

HARNESSING RENEWABLE ENERGY FOR SUSTAINABLE DEVELOPMENT: INSIGHTS FROM UNIVERSITY-INDUSTRY COLLABORATIVE EFFORTS IN NIGERIA


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AGENDA

- Background
 - Problem Statement
 - Objectives
 - Literature review
 - Methodology
 - Results
 - Discussion
 - Conclusion
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BACKGROUND

CONTEXT

- The pursuit of sustainable development in Africa has underscored the critical need for reliable and affordable energy supplies.
- Africa is rich in renewable energy resources such as solar, wind, hydro, and biomass, holds immense potential to address the continent's energy needs. However, the region continues to grapple with a significant energy access gap, particularly in rural and underserved urban areas.
- In Nigeria, the most populous country in Africa, the energy sector is heavily reliant on fossil fuels,
- particularly oil and natural gas.
- This dependency has led to several economic, environmental, and social challenges, including
- volatile energy prices, greenhouse gas emissions, and limited energy access.

ISSUES

- 60-70% of Nigerians lack access to clean and reliable energy sources (World Bank, 2020)
- Barriers include inadequate infrastructure and regulatory frameworks.

PROBLEM STATEMENT

CHALLENGE

- Despite rich renewable resources, Nigeria struggles with clean energy access.
- Limited research on University-Industry collaborations in this context.

OBJECTIVE

- Understand the dynamics of such collaborations to develop strategies for overcoming energy challenges.



OBJECTIVES

- Identify key factors for successful University-Industry collaborations.
- Examine challenges and barriers.
- Assess outcomes and impacts.
- Provide recommendations to enhance these collaborations.

LITERATURE REVIEW

RENEWABLE ENERGY IN NIGERIA

- Abundant solar, wind, hydro, and biomass resources. (Energy Commission of Nigeria, 2017).
- Barriers include inadequate infrastructure and policy frameworks. (IRENA, 2019).

UNIVERSITY-INDUSTRY COLLABORATIONS

- Essential for bridging the gap between research and practice. Various forms include joint research, consulting, and technology licensing.
- Challenges include financial constraints and intellectual property disputes. (Perkmann et al. (2013)

METHODOLOGY

RESEARCH DESIGN

- Qualitative research with a case study approach.

STUDY AREA

- Irepodun Local Government in Kwara State

DATA COLLECTION

- Surveys: 300 respondents (students, faculty, industry partners).
- Interviews: 20 key stakeholders.

ANALYSIS

- Quantitative analysis of survey data using SPSS.
 - Thematic analysis of interview data.
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RESULT

KEY FINDINGS

SURVEY

- Awareness of Renewable Energy: 75.4% aware, 24.6% not aware.
- Perceived Benefits: 40.8% economic growth, 30.1% environmental protection, 29.1% job creation.
- Challenges in Collaboration: 55.5% financial constraints, 21.5% regulatory issues, 23% lack of trust.

INTERVIEW RESULTS

KEY THEMES

COLLABORATION DYNAMICS

- Effective communication and shared goals cited as success factors.

BARRIERS

- Financial constraints and regulatory challenges highlighted.

BENEFITS

DISCUSSION

INTERPRETATION OF RESULTS

- University-Industry collaborations have significant potential but face several challenges.

IMPLICATIONS


- Need for supportive policies and increased funding.
- Importance of building trust and aligning goals between academia and industry.



CONCLUSION

- The study emphasizes the potential of University-Industry collaborations to advance renewable energy in Nigeria. It highlights the need for a supportive ecosystem that includes clear policies, adequate funding, and capacity-building initiatives.

RECOMMENDATION

- Develop supportive policies and clear intellectual property frameworks.
 - Increase funding for collaborative research.
 - Invest in capacity building and training programs.
 - Promote interdisciplinary research.
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**THANK YOU ALL FOR
LISTENING**

