



## **A Parsimonious Description of Tourism Variables for the Assessment and Promotion of Tourism Development in Rural Rivers State, Nigeria.**

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### **Abstract**

*The major components of tourism development in Rivers State, Nigeria were summarized for purposes of assessing the tourism potential of the study area for rural development. To achieve this, a total of 30 tourism sites representing 43% of the settlements were selected from a population of 70 recognized centres in the study area using a Table of Random Numbers. Data was collected on eleven (11) key rural variables capable of aiding in tourism development. These were collapsed using the multivariate technique of factor analysis. The result yielded a four dimensional solution which were identified as Culture, Climate/rural industrialization, Carnival/Ecological, and Creek development. It was also revealed from the study that 21 of the 30 communities (70%) had above average factor score on the four major dimensions of tourism development. The spread however showed that only 19% fared very well on Culture; 28% on Carnival and Creek development while 23.8% was on Climate attraction. The four factors derived from this study represented the major dimensions of tourism potential in the study area upon which rural development interest should focus. It was concluded that more needed to be done especially in the area of showcasing the culture of the area. Improvement in road network was recommended to pave the way for increased patronage of the material culture of the area.*

**Keywords:** Tourism development, tourism potential, rural development and Rivers State.

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### **1. Introduction**

The promotion of tourism as a veritable tool of development by international development agencies has been an attractive option. Grandoit (2005) citing Truong (1990) reported that this promotion started in 1969 by a private international development

consulting firm specializing in tourism and regional development in the Dominican Republic. As a case study, Hall (1994) concluded that there are currently few, if any, viable alternatives to tourism for nations waiting to create employment opportunities. Tourism therefore has become a veritable tool to drive employment, infrastructure provision and better the livelihood of the rural inhabitants. Rural tourism is therefore seen as a major means of curtailing rural urban, migration, by the youthful and active population of most developing countries (Hanin, et al., 2012).

Rivers State is abundantly endowed with both human and natural resources. Though recognized as a major oil producer in Nigeria, other resources abound untapped largely in the tourism industry. The State is largely rural with the rural inhabitants constituting about 63% of the population (Iyagba, 1999). Given the fact that the capital city of Port Harcourt is the only major urban centre in the State, it is increasingly becoming over-burdened by the continuous influx of immigrants. Therefore, successive governments have found it expedient to pay priority attention to rural development to improve the living standards of the rural inhabitants by providing infrastructure. Thus different strategies have been suggested over the years within emphasis on the provision of infrastructures. The most attractive was the shell community project. A parallel to the Shell Community Development Project was the Green River Project (GRP) initiated by the Nigerian Agip Oil Company (NAOC) in 1986. In between these two projects were the Agricultural Development Project (ADP) of the Federal Government in 1972; the River Basin and Rural Development Authority in 1976 and the Directorate of Foods, Roads and Rural infrastructure in 1986 among others. Although these strategies were agriculture oriented and by implication rural-based, they were all assessed to have failed (Ojo, 1998; Okpaga, 2002). For a proper management of the rural communities in the state, there must be a shift in policy thrust.

Gould (2004), Woods (2005), Cole (2006) and Imikan (2014) were all in agreement that the tourism industry is a development propeller in transforming the rural landscape and the inhabitants. The preference for tourism as a viable option to rural development is that it is rural oriented and can be used for transforming the socio-economic terrain of rural Rivers State. Tourism has become the means by which third world countries, with little to offer but nature, could accumulate capital and ultimately, kick-start their development process. For example, it has become fashionable to address development challenges by implementing several development strategies that lead to the adoption of the tourism development strategy. The relevance of tourism to the development of rural areas cannot therefore be overstressed. Tourism treated holistically, is largely seen as a viable source of investments for backward economies and a source of quick livelihood and development for unskilled workers (Haldar, 2007).

Makens, Bowen and Kotler (2006) doubt how rural tourism can make a head way economically without deliberate collaboration of private partnership and government. There exist varied arguments for and against this collaboration between the private partnership and government. A common solution for tourism promotion and development decisions according to Marque, Yale and Cook (2010) is through a tourism related private

partnerships. Rohac (2010) asserts that rural tourism is operated by households and medium-sized companies, and since they do not have the financial and human resources to organize it, the integrated approach is advocated.

The aim of this study was to extract the principal dimensions upon which the development of tourism in rural Rivers State revolves so that they may serve as bases for tourism planning in the areas. To achieve this aim, the following objectives were pursued:

1. To assess the available tourism infrastructure stock in the sampled communities;
2. To obtain the principal dimensions of tourism attraction in the study area; and
3. To show how the derived principal dimensions may be exploited for purposes of tourism development in the study area

There are great prospects for tourism in general and rural tourism in particular in Nigeria. Obioma (2013) believed that this was borne-out of the fact that, Nigerians are more enlightened, intellectually active and psychologically willing than before. They are now favourably disposed to participation in recreation; out-door sports as well as in their history, culture, natural environment and wildlife. This was collaborated by a previous study carried out by the United Nation World Tourism Organization (2008) and added that the economic benefits to the inhabitant's communities and government at all levels could bring prosperity, new lease of life and good will in developing countries. With this, the much desired development according to Crouch, and Ritchie (2002) and Prideaux (2000) would be actualized (Ogundele, 2002).

The mere presence of tourists' sites and a concomitant provision of infrastructures are no cast iron guarantee for rural tourism development. In the light of this Godfrey and Clarke (2000) advocated for a strategy to be evolved for the improvement of existing products and explore new frontiers vis-à-vis new markets to sell the tourism industry for patronage locally and intentionally. And with this Imikan (2014) opined that rural tourism has the potency of transforming the rural landscape of Nigeria and Africa. Countries such as Kenya, South Africa, Egypt, and Mauritius are noted for being tourists' destinations in Africa. According to the World Tourism Organization (2014) Africa contributed significantly about 40 million tourists to internationally tourist arrivals.

Interestingly, in Nigeria an inventory of potential tourists sites are located in the rural areas which are largely inaccessible, and thus not harnessed (Bagbe, et al., 2006). And according to Rohac (2010) the degree of usage by tourists has a direct correlation with the low or near absence of infrastructures in the destination points.

## **2. Study Area**

Rivers State is one of the core Niger Delta States of Nigeria. It is located between latitudes 4<sup>0</sup>20' and 5<sup>0</sup>45' North and Longitudes 6<sup>0</sup>20' and 7<sup>0</sup>33' East with a land mass of approximately 10.26km. Generally, the land form of the state is flat and monotonous. Characteristically, the topography is adorned by a maze of creeks, waterways and swamps criss-crossing the low lying plains. Rivers State is a catchment area for a number of river systems that traverse and drain this region. These include the Orashi River, the New Calabar River, the Otamin/Imo River and the Niger River which after over 4,200

kilometers from the Guinea Highlands finally empties into the Gulf of Guinea tributaries that form the Niger Delta. Other rivers are the Abonnema, the Woji and the Elekohia which empty into the Amadi Creek.

Climate is Sub-Equatorial with the winds, air masses and the ocean currents having great influences on climatic elements such as temperature, precipitation, humidity and air pressure. Vegetation types are the coastal swamps forests, the mangrove swamp forest, fresh water swamp forest as well as the tropical rain forest.

The people of Rivers State belong to the same language group called the Niger Delta - Congo (Aferre and Williamson, 1989). The major economic activities in the study area are palm are processing in the upland region, coconut harvesting in the coastal sands, Raffia palm tapping, cassava cultivation, fishing, craft such as pottery and canoe making.

Given the peculiar riverine terrain of Rivers State, the traditional or indigenous way of solving the problem of bridge construction is of great importance and interest. The bridge could be rafter bridge, Log Bridge or the hanging bridge. For shallow water, a rafter bridge is needed. To construct thus, pieces of strong wood are buried in two rows at equi-distance across the stream, each wood is bent towards the next and dry bamboo pieces placed across each row and tied with raffia palm cords. This is not only common in the rural riverine areas but could be found along the waterfronts in the city, popularly called "watersides".

The Port- Harcourt tourist beach at Borokiri is increasing in popularity and patronage from fun-seekers especially at weekends. The portion where the beach is situated was reclaimed from the mangrove swamp. It is a man-made (artificial) beach. During festive periods, and weekends, the beach is full of activities-cultural dances, disc-jockeying, games, drama etc. It harbours restaurants that serve all varieties of seafoods, fish pounds, museums and souvenir shops.

### **3. Materials and Methods**

The population of tourists in the selected centers was utilized for the study. A total of thirty (30) tourist centers (representing 43%) were drawn from a population of seventy (70) select tourist centres in Rivers State. To select the thirty (30) tourists' centers from the recognized centers in Rivers State, a Table of Random Numbers was used. The choice of the number of households for each tourist's center was done in proportion to the size of the household. In each center, questionnaire was administered in line with the systematic sampling procedure. A total of four-hundred and forty copies of the questionnaires were administered to tourists to obtain specific information.

### **4. Technique of Data Analysis**

The study made use of the multivariate technique of factor analysis. Factor analysis is a multivariate statistical technique which is generally applied in research to achieve parsimony in data description (Udofia,). It is used to examine the underling patterns or relationship within a large number of variables and to condense or summarize the information into smaller sets of factors. The factor analysis model can be expressed as follows:

$$X_1 b_{11} f_1 + b_{12} f_2 + b_{13} f_3 + \dots \dots U_1 + C_1$$

$$X_2 b_{21} f_1 + b_{22} f_2 + b_{23} f_3 + \dots \dots U_2 + C_2 \text{ etc}$$

Where:

- U<sub>1</sub> the mean of X<sub>1</sub>
- C<sub>1</sub> the residual specific to the test after taking account of the contribution of the factors.
- f<sub>1</sub>, f<sub>2</sub>, f<sub>3</sub> the value of the factors which vary from one subject to another, but have zero mean and unit variance, and are assumed to be uncorrelated with one another and with the residuals.
- b<sub>ij</sub> Constants like regression coefficients, indicating how they are affected by each factor. The b<sub>ij</sub> are known as factor loadings.

The technique has the capability of generating a set of dimensions that are latent (not easily observed) in a large set of variables: also referred to as R-factor analysis. It devises a method of combining or condensing large number of items into distinctly different groups within a larger population. It increases an entirely new set of smaller number of variables to partially or completely replace the original set of variables.

### 5. Results and Discussions

In this study, eleven variables indicating aspects of tourism development were identified and utilized. Table 1 presents a summary of field data for tourism development:

**Table 1: Descriptive analysis of tourism data in rural Rivers State**

Variable	Definition	Total stock	Mean
Y1	Climate attraction	94.6	31.5
Y2	Rural industry	377.2	12.57
Y3	Souvenir shop	926	30.9
Y4	Local craft shops	1064	35.5
Y5	Cultural festival	925	30.8
Y6	Beach attraction	1123.7	37.5
Y7	Mangrove	1677	55.9
Y8	Historic site	1226	40.9
Y9	Carnival	1386	46.2
Y10	Water resort	994	31.5
Y11	Creeks	775	25.2

Data in Table 1 shows the totals and the mean values for all the tourism variables utilized in the study. A low mean score suggests a relatively less patronage for that variable. Accordingly, three variables had mean values of 40 and above. They included: Y7 (55.9), y8 (40.9) and Y9 (46.2). These variables enjoyed far more patronage than others. The least patronized variables included: y2 (12.57) and y11 (25.2). The reason for their low patronage is not farfetched. Most rural areas of the State have no infrastructure that would attract tourists. The creeks of the Niger Delta were hostile and thus were not conducive due to militant activities.

## 6. Dimensions of Tourism Attractions in Rural Rivers State

In this research, eleven various forms of tourist attraction were identified in the study area. Data indicating the volume of patronage for each of the eleven (11) tourist attraction were collected and subjected to factor analysis. This was done in order to summarize the tourism data to reflect the major dimensions (factors) of tourist attraction in the areas. The R-mode factor analysis was employed. The result of the analysis yielded 4 major components or dimensions of tourist attraction for the study area. The 4 factors were therefore named and presented according to their factor loadings as shown in Table 2.

As data in Table 2 indicated, the rotated factor analysis yielded and retained a maximum of 4-dimensional solutions. These four were adopted for interpretation based on the strength of their eigenvalues. All the four factors yielded eigenvalues greater than 1. The factors accounted for 72.8% of total variation in the data set and were therefore a satisfactory factor solution for the study. All communities reported large and positive values. This indicated that all the variables included in the analysis were important. Essentially the preceding paragraph highlights the 4 dimensional factor solutions along with their variable loadings and appropriate naming.

**Table 2: Rotated factor matrix for the tourism data**

Variable	Definition of variable attraction	F1	F2	F3	F4	Communalities
Y1	No. of tourist for climate attraction	0.09	0.88	0.03	0.03	.79
Y2	% of respondents engaged in non-agric	.12	.89	-.05	-.04	.82
Y3	Monthly revenue generated from souvenir shops	.94	.02	0.6	.04	.90
Y4	Monthly revenue generated from local craft shops	.95	-.02	.07	-.13	.91
Y5	% of tourist on cultural festival	.81	.35	-.01	.74	.80
Y6	No. of tourist on beach attraction	-.12	.34	.30	-.36	.77
Y7	No. of tourist on mangrove forest attraction	.31	.16	-.58	.28	.60
Y8	No. of tourist on historic site visits	.06	.46	.11	.07	.41
Y9	No. of tourists on annual carnival	-.12	.30	.81	.17	.76
Y10	% of tourists on water	-.21	0.2	-.64	.04	.49
Y11	No. of tourists on creeks attraction	-.09	.10	.18	-.81	.71
	<b>Eigenvalue</b>	<b>3.18</b>	<b>2.13</b>	<b>1.45</b>	<b>1.23</b>	
	<b>Percentage variance</b>	<b>28.9</b>	<b>19.4</b>	<b>13.2</b>	<b>11.1</b>	
	<b>Cumulative %</b>	<b>28.9</b>	<b>48.3</b>	<b>61.6</b>	<b>72.8</b>	

Source: Data Analysis

**Culture Factor**

This factor was so named because it loaded highly and positively on variables y3 (.94), y4 (.95) and y5 (.81). These variables represented monthly revenue generated from souvenir shops, monthly revenue generated from local craft shops and number of tourists on cultural festival respectively. It explained 28.9% of the variation in the data set. Undoubtedly, this factor had the strongest pull on tourists because of the uniqueness of the material and non-material culture of the people.

**Climate and Rural Industrial Factor**

Industries sited in rural areas are strong force of tourist attraction, likewise the variations in micro-climate of riverine areas. Factor 2 was so named “Climate and Rural Industrialization Factor” because of its high and positive loading on variables y1 (.88) and y2 (.89) which stood for number of tourists on climate attraction and percentage of respondents engaged in non-agricultural jobs respectively. This factor accounted for 19.4% of the variation in the data set and was ranked second in the order of importance.

**Carnival and Ecological Factor**

Annual carnival displays constituted an important dimension of tourist development. The protection and conservation of the natural ecosystem also had a strong pull on tourists. This factor were so named because it loaded highly on variables y9 (.81), y7. These variables represented number of tourist on annual carnival, number of tourist on mangrove forest attraction and number of tourists on water resort visit respectively. The factor accounted for 11.1% of variation in the data set. The low eigenvalue (1.23) reported by this factor indicated that this aspect of tourist attraction had the lowest patronage, probably due to previous militant presence in the creeks of the Niger Delta. Based on interaction with the inhabitants, it was found out that community clashes and the polluted environment led many able bodied young men and women to migrate to Port Harcourt, thus carnival and other cultural activities in most of the rural community were put on hold.

**7. Tourism Profile of Sampled Communities in Rivers State**

Upon the extract of the four significant factors that defined the dimension of tourism development in the area, it was necessary to determine of each of the 30 sampled communities on the 4 factors extracted. This was done by applying the matrix of factors scores as presented in Table 3.

**Table 3: Description of factor scores for the 30 tourists’ communities in Rivers State**

S/N	Tourists’ Community	Dimensions of tourism			
		F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>
1	Okwuzi	1.04	-0.56	1.01	1.91
2	Omoku	0.88	-0.35	1.29	1.23
3	Obagi	0.63	0.37	0.95	0.01
4	Edeoha	0.74	-1.34	-0.07	-1.24

5	Obaji-Emohua	0.67	-0.94	-0.16	-0.97
6	Ndele	0.30	-0.73	0.91	-0.66
7	Igbo-Etche	-0.45	0.15	-0.55	-0.58
8	Ozuzu	1.58	0.05	-0.46	-0.96
9	Okechi	2.36	-0.94	-0.72	-0.19
10	Bane	-0.75	-0.75	1.29	-0.88
11	Kono	0.09	-0.82	0.43	-0.79
12	Sogbo	0.16	-0.11	0.42	-1.25
13	Kaa	-1.74	0.10	2.37	0.28
14	Queens Town	-0.86	0.84	1.70	1.29
15	Nkoro	-0.33	0.98	1.04	0.21
16	Ikuru	0.51	1.35	0.06	0.45
17	Abonnema	-0.40	-1.48	0.06	0.45
18	Idama	-0.69	-1.15	-0.80	0.45
19	Obonoma	-0.44	-0.60	-1.61	0.37
20	Borikiri	0.39	2.54	-0.16	-0.97
21	Obrikom	-0.92	1.81	-1.14	-1.28
22	Aggah	1.37	1.33	-1.14	0.30
23	Isu	0.14	-0.10	-0.47	2.30
24	Ebukama	-0.06	1.45	0.20	1.22
25	Kula	0.04	0.77	-0.98	1.27
26	Obelle	0.61	-0.02	-0.49	0.52
27	Rumuji	-1.64	-0.25	-0.90	0.48
28	Odiemeranyi	-1.32	-1.00	-1.47	0.05
29	Kaani	-1.97	-0.14	-1.09	-0.55
30	Kpean	0.01	-0.41	0.02	-0.55

Source: *Data Analysis*

As the matrix of the factor scores in table 3 indicates, there was significant spatial variation in the performance of the 30 tourist communities on the 4 dimensions of tourism development in region. For the Cultural factor, a total of four (4) communities out of (30) had strong positive scores of 1.00 and above indicating above range average performance on this factor. These included Okwkuzi, Ozuzu, Okehi and Aggah. This showed that these communities had robust attraction for culture heritage- based tourism facility.

For Climate and Rural Industrialization Factor, a total of 5 communities had high positive scores of 1.00 and above on this dimension of tourism development. They included Ikuru, Borikiri, Obrikom, Aggah and Ebukam. This showed that these communities had greater pool of tourists on this factor of tourism in the area.

Carnival and ecological factor revealed that six (6) communities had high positive scores on this factor. They were Okwuzi, Omoku, Bane, Kaa, Queens towns, Nkoro. This meant that these communities were well developed in terms of carnival and ecological tourism facility.



Creek Development indicated that six (6) communities showed high positive scores of 1.00 and above on this factor. They included Okwuzi, Omuku, Queens town, Izu, Ebukama and Kula. These communities were favourably disposed in terms of creek attraction for tourism development than the rest of the communities studied.

**Table 4: Summary of tourism performance in rural Rivers State**

<b>Dimension of tourism</b>	<b>No. of Communities with a factor score of 1.00 and above</b>	<b>% of Total</b>
Culture	4	19.0
Carnival	6	28.6
Creek	6	28.6
Climate	5	23.8
<b>Total</b>	<b>21 (n = 30)</b>	<b>100.0</b>

## **8. Conclusion and Recommendations**

The summary of the performance of communities with respect to the four main dimensions of tourism development as shown in Table 4 revealed that 21 communities out of 30 representing 70% had above average factor score on the four major dimensions of tourism development. However, the spread showed that 19% fared so well on culture, 28.6% on the carnival and creek and 23.8% for climate attraction.

The four factors derived from this study represented the major dimensions of tourism potential in the study area upon which rural development interest should focus. Considering that rural Rivers State harbours enormous tourist features, there is the need to evolve a more pragmatic rural oriented tourism agency that can impact directly on target communities. It was concluded that more needed to be done especially in the area of showcasing the culture of the area. Improvement in road network was recommended to pave the way for increased patronage of the material culture of the people, thus, giving them a sense of identity, mutual an improved socio-cultural and economic benefits.

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