

## Potentials of Adire Production for Sustainable Tourism Development in Abeokuta, Nigeria

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### ABSTRACT

Abeokuta, Ogun State capital, Nigeria, is globally renowned as Adire's epicenter, a traditional Yoruba resist-dyeing textile art, yet its significant cultural heritage remains underexploited as a catalyst for holistic, sustainable tourism development. As a result, this study aimed at examining the impact of Adire production on sustainable tourism development in Abeokuta, Nigeria. Primary data were collected through a structured questionnaire administered to 384 respondents in the study area. Systematic random sampling was used to administer the questionnaire in a predetermined sequence, ensuring representativeness across clustered Adire production hubs. Descriptive statistics such as frequency, percentages, mean, and standard deviation were used to analyze the data. Findings of the study revealed a youthful cohort (mean age 31.85 years, 77.35% under 40) and female-dominated (66.41%) producers driving Adire production with 80% familial participation. Findings showed that 80% train apprentices engage in Adire production. Findings of the study further revealed that Adire employs 184 individuals across 42 trainers (mean 4.38/trainer), with 90.27% of respondents affirming the potential of Adire production for sustainable tourism development, 81.4% viewed it as an employment source, and 41.3% recognized its role in promoting local culture. The study advocates leveraging Adire production for community-based tourism, niche market experiences for tourists, and local entrepreneurship. It recommends standardization, strategic branding, and a multi-stakeholder framework to harness Adire's production potential to position Abeokuta as Nigeria's leading sustainable cultural tourism destination.

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### 1 Introduction

The global tourism industry is increasingly pivoting towards sustainability, emphasizing models that are environmentally friendly, socially inclusive, and economically beneficial to local communities (United Nations World Tourism Organization, 2011). In this context, cultural heritage and creative industries have emerged as powerful drivers for destination differentiation and sustainable development. Also, experts on cultural heritage laid emphasis on the importance of preserving cultural legacy and the community's identity in order to provide economic benefits (Rodrigues et al., 2025). This shift not only underscores the need for balanced growth but also highlights how intangible assets like traditions can fuel long-term prosperity in tourism-dependent regions.

Building upon this foundation, sustainable tourism takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities (World Tourism Organization (WTO), 2013; Younas et al., 2023). Consequently, cultural heritage tourism, a key pillar of sustainable tourism, involves traveling to experience the places, artifacts, and activities that authentically represent the stories and people of the

past and present (Gaonkar & Sukthankar, 2025; Sihombing et al., 2024). Moreover, Douglas et al. (2023) and Zhu et al. (2025) emphasize that in the experience economy, tourists are no longer satisfied with merely seeing sights; they seek active participation, learning, and emotional connection. This evolving demand creates a perfect opportunity for crafts like Adire, which could offer rich, hands-on, sensory experiences that can immerse visitors in authentic cultural processes. Furthermore, community-based tourism (CBT) models, where local communities have significant control over and benefit from tourism development, are lauded for ensuring that tourism revenues are retained locally, thereby reducing poverty and empowering residents (Salazar, 2012). Such approaches ensure equitable distribution of gains, fostering resilience against external shocks.

Therefore, traditional handicrafts, which refer to useful and decorative objects made totally by hand and skills or by using simple tools to meet the needs of the people (Li et al., 2025), make significant economic contributions to the tourism sector with added value to other local economic activities (Nneka & Ejikeme, 2024). Hence, Abeokuta, "the city under the rock," possesses this rich tapestry of history and culture, with its most vibrant

thread is the production of Adire textile. Adire production is a form of traditional handicraft industry that encompasses the creative form and artistic patterns of dyed cloths. Adire, meaning "to tie and dye" in Yoruba, is an indigenous craft that produces beautifully patterned textiles using resist-dyeing techniques like tying, stitching, and, more recently, starch-resist painting (Elegbedele, 2020). This textile product, according to Gausa and Ezra (2015), is seen as a form of trade because it plays a role in the sociocultural setting, thereby providing the people with job opportunities and a source of income, among other benefits. For decades, Abeokuta has been the undisputed hub of this craft, attracting traders and enthusiasts from across Nigeria and beyond, thereby reinforcing its status as a cultural beacon.

In the Nigerian context, studies on Adire have primarily focused on its aesthetic, cultural, and economic dimensions (Saheed, 2013; Solomon & Ezra, 2015). However, there is a discernible gap in the literature that systematically links the entire Adire production ecosystem to a structured framework for sustainable tourism development in its primary home, Abeokuta. Thus, sustainable tourism, which takes full account of its current and future economic, social, and environmental impacts, addressing the needs of the visitors, the industry, the environment, and host communities (Liu et al., 2013), has emerged as a critical concern that must be addressed in any viable tourism development strategy. In Abeokuta, Adire production helps to improve the residents' quality of life by optimizing local economic benefits. Also, the purpose of sustainable tourism in Adire production is to strike a balance between protecting the environment, maintaining cultural integrity, establishing social justice, and promoting economic benefits.

Despite the laudable sustainable tourism development potentials in the state, coupled with government interest and effort in developing the tourism sector, there are still plaguing Adire production in Abeokuta. It is therefore on this basis that the study aims to examine the impact of Adire production on sustainable tourism development in Abeokuta. Consequently, the objectives are to assess the socio-demographic characteristics of respondents, training and participation in Adire production, and employment opportunities provided by Adire production.

## 2 Materials and Methods

### 2.1 Study Area

Abeokuta, the largest city and capital of Ogun State in Nigeria's southwestern sub-humid tropical region, lies between latitudes 7°08' to 6°00' N and longitudes 3°20' to 5°09' E (Figure 1). The area is positioned on the Ogun

River's east bank amid wooded savannah and striking rocky outcrops like Olumo Rock, which is 78 km north of Lagos by rail or 130 km by water (Adedokun et al., 2017). These natural landmarks, including caves, shrines, and granite masses surrounding the expansive city, form a scenic backdrop that enhances its tourism appeal, directly tying into Adire production's potential. Olumo Rock's cultural sites and the Oyan River Dam's environs provide immersive heritage trails that complement hands-on Adire dyeing experiences for visitors seeking authentic cultural immersion. Thus, Abeokuta's topography not only preserves traditional livelihoods but also creates synergistic tourism circuits where geological features amplify Adire's draw as a sustainable attraction.

In the study area, local occupations weave Adire fabric production into a diverse economy of farming, stone quarrying, sand dredging, and commercial transport, signaling readiness for integrated sustainable tourism development (Olojo-Kosoko et al., 2024). By linking Adire workshops with Olumo Rock tours and riverine eco-adventures, stakeholders can foster community-based models that retain revenues locally, empower women-dominated artisans, and balance environmental preservation with economic gains. This approach may position Abeokuta as a premier destination for cultural tourism, harnessing natural assets to elevate Adire's role in job creation, heritage promotion, and niche market experiences, ultimately advancing Nigeria's sustainable tourism agenda.

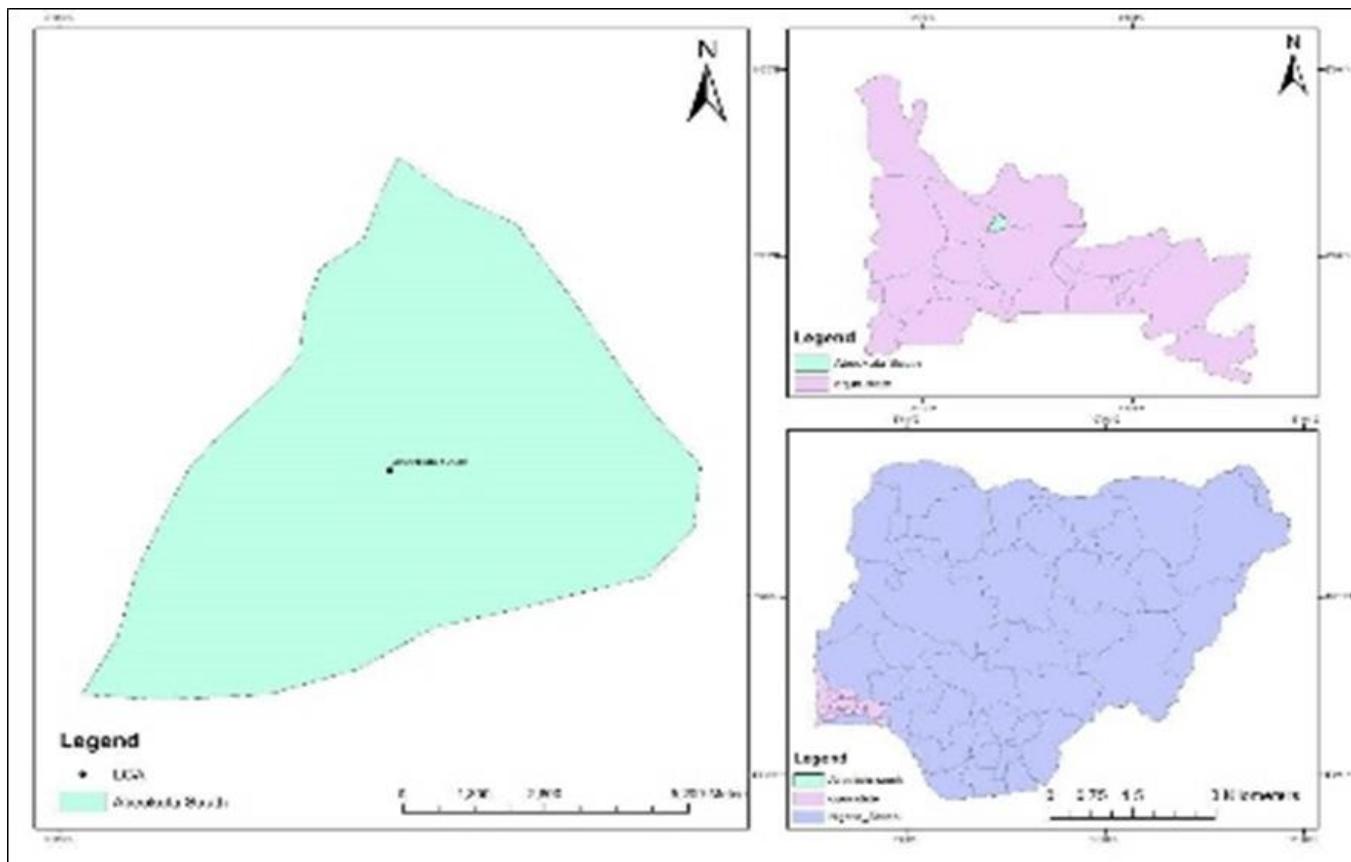


Figure 1: Abeokuta South Local Government Area

Source: Ogun State Ministry of Land and Survey, 2024

## 2.2 Research Design

This study adopted a cross-sectional survey design to examine the potential of Adire production for sustainable tourism development in Abeokuta, Nigeria. The study focused on assessing the socio-demographic characteristics of respondents, training and participation in Adire production, and employment opportunities provided by Adire production. Primary data were sourced using a structured questionnaire.

## 2.3 Data Sources

The questionnaire was used to capture first-hand insights on demographics, family involvement, training dynamics, and economic contributions of Adire. The questionnaire included closed-ended items (e.g., categorical options for socio-demographic variables).

A total of 384 questionnaires were administered across key Adire hubs like Itoku and Asero Markets. This sample size was determined using Yamane's (1967) formula for finite populations. Systematic random sampling was employed to administer the questionnaire to residents aged 15 and above in a predetermined sequence. This technique ensures representativeness, minimizes bias, and is ideal for clustered production areas, justifying its use over simple random sampling due to spatial dispersion. The Fieldwork spanned four weeks (June-July 2025), with trained enumerators (5 locals fluent

in Yoruba) administering copies of the questionnaire face-to-face during peak production hours for high response rates (98% retrieval, n=384 valid). Ethical protocols included informed consent, and the anonymity of the respondents was ensured.

## 2.4 Data Analysis

The IBM SPSS v.27 was used for data entry, where validation checks for outliers were also done. For this study, analysis was done using descriptive statistics tailored to the objectives. Percentages for categorical variables (e.g., age groups, gender) were calculated as:  $\% = \left( \frac{f}{N} \right) * 100$ , where  $f$  is frequency and  $N = 384$  total responses. Means for ordinal data and Standard deviations were also used to assess the socioeconomic contributions of Adire production to sustainable tourism. Charts and tables were used to visualize the results. This approach ensures objective alignment, which provides reliable insights into Adire's tourism potential.

## 3 Results and Discussion

### 3.1 Socio-Demographic Characteristics of Respondents

Table 1 displays the results of the socio-demographic characteristics of the respondents in the study area. Findings in Table 1 revealed a youthful cohort that is driving Adire production in Abeokuta. For instance, findings revealed that those aged 21-30 accounted for 28.39% and 31-40 for 29.69%, comprising nearly 58% of

respondents and a mean age of 31.85 years. This dominance of young participants (77.35% under 40) signals successful intergenerational knowledge transfer, as older artisans (only 3.91% aged 51 and above) phase out, ensuring craft sustainability amid urbanization. Findings also revealed that females predominate with 66.41% versus 33.59% males, underscoring women's traditional stewardship of Adire. This finding aligns with Soaga and Opeolu (2009), whose study revealed that over 70% of the producers are female, with 23.3% male. This aligns with Yoruba gendered craft divisions, where resist-dyeing historically empowered female economies. These findings corroborate those of Owoeye (2017), who views women's dyeing in Osogbo as ritual performances symbolizing human sociality's formation, evolution, and socialization.

As shown in Table 1, findings revealed a religiously diverse yet balanced pattern where 59.64% of the respondents were Christian, 40.36% Muslim, which reflects Ogun State's demographics. These enriching perspectives on Adire's sociocultural role across faiths. 57.81% of the respondents are married, while singles at 34.9%, minimizing extremes (widowed/separated at 3.65% each, no divorces), which broadens experiential insights for tourism viability assessments. High educational attainment, like tertiary education, accounted for 53.65%, and vocational (26.04%, n=100), with low illiteracy accounting for 7.55%.

The findings reveal an occupationally diverse pattern, with civil servants leading at 34.11%, followed by students (23.18%), housewives (14.84%), traders (9.11%), and farmers/artisans under 8%, signaling Adire's permeation into formal sectors. This socioeconomic breadth facilitates community-based tourism (CBT), as multi-occupational involvement mirrors successful models where such diversity attracts government and investor support for development. Overall, these traits position Adire producers as agile agents for sustainable tourism, corroborating the WTO's (2013) framework where educated youth and gender equity amplify cultural heritage's economic impacts in Africa. Challenges like skill standardization remain, but the profile affirms potential for niche, inclusive destinations.

While challenges such as unstable income, declining youth interest in apprenticeship, weak skill standardization, and limited market access. High production costs, inconsistent demand, and competition from mass-produced textiles reduce profitability, discouraging young and educated individuals from sustaining traditional skills. Inconsistent quality, poor branding, and Reed's lack of standardization further limit Adire's competitiveness in tourism and international markets. Tourism, especially cultural and community-based tourism, offers a multidimensional solution by

enhancing economic returns, attracting youth participation via creative and entrepreneurial opportunities, professionalizing skills standardization through training and certification, and expanding markets through collective organization and branding. Tourism can convert these constraints into opportunities. Consequently, Adire producers' diverse socioeconomic profile not only supports community-based tourism development but also strengthens the long-term viability of this cultural heritage as a niche, inclusive, and sustainable tourism resource.

**Table 1: Socio- demographic Characteristics of Respondents**

Variable	Frequency	Percentage
<b>Age</b>		
15-20	74	19.27
21-30	109	28.39
31-40	114	29.69
41-50	72	18.75
51 and above	15	3.91
Mean	31.85	
<b>Gender</b>		
Male	129	33.59
Female	255	66.41
<b>Religion</b>		
Christianity	229	59.64
Islam	155	40.36
<b>Marital Status</b>		
Single	134	34.9
Married	222	57.81
Widowed	14	3.65
Separated	14	3.65
Divorced	0	0
<b>Education</b>		
No formal Education	29	7.55
Primary	7	1.82
Secondary	42	10.94
Tertiary	206	53.65
Vocational education	100	26.04
<b>Occupation</b>		
Farmer	29	7.55
Civil servant	131	34.11
House wife	57	14.84
Student	89	23.18
Mechanic	8	2.08
Carpenter	7	1.82
Trader	35	9.11
Hair dresser	14	3.65
Fashion designer	14	3.65

### 3.2 Training and Participation in Adire Production

Responses obtained from the producers of Adire attire were also assessed to determine the participants involved in Adire production that result in sustainable tourism development. The result revealed that most of the Adire producers claimed that their children participate in Adire production, which accounted for 84% of them (See Figure 2a and 2b). On the other hand, 16% of them said no, this is because a few producers do not want their children to be involved in Adire production. It can therefore be concluded that there is a high chance for the production of Adire attire to be sustained in future generations.

Most of the respondents said they train people on Adire production, which accounted for 80% of them (Figures 2a and b). This implies that there is a high chance

for the production of Adire attire to be sustained in the future. These findings align with Dumitras et al. (2021), who examined experienced visitors' preferences in Romanian national and natural parks, focusing on motives for adventure tourism's core elements: physical activity, natural environment, and cultural immersion. Further, 20% of the trainers thought that they had not received any applicants who had registered as apprentices. Some said that applicants are discouraged because Adire production is time-consuming and the profit is low. Others said they operate on part time basis, so they do not have time to train an apprentice.

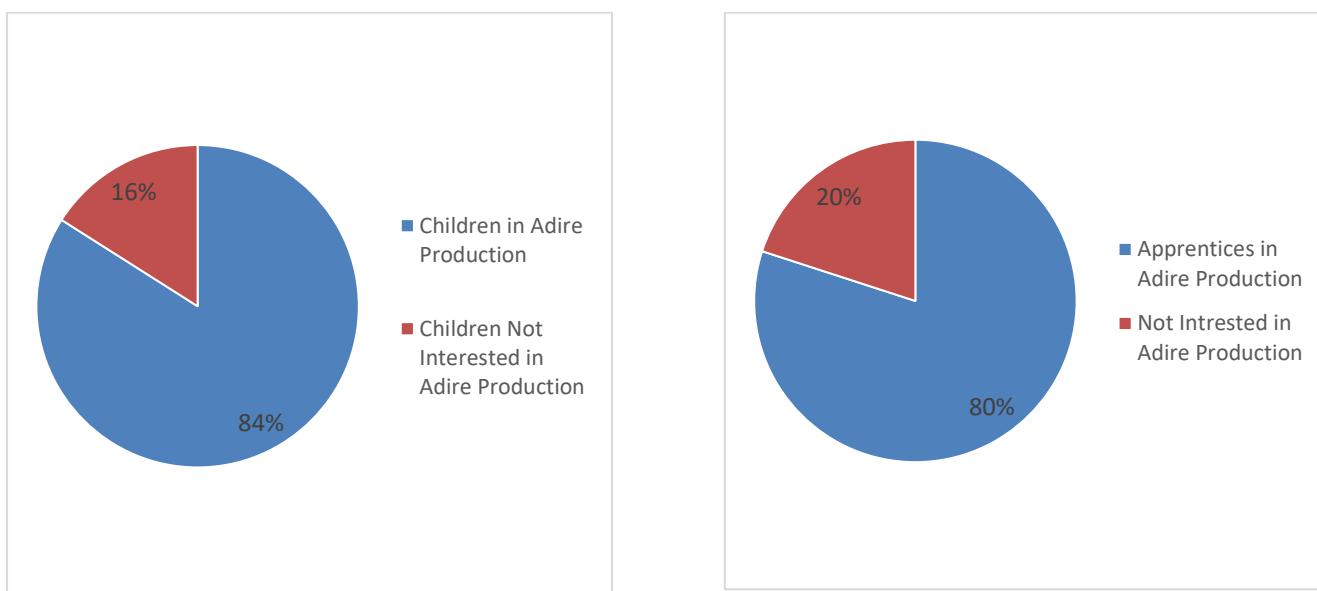


Figure 2: a) Participation of Adire producers (Children in Adire Production). B) Training of People on Adire Production

### 3.3 Employment Opportunities Provided by Adire Production

Table 2 displays the results of employment opportunities provided by Adire producers. Findings showed that Adire production generates substantial employment opportunities, employing 184 individuals across 42 trainers as detailed in Table 2, with a mean of 4.38 apprentices per trainer (S.D. = 3.21). The distribution shows 12 trainers managing 4 apprentices each (48 total), 8 with 5 apprentices (40 total), and varying numbers up to 8 apprentices. These findings demonstrate a robust training structure that fosters skill development in the area. These findings are supported by Gausa and Ezra (2015), underscoring its economic viability despite environmental considerations.

**Table 2: Employment Opportunities Provided by Adire Producers**

No. of Apprentice	No. of trainers	Total No. of Apprentice
2	8	16
3	4	12
4	12	48
5	8	40
6	4	24
7	4	28
8	2	16
Sum Total	42	184
Mean	6	26.29
S.D.	3.21	12.44

### 3.4 Socioeconomic Contributions of Adire Production to Sustainable Tourism

Table 3 presents respondents' perceptions of Adire production's socioeconomic impacts in Abeokuta. Findings in this Table revealed that employment generation ranked first with mean=120.33 and SD=78.6. This affirms its role as a primary income source for producers. This aligns with Soaga and Opeolu (2009), whose study revealed that the Adire textile industry significantly shapes Nigeria's socio-economic landscape by generating employment and income, empowering women, preserving cultural heritage, and boosting GDP via local and international trade. In Abeokuta's markets like Kemta International (Plate 1), commercialization of the products ranked fifth (mean=79.5, SD=38.9), which drives souvenir sales to tourists, positioning Adire as a tourism multiplier that retains revenues locally and reduces poverty (ranked third, mean=188.5, SD=69.5) by enabling income generation via learned skills.

Sustainable development ranks second with a mean of

90.25 and an SD of 71.6. This finding shows the existence of intergenerational transfer that preserves the craft amid modernization, while cultural symbolism (fourth, mean=118.3, SD= 68.3) reinforces Abeokuta's identity as Adire's hub. This corroborates the results of Klarin (2018), who traces sustainability from Brundtland's holistic pillars, economic viability, social equity, and cultural continuity, to contemporary applications in creative industries. Adire's resist-dyeing rituals embody this, offering immersive experiences that tourists buy as symbols. Challenges like imitation persist, but these rankings advocate policy interventions, standardization, branding, and Olumo Rock-linked tours to amplify Adire's tourism potential, transforming Abeokuta into a sustainable cultural destination that balances livelihoods with heritage preservation.

**Table 3: Table 3: Socio-economic Contributions of Adire Production to Sustainable Development in Abeokuta**

S/N	Socio-economic contributions	Mean	Standard Deviation	Ranking
1	Commercialization	79.5	38.9	5
2	Sustainable Development	90.25	71.6	2
3	Poverty Alleviation	188.5	69.5	3
4	Cultural Symbolic	118.3	68.3	4
5	Source of Employment	120.33	78.6	1



Plate 1: Adire Product in the Kemta International Market, Abeokuta



#### 4 Conclusion

This study confirms Adire production in Abeokuta as a thriving, commercially driven occupation. It is sustained by a youthful, predominantly female, and educated workforce across diverse occupations. Robust intergenerational participation involves children of most producers. Many also train others that ensures craft sustainability. These dynamics generate employment opportunities and foster economic independence. Income and profits improve living standards and enable business expansion. They enhance sustainable development and reduce poverty effectively. Producers affirm tourism's role in promoting intercultural tolerance. The view that Adire textiles are the premier decorative traditional symbol was also pronounced. This underscores its viability as a cultural asset for community-based tourism. Insightfully, Adire reveals adaptive resilience, shifting from ritual practices to modern commerce. It positions the craft as a poverty-alleviating engine that preserves Yoruba heritage while enabling livelihoods amid urbanization.

To leverage these findings, actionable steps should include: (1) people prioritising Adire in national cultural displays to capitalize on its employment and tourism potentials, as producers recognize its symbolic status; (2) there should be an establishment that funds Adire museum in Abeokuta to document patterns and trends, supporting high training rates and child participation for future sustainability; and (3) Government and Non-governmental agencies (NGOs) should organize conferences for producers to address training barriers like low profits, boosting enrollment and intercultural tourism benefits.

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