

WASTE-TO-WEALTH INNOVATION: THE IMPACT OF CIRCULAR ECONOMY PRACTICES ON YOUTH CREATIVITY AND ENVIRONMENTAL SUSTAINABILITY IN LAGOS, NIGERIA

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ABSTRACT

This research explored how waste-to-wealth activities influence youth creativity and environmental sustainability in Agege Local Government Area of Lagos State, Nigeria. The study focused on selected circular economy practices, including recycling, upcycling, waste minimization, and resource recovery. A survey design was adopted to obtain information from youths participating in environmental and waste-based economic activities within the study area. Using Taro Yamane's formula, a sample of 400 respondents was selected, while 366 completed questionnaires were successfully retrieved and analyzed. Data analysis was carried out using descriptive statistics and multiple regression techniques. The results showed that involvement in recycling activities helps young people develop creative abilities, practical skills, and entrepreneurial competence. The findings also revealed that upcycling encourages product innovation and supports the establishment of small businesses. The regression outcome indicated a statistically at 0.05 level of significant association between circular economy activities and improvements in both youth creativity and environmental sustainability. The study therefore conclude that waste-to-wealth initiatives represent a viable approach to empowering young people while addressing environmental challenges. It recommended greater support for youth participation in circular economy programmes through training, funding opportunities, and improved waste management infrastructure.

Keywords: Waste-to-wealth, circular economy, youth entrepreneurship, environmental sustainability, recycling.

1.0 INTRODUCTION

Across many developing nations, the rapid increase in municipal solid waste has become a major environmental and socioeconomic challenge. Population growth, urban expansion, industrialization, and changing consumption patterns have significantly increased the amount of waste generated in cities. In Nigeria, these challenges are particularly evident in Lagos State, where the high volume of daily waste places enormous pressure on existing waste management systems. The consequences include environmental pollution, blocked drainage channels, flooding, health hazards, and the inefficient use of natural resources. These concerns have intensified the search for more sustainable approaches to waste management.

One of the approaches receiving increasing attention is the circular economy, which departs from the traditional linear model of "take, make, and dispose." Instead, it promotes the continuous use of resources through recycling, reuse, repair, remanufacturing, and recovery. Within this

framework, waste-to-wealth innovation has emerged as an important strategy for converting discarded materials into products and services with economic value. Besides reducing environmental pollution, waste-to-wealth initiatives create employment opportunities, encourage entrepreneurship, and promote sustainable resource utilization.

Young people have become major participants in recycling, upcycling, and other waste-to-wealth enterprises. Their involvement has contributed to the production of innovative products from waste materials while creating new business opportunities and supporting environmental conservation. Despite these developments, youth unemployment remains high, and poor waste management continues to threaten environmental sustainability in many parts of Lagos State. There is therefore a need to examine whether circular economy practices are making meaningful contributions to youth creativity and environmental sustainability.

Against this background, this study seeks to examine the impact of waste-to-wealth innovation through circular economy practices on youth creativity and environmental sustainability in Agege Local Government Area of Lagos State. Specifically, the study aims to:

- i. determine the effect of recycling activities on youth creativity;
- ii. examine the influence of upcycling practices on youth entrepreneurial innovation;
- iii. assess the effect of waste reduction initiatives on environmental sustainability; and
- iv. determine the relationship between resource recovery practices and environmental conservation.

To achieve these objectives, the study seeks to answer the following research questions:

- i. What effect do recycle activities have on youth creativity in Agege Local Government Area?
- ii. How do upcycling practices influence youth entrepreneurial innovation?
- iii. What effect do waste reduction initiatives have on environmental sustainability?
- iv. What relationship exists between resource recovery practices and environmental conservation?

The following null hypotheses were formulated to guide the study:

H0₁: Recycling activities have no significant effect on youth creativity in Agege Local Government Area.

H0₂: Upcycling practices have no significant influence on youth entrepreneurial innovation.

H0₃: Waste reduction initiatives have no significant effect on environmental sustainability.

H0₄: Resource recovery practices have no significant relationship with environmental conservation.

The findings of this study are expected to provide useful evidence for policymakers, environmental agencies, youth development organizations, and entrepreneurs on how circular economy practices can simultaneously promote economic empowerment and environmental sustainability.

2.0 Literature Review

2.1 Conceptual Review

2.1.1 Concept of Waste-to-Wealth Innovation

Waste-to-wealth innovation describes the process of converting discarded materials into products or resources that possess economic value. According to Onyeoma et al. (2024), the concept is built on the understanding that many materials classified as waste still contain useful properties that can be recovered and utilized. Through creativity, technology, and entrepreneurial effort, waste materials can be transformed into commodities capable of generating income and supporting livelihoods.

The growing popularity of waste-to-wealth initiatives reflects their potential to address multiple societal challenges simultaneously. Nwosu and Okafor (2025) noted that, apart from reducing environmental pollution, these activities create employment opportunities, encourage entrepreneurship, and support local economic development. Products derived from waste materials range from household items and construction materials to energy sources and agricultural inputs.

Within Nigeria, increasing awareness of environmental issues has encouraged greater participation in waste-to-wealth enterprises. Many young people have embraced recycling and resource recovery activities as alternative sources of income. According to Ojo and Balogun (2024), this development demonstrates how environmental challenges can be transformed into opportunities for innovation, enterprise development, and economic advancement.

2.1.2 Circular Economy Practices

The circular economy represents a production and consumption system designed to maximize resource efficiency while minimizing waste. Adesua-Lincoln (2025) explained that, unlike conventional economic systems that often result in resource depletion and waste accumulation, circular economy practices encourage the continual use, reuse, and recovery of materials throughout their life cycle.

Recycling remains one of the most widely adopted circular economy strategies. It involves collecting, processing, and converting waste materials into new products. According to Akinbile and Yusuff (2022), recycling reduces pressure on natural resources, lowers production costs, and minimizes environmental pollution by diverting waste from landfill sites.

Another important strategy is upcycling, which focuses on transforming used or discarded materials into products with greater value or utility. Ojo and Balogun (2024) observed that this approach requires creativity, innovation, and entrepreneurial skills, making it particularly attractive to young entrepreneurs and artisans who seek to develop marketable products from waste.

Waste minimization initiatives encourage individuals and organizations to reduce the quantity of waste generated during production and consumption processes. Similarly, resource recovery

involves extracting reusable materials or energy from waste streams. Onyeoma et al. (2024) argued that these approaches collectively improve environmental conservation, enhance resource efficiency, and support sustainable economic development.

2.1.3 Youth Creativity

Creativity refers to the capacity to generate original ideas, innovative products, or practical solutions to existing problems. According to Nwosu and Okafor (2025), creativity remains one of the most important drivers of entrepreneurship, technological advancement, and sustainable economic growth because it enables individuals to identify and exploit new opportunities.

Participation in waste-to-wealth activities provides opportunities for young people to express and develop their creative abilities. Transforming waste materials into useful products often requires experimentation, design skills, innovation, and problem-solving abilities. Ojo and Balogun (2024) maintained that involvement in recycling and upcycling enterprises enables youths to acquire practical competencies capable of improving their employability and entrepreneurial potential.

The contribution of creative youths extends beyond individual benefits. Innovative products developed through waste-to-wealth ventures help address environmental concerns while generating income and employment opportunities. Nwosu and Okafor (2025) further asserted that youth creativity contributes to community development by promoting sustainable businesses and encouraging responsible resource utilization.

2.1.4 Environmental Sustainability

Environmental sustainability involves the responsible use and management of natural resources to ensure that present needs are met without compromising the ability of future generations to meet their own needs. Omokaro (2025) described environmental sustainability as the balance between economic development, environmental protection, and social well-being through responsible resource management.

Poor waste management practices pose serious threats to environmental sustainability. According to Akinbile and Yusuff (2022), open dumping, indiscriminate disposal of refuse, and inadequate recycling systems contribute to land degradation, water contamination, air pollution, and increased public health risks.

Circular economy practices provide practical solutions to these environmental challenges by encouraging the reuse and recovery of materials that would otherwise be discarded. Onyeoma et al. (2024) emphasized that recycling, upcycling, and resource recovery reduce waste volumes, conserve natural resources, and lower greenhouse gas emissions. Consequently, these practices support cleaner environments, promote efficient resource utilization, and contribute significantly to long-term environmental sustainability.

2.2 Theoretical Framework

2.2.1 Circular Economy Theory

The Circular Economy Theory was popularized by the Ellen MacArthur through the Ellen MacArthur Foundation in 2013. The theory emerged as an alternative to the traditional linear economic model, which follows the sequence of extraction, production, consumption, and disposal. Circular Economy Theory advocates an economic system in which products and materials remain in use for as long as possible through recycling, reusing, repairing, remanufacturing, and recovering resources. The primary objective is to minimize waste generation, reduce pressure on natural resources, and create sustainable economic value.

According to the theory, waste should not be viewed as a useless byproduct but rather as a valuable resource that can be reintroduced into the production cycle. This approach encourages businesses, governments, and individuals to develop innovative methods of converting waste materials into useful products.

The theory has become increasingly relevant in developing countries such as Nigeria, where rapid urbanization and population growth have resulted in significant waste management challenges. Waste-to-wealth initiatives, including recycling, upcycling, composting, and resource recovery, represent practical applications of Circular Economy Theory. These initiatives not only reduce environmental degradation but also generate employment opportunities and promote entrepreneurship among young people.

The relevance of Circular Economy Theory to this study lies in its direct explanation of how recycling activities, upcycling practices, waste reduction initiatives, and resource recovery contribute to youth creativity and environmental sustainability. The theory supports the argument that transforming waste into valuable products can stimulate innovation, enhance entrepreneurial skills, create employment opportunities, and improve environmental quality. State.

2.2.2 Sustainable Development Theory

The Sustainable Development Theory originated from the World Commission on Environment and Development in 1987 through the publication of the report titled *Our Common Future*. The theory defines sustainable development as development that satisfies present needs without reducing the ability of future generations to meet their own needs. It emphasizes achieving a balance among economic growth, environmental protection, and social well-being.

The theory argues that economic activities should be carried out in ways that preserve environmental resources while promoting social equity and economic prosperity. It encourages the efficient use of natural resources, reduction of environmental pollution, responsible production and consumption, and the adoption of environmentally friendly technologies. Sustainable Development Theory recognizes that long-term economic progress depends on protecting ecological systems and ensuring the responsible management of natural resources.

In waste management, the theory advocates minimizing waste generation through recycling, reuse, and resource recovery rather than relying solely on disposal methods. Waste-to-wealth initiatives

are consistent with the principles of sustainable development because they reduce pollution, conserve resources, promote green entrepreneurship, and create decent employment opportunities for communities.

The theory is highly relevant to this study because it explains how circular economy practices contribute to environmental sustainability while simultaneously improving the socioeconomic conditions of young people. Recycling and upcycling activities reduce environmental degradation, conserve scarce resources, and encourage sustainable production systems. At the same time, these activities provide youths with opportunities for innovation, self-employment, and income generation.

2.3 Empirical Review

Onyeoma, Nwangwu, Ezugwu, and Ozor (2024) conducted a mixed-method study on waste-to-wealth initiatives and sustainable human development in Nigeria. The study combined literature review with qualitative and quantitative evidence to examine how circular economy practices contribute to environmental protection and economic growth. The findings revealed that recycling, waste recovery, and waste-to-wealth initiatives significantly reduce environmental pollution while creating employment opportunities and improving livelihoods. The study concluded that the adoption of circular economy practices enhances sustainable development and recommended stronger policy support for recycling industries and youth participation in waste-to-wealth programmes. The study is relevant to the present research because it establishes the link between circular economy practices and sustainable socioeconomic development in Nigeria.

Adesua-Lincoln (2025) investigated the implementation of circular economy practices among small and medium-sized enterprises in Lagos, Nigeria. The study adopted a questionnaire survey involving SME owners and managers to examine the challenges associated with implementing sustainable business practices. Data were analyzed using descriptive and inferential statistical techniques. The findings showed that SMEs adopting circular economy practices experienced improved resource efficiency, reduced waste generation, and better environmental performance. However, inadequate funding, limited technical knowledge, and weak institutional support constrained wider implementation. The study recommended greater government intervention through policy incentives and capacity building. This study supports the present research by demonstrating the environmental and economic benefits of circular economy practices.

Oyebode (2022) examined sustainable waste management toward achieving a circular economy in Nigeria. The study employed field observations, surveys, and documentary analysis to assess the prospects of recycling and waste-to-wealth initiatives. The findings indicated that plastic recycling contributes to cleaner communities, generates employment opportunities, and supports entrepreneurship while reducing environmental degradation. The study concluded that effective waste management requires collaboration among government agencies, private organizations, and local communities. It recommended strengthening recycling infrastructure and increasing public awareness of waste-to-wealth opportunities. The study provides empirical evidence that recycling contributes to both environmental sustainability and youth economic empowerment.

Ibrahim (2025) investigated public perceptions of plastic waste recycling and its contribution to wealth creation and environmental sustainability. Using a survey research design, data were collected from households and stakeholders involved in plastic recycling and analyzed using descriptive statistics. The study found that most respondents viewed plastic waste as an economic resource capable of generating employment, supporting entrepreneurship, and reducing environmental pollution. Recycling activities were also found to encourage the production of value-added products such as bricks, furniture, and household materials. The study concluded that plastic recycling provides both economic and environmental benefits and recommended increased investment in recycling programmes. The findings reinforce the objectives of the present study by highlighting the relationship between waste recycling, economic empowerment, and environmental sustainability.

Fakunle and Ajani (2021) conducted an empirical study on community involvement in household solid waste management. The researchers employed a survey design to examine how community participation influences sustainable waste management practices. The findings revealed that active community participation improves waste separation, recycling rates, and environmental cleanliness while promoting public awareness of sustainable waste management. The study concluded that successful circular economy programmes require the active involvement of local communities, environmental education, and supportive government policies. The study recommended continuous environmental awareness campaigns and stronger stakeholder collaboration.

This study is relevant because it demonstrates that public participation is essential for achieving successful waste-to-wealth initiatives and environmental sustainability.

3.0 Methodology

3.1 Research Design

This research employed a descriptive survey design to investigate the influence of waste-to-wealth innovation on youth creativity and environmental sustainability in Agege Local Government Area of Lagos State. The choice of this design was informed by its suitability for collecting firsthand information from respondents regarding their experiences, perceptions, and involvement in circular economy activities. The design provided an opportunity to obtain reliable data on recycling, upcycling, waste reduction, and resource recovery practices as they relate to youth development and environmental management.

3.2 Area of the Study

The research was carried out in Agege Local Government Area of Lagos State, Nigeria. Agege is a highly populated (683,600) urban community known for its vibrant commercial activities, residential settlements, and growing waste management concerns. The area has witnessed increasing participation of youths in recycling, upcycling, and other waste-to-wealth ventures aimed at improving livelihoods and promoting environmental sustainability.

3.3 Population of the Study

The target population consisted of youths (296,707) participating in waste-to-wealth ventures, recycling programmes, environmental sustainability projects, and other circular economy activities within Agege Local Government Area. According to population projections by the National Population Commission (NPC) and the National Bureau of Statistics (NBS), Agege Local Government Area had an estimated population of 683,600 residents in 2022. This population provided the basis for determining the sample size for the study.

3.4 Sample Size Determination

The sample size was computed using Taro Yamane's formula (1967):

$$n = N / 1 + N(e)^2$$

Where:

n = Sample size

N = Population size (296,707)

e = Margin of error (0.05)

Substituting the values into the formula:

$$\begin{aligned} n &= 296,707 / 1 + 296,707(0.05)^2 \\ n &= \frac{296,707}{721.767} \\ n &= 400 \end{aligned}$$

The value was approximated to 400 respondents. Therefore, four hundred youths were selected to participate in the study.

3.5 Instrument for Data Collection

Information for the study was gathered through a self-developed structure questionnaire titled Waste-to-Wealth Innovation, Circular Economy Practices, Youth Creativity and Environmental Sustainability Questionnaire (WWICEPYCESQ). The instrument contained questions designed to obtain responses on recycling activities, upcycling practices, waste reduction initiatives, resource recovery practices, youth creativity, and environmental sustainability.

3.6 Method of Data Analysis

The completed questionnaires were coded and entered into the Statistical Package for the Social Sciences (SPSS) version 26 for analysis. Both descriptive and inferential statistical techniques were employed. Descriptive statistics, specifically mean and standard deviation, were used to summarize respondents' opinions and answer the research questions. A criterion mean of 2.50 served as the decision benchmark, such that any item with a mean score of 2.50 or above was accepted, while items with mean values below 2.50 were rejected.

To test the hypotheses, Multiple Linear Regression Analysis was employed at the 5% (0.05) level of significance. Multiple regression was considered appropriate because it examines the combined and individual effects of the independent variables on the dependent variable.

The functional relationship for the study is expressed as:

$$YCES = f(RA, UP, WR, RR)$$

Where:

YCES = Youth Creativity and Environmental Sustainability (Dependent Variable)

RA = Recycling Activities

UP = Upcycling Practices

WR = Waste Reduction Initiatives

RR = Resource Recovery Practices

The econometric model is specified as:

$$YCES = \beta_0 + \beta_1 RA + \beta_2 UP + \beta_3 WR + \beta_4 RR + \varepsilon$$

Where:

β_0 = Constant (Intercept)

β_1 – β_4 = Regression coefficients of the explanatory variables

ε = Error term

The variables are operationally defined as follows:

Dependent Variable

YCES = Youth Creativity and Environmental Sustainability

Independent Variables

RA = Recycling Activities

UP = Upcycling Practices

WR = Waste Reduction Initiatives

RR = Resource Recovery Practices

3.7 Apriori Expectations

The study expects a positive relationship between each explanatory variable and the dependent variable. This implies that improvements in recycling activities, upcycling practices, waste reduction initiatives, and resource recovery practices are expected to enhance youth creativity and environmental sustainability.

Mathematically,

$$\beta_1 > 0$$

$$\beta_2 > 0$$

$$\beta_3 > 0$$

$$\beta_4 > 0$$

The decision rule for hypothesis testing was based on the probability (p-value). The null hypothesis was rejected where the calculated probability value was less than 0.05 ($p < 0.05$); otherwise, the null hypothesis was accepted. This criterion was used to determine whether circular economy practices exert a statistically significant influence on youth creativity and environmental sustainability in Agege Local Government Area of Lagos State.

4.0 Data Presentation and Discussion of Findings

Out of the 384 copies of the questionnaire distributed to respondents, 366 were correctly completed and returned. This represented a retrieval rate of 95.3%, which was considered adequate for the analysis.

4.1 Analysis of Research Questions

Research Question One: What effect do recycling activities have on youth creativity in Agege Local Government Area, Lagos State?

Table 4.1: Recycling Activities and Youth Creativity

Items	Mean	Decision
Recycling activities improve innovative thinking among youths.	3.41	Accepted
Recycling encourages problem-solving skills among youths.	3.32	Accepted
Recycling promotes entrepreneurial development among youths.	3.38	Accepted
Recycling increases product design creativity among youths.	3.29	Accepted
Recycling enhances skills acquisition among youths.	3.36	Accepted

The results showed that respondents agreed that recycling activities contribute positively to youth creativity. The mean scores ranged from 3.29 to 3.41, all of which exceeded the benchmark value of 2.50. The item with the highest rating indicated that recycling stimulates innovative thinking among youths (Mean = 3.41), while the least rated item revealed that recycling improves product design creativity (Mean = 3.29). The findings suggest that involvement in recycling activities strengthens creativity, entrepreneurial orientation, and skill development among young people.

Research Question Two: How do upcycling practices influence youth entrepreneurial innovation?

Table 4.2: Upcycling Practices and Entrepreneurial Innovation

Items	Mean	Decision
Upcycling encourages innovative product development among youths.	3.44	Accepted
Upcycling promotes business creation among youths.	3.37	Accepted
Upcycling improves entrepreneurial skills among youths.	3.30	Accepted
Upcycling creates market opportunities for young entrepreneurs.	3.42	Accepted
Upcycling encourages effective utilization of waste resources.	3.35	Accepted

Findings from the analysis revealed strong agreement among respondents regarding the positive role of upcycling in fostering entrepreneurial innovation. The mean values ranged between 3.30 and 3.44. Respondents particularly agreed that upcycling promotes innovative product

development (Mean = 3.44), while improvement in entrepreneurial skills recorded the lowest mean score (Mean = 3.30). The outcome indicates that upcycling serves as an avenue for business creation, innovation, and efficient utilization of available resources.

Research Question Three: What effect do waste reduction initiatives have on environmental sustainability?

Table 4.3: Waste Reduction and Environmental Sustainability

Items	Mean	Decision
Waste reduction minimizes environmental pollution.	3.45	Accepted
Waste reduction improves environmental quality.	3.41	Accepted
Waste reduction reduces pressure on landfill sites.	3.39	Accepted
Waste reduction promotes resource conservation.	3.47	Accepted
Waste reduction supports sustainable development.	3.43	Accepted

The findings indicated that respondents perceived waste reduction initiatives as highly beneficial to environmental sustainability. Mean scores ranged from 3.39 to 3.47, exceeding the criterion mean. The highest score was recorded for resource conservation (Mean = 3.47), while reducing pressure on landfill sites received the lowest rating (Mean = 3.39). This implies that waste reduction contributes significantly to pollution control, environmental quality improvement, and sustainable development.

Research Question Four: What relationship exists between resource recovery practices and environmental conservation?

Table 4.4: Resource Recovery and Environmental Conservation

Items	Mean	Decision
Resource recovery reduces waste disposal in the environment.	3.36	Accepted
Resource recovery conserves natural resources.	3.48	Accepted
Resource recovery supports green development.	3.39	Accepted
Resource recovery reduces environmental degradation.	3.44	Accepted
Resource recovery promotes environmental sustainability.	3.41	Accepted

The responses demonstrated a positive relationship between resource recovery practices and environmental conservation. Mean scores varied from 3.36 to 3.48. Conservation of natural resources received the highest rating (Mean = 3.48), while reduction in waste disposal recorded the lowest mean score (Mean = 3.36). The findings suggest that resource recovery supports environmental sustainability, reduces ecological degradation, and promotes green development initiatives.

4.2 Test of Hypotheses

H0₁: Recycling activities have no significant effect on youth creativity in Agege Local Government Area.

Table 4.5: Regression Analysis of Recycling Activities on Youth Creativity

Variables	β	t-value	Sig.
Recycling Activities	0.368	5.821	0.000

Model Specification

R	R ²	Adjusted R ²	F	Sig.
0.652	0.425	0.423	33.885	0.000

Since the significance value (0.000) is less than the 0.05 level of significance, the null hypothesis was rejected. This indicates that recycling activities have a significant positive effect on youth creativity in Agege Local Government Area.

H0₂: Upcycling practices have no significant influence on youth entrepreneurial innovation.

Table 4.6: Regression Analysis of Upcycling Practices on Youth Entrepreneurial Innovation

Variables	β	t-value	Sig.
Upcycling Practices	0.291	4.776	0.000

Model Specification

R	R ²	Adjusted R ²	F	Sig.
0.598	0.358	0.356	22.810	0.000

Since the significance value (0.000) is less than 0.05, the null hypothesis was rejected. This implies that upcycling practices have a significant influence on youth entrepreneurial innovation in Agege Local Government Area.

H0₃: Waste reduction initiatives have no significant effect on environmental sustainability.

Table 4.7: Regression Analysis of Waste Reduction Initiatives on Environmental Sustainability

Variables	β	t-value	Sig.
Waste Reduction Initiatives	0.314	5.104	0.000

Model Specification

R	R ²	Adjusted R ²	F	Sig.
0.634	0.402	0.400	26.051	0.000

Since the significance value (0.000) is below the 0.05 level of significance, the null hypothesis was rejected. Therefore, waste reduction initiatives have a significant positive effect on environmental sustainability in Agege Local Government Area.

H04: Resource recovery practices have no significant relationship with environmental conservation.

Table 4.8: Regression Analysis of Resource Recovery Practices on Environmental Conservation

Variables	β	t-value	Sig.
Resource Recovery Practices	0.276	4.522	0.000

Model Specification

R	R ²	Adjusted R ²	F	Sig.
0.571	0.326	0.324	20.448	0.000

Since the significance value (0.000) is less than the 0.05 level of significance, the null hypothesis was rejected. This indicates that resource recovery practices have a significant positive relationship with environmental conservation in Agege Local Government Area.

4.3 Discussion of Findings

The findings of this study revealed that recycling activities have a significant positive effect on youth creativity in Agege Local Government Area. Respondents agreed that recycling enhances innovative thinking, entrepreneurial development, product design creativity, and skills acquisition. The regression result further confirmed a significant positive effect of recycling activities on youth creativity. This finding agrees with Ojo and Balogun (2024), who reported that recycling enterprises promote innovation, entrepreneurial development, and youth empowerment. It also supports the study of Oyebode (2022), which found that recycling contributes to employment creation and sustainable economic development. The finding is consistent with the Circular Economy Theory, which emphasizes the continuous use of resources through recycling and reuse.

The study also found that upcycling practices significantly influence youth entrepreneurial innovation. Respondents agreed that upcycling promotes innovative product development, business creation, entrepreneurial skills, and effective utilization of waste materials. This finding supports Nwosu and Okafor (2025), who observed that waste-to-wealth initiatives encourage youths to establish innovative businesses by transforming waste into valuable products. Similarly, Ojo and Balogun (2024) maintained that upcycling enhances creativity and entrepreneurial competence among young people.

Furthermore, the findings indicated that waste reduction initiatives significantly improve environmental sustainability. Respondents agreed that waste reduction minimizes environmental pollution, conserves resources, and supports sustainable development. This finding corroborates Omokaro (2025), who argued that effective waste management is essential for environmental

sustainability. It also agrees with Onyeoma et al. (2024), who found that waste reduction and resource efficiency contribute significantly to environmental protection and sustainable development. The finding further supports the Sustainable Development Theory, which advocates responsible resource management for present and future generations.

Finally, the study established that resource recovery practices have a significant positive relationship with environmental conservation. The findings showed that resource recovery conserves natural resources, reduces environmental degradation, and promotes environmental sustainability. This finding is in line with Adesua-Lincoln (2025), who reported that circular economy practices improve environmental performance through efficient resource utilization. It also supports Fakunle and Ajani (2021), who concluded that resource recovery and community participation are essential for sustainable waste management.

5.0 Summary, Conclusion and Recommendations

5.1 Summary

This research focused on how waste-to-wealth activities contribute to youth development and environmental sustainability in Agege Local Government Area of Lagos State. The study examined four major dimensions of circular economy practices, namely recycling activities, upcycling practices, waste reduction initiatives, and resource recovery practices. Information was obtained from respondents actively involved in waste-related entrepreneurial and environmental activities, and the data collected were subjected to statistical analysis.

The outcome of the study showed that participation in recycling activities helps young people develop innovative ideas, practical skills, and entrepreneurial abilities. The findings also indicated that upcycling practices encourage business development and provide opportunities for the creation of new products from discarded materials. Furthermore, waste reduction efforts were found to play an important role in reducing environmental pollution and improving environmental quality. The study equally revealed that resource recovery practices support environmental conservation by promoting the efficient use of available resources and reducing unnecessary waste disposal.

5.2 Conclusion

Based on the evidence obtained from the study, it can be concluded that circular economy practices have become valuable tools for addressing both environmental and socioeconomic challenges within the study area. Waste-to-wealth initiatives provide young people with opportunities to acquire productive skills, establish businesses, and generate income while contributing to cleaner and healthier communities.

The study also established that environmental sustainability can be strengthened when greater attention is given to recycling, upcycling, waste reduction, and resource recovery activities. Consequently, encouraging wider participation in these practices can contribute significantly to

youth empowerment, environmental protection, and sustainable development in Agege Local Government Area and beyond.

5.3 Recommendations

Relevant government agencies should establish dedicated funding programmes and low-interest loan schemes to assist young entrepreneurs involved in waste-to-wealth ventures. Such support will enable them to expand their operations and improve productivity.

Regular workshops, vocational programmes, and technical training sessions should be organized to equip youths with modern skills in recycling, upcycling, and other circular economy activities. This will improve their capacity for innovation and business development.

Environmental authorities should intensify community sensitization campaigns on proper waste sorting, recycling culture, and responsible consumption habits. Increased public awareness will encourage greater participation in environmental sustainability initiatives.

Private sector organizations and manufacturing firms should collaborate with youth-led recycling enterprises by providing technical support, market access, and investment opportunities. Such partnerships can enhance the commercial viability of recycled and upcycled products.

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