

Impact of Climate Change on Hospitality Services, a case study of Lagos-Island

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Abstract: This study evaluates the resultant effect of weather and climate change on tourist inflow and hotel services using a case study of Lagos-Island. Tourists are sensitive to weather and climate changes which can impact on their decision to travel. Data for this study were collected from primary sources, through personal observation and the stratified random administration of two hundred (200) copies of questionnaires on categories of respondents in Lagos Island. Data were analysed using chi-square statistical method. Result from the study showed that there is higher patronage of visitors and tourist to the hotel during dry season, than wet season. This study recommends that as the hospitality services in Lagos-Island improve, there is need to understand the weather and climate of the area to better improve their services and also to destination choice of the tourist. Thus all tourism and hospitality service planners have a critical role to play in terms of proper management of the tourist destination facilities and services to aid overall quality.

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Introduction

Hospitality is the relationship between guest and host or the act or practise of being hospitable (Wikipedia; 2011), specifically this includes the reception and entertainment of guests, visitors or strangers, resort membership club, conventions, attractions, special events, and other services for travellers and tourists.

The hospitality is derived from the Latin "hospes", which is formed from "hostis" which originally means "to have power". The meaning of host can be literally read as lord of strangers. Hostire means "equalized or compensate". In the contemporary west, hospitality is a rare matter of protection and survival, and is more associated with etiquette and entertainment. However, it still involves showing respect for one's guest, providing for their needs, and treating them as equals. Cultures and sub-cultures vary in the extent to which one is expected to show hospitality to strangers, as opposed to personal friends or members of one's group. The hospitality service industry includes hotels, casinos, and resorts, which offer comfort and guidance to strangers, but only part of business relationship.

The strong and sustained rise of hospitality industry over the past ten years is one of the most remarkable phenomenon of our time (WTO; 2003). This activity continued to grow steadily in spite of factors such as global economic recession and climate change, which obviously affect the industry through the level of patronage. With the substantial growth in the hospitality industry, this sector has become one of the world biggest industries. It is also the largest and fastest growing and dynamic economic sector (Hamilton and Richard; 2003).

The hospitality and hotel service employ more people than the agricultural, automobile, electronic, steel and textile industries combined. This sector currently support more than 21.5 million jobs around the world, and at the end of 2010, it was projected to be the largest industry in the world with an estimate of 112 million employee around the world (World Economic Forum; 2007). To summarize this growth, the Secretary General of the United Nation World Tourism Organization (UNWTO), Francesco Frangialli (2007), emphasized that "the world tourism has entered into a historically new phase of growth, because hospitality and tourism has become a major source of foreign earnings for many countries.

Nigeria is an important component of African hospitality and tourism, it ranked among the top ten African tourism destination in terms of tourist arrivals (world Tourism Organisation; 2012), and posses strong domestic tourism market (Yeye; 2003), including a wide range of tourism resources (natural, cultural, capital and human). Here, as in many part of the world, the revolution of hospitality and tourism still obviously relate to some factors (political, economical, socio-cultural and even natural such as climate). Freitas (1999), in a study of concepts and methods in tourism climate research, pointed out that it is generally accepted that climate is an important resource base for tourism regions, because it determines the sustainability of the region for tourism. Also a wide range of potential climate change impact on the hospitality and tourism sector was identified in Lagos-Island, Nigeria in an annual report of the Lagos State Ministry of Tourism and Environment in 2012.

In Nigeria, climate has become an important factor as tourism obviously relates to it (Afolabi and

Berritella et al (2004) study on the economic implication of climate change induced on tourism demand revealed that Mediterranean particularly benefit from this, being close to the main holiday makers of wealthy Europe counties, e.g. Spain, France, Italy, Croatia, Slovenia, Bosnia, as well as cool and rainy North West. Thus, climate change may alter this as tourism and hospitality service improves. The current popular holiday destinations may become too hot, and destinations that are currently too cool may see a surge in their popularity and could have a major impact on some economies negatively.

Adebayo (2007) observed that climatology is relevant to mankind and national development in various ways. This he said is because weather and climate often goes a long way to dictate human activities. The type of food consumed by man and animal is dictated by the type of climate being experienced in a particular place. The structure of building erected in place has direct bearing with the climate of the area. The type of clothing material put on by man is associated with the climate of an environment. The type of animals and birds being reared are also dictated by the prevailing climate. Even the type of vegetation that is present in an area is closely related to the influence of climate of such an area (Adebayo and Owolabi, 2006). They also noted that there are certain factors that affect weather and climatic conditions of a place and these factors include altitude, distance from the sea, ocean currents, air masses and winds natural vegetation and soil, slope aspect e.t.c. in a particular day, the weather of a place can change many times. For instance, it could be cloudy at a point and it can rain for short period of time on that same day. The atmospheric condition of a place at any given time can always be stated. In doing this, we are talking about weather (Adebayo, 2010)

Matzarakis (2002) defines some indicators of attractiveness of certain weather conditions to tourist. He also admitted that although many part of our lives are influenced by weather and climate, from the crops we grow to the social activities we engage in, and particularly hospitality and tourism activities. Hence, the natural environment and climatic condition are very important factors which can determine the attractiveness of a region either as a tourist or holiday destination.

2.2 Economic Impact Of Climate Change On Hospitality Industry

A handful of studies had focused on the economic implication of climate change on hospitality service (e.g Berritella et al, 2004). This is because of the previewed economic significance of this sector

which according to Graham and Todd (2003) is the second largest sector in global economy and is capable of providing 28.8 million jobs annually around the world. In addition, Lagos-Island hospitality and hotel service is one of the biggest industry in Lagos State. A wide range of findings (Witt and Witt, 1995) shows that the demand for hospitality service in majority of the studies is focused on economic factors. This might be so, because being an attraction, hospitality and hotel service are business, by discussing the problems of economic impact of climate change on hospitality and hotel services which relates mostly to the problems in the off-peak period, particularly the loss of profit due to the inefficient use of the resources and facilities. This argument is approved respectively by Manning and Power (1984); William and Shaw (1991). They concluded that hospitality and tourism activities are seasonal activities. Consequently, the negative effect of climate change may lead to a shortage of hotel rooms in peak season, whereby the creation of excess capacity can be economically disastrous. The under-utilization of facilities in the off-peak season along with greatly reduced revenue are inevitable, because the majority of the capital assets are inflexible, (Matheson and Wall, 1992). Even though some hospitality and hotel service accommodation close during the off-peak (i.e. less patronage). Some others will remain open so as to obtain sufficient income in order to cover their fixed cost (e.g. Maintenance cost), which represent a large proportion of the total cost. The economic impact is not negative as stated by Grant and Human (1997), who outlined some potential positive economic impact of climate change on hospitality/ tourism (e.g. maintenance work on building and environment).

Another economic impact of climate change on hospitality and tourism is analyzed on nature based tourism, which is an important component of African tourism. A study by Eagles et al (2003) estimates the visitation to parks and protected areas as over 50,000 visitors a day. Moving along the same idea, Scolt and McBoyles (2001), use another theory known as the "Tourism Climate Index" to find the length and quality of both dry and wet season and how tourism will improve market or economy under climate change, consequently, changes in visitors number and seasonal visitation pattern appears very important for parks revenue and the economy of nearby communities. Beside the thesis of negative and positive change on hospitality and tourism, this research work also focus on understanding the shift in demand for hospitality and hotel services as a result of climate change.

Table 5. The list of some hotels on Lagos-Island, their facilities, location, cost and ranking.

Hotel	Address	Accommodation And Facilities	Cost (Per Night)	Ranking
Eko Hotel & Suites	Adekunbo Ademola street, Victoria Island.	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access.	#35,000- #120,000	5 STAR
Apple Wood Suites	Victoria Island	Accommodation; VIP Suites, Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment, Internet access.	#23,000- #58,000	4 STAR
Blue Sea Hotel	Victoria Island Tel: +23412708820	Accommodation; VIP Suites, Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment, Internet access.	#28,000- #42,600	4 STAR
Intercontinental Hotel	LEKKI	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access.	#48,000- #100,000	5 STAR
Victoria Continental Hotel And Towers	Plot 18/ 19 water cooperation road, dide olu estate, off ligali ayorinde street, Apese, Victoria-Island.	Accommodation; VIP Suites, Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#12,000- #50,000	3 STAR
Intercontinental Lagos Hotel	Plot 52A Kofo Abayomi Street, Victoria-Island	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access	#85,560- #150,000	5 STAR
Eko Hotel & Suites	Victoria-Island	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access	#69,900- #150,000	5 STAR
Hardlyapartment	Adeola Odeku, Victoria-Island	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#12,000- #50,000	3 STAR
Villa Picasso Corporate Suites	62B Adetokunbo Ademola street, Victoria-Island	Accommodation; VIP Suites, Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment, Internet access	#25,000- #50,000	4 STAR
Cotton Suites	5 Amodu Tijani Street, off Sanusi Fafunwa Street, Victoria-Island	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment, Internet access	#19,999- #50,000	4 STAR
Lagos Oriental Hotel	3 Lekki Road, Victoria-island	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access	#44,500- #150,000	5 STAR
Micheal Lodge	Plot 1411 Adetokunbo	Accommodation; Executive Suites, Deluxe	#19,800-	3 STAR

	Ademola Street, Victoria-Island	and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#48,000	
The Belaggio Corporate Suites	1686A Oladele Olashore Street, off Sanusi Fafunwa Street, Victoria-Island	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#12,000- #40,000	3 STAR
Radisson Blu Anchorage Hotel	1A Ozumba Mbadiwe Avenue, Victoria-Island	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access	#66,000- #150,000	5 STAR
Four Points	Block 2, Plot 9/ 10 Oniru Estate, Victoria-Island	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access	#65,900- #150,000	5 STAR
Best Western	Plot 1228 Ahmadu Bello Way, Bar Beach, Victoria-Island	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment, Internet access.	#40,000- #60,000	4 STAR
Hotel Bon Voyage	57A Marinho Drive, off Ajose Adeogun Street.	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment, Internet access.	#35,900- #50,000	4 STAR
Protea Hotel Kuramo Waters	Kuramo Waters Close, off Akin Ogunlewe Street	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment, Internet access.	#40,600- #80,000	4STAR
Hotel Victoria Palace	Plot 1623, Saka Jojo Street, off Adeola Odeku Street, Victoria-Island	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#17,393- #38,500	3 STAR
Cumberland Hotel	2/ 4 Adeola Odeku Street, Victoria-Island.	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#16,870- #38,000	3 STAR
The Sanzak Place	159A Sinari Darinijo Street, off Ligali Ayorinde Street, Victoria-Island.	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#17,000- #35,000	3 STAR
Federal Palace Hotel	6-8 Ahmadu Bello Way, Victoria-Island	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access	#68,000- #120,000	5 STAR
Beni Apartments	Plot 37 Ahmadu Onibudo Street, off Adeola Hopewell, Victoria-Island.	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#38,000- #75,000	4 STAR
Apple Wood Suites	Victoria –Island	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#23,000- #58,000	4 STAR
Blue Sea Hotel	Victoria-Island	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access	#42,000- #158,000	5 STAR
Bogobiri House	Maitama Sule, opposite Nimbus Art Center, Ikoyi	Accommodation; Palm Suite, Double Suites, Single rooms, and Bar	#18,200- #39,000	2 STAR

	South West			
Hotel Belisimo	Along Lekki express road, Victoria-Island Lagos.	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#20,200- #60,000	4 STAR
Ambassador Hotel	Okotie Eboh, Ikoyi, Lagos	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#20,000- #60,000	4 STAR
Bay Watch Guest House	25 Oju Olobun Close, Victoria-Island	Accommodation; Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment	#28,400- #42,600	4 STAR
Sheraton Hotel	Opposite Chevron and Mobile Headquarter, Lekki express way, Victoria-Island	Accommodation; detached private rooms, Single rooms, Double Executives, Presidential suites, Bar, Hall, Gym, Swimming pool, Car hire, Private beach, Parking space, Aesthetic environment, Credit card, Internet access	#50,000- #180,00	5 STAR
De Ritz Hotel Deluxe	4 Tialade Close, off Bmishile Street, Victoria-Island.	Accommodation;+ Executive Suites, Deluxe and Standard, Bar, Gym, Swimming pool, Parking space, Aesthetic environment, 24 hrs reception.	#25,000- #35,000	4 STAR
Golden House	Golden House Apartment, near Palms (Shoprite), Block 64, Plot 7, Emma Street, Victoria-Island.	Provide low budget private housing facilities, laundry and bar, free internet, free parking space, laundry services.	#25,000- #35,000	4 STAR
Hotel 1960	Ikoyi Lagos	Luxurious Accommodation, Free Internet service, free Parking Space, Eatery and Bar	#25,000- #35,000	4 STAR
The Lekki Inn	Lekki Lagos	Luxurious Accommodation, Free Internet service, free Parking Space, Eatery and Bar	#15,000- #32,000	3 STAR

Methodology

Data for this study were collected from primary and secondary sources. The primary source was through personal survey and the collection of data from two different hotels (The Intercontinental Lagos Hotel and Protea Hotel Kuramo Waters) using administration of nineteen items questionnaire based on categories of respondent (Appendix 1). A total number of two hundred (200) copies of the questionnaires were administered on visitors, tourist as well as hotel staffs (120 copies on visitors/tourist, 80 copies on hotel staffs). The two hundred copies distributed were not completely retrieved, and one hundred and seventy-eight (178) copies were retrieved with the assistance of the hotel management. Data collected were to indicate, annual weather variation, amount of monthly patronage, hotel statistics. More so, tourism and climate related data were collected

from secondary sources which include internet (e.g. Wikipedia, Google, Accuweather), and existing journals (i.e. tourism and climate related write-up).

For proper data analysis of hypothesis, the Chi-square statistical method was used.

All the data collected has helped to note the seasonal change in level of patronage and the economic effect of climate change on hospitality and hotel service.

Result And Data Discussion.

Table 6 below show that the tourist population of Lagos-Island is made up of 33.7% (18-38 years) age group, 49% (39-58) age group, and 17% (59 and above) age group. This simply means that majority of the people that come for hotel services in Lagos-Island fall within the age range 18-38 years and 39-58 years (82.6%).

Table 6; Age Distribution of Respondent

Age	Frequency	Perecnt	Cummulative
18-38	33	33.7	33.7
39-58	48	49	82.6
59 AND ABOVE	17	17.3	100
TOTAL	98	100	

Source: fieldwork 2014.

Table 7 below shows that 18.3% of the tourists made use of hotel services and facilities on daily bases for activities like clubbing, restaurant, gymnasium, swimming and drinking, while 34.6% made use of hotel services and facilities on weekly summits and seminars, and social occasion, 28.5% made use of hotel

services and facilities annually for festival celebrations (e.g. Christmas, Easter and New year celebration, social events and tourism purposes). This implies that tourist made use of hotel service and facilities more on weekly bases.

Table 7: Trip frequency on how tourist visit hotel.

Period	Frequency	Percent %
Daily	18	18.3
Weekly	34	34.6
Monthly	28	28.5
Yearly	24	20
TOTAL	98	100

Source: fieldwork 2014.

Table 8 below shows the responses of tourist as to whether or not weather condition can influence their decision to travel for tourism or hospitality purpose, and 37.8% of the total population revealed that weather condition can discourage their decision to travel, while 17.3% stated otherwise that it can encourage them, so also 28.6% are indifferent, and 16.3% have no option at all. This therefore implies that change in weather condition discourage majority of tourists.

Table 8 seasonal changes affect hotel service

Responses	Frequency	Perecent
Seriously	8	10
Partially	60	75
Not at all	12	15
TOTAL	80	100

Source: fieldwork 2014

Table 9.

Responses	Frequency	Percent
Low-earners	20	20.4
Middle-earners	33	33.7
High-earners	45	45.9
TOTAL	98	100

Source: fieldwork 2014

Table 9 above shows the responses of hotel service staff on the type of income earners who patronize their service more in Lagos-Island. Their response shows that 20.4% of the low-income earners patronize hotel services, while 33.7% of middle class income earners and 45.9% of high-class income earners patronize hotel service as well. This therefore implies that the high-class income earners patronize hotel services more than the low-income and middle-class income earners. This fact is well supported with the

information provided on table 1.3 by the hotel management.

Table below shows the responses of hotel service staffs on wether or not seasonal change in weather and climate affect hotel service and quality. Their responses revealed that 10% of them believe seasonal change in weather seriously affect hotel service, while 75% believe it affects it partially, and 15% agreed not at all. This therefore implies that seasonal change in weather can affect partially hotel services.

Table 10 shows the responses of hotel service staffs on the seasonal inflow of visitation. Their responses revealed that 58.2% of tourist visit during the dry season, 23.5% during wet season, and 18.4% at any time. This implies that tourist prefer to visit hotel more during the dry season. This fact is well supported by table 4.7, which indicate the tourist monthly inflow statistic of The Intercontinental Hotel and Protea Hotel Kuramo Waters for 2014.

Table 10 what season does tourist use hotel services more.

Responses	Frequency	Percent
Dry Season	57	58.2
Wet Season	23	23.5
Any-Time	18	18.4
Total	98	100

Source: fieldwork 2014

2014 visitors/tourist monthly inflow statistics for The Intercontinental Hotel and Protea Hotel Kuramo Waters, Lagos-Island, Nigeria.

The Intercontinental Hotel

Protea Hotel

Total number of rooms available= 358

Total number of rooms=65

Table 11.

Months	N0: Of Rooms Occupied	N0: Of Patronage	N0:Of Rooms Occupied	N0: Of Patronage
JAN	305	511	65	230
FEB	256	423	54	227
MAR	187	300	47	202
APR	185	245	42	197
MAY	169	220	28	181
JUN	142	204	25	176
JUL	167	235	35	178
AUG	187	270	62	205
SEP	358	467	65	247
OCT	358	600	65	250
NOV	358	607	65	254
DEC	358	620	65	258

Source: fieldwork 2014.

Table 11 shows the change in seasonal weather condition of Lagos-Island for 2010 and 2014. This fact, when compared with data on table 4.7 reveal that the dynamic and unprecedented change in weather condition may have succeeded in reducing the seasonal

level of patronage of hotel service, where tourist inflow is seen to increase more during the dry season, and also decrease during the wet season. This therefore implies that, the more the rainy days the less the customer/ tourist patronage, and vice versa.

Table 11.1: Lagos-Island, monthly climate data, 2010, Average temperature in °C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MAX:	31	31	32	32	31	29	28	28	28	29	31	31
MIN:	23	25	26	25	24	23	23	23	23	23	24	21
AVERAGE:	27	28	29	28.5	27.5	26	25.5	25.5	25.5	26	27.5	26

Source: (British Broadcasting Commission, weather report 2010)

Table 11.2

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MAX:	33	32	33	32	32	30	28	26	28	27	31	30
MIN:	25	24	25	21	25	24	23	24	24	24	24	25
AVERAGE:	29	28	29	26.5	28.5	27	25.5	25	26	25.5	27.5	27.5

Source: (accuweather.com)

Hypothesis Testing

Data used for testing the hypothesis in table 4.9 are gotten from appendix ii; below is the chi-square statistical test table.

Test Statistics

	What Range of Income Earners Patronize Hotel Service More?	What Season Does Tourist Use Hotel Service More?	Does Seasonal Change Affect Hotel Service?	How Weather Condition Influence Your Decision to Travel?
Chi-square	111.449	80.775	100.124	52.876
df	2	2	2	3
Asymp. sig.	.000	.000	.000	.000

1. H0: There is no significant difference between patronage of hotel service by the different level of income earners.
From the chi-square test result in table 4.8, the calculated chi-square (X^2c) is given as 111.449, degree of freedom =2.
At 5% level of significance, with degree of freedom =2, the tabulated chi-square (X^2t) is given as 5.991.
From the above results, since the X^2c (111.449) is greater than X^2t (5.991), we therefore reject the null hypothesis (H0) and conclude that there is a significant difference between patronage of hotel service by different level of income earners.
2. H0: There is no significance good weather condition for tourist decision to travel.
From the chi-square test result in table 4.8, the calculated chi-square (X^2c) is given as 52.876, degree of freedom =3
At 5% level of significance, with degree of freedom =3, the tabulated chi-square (X^2t) is given as 7.815 from the above result, since the X^2c (52.876) is greater than the X^2t (7.815), we therefore reject the null hypothesis (H0), and conclude that there is a significant good weather condition for tourist to decide to travel.
3. H0: There is no significant difference between seasons which tourist can visit hotel service.
From the chi-square test result in table 4.8, the calculated chi-square (X^2c) is given as 80.775, degree of freedom =2
At 5% level of significance, with degree of freedom =2, the tabulated chi-square (X^2t) is given as 5.991. From the above result, since the X^2c (80.775) is greater than the X^2t (5.991), we therefore reject the null hypothesis (H0), and conclude that there is a significant season which tourist can visit hotel service more.
4. H0: There is no significant influence of climate change on the attractiveness of hotel service.
From the chi-square test result in table 4.8, the calculated chi-square (X^2c) is given as 100.124, degree of freedom =2
At 5% level of significance, with degree of freedom =2, the tabulated chi-square (X^2t) is given as 5.991. From the above result, since the X^2c (100.124) is greater than the X^2t (5.991), we therefore reject the null hypothesis (H0), and conclude that there is a significant influence of the climate change on the attractiveness of hotel service.

Summary, Recommendation, Conclusion.

The issue of climate change as it affects hospitality and hotel services in Lagos-Island, had been observed to have effect not only on the tourist patronage, but also, it can create a seasonal increase and decrease in the revenue generation of such hotel service provider. It may also have a negative effect on the environment. It is therefore necessary that the government, climate expert, environmentalist, hotel service managers, and tourism/ hospitality related activities owners put together a strong effort, in order to protect our environment, for a better tourism and hospitality management.

Recommendation

1. In view of the findings in this study (e.g. reduction in patronage and hotel revenue generation), hotel service managers should put into consideration proper strategies, facilities and programmes to encourage tourism or visitors at any season.
2. Having ascertain peak period of Lagos-Island hotel service, which is during the dry season, the management should devote time for strategic advertisements during the rainy season to give room for a balance in the carrying capacity of the hotel service during the dry and rainy season.
3. For the potentials inherent in the hotel service to be fully realized, management of a hotel service should ensure proper planning and efficient managerial procedures and activities.
4. Hotel service providers should always put into consideration the different level on income earners at point of establishment, in order to provide adequate and affordable services for all.
5. Hotel service providers should endeavor to equip their hotels with latest technologies that will help reduce the threat of seasonal and weather variation on the hotel service and activities, in order to improve visitors and tourist patronage, as well as revenue generation.

Conclusion

In the light of the findings on this study, it is now certain that weather and climate change can determine and also influence tourist decision to travel. It is necessary that we observe the facts that in a situation where the influence is negative and the tourist do not move, the inflow of tourist to destination will be limited. Therefore, development in the tourism and hospitality industry will also be limited. To avert this, tourism and hotel managers must be aware of the significant effect of climate change (e.g. patronage reduction), in order to effectively manage and provide adequate facilities and programme.

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5.4 Appendix

- (i). Map of Lagos, Nigeria.
- (ii). Questionnaire.

Map Of Lagos

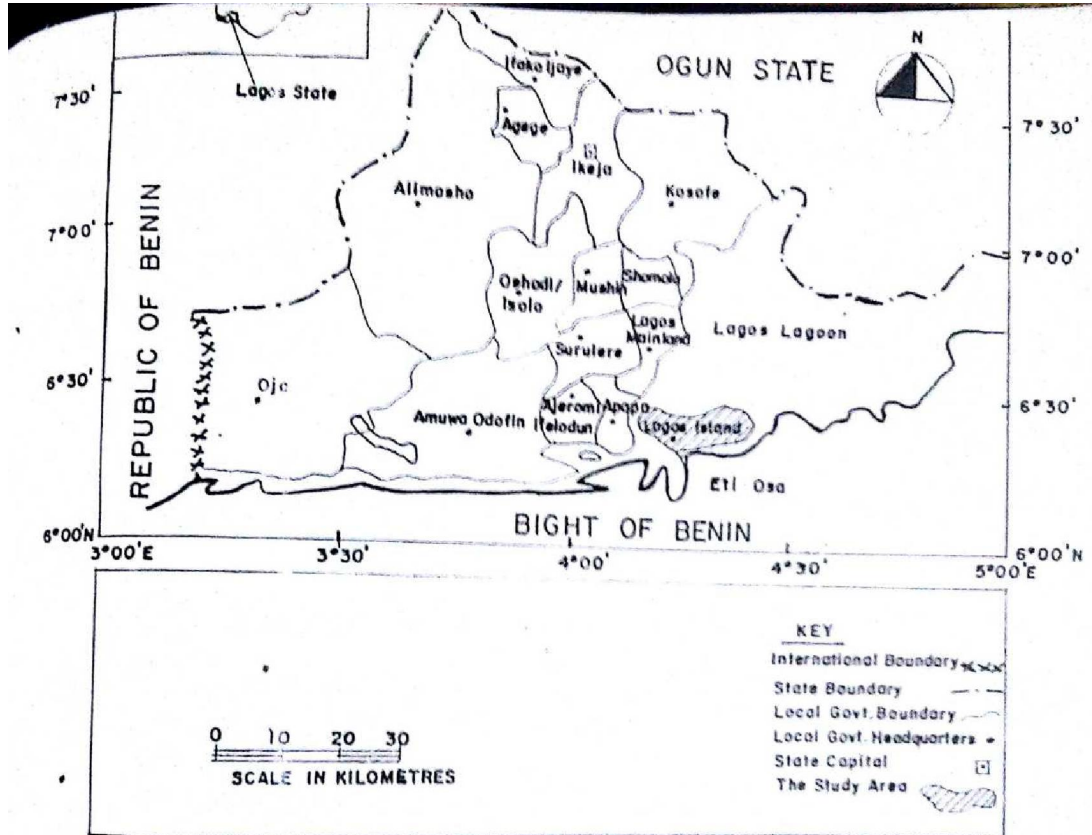


FIG. : LAGOS STATE IN MAP SHOWING THE STUDY AREA (LAGOS ISLAND).
 Source: Lagos Island Local Government, Lagos State/ Department of Geography & Planning Science, Cartographic Unit, University of Ado-Ekiti (UNAD).

Section A.

This Section Is To Focus On The Public, Where The Following Questions Will Be Asked;

1. Age Group..... (18-38), (39-58), (59 And Above)
2. Sex..... Male /Female
3. Occupation.....(Student), (Politician), (Banker), (Others).
4. Income Status..... (Low Income), (Middle Class) (High Income)
5. How Many Hotel Do You Know Exist In Lagos-Island..... (10-20), (21-40), (41-60), (61-Above)
6. Do You Make Use Of Hotel Services..... Yes /No
7. How Often Do You Vist Hotel.....(Daily), (Weekly), (Monthly), (Yearly).
8. What Month Of The Year Do You Visit..... (January-March),

- (April-June),
 (July-September),
 (October-December).
 9. Does Weather Condition
 Influence Your Decision
 To Visit..... (Discourage),
 (Indifferent),
 (Encourage), (No Option).
 10. At What Season Of The Year
 Do You Like To Go On Leisure..... (Dry),
 (Wet), (Anytime).

Section B

This Section Is To Focus On The Hotel Service Company, Where The Following Questions Were Asked;

1. Name Of Hotel.....
2. What Type Of Hotel Accommodation
 Do You Offer.....
3. How Many Rooms Does The Hotel Have.....
4. What Other Facilities Does
 The Hotel Have..... (Gym), (Swimming Pool),
 (Hall), (Internet),
 (Car-Hire), (Others, Specify.....).
5. What Age Range Patronize
 The Hotel Service More..... (18-38), (39-58),
 (59-78), (79-Above).
6. At What Month Of The Year
 Does The Hotel Service
 Experience High Patronage..... (January-April),
 (May-August),
 (September-December).
7. At What Month Of The Year
 Does The Hotel Experience
 Low Patronage..... (January-April),
 (May-August),
 (September-December).
8. How Bad Is The Climatic Seasonal
 Variation Affecting The Hotel..... (Seriously),
 (Partially),
 (Not At All).
9. How Does The Hotel Dispose Its
 Waste..... (Sewage),
 (Land-Fill), (Refuse Bin),
 (Others).

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