. = Godswill Furniture, K.F. = Kings Furniture, J.F. = Jude Furniture, P.F. = Pedro Furniture, I.F. = Issac Furniture, P.J. = Pa. Joe Furniture, W.F. = Wilfred Furniture, N.F. = Nurudeen Furniture, A.Y. = AY Furniture, S.F. = Samson Furniture, D.O. = De Oyebos Furniture, G.L. = Glory Furniture, A.F. = Allwell Furniture, U.V. = Uvie Vicks Furniture.

4.2 Type of furniture-making industries based on size and product output

A total of sixteen (16) furniture-making industries were surveyed in Oredo Local Government Area. The industries were categorized based on the number of workers: small-scale (1-5 workers), medium-scale (6-10 workers), and large-scale (11 and above workers). The result revealed that 7 outlets were small-scale, 6 were medium-scale, and 3 were large-scale. The average monthly operational output ranged from 5 to 50 furniture units, with a mean of 18.75±3.2 units. The primary customers were furniture-making households (56.25%) and individual clients (43.75%). A majority of the outlets (56.25%) reported regularly supplying furniture outside Oredo LGA.

Figure 4.2: Distribution of Furniture Industries by Business Scale

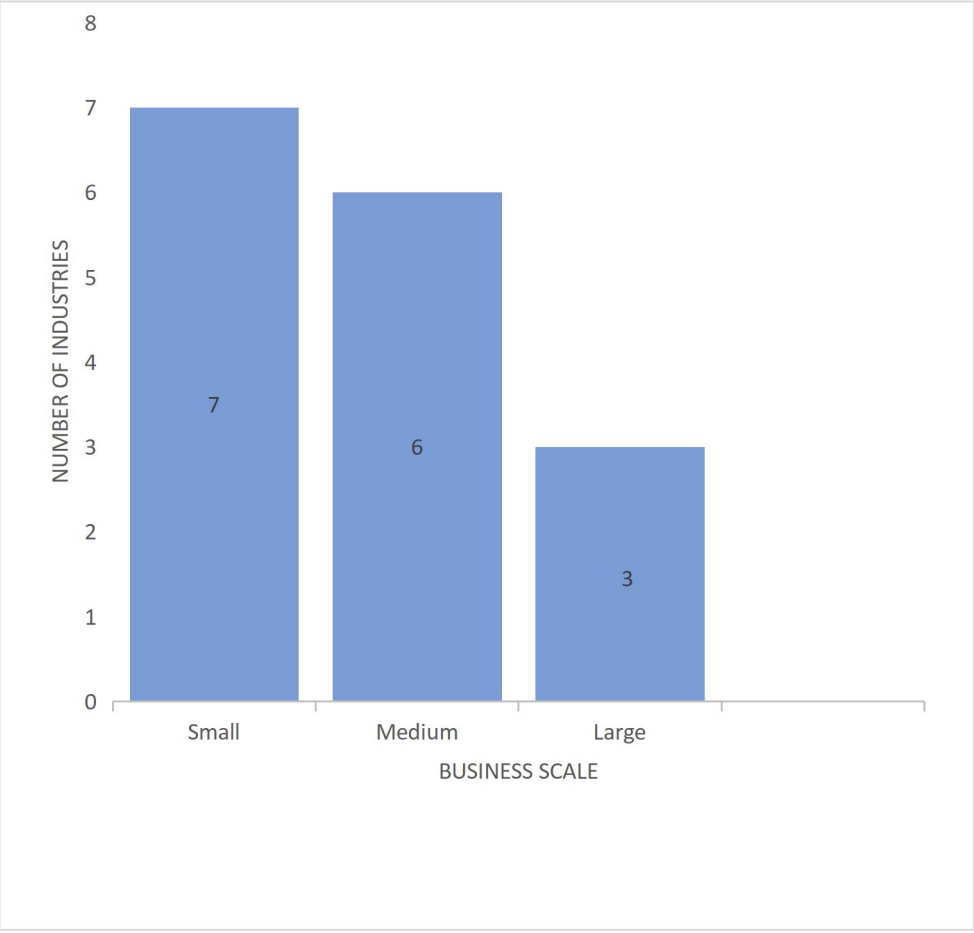


Table 4.2: Business scale of furniture industries in the study area

Industry Name	No. of Workers	Business Scale	Avg. Monthly Output	Supply Outside LGA
Ad Best Furniture	3	Small	10	Occasionally
General Furniture	5	Small	5	Occasionally
Godswill Furniture	6	Medium	25	Occasionally
Kings Furniture	4	Small	10	Occasionally
Jude Furniture	6	Medium	30	Regularly
Pedro Furniture	4	Small	5	Occasionally
Issac Furniture	2	Small	10	Regularly
Pa. Joe Furniture	5	Small	10	Occasionally
Wilfred Furniture	8	Medium	20	Regularly
Nurudeen Furniture	13	Large	50	Regularly
Ay Furniture	6	Medium	30	Regularly
Samson Furniture	10	Medium	40	Regularly
De Oyebos Furniture	7	Medium	10	Occasionally
Glory Furniture	4	Small	10	Occasionally
Allwell Furniture	10	Large	20	Regularly
Uvie Vicks Furniture	5	Small	30	Occasionally
TOTAL	**98**		**300**	
Mean	**6.1**		**18.75**	
Std. Error	**±0.87**		**±3.2**	

The supply outside Oredo Local Government Area was between scale 1-5, scale 4-5 indicate regularly and scale 1-3 indicate ocassionally.

4.3 Woody species utilized by furniture-making industries

A total of 10 woody species from 7 plant families were identified as being utilized by the furniture industries. The most common families were Boraginaceae and Combretaceae. The species recorded include *Cordia millenii*, *Terminalia ivorensis*, *Khaya ivorensis*, *Mansonia altissima*, *Guarea cedrata*, *Nesogordonia papaverifera, Afzelia*

Africana, Khaya grandifoliola, Albizia lebbeck and Milicia excelsa. Cordia millenii was the most frequently used species, found in 15 out of 16 industries (93.75%), followed by *Terminalia ivorensis* (68.75%) and *Khaya irovensis* (62.5%). The primary source of wood was sawmills (87.5%), with durability being the most cited reason for species selection.

Table 4.3: Woody species and their frequency of use in the study site

Family	Woody Species	Local Name	Frequency	Percentage (%)
Boraginaceae	*Cordia millenii*	Omo	15	93.75
Combretaceae	*Terminalia ivorensis*	Black afara	11	68.75
Meliaceae	*Khaya ivorensis*	Okwen	10	62.50
Meliaceae	*Guarea cedrata*	Obobo	5	31.25
Moraceae	*Milicia excelsa*	Iroko	4	25.00
Meliaceae	*Khaya grandifoliola*	Mahogany	3	18.75
Malvaceae	*Mansonia altissima*	African walnut	7	43.75
Malvaceae	*Nesogordonia papaverifera*	Danta	3	18.75
Fabaceae	*Afzelia Africana*	Apa	2	12.50
Fabaceae	*Albizia lebbeck*	Woman tongue	3	18.75

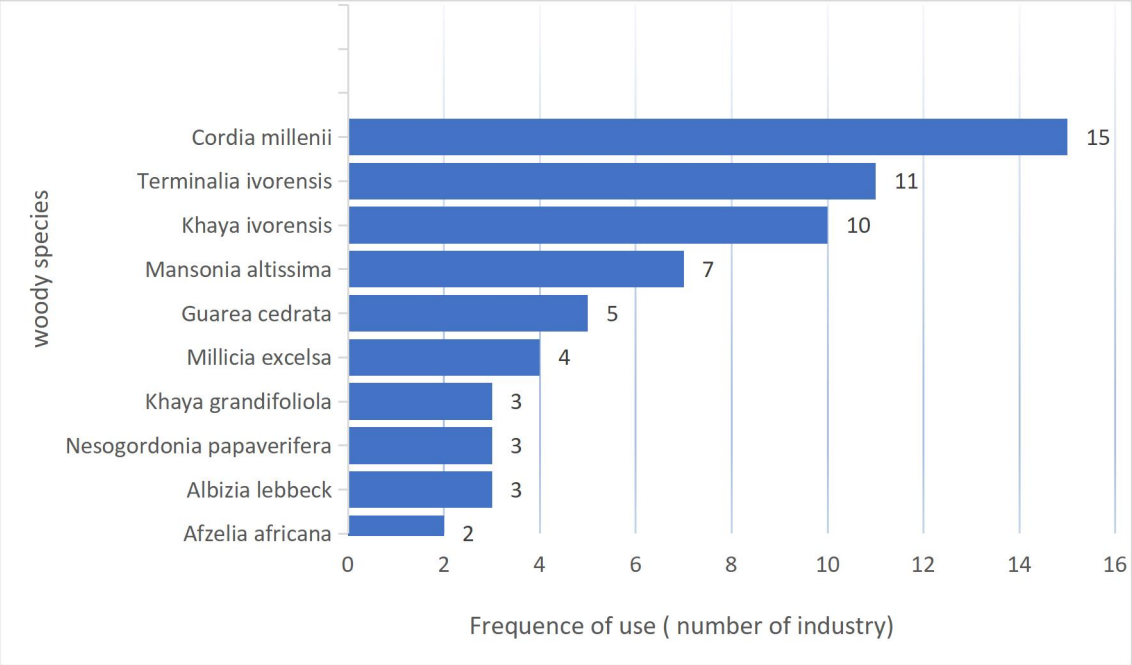


Figure 4.3: Frequency of Woody Species Utilization in Furniture Industries

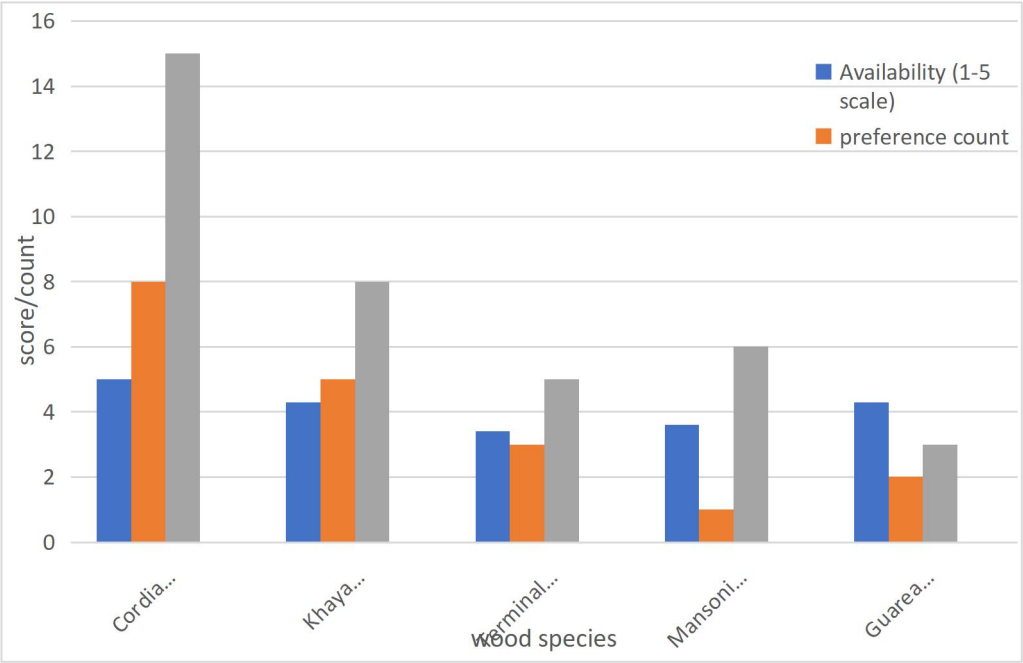
4.4 Prioritization of woody species based on availability and use

The prioritization of woody species was based on a scale of 1-5 (1=Scarce, 5=Abundant) for availability and a count of how many industries identified a species as most commonly used or most preferred. *Cordia millenii* was indicated to be the most available species (Mean Availability: 4.8±0.13), the most commonly used (15 industries), and the most preferred (8 industries). Durability was the overarching factor influencing the choice of wood species, cited by 100% of the furniture- making industries.

Table 4.4: Prioritization of wood species based on availability and preference

Woody Species	Mean Availability (1-5)	Most Commonly Used (Count)	Most Preferred (Count)
Cordia millenii	4.8 ±0.13	15	8
Khaya ivorensis	4.3 ±0.15	8	5
Terminalia ivorensis	3.4 ±0.25	7	3
Masonia altissima	3.6 ±0.22	6	1
Guarea cedrata	4.3 ±0.25	3	2
Std. Error	**±0.19**		

Figure 4.4: Availability, Preference and Common Use of Major Wood Species



4.5 Volume of wood used monthly and yearly

The estimated volume of wood utilized monthly by the industries ranged from 0.6m³ to 10.81m³, with a total monthly volume of 113.94m³ and a mean of 7.12±0.84m³ per furniture-making outlet. The projected yearly usage ranged from 10.6m³ to 106.2m³, culminating in a total annual volume of 1062.2m³ and a mean of 66.39±8.1m³ per outlet. Majority of the outlet (87.5%) reported experiencing seasonal changes in wood availability, and most (56.25%) restock their wood supply on a weekly basis.

Table 4.5: Estimated volume of wood utilization by furniture industries

Statistic	Monthly Volume (m³)	Yearly Volume (m³)
Total	113.94	1062.2
Mean	7.12	66.39
Std. Error	±0.84	±8.1
Median	10.6	42.4
Minimum	0.6	10.6
Maximum	10.81	106.2
Variance	11.36	1050.6

Figure 4.5: Monthly Wood Consumption by Furniture Industry

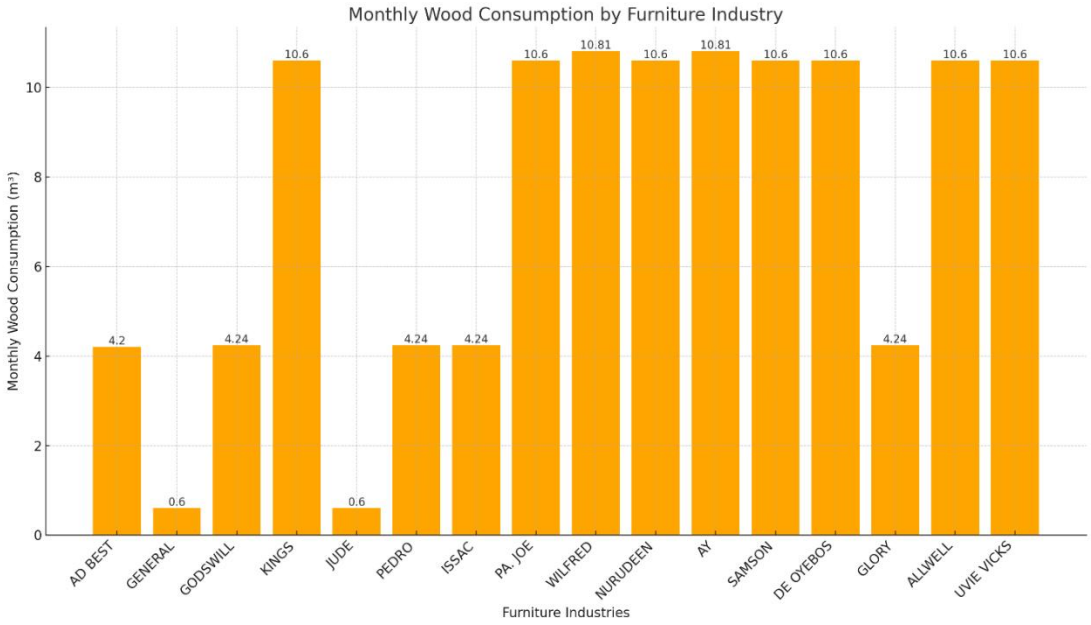


Figure 4.6: Yearly Wood Consumption by Furniture Industry

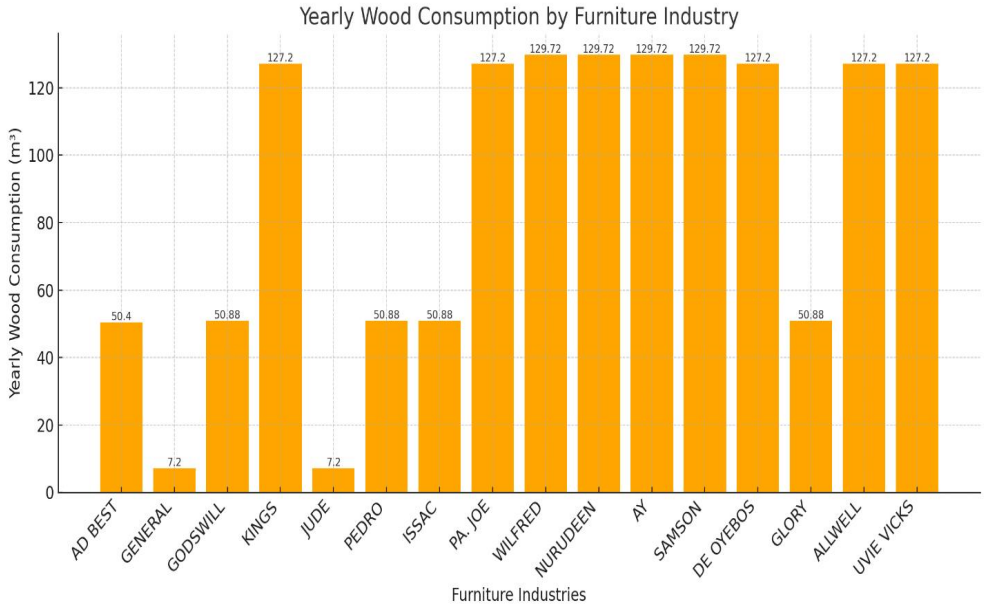


Plate 1: Interview with respondents in General Uvie Furniture

Plate 2: Interview with respondents in vicks furniture

Plate: 3 Interview with respondents in Isaac furniture

Plate 4: Interview with respondents in furniture

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The findings of this study revealed that furniture making is economically viable and steadily growing within Oredo Local Government Area, largely sustained by small- and medium-scale industries. The furniture-making industries is dominated by young and middle-aged artisans who have acquired their expertise through apprenticeship rather than formal education, reflecting the vocational nature of the occupation. The industry contributes significantly to local employment, skill transfer, and poverty reduction. It also demonstrates great potential for expansion due to increasing consumer demand and creativity among artisans. However, the informal mode of skill acquisition and limited exposure to modern production technologies remain challenges that could affect long-term competitiveness. Therefore, strengthening technical training, introducing innovative design concepts, and providing financial support could enhance productivity, efficiency, and sustainability in the local furniture-making industry across Oredo Local Government Area.

The assessment of woody species utilisation showed that Cordia millenii, Terminalia ivorensis, and Khaya ivorensisS were the most commonly used and preferred species, valued for their strength, durability, and ease of processing. Nonetheless, heavy reliance on a few timber types raises sustainability concerns, as unchecked exploitation could

deplete forest resources and threaten ecological balance. The study also found that wood supply fluctuates with seasonal variations, influencing production stability and operational cost. Despite these constraints, most furniture industries maintain consistent output and serve customers within and beyond Oredo, demonstrating their adaptability and market resilience. To ensure long-term resource availability and industrial growth, there is a pressing need for reforestation initiatives, sustainable wood sourcing practices, and policy interventions that promote responsible utilisation of forest resources in Edo State.

5.2 Recommendations

Based on the findings and conclusion of this study, the following recommendations are made:

1. Government agencies, in collaboration with forestry departments, should implement strict regulations to ensure that wood harvesting is done sustainably. Furniture industries should be encouraged to participate in tree planting and reforestation programmes to replenish the species they utilise most.
2. Research institutions and forestry extension services should promote the use of less-exploited but durable species as alternatives to the overused ones such as Cordia millenii and Terminalia ivorensis. This will reduce pressure on a few preferred species and foster biodiversity conservation.
3. Efforts should be made to strengthen the wood supply chain through the establishment of community-managed timber depots. This will ensure regular supply and reduce the impact of seasonal scarcity on production activities.
4. Small and medium furniture industries should be supported through credit facilities, cooperative societies, and government incentives to enhance productivity and encourage expansion beyond local markets.

5. Furniture makers should be encouraged to adopt modern machines and processing tools that enhance efficiency, reduce waste, and improve product quality. Technical education centres and workshops can play a vital role in this aspect.

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APPENDIX

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QUESTIONNAIRE

TITLE: ASSESSING THE TYPES OF FURNITURE MAKING AND PREFERRED WOODY SPECIES FOR THESE PRODUCTS IN OREDO LOCAL GOVERNMENT AREA, EDO STATE, NIGERIA

The purpose of this questionnaire is to obtain information on furniture-making from furniture makers in Oredo Local Government Area.

INSTRUCTION: This questionnaire is a study instrument. All your responses to questions will be treated confidentially, please be open to your response.

Thanks for your cooperation.

Section 1: Demographic and background Information

1. Name (Optional): _____

2. Workshop location: _____

3. What is your age? Below 25 ( ) 26-34 ( ) 35-44 ( ) 45-55 ( ) 56 and above

4. What is your sex? Male ( ) female ( )

5. What is your level of education? No formal education ( ) primary ( ) secondary ( ) Tertiary ( )

6. What is your years of experience in the furniture-making industry: less than 1 year ( ) 1-5 years ( ) 6-10 years ( ) more than 10 years ( )

Section 2: Business scale assessment

7. How many workers are employed in your furniture business? 1-5 ( ) 6-10 ( ) more than 10

9. What is the nature of your business operation? Individual/ sole ownership ( ) partnership ( ) company/enterprise ( ) cooperative ( )

10 What is your average monthly production output? 1-10 items ( ) 11-30 items ( ) over 30 items

11. Who are your main customers? Individuals only ( ) local shops or households ( ) companies, institutions/ large contracts

12. Do you supply furniture outside Oredo Local Government Area? No ( ) occasionally ( ) regularly ( )

13. What type of equipment do you primarily use? Basic hand tools only ( ) combination of hand tools and power tools ( ) Mostly industrial machines and advanced tools ( )

Section 3: woody species utilized by furniture making industries

14. What types of woody species do you commonly use in furniture production?

_____,_____,_____,

_____

15. How do you identify the types of species? Local/common names ( ) scientific/ Latin name ( ) both ( )

16. Where do you source these woods from? Local sawmills ( ) Timber market ( ) Directly from forest ( ) imported suppliers ( ) others ( )

17. Has there been changes in the wood species utilized over the years? Yes ( ) No ( )

18.What are the main reasons for changes in wood species?

__________________,________________________,______________________________,_________________

19. What wood species were you using when you started the business?

______________________,_____________________,___________________________,____________________

20. What new species have you been using over the recent years?

__________________________,_____________________,___________________________,________________

21. Are you satisfied with the performance of the new woody species you now use? Yes ( ) No ( )

Section 4: prioritization and usage of wood species in furniture production

INSTRUCTION: Kindly rank the listed species above based on availability and most commonly used, using scale 1-5, where 1 is scarce and 5 is abundant

WOOD SPECIES	AVAILABILITY	MOST COMMONLY USED
	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )
	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )
	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )
	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )
	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )	1 ( ) 2 ( ) 3( ) 4 ( ) 5 ( )

22. Which wood species do you preferred the most, and why?

_____,_____,_____

_____

23. what are the factors influencing your choice of wood selection? Durability ( )

Aesthetic appeal ( ) cost ( ) sustainability ( ) workability ( ) others;

_____,_____,_____,_____

__

Section 5: Assessment on the volume of wood utilized

24. What is your average volume of wood usage monthly (planks or logs)? Less than 5 pieces ( ) 6-20 pieces ( ) 21-50 pieces ( ) more than 50 pieces

25. what is your average volume of wood use yearly (planks or logs)? Less than 50 pieces ( ) 51-200 pieces ( ) 201- 500 pieces ( ) more than 500 pieces

26. Do you experience seasonal changes in the availability of wood? Yes ( ) No ( )

27. How often do you restock your wood supply? Weekly ( ) monthly ( ) quarterly ( ) Annually ( ) as needed ( )