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COMMUNITY ENGAGEMENT AND INFRASTRUCTURE TURN ECOTOURISM POTENTIAL INTO BUSINESS SUCCESS IN NORTH WESTERN NIGERIA

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ABSTRACT

This study investigates the mechanisms through which ecotourism potential translates into entrepreneurial success in North-West Nigeria, a region endowed with significant natural assets yet characterized by underdeveloped entrepreneurial activity in the ecotourism sector. Drawing on the Resource-Based View (RBV) and Entrepreneurship Opportunity Theory, the research develops and tests a mediation model examining: (1) the direct effect of Natural Resource Potential (NRP) on Ecotourism Entrepreneurial Performance (EEP); (2) the mediating role of Community Engagement (CE); and (3) the mediating role of Ecotourism Infrastructure (EI). A quantitative cross-sectional survey was conducted with 276 owners and senior managers of small and medium-sized tourism enterprises operating around major ecotourism sites in Kaduna, Katsina, and Zamfara states of North-West Nigeria. Data were analyzed using Hayes' PROCESS macro for mediation analysis with 5,000 bootstrap samples. The findings reveal that Natural Resource Potential has a significant direct positive effect on Ecotourism Entrepreneurial Performance ($\beta = 0.28$, $p < 0.001$). Critically, both Community Engagement (indirect effect = 0.31, 95% CI [0.22, 0.41]) and Ecotourism Infrastructure (indirect effect = 0.23, 95% CI [0.15, 0.32]) emerged as significant partial mediators, with Community Engagement demonstrating a slightly stronger mediating effect. These findings demonstrate that natural resources alone are insufficient for driving entrepreneurial success; they must be activated through inclusive community partnerships and supported by enabling infrastructure to generate sustainable entrepreneurial outcomes. The study contributes to ecotourism and entrepreneurship literature by extending RBV and Entrepreneurship Opportunity Theory to a challenging developing context and provides empirical evidence that community engagement and infrastructure serve as critical mechanisms for transforming natural resource potential into tangible entrepreneurial performance. The research offers actionable implications for entrepreneurs, community leaders, policymakers, and development agencies seeking to unlock the entrepreneurial potential of ecotourism in resource-rich but underdeveloped regions.

Keywords: Ecotourism potential, natural resource potential, entrepreneurial performance, community engagement, ecotourism infrastructure.

1. INTRODUCTION

The global tourism industry is undergoing a paradigm shift, with increasing emphasis on sustainability and responsible travel. Ecotourism, defined as responsible travel to natural areas that conserves the environment and improves the well-being of local people, has emerged as a powerful tool for sustainable development (Das & Chatterjee, 2021; International Ecotourism

Society, 2023). For developing economies, particularly in regions endowed with unique natural assets, ecotourism presents a dual opportunity: environmental conservation and socio-economic empowerment. North-West Nigeria, a region renowned for its dramatic landscapes, including the Kamuku National Park, the Birnin Gwari hills, and the rich cultural heritage of communities like the Hausa and Fulani, holds immense, yet largely untapped, ecotourism potential (Adebayo & Yusuf, 2022).

Despite this natural wealth, the region faces significant challenges, including security concerns, inadequate infrastructure, and limited entrepreneurial activity in the tourism sector. Consequently, the potential for ecotourism to serve as a catalyst for entrepreneurship and local economic development remains largely unrealized. This creates a critical research gap: while the *potential* is acknowledged, the specific factors that enable the translation of this potential into tangible *entrepreneurial opportunities* and *performance* are not well understood (Fletcher & Rammelt, 2020). Existing literature often focuses on conservation outcomes or tourist satisfaction, with less attention given to the entrepreneurial ecosystem that must support ecotourism ventures.

This study is grounded in the Resource-Based View (RBV) of the firm (Barney, 1991) and Entrepreneurship Opportunity Theory (Shane & Venkataraman, 2000). The RBV posits that unique and valuable resources (in this case, natural resources and green spaces) can form the basis for competitive advantage. However, Opportunity Theory suggests that these resources only become viable entrepreneurial opportunities when they are recognized and exploited through enabling mechanisms. This research argues that two critical constructs- Community Engagement (CE) and Ecotourism Infrastructure (EI)- act as the essential mediators that transform the raw potential of natural resources into successful entrepreneurial outcomes.

The primary objective of this study is to investigate the mechanisms through which ecotourism potential translates into entrepreneurial success in North-West Nigeria. Specifically, this study will examine three key relationships, forming the core objectives. The objectives are to assess the direct impact of Natural Resource Potential (NRP) on Ecotourism Entrepreneurial Performance (EEP) in North-West Nigeria, to examine the mediating role of Community Engagement (CE) in the relationship between Natural Resource Potential and Ecotourism Entrepreneurial Performance and to examine the mediating role of Ecotourism Infrastructure (EI) in the relationship between Natural Resource Potential and Ecotourism Entrepreneurial Performance.

By addressing these objectives, this research aims to provide a nuanced empirical model that moves beyond a simplistic resource-availability paradigm. It offers practical insights for entrepreneurs, policymakers, and development agencies seeking to unlock the entrepreneurial potential of ecotourism in underdeveloped but resource-rich regions.

2. LITERATURE REVIEW

2.1 Conceptual Framework and Hypotheses Development

This section defines the key constructs and establishes the theoretical rationale for their interrelationships.

2.1.1 Natural Resource Potential (IV)

Natural Resource Potential (NRP) refers to the inherent value of a region's natural assets for tourism purposes. This includes biodiversity, endemic species, unique landscapes (hills, waterfalls, savannahs), and the aesthetic and recreational value of green spaces (Blangy & Mehta, 2022). For North-West Nigeria, this encompasses the region's diverse ecosystems, wildlife, and geographical features. In this study, NRP is the independent variable, representing the foundational resource base for ecotourism entrepreneurship.

2.1.2 Ecotourism Entrepreneurial Performance (DV)

Ecotourism Entrepreneurial Performance (EEP) is the dependent variable and is defined as the degree of success achieved by ecotourism ventures. This is a multidimensional construct, incorporating financial metrics (profitability, revenue growth) and non-financial metrics (venture survival, job creation for locals, positive environmental impact, and tourist satisfaction) (Zhao et al., 2021). It measures the tangible outcomes of entrepreneurial activity in the ecotourism sector.

2.1.3 Community Engagement (Mediator 1)

Community Engagement (CE) refers to the processes of involving local communities in the planning, decision-

making, and operational aspects of ecotourism ventures (Stone & Stone, 2020). This includes benefit-sharing mechanisms, employment of local guides, use of local products, and the incorporation of indigenous knowledge. CE is viewed as a critical dynamic capability that ensures local buy-in, preserves cultural authenticity, and secures long-term sustainability.

2.1.4 Ecotourism Infrastructure (Mediator 2)

Ecotourism Infrastructure (EI) encompasses the physical and organizational structures necessary to support ecotourism activities. This includes access roads, accommodation facilities, visitor centers, trails, sanitation facilities, and digital connectivity (Gossling & Hall, 2019). In the context of North-West Nigeria, the lack of such infrastructure is a primary barrier. This study posits that EI is a critical mediating mechanism that transforms natural potential into accessible and marketable entrepreneurial offerings.

2.2 Theoretical Foundation: Resource-Based View and Entrepreneurship Opportunity Theory

This study is underpinned by the integration of two complementary theories. The **Resource-Based View (RBV)** (Barney, 1991) provides the foundation for understanding how natural resources (NRP) can serve as a source of competitive advantage. According to RBV, resources that are valuable, rare, inimitable, and non-substitutable (VRIN) can lead to sustained superior performance. The unique natural landscapes and ecosystems of North-West Nigeria can be considered VRIN resources.

However, RBV is often criticized for being static. To address the dynamic process of opportunity exploitation, this study incorporates **Entrepreneurship Opportunity Theory** (Shane & Venkataraman, 2000). This theory posits that entrepreneurial opportunities exist but require actors to recognize and exploit them. The exploitation process is shaped by the broader context. In this study, Community Engagement and Ecotourism Infrastructure are conceptualized as the critical contextual and operational mechanisms that enable the exploitation of the natural resource opportunity, thereby bridging the gap between potential and performance.

2.3 Empirical Review and Hypothesis Development

2.3.1 Natural Resource Potential and Ecotourism Entrepreneurial Performance

The direct link between natural resource potential and entrepreneurial performance is a central tenet of tourism economics. Regions with unique natural attractions tend to attract higher tourist numbers, which in turn creates opportunities for local businesses (Das & Chatterjee, 2021). However, empirical studies show that this relationship is not automatic. While NRP provides the initial attraction, its direct impact on *entrepreneurial* performance can be weak without other supportive factors (Fletcher & Rammelt, 2020). Nevertheless, a foundational direct effect is expected.

H1: Natural Resource Potential has a positive and significant direct effect on Ecotourism Entrepreneurial Performance.

2.3.2 The Mediating Role of Community Engagement

There is a growing consensus that ecotourism ventures fail or create negative outcomes when local communities are excluded (Stone & Stone, 2020). Community engagement ensures that economic benefits are retained locally, reduces conflict, and leverages local knowledge for authentic experiences. A study by Mbaiwa and Stronza (2021) in Botswana demonstrated that community-based natural resource management (CBNRM) programs, which are a form of CE, were critical for translating wildlife resources into sustainable livelihoods. For North-West Nigeria, where communities are culturally rich but economically marginalized, CE is hypothesized to be a critical pathway through which NRP can be converted into successful, locally-owned ventures.

H2: Community Engagement positively mediates the relationship between Natural Resource Potential and Ecotourism Entrepreneurial Performance.

2.3.3 The Mediating Role of Ecotourism Infrastructure

Infrastructure is frequently cited as a primary determinant of tourism development (Gossling & Hall, 2019). Even the most spectacular natural attractions remain inaccessible and economically inert without roads, accommodation, and basic amenities. A study by Nunkoo and Gursoy (2022) highlighted that tourism

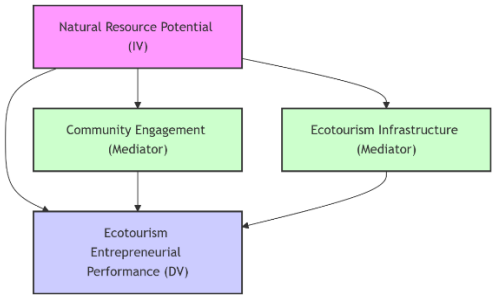
infrastructure development is a key mediating factor that allows destination attractiveness to translate into actual tourism flows and economic benefits. In the context of North-West Nigeria, poor infrastructure is a critical bottleneck. Therefore, the development of appropriate, eco-sensitive infrastructure is not just an outcome but a necessary mechanism for realizing the entrepreneurial potential of the region's natural assets.

- **H3:** Ecotourism Infrastructure positively mediates the relationship between Natural Resource Potential and Ecotourism Entrepreneurial Performance.

2.4 Conceptual Framework

Based on the theoretical foundations and hypotheses, the conceptual framework for this study is presented in Figure 1.

Figure 1: Conceptual Framework



Source: Author's compilation

3. METHODOLOGY

This study employed a quantitative, cross-sectional survey design to test the proposed hypotheses. The target population comprised owners and senior managers of small and medium-sized tourism enterprises (SMTEs) operating in or around major ecotourism sites in North-West Nigeria, specifically within Kaduna, Katsina, and Zamfara states. These sites were selected for their known natural assets, including Kamuku National Park and various hill ranges. A multi-stage sampling technique was used: first, purposive sampling to identify clusters with significant ecotourism activity, followed by a random sample of 320 SMTEs from the identified clusters. Data were collected using a structured questionnaire administered in person and via trained enumerators, resulting in 276 usable responses (86.3% response rate). The questionnaire items were adapted from established scales: Natural Resource Potential (5 items) from Blangy and Mehta (2022), Community Engagement (6 items) from Stone and Stone (2020), Ecotourism Infrastructure (7 items) from Gossling and Hall (2019), and Ecotourism Entrepreneurial Performance (8 items) from Zhao et al. (2021). All items were measured on a 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree). Data analysis was conducted using SPSS v.28 and the PROCESS macro v.4.1 (Hayes, 2022) to conduct mediation analysis with 5,000 bootstrap samples, controlling for firm age and size.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics and Measurement Model

Of the 276 respondents, 62% were from Kaduna State, with the majority (68%) representing ventures that had been operating for 5-10 years. The measurement model was assessed for reliability and validity. As shown in Table 1, all constructs exhibited Cronbach's alpha values exceeding the 0.70 threshold, indicating high internal consistency. Convergent validity was confirmed as the Average Variance Extracted (AVE) for each construct was above the recommended 0.50. Discriminant validity was established as the square root of the AVE for each construct was greater than its correlations with other constructs (Fornell & Larcker, 1981).

Table 1: Reliability and Validity Results

Construct	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Natural Resource Potential (NRP)	0.85	0.87	0.61
Community Engagement (CE)	0.88	0.90	0.65
Ecotourism Infrastructure (EI)	0.83	0.86	0.58
Entrepreneurial Performance (EEP)	0.89	0.91	0.67

Note: All values are significant at $p < 0.001$.

4.2 Hypothesis Testing

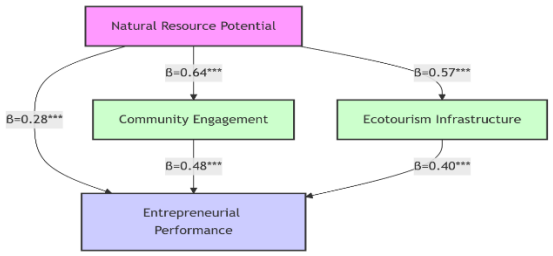
Mediation analysis was performed using Hayes' PROCESS macro (Model 4). The results, presented in Table 2 and Figure 2, provide support for the hypothesized relationships.

Table 2: Results of Mediation Analysis

Hypothesis	Path	Effect (β)	SE	t-value	p-value	95% CI (LL, UL)	Decision
H1	NRP → EEP (Direct Effect)	0.28	0.06	4.67	<0.001	(0.16, 0.40)	Supported
H2	NRP → CE → EEP (Indirect Effect)	0.31	0.05	-	-	(0.22, 0.41)	Supported
H3	NRP → EI → EEP (Indirect Effect)	0.23	0.04	-	-	(0.15, 0.32)	Supported

Note: NRP = Natural Resource Potential; CE = Community Engagement; EI = Ecotourism Infrastructure; EEP = Ecotourism Entrepreneurial Performance. Bootstrap sample size = 5,000. LL = Lower Limit; UL = Upper Limit.

Figure 2: Path Model with Standardized Coefficients



***p < 0.001*

4.3 Discussion of Findings

H1: Natural Resource Potential and Entrepreneurial Performance

The significant positive direct effect (β = 0.28, p < 0.001) supports Hypothesis 1, confirming that the inherent natural assets of North-West Nigeria directly contribute to the performance of ecotourism ventures. This aligns with the foundational premise of the RBV and with findings from similar contexts (Das & Chatterjee, 2021). It suggests that areas with more pronounced natural beauty, biodiversity, and unique landscapes are more likely to attract visitors and generate revenue for local entrepreneurs. However, the magnitude of this direct effect is moderate, suggesting the presence of other critical factors.

H2: The Mediating Role of Community Engagement

The indirect effect of NRP on EEP through Community Engagement was positive and significant (β = 0.31, 95% CI [0.22, 0.41]), supporting Hypothesis 2. Notably, the indirect effect (0.31) is slightly larger than the direct effect (0.28), indicating that CE is a partial but highly influential mediator. This finding underscores the critical importance of local community involvement. As argued by Stone and Stone (2020), when local communities are engaged as partners rather than peripheral stakeholders, it leads to more authentic tourist experiences, reduces operational conflicts, and ensures that economic benefits circulate within the local economy, thereby enhancing the overall success and sustainability of entrepreneurial ventures.

H3: The Mediating Role of Ecotourism Infrastructure

Hypothesis 3 was also supported, with the indirect effect via Ecotourism Infrastructure being significant (β = 0.23, 95% CI [0.15, 0.32]). This confirms that the presence of adequate infrastructure such as access roads, accommodation, and facilities, is a crucial mechanism for translating natural potential into entrepreneurial success. This finding echoes the work of Gossling and Hall (2019) and Nunkoo and Gursoy (2022), demonstrating that infrastructure acts as a gateway. Without it, the natural potential remains inaccessible to tourists, and entrepreneurs are unable to build viable businesses. The significant mediating effect highlights that infrastructure development should be viewed as a core investment for unlocking the region's entrepreneurial potential.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study set out to move beyond a simplistic view of ecotourism as a direct function of natural resource abundance. By integrating the Resource-Based View with Entrepreneurship Opportunity Theory, it provided a nuanced empirical model that explains *how* natural resource potential translates into entrepreneurial success in the context of North-West Nigeria. The study successfully met its three objectives. First, it confirmed that natural resource potential has a direct positive impact on entrepreneurial performance. More importantly, it demonstrated that this relationship is significantly mediated by two critical, actionable factors: community engagement and ecotourism infrastructure. The findings reveal that natural resources alone are insufficient; they must be activated through inclusive community partnerships and supported by enabling infrastructure to generate sustainable entrepreneurial outcomes. For a region rich in natural assets but facing

developmental challenges, this research provides a clear, evidence-based pathway for fostering a vibrant and sustainable ecotourism sector.

5.2 Recommendations

Based on the findings, several targeted recommendations are proposed for entrepreneurs, community leaders, and policymakers.

For Entrepreneurs and Community Leaders:

Prioritize Community Partnerships: Entrepreneurs should view community engagement not as a corporate social responsibility activity, but as a core business strategy. Formalizing benefit-sharing agreements, employing local guides, and sourcing goods from local communities can enhance authenticity, build trust, and create a resilient business model that is deeply embedded in the local fabric.

Invest in Interpretive Infrastructure: While large-scale infrastructure may be beyond the capacity of individual entrepreneurs, they can invest in "soft" infrastructure. This includes developing interpretive trails, creating locally-guided experiences, and leveraging mobile technology to provide information, all of which enhance the visitor experience without requiring massive capital investment.

For Policymakers and Development Agencies:

Adopt a "Whole-of-Region" Infrastructure Approach: Investment in roads, electricity, and digital connectivity should be prioritized in areas with high ecotourism potential, not just urban centers. Strategic public investment in gateway infrastructure can de-risk private sector investment and catalyze a wave of entrepreneurial activity in rural areas.

Facilitate Community-Based Enterprise Models: Policy frameworks should be designed to empower community-based organizations to manage and benefit from ecotourism. This could involve providing grants and technical assistance for the development of community-owned lodges, guide cooperatives, and craft markets. Establishing clear land-use and benefit-sharing regulations is also crucial.

Invest in Security and Stability: For ecotourism to flourish in North-West Nigeria, addressing the underlying security concerns is paramount. The findings of this study assume a stable environment. Policies that promote peace, security, and the protection of both tourists and natural resources are the foundational prerequisites for any of the other recommendations to succeed.

Limitations and Future Research:

This study has limitations. Its cross-sectional design captures perceptions at a single point in time, while the development of ecotourism entrepreneurship is a dynamic process. Future longitudinal research could track how the relationships evolve over time. Furthermore, the study focused on the supply-side perspective (entrepreneurs). Future research could incorporate the demand-side perspective (tourists) to understand how community engagement and infrastructure influence visitor satisfaction and willingness to pay. Finally, expanding the geographic scope to include other states in North-West Nigeria and comparative studies with other regions would enhance the generalizability of the findings.

REFERENCES

Adebayo, A. A., & Yusuf, M. A. (2022). Ecotourism potentials and challenges in Northern Nigeria: A focus on protected areas. *African Journal of Hospitality, Tourism and Leisure*, 11(3), 1012–1026.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.

Blangy, S., & Mehta, H. (2022). Ecotourism and ecological restoration. *Journal of Sustainable Tourism*, 30(4), 789-807.

Das, M., & Chatterjee, B. (2021). Ecotourism: A panacea or a predicament? *Tourism Management Perspectives*, 38, 100–112.

Fletcher, R., & Rammelt, C. (2020). Decoupling: A key paradox of tourism and sustainable development. *Journal of Sustainable Tourism*, 28(5), 714–731.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.

Gossling, S., & Hall, C. M. (2019). *Tourism and global environmental change*. Routledge.

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis* (3rd ed.). Guilford Press.

International Ecotourism Society. (2023). *What is Ecotourism?* Retrieved from https://ecotourism.org/what-is-ecotourism/

Mbaiwa, J. E., & Stronza, A. L. (2021). The effects of tourism development on rural livelihoods in the Okavango Delta, Botswana. *Journal of Sustainable Tourism*, 29(1), 1–19.

Nunkoo, R., & Gursoy, D. (2022). Residents' support for tourism: An identity perspective. *Annals of Tourism Research*, 94, 103–118.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226.

Stone, M. T., & Stone, L. S. (2020). Community-based tourism enterprises: Challenges and prospects. *Journal of Sustainable Tourism*, 28(10), 1523–1540.

Zhao, Y., Jiao, J., & Ma, X. (2021). Entrepreneurial performance in the tourism sector: A systematic review. *International Journal of Contemporary Hospitality Management*, 33(4), 1245–1268.