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INFRASTRUCTURAL DEVELOPMENT AND DESTINATION COMPETITIVENESS OF AKWA IBOM STATE, NIGERIA.

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ABSTRACT

This study aimed at examining the relationship between infrastructural development and destination competitiveness. Contextually the study focused on infrastructural proxies like; the availability of sport facilities, access to quality accommodation and the availability of transportation infrastructure as they relate with destination competitiveness. The researchers adopted a quantitative research design approach, utilizing the survey method with the use of questionnaire as the primary data collection method. The target population consisted of visitors met at specific destinations within the study area. This constituted an unknown population; hence to arrive at an appropriate sample for the study, the Walpole (1974) formula was used. Respondents were accessed using the stratified random sampling technique. Data were collected from primary sources using a five point Likert scale questionnaire. Data collected were analyzed using the Descriptive statistics to analyze the demographic characteristics of the respondents. To establish the relationship between the independent variables and dependent variables, the multiple regression analysis was used, calculated at a 0.05 significant level. The findings from this study revealed that there is a positive collective significant relationship between Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure and the destination competitiveness of Akwa Ibom State, Nigeria. It was recommended that infrastructures such as good road networks, provision of recreation/sporting facilities, quality and affordable accommodations among others, should be provided by the state, as these infrastructures make up the basic needs of visitors and serve as supporting elements and activities that boost their experience during travel and tourism.

Introduction

Tourism is recognized as one of the key sectors of development in all countries and a major source of income, jobs and wealth creation. It also plays a wider role in promoting the image and international perception of a country externally as well as influencing complementary domestic policies. This range of influence and importance creates challenges in measuring competitiveness in tourism. Understanding country competitiveness in tourism is a major consideration for policy makers and a major challenge for professionals in providing evidence to inform decision making. Various indicators have been developed by different organisations over the years to address particular aspects of competitiveness but there has remained a lack of an overall measurement framework for competitiveness in tourism for the use of governments. The current work by member and partner countries seeks to address this gap and make a positive contribution to the practical measurement of competitiveness.

The influences on competitiveness can change quickly and this dynamic creates further challenges and a need for on-going research and development on indicators. Global economic and tourism trends, including changing market trends and travel behaviours, the role of social media and new sources of demand and growth all increase the importance of the topic and the ability of OECD and partner countries to compete within the changing global marketplace. OECD 2013. On the other hand, Tourism infrastructure is the basis of tourism development and utilization of existing destination resources. Tourism infrastructure includes a large number of services, necessary to meet the needs of tourists and increase satisfaction during their stay at the destination. The subject of this paper is the consideration of relationship between the available infrastructure and the achieved level of tourism competitiveness. JOVANOVIĆ, Ivana (2016). The paper suggests that future tourism development depends on intensive investment in infrastructure and its modernization, as an important factor of development of the tourism sector. The aim of the paper is to analyze the correlation between infrastructural development and tourism competitiveness in Akwa Ibom State, Nigeria and the level of competitiveness of tourism infrastructure.

Statement of the Problem

The lack of a thorough understanding of the relationship between infrastructural development and tourism competitiveness hampers the ability of policymakers and stakeholders to make informed decisions regarding infrastructure investment in the tourism sector. This research seeks to address this gap using sport infrastructural, transportation infrastructural and quality accommodation infrastructural dimensions. The study will further examine the impact of infrastructural development on the competitiveness of tourist destinations, providing valuable insights that can inform strategies for sustainable tourism development and enhance the overall competitiveness of Akwa Ibom destinations in an increasingly competitive global tourism market. The main objective of the study is to determine the relationship between infrastructural development and destination competitiveness in Akwa Ibom State, Nigeria. Specifically, the study is aimed at:

i. Ascertaining the collective relationship between availability of sport infrastructures, transportation infrastructure, and quality accommodation infrastructure and destination competitiveness of Akwa Ibom State, Nigeria.

Hypotheses of the Study

Three hypothesis were formulated for the study;

H_{01}: Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure does not have any collective relationship with the destination competitiveness of Akwa Ibom State, Nigeria.

Review of Relevant Literature

An Overview of Infrastructural Development

The term infrastructure is an ambiguous term. Its ambiguity is derived from the fact that it cannot be pinned to a universally acceptable definition. In fact, it means different thing to different people and at different time and place. However, in literal terms, infrastructure refers to the large scale public systems, services and facilities of a particular place that are necessary for smooth socio-economic and political activities. These may include such things as power supplies, potable water supplies, access to qualitative healthcare facilities, good roads and public transportation, telecommunications, befitting educational institutions, good recreation facilities, hygienic environment and so on. In other words, Infrastructure covers virtually every sector of the economy: power plants, highways, seaports, airports, canals, dams, water supply, telecoms, railways, land reclamation, inter-sate transport systems, industrial estates or township development, housing, tourism development, waste management, ICT and database infrastructure, education, health, drainage, dredging, trade fair complexes, etc. Oyeweso (2011).

Navarro (2015) believed that a region capacity to attract people and business in a sustainable way is associated among other factors with the local infrastructure. Crouch and Ritchie (1999), who examined tourism infrastructure in the context of comparative and competitive advantage, stated that tourism planning and development would not be possible without roads, electricity, sewage, potable water and airport/ harbor in terms of international tourism. Furthermore, the UNWTO (2007) asserted that the development of tourism especially in rural locations requires infrastructure capable of serving the host population and the temporary population that arises at the location for business or leisure purpose. Empirically, several studies have lent credence to the importance of infrastructure in tourism.

Infrastructural Development in Akwa Ibom State, Nigeria.

The provision of infrastructural facilities are commonly seen as the responsibility of the public sector (Cooper, *et al*. 2008). However, a different understanding of the concept of tourism destination infrastructure along with the growing importance of tourism has resulted with the stronger involvement of private sector stakeholders (Mandic, Mrnjavac and Kordic, 2018). Some infrastructure provision in Akwa Ibom state that can promote tourism may include: the Ibaka Seaport; the Victor Attah international Airport with modern terminal building and a runway capable of handling large aircraft; several major roads infrastructures; the Godswill Akpabio International Stadium referred to as the Nest of Champions; the remodeled Eket township Sport stadium, the Ibom Icon gulf course; the Ibom Specialist Hospital that promotes Medical Tourism, Hotel accommodations owned by private hospitality stakeholders, and so

on. These are some of the significant infrastructural developments in Akwa Ibom State. The government continues to prioritize infrastructural projects to improve the overall living standards and attract investments to the state (AI, Tgpt-2023).

Sport Infrastructure

Sport infrastructure refers to the physical facilities and structures that are built and designed to support various sporting activities. These facilities play a crucial role in promoting and developing sports at all levels, from grassroots participation to elite competitions. They provide spaces where athletes can train, compete, and improve their skills, as well as venues where spectators can enjoy watching sporting events. Schlemmer, Barth and Schnitzer (2020) views sporting in tourism as those travel related sports and recreation activities that individuals or groups who leave their place of residence participate in or experience in some ways, that may be professional, recreational or adventure driven. The development of sport infrastructure is essential for the growth of sports, fostering a healthy and active lifestyle, and hosting major sporting events. In Nigeria particularly, sports have found its place either as a tourism product in its self or as an augmentation of other tourism products or events, aimed at enhancing the tourism experience of guests.

Sports infrastructure can include a wide range of facilities, tailored to different sports and activities. Such as: Stadiums and Arenas, Indoor Sports Halls, that provide spaces for indoor sports like basketball, volleyball, badminton, table tennis, and gymnastics; Outdoor Sports Fields designed for sports such as football, rugby, field hockey, lacrosse, baseball and golf, Aquatic Centers for swimming pools, diving pools, and water polo arenas, Velodromes cycling tracks; Tennis Complexes for both indoor and outdoor games; Fitness and Training Centers offering gymnasiums, fitness studios, and sports-specific training equipment. The development of sport infrastructure is a significant investment for governments, sports organizations, and private entities, especially in boosting tourism.

Transportation Infrastructure

Transportation infrastructure plays a crucial role in shaping the competitiveness of a destination's tourism industry. An efficient and well-developed transportation network not only enhances the accessibility and connectivity of a region but also contributes significantly to its overall tourism attractiveness (UNWTO, 2017). The following are key factors and benefits associated with a robust transportation system that could enhance destination competitiveness:

i. Enhanced Connectivity: A well-developed transportation infrastructure improves connectivity by linking various destinations and facilitating smooth travel experiences for tourists. Efficient air, road, rail, and maritime networks enable tourists to access different regions easily, reducing travel time and enhancing convenience. Improved connectivity allows tourists to explore multiple attractions within a shorter period, thereby increasing the overall appeal of a destination (Saha and Yap, 2018).
ii. Multi-destination Tourism: Efficient transportation infrastructure enables the development of multi-destination tourism itineraries. Interconnected transportation networks allow tourists to explore multiple attractions across different regions or countries within a single trip. This

concept of seamless travel between destinations creates synergies and cooperation among regions, boosting tourism collaboration and offering tourists diverse experiences (Zhang and Fan, 2019).

iii. Sustainable Tourism Development: Investments in sustainable transportation infrastructure, such as eco-friendly transportation modes and reduced carbon emissions, contribute to the promotion of sustainable tourism. Environmentally conscious travelers are increasingly prioritizing destinations with sustainable transportation options. Implementing green transportation initiatives not only reduces the negative environmental impact but also enhances the destination's image, attracting sustainability-minded tourists (Zhang and Fan, 2019).

iv. Positive Economic Impacts: Investments in transportation infrastructure generate significant economic benefits for tourism destinations. Improved connectivity attracts more tourists, leading to increased visitor spending on accommodations, dining, shopping, and various tourism-related activities. This, in turn, stimulates the growth of local businesses, generates employment opportunities, and contributes to the overall economic development of the region (World Bank, 2013).

v. Competitive Advantage: A well-connected transportation system gives a destination a competitive edge in the global tourism market. Tourists often prioritize destinations with convenient and reliable transportation options, as it enhances their travel experience. Destinations with efficient transportation infrastructure can position themselves as easily accessible and tourist-friendly, attracting a larger share of visitors compared to those with limited connectivity (World Bank (2016).

An efficient and well-developed transportation network improves connectivity, accessibility, and economic opportunities. By investing in sustainable transportation solutions, destinations can create a positive impact on both tourism development and the environment. Governments, tourism authorities, and industry stakeholders must recognize the importance of transportation infrastructure and collaborate to ensure its continuous improvement, fostering sustainable and competitive tourism growth.

Quality Accommodation

Accommodations can be defined as an establishment which offers its facilities and services to individuals or groups (Akyeampong, 2007). Accommodations in tourism destinations can further be defined as any facility that provides a psychological base for tourists, visitors or individuals who are temporarily away from their usual place of residence or work (Mensah and Dei-Mensah, 2013).

Accommodation quality is confirmed as the significant determinant to enhance tourists' satisfaction and hotels and the hotel industry belong to the most important super structural elements of a tourism destination, without these, no destination could be competitive (Attila, 2016). Quality accommodations contribute to the overall competitiveness of a destination, impacting its ability to attract visitors, generate revenue, and foster sustainable growth. According to the United Nations World Tourism Organization (UNWTO, 2019) the availability of quality accommodations play several roles in Tourism Competitiveness:

i. Attracting Tourists: Quality accommodations characterized with Comfort, cleanliness, amenities, and personalized service, act as a significant draw for tourists, influencing their decision to visit a particular destination and contribute to a positive guest experience, resulting in favorable word-of-mouth recommendations and repeat visits.
ii. Enhancing Destination Image: High-quality accommodations contribute to a destination's overall image and reputation. Positive guest experiences reflect well on the destination, creating a competitive advantage and helping differentiate it from competitors.
iii. Increasing Spending and Length of Stay: Well-maintained accommodations often command higher prices, leading to increased tourism revenue. Additionally, when visitors have positive experiences, they tend to stay longer, explore more, and spend more money on local attractions, dining, and shopping (Ritchie and Crouch, 2003).

To achieve these benefits, several factors are identified to contribute positively in qualifying an accommodation as being of "quality", they include:

i. Service Excellence: Trained staff who are knowledgeable and attentive in delivering exceptional services and are responsive to the customers' service needs, contribute to the overall quality of accommodations. Ensuring staff are knowledgeable, attentive, and responsive to guest needs is crucial.
ii. Infrastructure and Facilities: Well-maintained facilities, modern amenities, and comfortable rooms are essential elements of quality accommodations. Up-to-date technology, efficient connectivity, and sustainable practices also play a role in enhancing guest satisfaction.
iii. Safety and Security: Providing a safe and secure environment is paramount. Adequate security measures, emergency response protocols and adherence to health and safety standards are crucial aspects of quality accommodations.

Tourism Competitiveness

A country's tourism competitiveness is reflected in factors such as its market development conditions, social development level, environmental quality, human resource level, infrastructure, information technology level, and ability to provide services (Navickas and Malakauskaite, 2009; Gooroochurn and Sugiyarto, 2005). Tourism competitiveness is defined as the ability of a tourist destination to attract and satisfy potential tourists (Enright and Newton, 2004; Zhang *et al*. 2011). Accordingly, Abreu-Novais *et al*. (2016) identifies two major orientations characterizing tourism competitiveness. The first focuses on internal attributes and abilities, aiming at enhancing residents' well-being. The second links tourism to market position revealed in larger numbers of tourist arrivals or overnights compared to those of competing destinations, and derives its core (Gooroochurn and Sugiyarto, 2005; Hong, 2009).

According to Croes, *et al*. (2019) tourism competitiveness covers two other components: satisfaction and productivity. Satisfaction determines value and is associated with the destination's ability to provide memorable experiences to tourists. On the other hand, Productivity is relevant for human development because it prods effective resource use, creates value in using resources, and measures used resources' performance. This implies that used resources should provide economic, social, and environmental benefits that exceed their corresponding costs. Thus, the ability of a destination to

create and integrate added value product that sustain its resources while maintaining market position relative to other competing destinations is seen as the competitiveness of the destination (Kunst, 2009). Destination competitiveness does play a very important role in promoting destinations to favorable positions in the tourism market and maintaining their competitive advantage (Leung and Baloglu, 2013).

Theoretical Underpinning

The study is anchored on the Porter's 'Diamond of national competitiveness model' (1990, made prominent in tourism by Crouch and Ritchie (1999). The national diamond competitiveness model identifies that competition between national industries or destinations, in the case of tourism is based on six elements namely; factor conditions, demand conditions, related and supporting industries, firm strategy, structure and rivalry, chance events and government. It is asserted that these elements function in two distinct and interrelated environments namely: the micro and macro environment respectively. The travel trade (such as tour packagers, suppliers, retail travel agents, specialty channels, and facilitators), tourism markets, competitive destinations, and a destination's public or stakeholders (residents of the destination, workers in the tourism and hospitality industry, citizen-action groups, the media, financial institutions, and so on.) are all included in the micro-environment. The macro-environment, on the other hand, is concerned with factors outside the micro-environment that have an impact on the micro-environment. Increased concern for the environment, global economic restructuring, altering consumer demographics, the more complex relationship between technology and human resources, and others are some of its components.

According to the authors, the micro- and macro-environment affect simultaneously the 'competitiveness core' defined by four major components: "core resources and attractors (physiography, culture and history, market ties, mix of activities, special events, entertainment and superstructure); supporting factors and resources (infrastructure, accessibility, facilitating resources, hospitality, enterprise); destination management (resources stewardship, marketing, finance and venture capital, organization, human resource development, information/research, quality of service, visitor management); and qualifying determinants (location, interdependencies, safety/security, awareness/image/brand, cost/value)" (Crouch and Ritchie, 1999). This study finds its focus on the theory in evaluating the place of infrastructure as supporting factors and resources that could enhance the destination competitiveness of the study area. It focuses on the availability of quality accommodation, access to transportation and the availability of Sport and recreational infrastructures in enhancing the competitiveness of the study area, to give it a competitive advantage over other state. Thus boosting its preference by visitors.

Empirical Reviews

Eno Jame, and Aniedi Essien (2019) conducted a research on infrastructure and sustainable development in Nigeria. The study aimed at assessing the availability of general infrastructure,

tourism infrastructure and other social services in thirty randomly selected tourists' destinations in South-South Nigeria. Data for the study were generated with the aid of infrastructure/social services checklist alongside oral interview with tourism officials in the area. Findings revealed a significant deficit in the number and types of infrastructure available as more than fifty percent of sampled tourist destinations lack the basic infrastructure such as tourist accommodation, transport infrastructure and health services. The sustainability of tourism in this area is in doubt except effort is made to engage the public-private partnership for the provision of critical infrastructure in these tourist destination.

Lilia, Liberato and Moreira, (2021) in a research, the role of sport tourism infrastructures and sport in destination competitiveness. This study reports two thematic areas that have been very relevant, in the last years, to Oporto as a tourism destination, focusing on attraction and competitiveness: sports and tourism. Visioning the research objectives, a quantitative methodology was employed through the application of a questionnaire to 400 tourists/visitors in the city of Oporto. The data gathered confirm that the main reasons for the trip influence the visit to the Dragão stadium and the FC Porto Museum, and the assistance to a football game at the Dragão stadium influences the visit to the Dragão Stadium and the FC Porto Museum.

Khan, Oianli, SangBo,Zaman and Zhang (2017) conducted a study aimed at examining the impact of air transportation, railways transportation, travel and transport services on international inbound and outbound tourism in a panel of 19 tourists - oriented countries, over a period of 1990–2014. By applying principal component analysis, the study constructs travel and tourism competitiveness index for inbound and outbound tourism. The main constructs of inbound tourism index include international tourists' arrival, tourism receipts, receipts of passengers' transports items and travel items while the constructs of the outbound index include international tourists' departure, tourism expenditures, and expenditures for passengers transport and travel items. The result of panel Fully Modified OLS (FMOLS) regression shows that the presence of air transportation, railways transportation, and trade openness positively affect inbound tourism index, while travel and transport services negatively affect tourism competitiveness index. The variance decomposition results show that air transportation freight is the contributor that largely influences inbound-outbound tourism, while railways passengers carried and trade openness has the least share to influence inbound and outbound tourism index for the next 10-year period. The study concludes with the importance of transportation sector that deem desirable to promote tourism worldwide. The concentration of different modes of transportation including air transportation, railways transportation, and travel and transport system would helpful to advance international tourism.

Chen and Funk, (2010) undertook a study with a primary goal of investigating trip purpose, destination image, and revisit intention. The study used a generic list of 16 destination attributes to investigate travel purpose, which included: accommodation facilities, clean and green city, climate, local price level, cultural difference, friendliness of the locals, historical/cultural attractions, local infrastructure/transportation, nightlife and entertainment, personal safety, quality of food, restful/relaxing atmosphere, scenery/natural attractions, sports facilities and activities, shopping facilities, and toll roads. The researchers used a survey design technique to obtain primary data from 369 non-sport and sport on-site tourists attending the European Athletics Championship in Sweden using a structured self-

administered questionnaire. The descriptive analysis (Means and Standard Deviation) was utilised to determine the importance rating of the variables used to examine the acquired data. The Analysis of Variance (ANOVA) was also performed to assess for variations in the rating of Destination attribute performance between the two groups (Non-sport and Sport tourist). Significant disparities were discovered in six attributes: housing amenities, cultural difference, historical/cultural attractions, personal safety, food quality, and sports facilities and activities. While sport tourists rated four attributes as significantly important: sports facilities and activities, lodging facilities, food quality, and personal safety, non-sport tourists rated cultural difference and historical/cultural attractions as more important, but they were able to engage in the sport event milieu casually and gain more experiences and offerings during the period.

Mangion, Durbarry and Sinclair (2005), carried out a research on tourism competitiveness: Price and quality. The study objectively examined the price competitiveness of tourism destinations at the national level using the Almost Ideal Demand System model. The extent to which changes in the characteristics of package holidays in destinations contribute to a change in the price of the packages is then examined using hedonic pricing models. The results show that the price sensitivities of tourism demand vary considerably between destinations, so that monitoring relative price competitiveness is important. The characteristics that have significant effects on package prices are identified, assisting policy makers in their choice of which characteristics to enhance with a view to increasing the returns from tourism.

Methodology

Research Design: The survey research design approach was adopted for this study. The choice of this design is considered because the anonymity of surveys allowed respondents to offer more candid and valid attitudinal responses to the research enquiry.

Study Area: Akwa Ibom State located in the South south geopolitical zone of Nigeria is chosen as the study area. The population of this study consist of all domestic and international visitors who were excursionist and overnighters visiting Akwa Ibom State.

Study's Population: The population of this study was treated as infinite and practically impossible to adopt the whole population to be encountered for this study.

Sample Size Determination: The Confidence interval method was used to determine the sample size for the study, at a 95% confidence level (**See Appendix 1**). The sample size arrived at were 384 respondents.

Sampling Procedure: The sampling procedure adopted for this study is the simple random sampling technique.

Source of Data and Data Collection Method: The main source of data that were utilized in this study were from primary sources, which were collected through the use of a structured questionnaire administered to on visitors measured on a '5' point Likert scale.

Validity of Research Instrument: Content validity was thus achieved by ensuring questions cover all the research objectives. Construct validity was also achieved by associating the current study with empirical studies and theories on destination competitiveness.

Reliability of Research Instrument: To test for reliability of the research instrument, the Cronbach alpha coefficient was used as reliability parameter to determine the internal consistency of the 4 items in the research instrument. The result coefficient for the items was 0.635. Indicating internal consistency of items and thus the items can be relied on to explain the relationship between the variables under measurement. The reliability coefficient are presented on Table 1:

Table 1: Reliability Coefficients

Variables	**Number of Items**	**Cronbach-Alpha Coefficient**
Transport	3	0.922
Sport	3	0.606
Accommodation	3	0.822
Competitiveness	3	0.667
Total	**12**	**0.754**

Source: SPSS output 2023.

Data Analysis Technique: To determine the relationship that may exist between dimensions of infrastructural development (the predictor variable) and destination competitiveness (the criterion variable). The multiple regression analysis was also used, all hypotheses were tested at 0.05 level of significance.

Model Specification: The functional model for this study is given as;

$Y = f(X_1, X_2, X_3)$

DC = F(SI, TI, AI)

The multiple regression analysis equation is:

$Y = a_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \ldots + e$

$DC = a_0 + \beta_1 SI + \beta_2 TI + \beta_3 AI \quad \ldots\ldots + e$

Conceptually, this model is presented as:

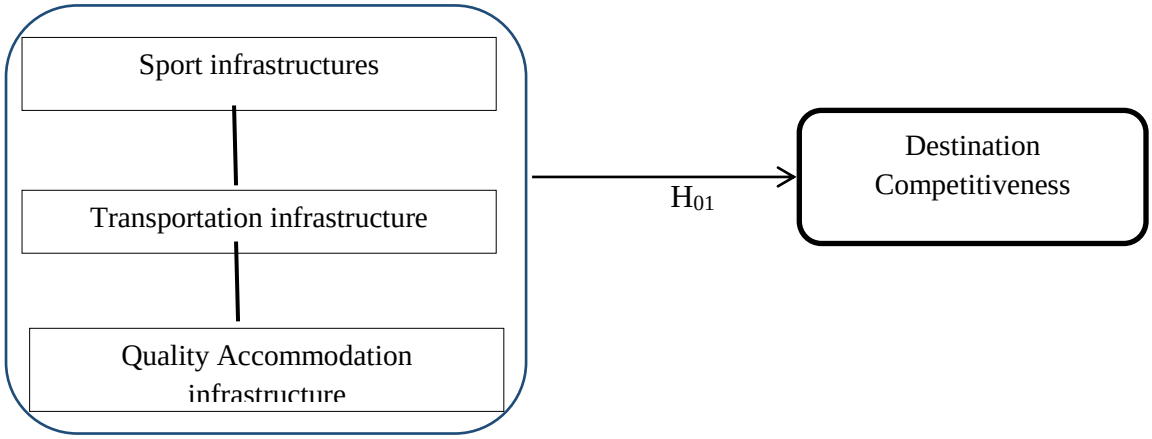

Figure 1: Conceptual Framework on Infrastructural development and Destination Competitiveness.

Source: The Researcher's Construct (2023).

Data Analysis and Results

Table 2: Personal Data of the Respondents

Demographics Variables	**No. of Respondents**	**Percentage (%)**
Age		
20-24 years	82	22.7
25-34 years	98	27.1
35-44 Years	96	26.5
≥45 Years	86	23.8
Total	362	100.0
Gender		
Male	171	47.2
Female	191	52.8

Total	362	100.0
Visit Intention		
Leisure	91	25.1
Business	122	33.7
Conference	82	22.7
Others	67	18.5
Total	362	100.0

Source: The Researcher's Computation (2023).

Table 2 shows that 96 respondents (26.5 %) fell between the ages of 35-44 years and 98 respondents were between the ages of 25-34 years (27.1%). Also 86 respondents (23.8%) were 45 years and above and 82 respondents (22.7 %) who were between the ages of 20-24 years made up the sampled population for this study. This implies that Akwa Ibom State as a destination enjoy the influx of visitors between the ages of 35-44 years and 25-34 years old. These persons were assumed to be exposed enough on the subject matter to provide answers to the questions. From the Table, 191 respondents (52.8 %) were female and the males accounted for 171 respondents (47.2 %). The implication of this is that Akwa Ibom State is host to an impressive number of females and males, thus the destination is not a one sexed destination as indicated on the Table.

Finding shows that 122 respondents (33.7 %) were visiting the State for business purposes, closely followed by 91 respondents (25.1 %) who were visiting for leisure purposes. This was closely followed by 82 respondents (22.7 %) that were visiting the destination to attend conferences. The least number of respondents surveyed were 67 respondents (18.5 %) that were visiting for other purposes other than Leisure, business or conferences. This also justified the use of excursionists and overnighters used as the target respondents in this study. The implication is that their purpose of visit and stay could have exposed them to other features of the state, thus these respondents were knowledgeable about the destination's attribute and could give reasonable opinion to satisfy the purpose of the study.

Test of Hypothesis

H_{01}: Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure does not have any collective relationship with the destination competitiveness of Akwa Ibom State, Nigeria.

Table 3: Multiple Regression Analysis Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.800[a]	.640	.637	1.42576

a. Predictors: (Constant), Sport facilities, Transportation, Accommodation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1295.889	3	431.963	212.498	.000[b]
	Residual	727.738	358	2.033		
	Total	2023.627	361			

a. Dependent Variable: Destination Competitiveness

b. Predictors: (Constant), Sport facilities, Transportation, Accommodation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.381	.417		3.311	.001
	Accommodation	.597	.125	.560	4.784	.000
	Transportation	.158	.049	.175	3.227	.001

Sport facilities	.106	.128	.096	.825	.410

a. Dependent Variable: Destination Competitiveness

Source: Field Survey Result (2023).

Results of the multiple regression analysis shows that the independent variables; Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure collectively accounted for approximately 64% of the variation in destination competitiveness of Akwa Ibom State, Nigeria, with a regression coefficient of R^2= 0.640. This means that Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure as predictors of infrastructural development were collectively accountable for 64% of the changes in destination competitiveness, while 26% of the changes in the dependent variable could be attributed to other factors not considered in the study's model.

Results on the table also indicates that the combined relationship between all the independent variables (Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure) and destination competitiveness (Y= DC) was strong according to the R= 0.800 and adjusted R^2 = 0.637, indicating that the regression model of this study is said to have a strong explanatory power of the dependent variable.

In addition, the F-ratio = 212.498 and p-value < 0.000 on the ANOVA suggest that the results of the regression model could not have occurred by chance and that Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure collectively and significantly predicted the changes in the dependent variable (destination competitiveness).

To assess the relative importance and significant contribution of each independent variable on the dependent variable, the coefficients are provided on the Table. Accordingly, all the infrastructural indicators that were collectively measured against destination competitiveness, showed a significant positive contribution in terms of changes in the dependent by their positive Coefficients.

But interestingly, the contribution of sport infrastructure on the model, judging by its p-value= 0.410 was insignificant when applied/considered collectively. The multiple regression analysis result showing the multiple regression Coefficients of each of the three variables are as follows: Sport infrastructures (βx_1SI= 0.106, p-value = 0.410), Transportation infrastructure (βx_2 TI = 0.158,p-value = 0.001) and Quality of accommodation (βx_3AI = 0.597, p-value = 0.000). This results as presented on the Coefficient table, can be interpreted that every unit change in any of the independent variables will lead to either an increase change in the dependent variable, according to the positive values of their unstandardized coefficients, as

represented in the resulting multiple regression model. The proposed multiple regression equation was:

$Y = a_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 \ldots + e$

$DC = a_0 + \beta_1SI + \beta_2TI + \beta_3AI \ldots\ldots\ldots\ldots\ldots + e$

Thus, the resulting multiple regression model is presented as:

$DC = 1.381 + 0.106SI + 0.158TI + 0.5976AI$

Considering the result of significant P-value = 0.000 in the ANOVA and coefficient, based on the decision rule the null hypothesis is rejected and the alternative hypothesis accepted. It is concluded that Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure does have a collective positive significant relationship with the destination competitiveness of Akwa Ibom State, Nigeria.

Discussion of Findings

The study's hypothesis (H_{01}) was formulated to ascertain whether there is a collective significant relationship between Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure and destination competitiveness of Akwa Ibom State, Nigeria. Data collected and analysed using the multiple regression analysis showed an of $R^2 = 0.640$ (64 %) and a p-value= $0.000 \leq 0.05$. Following the decision rule of this test, the null hypothesis is rejected, thus it is concluded that there is a collective positive significant relationship between Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure and the destination competitiveness of Akwa Ibom State, Nigeria. The result is in tandem with previous study done by Chen and Funk (2010) who found that tourists rated attributes like the availability of sports facilities and activities, as well as accommodation facilities as significantly important, as it enabled them to engage in the sport events casually and gain more from the offerings of the destination during their visit. Also the findings agrees with Khan, Oianli, SangBo,Zaman and Zhang (2017) who stressed that the concentration of different modes of transportation including air transportation, railways transportation, and travel and transport system would helpful to advance international tourism.

Conclusion

It is evident from the study's findings and can be concluded that Sport infrastructures, transportation infrastructure, and quality accommodation infrastructure are significant predictors of destination competitiveness of Akwa Ibom State, Nigeria, when considered collectively as dimensions of infrastructural development.

Recommendations

It is therefore recommended that for the State to enjoy preference among visitors and prospective visitors as a choice destination to visit, it must develop more relevant infrastructures that are most likely to positively boost the image of the destination, giving it a competitive advantage among other states. This is because infrastructures such as good road networks, provision of recreation/sporting facilities, quality and affordable accommodations among others, make up the basic needs of visitors and serve as supporting elements and activities that boost their experience during their travel.

Implications for Akwa Ibom State and Businesses.

i. Infrastructural Development: Investments in transportation networks, accommodations, attractions, and amenities should be made considering the perceived costs and expected rewards for all stakeholders involved, including the local community, government, and tourists.

ii. Visitors/Tourist Satisfaction and Loyalty: Ensuring that the perceived rewards of visiting Akwa Ibom State (e.g., cultural experiences, safety, services) outweigh the perceived costs (e.g., travel expenses, cultural differences) to foster positive tourist experiences, satisfaction, and repeat visits.

iv. Sustainable Tourism Development: Balancing infrastructural development with environmental sustainability to minimize negative impacts and preserve natural and cultural resources for long-term tourism competitiveness.

v. Stakeholder Collaboration: Encouraging collaboration and partnerships between the government, local communities, private sector, and tourists to collectively address the costs and rewards associated with infrastructural development and tourism competitiveness.

By applying the Porter's 'Diamond of national competitiveness model'to the context of infrastructural development and destination competitiveness in Akwa Ibom State, Nigeria, policymakers and tourism stakeholders can gain insights into the motivations, decision-making processes, and expectations of tourists and visitors alike. This understanding can guide strategic planning, resource allocation, and policy formulation to foster sustainable and give the destination a competitive advantage in the region.

Suggestion for Further Research

This study was geographically limited to Akwa Ibom State Nigeria, further studies could consider the country as a whole in determining how infrastructural development has affected tourism strive at a time when there is a proposed movement from the dependency of oil and gas as a major revenue earner to other productive sectors. Further studies could also consider a qualitative approach to the study while expanding on the proxies.

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APPENDICES

Appendix 1

Confidence Interval Method for sample size determination for an infinite Population

The formula is:

$$n = \frac{z^2 * s^2}{e^2}$$

Where: Z = the value of Z-score associated with the degree of confidence that is; 95% confidence level, being 1.96 from the Z-score table

e = Margin of error = 5% = 0.05

s = Estimated standard deviation = 0.5

(Where the standard deviation is not known, the value of the error term can be used)

Thus: $n = \frac{1.96^2 * 0.5(0.5)}{(0.05)^2}$

$$n = \frac{[3.8416 * 0.25]}{0.0025} = \frac{0.9604}{0.0025} = 384.16$$

Hence 384 is arrived at as the sample size of respondents for this study.