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Impact of Fuel Subsidy Removal on Tourism in Sub-Saharan Africa: A Case Study of Epe, Lagos Nigeria

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Abstract: This paper examines the impact of fuel subsidy removal on tourist behavior at the destination level. It focuses on the specific impact of fuel price increases on tourist spending patterns, investigates the relationship between fuel subsidy removal and length of stay in Epe, Lagos Nigeria with emerging tourism significance and recommends practical implications for hospitality and tourism sector adaptation strategies. Using quantitative design in which questionnaires were used to collect data, and analyzed with chi-square test of independence. The paper finds that fuel price increases have significantly impacted tourist spending patterns. The paper contributes refreshing insights useful for policy development, economic analysis, environmental considerations, market trends, investment decisions, consumer behaviour and regional development. The implications are vital for stakeholders, including local businesses, government officials, and community leaders to take informed decisions, navigate the challenges and opportunities arising from fuel subsidy removal and foster a resilient tourism sector in tourist destination areas.

Keywords: *Fuel Subsidy Removal, Tourist Behaviour, Spending Pattern, Tourism Resilience, Epe, Lagos.*

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I. INTRODUCTION

Tourism has long been recognized as a significant, dynamic, vibrant and growing sector contributing to sustainable economic development, stimulating employment, community empowerment, foreign exchange earnings, cultural preservation, and regional development in emerging economies (Elgin & Elveren, 2024, UNWTO, 2020). Being one possible development path for urban centers in developing economies within the sub-Saharan Africa, it boosts transportation and hospitality services, enhances business travel, cultural festivals, retail consumption and entertainment services (Oba & Diminyi, 2025), and also diversify dwindling national economies. Tourism is a major driver of economic growth, accounting for 10% of the global economy, contributing US$10.9 trillion to global GDP and supporting 357 million jobs, or one in ten people worldwide. International visitor spending reached US$1.9 trillion (World Bank Group, 2025). In the wake of the COVID-19 pandemic, tourism has shown resilience, recovering to about 7.6% of global GDP by 2022. However, despite the fact that the tourism sector is very important for economic diversification especially in developing countries, it is quite exposed to external forces and impacts in the wider market landscape (Poutakidou, & Menegaki, 2023), its impacts are still not understood (Feuerbacher, & Flaig, 2025).

The accessibility of energy is crucial to the current tourism business model, as the sector is inherently fuel-driven and energy-intensive due to its reliance on transport (Becken, 2008). This dependence means that fluctuations in oil prices can significantly impact tourism demand through mechanisms such as reduced disposable income and deferred major purchases (Can & Gozgor, 2016; Edelstein & Kilian 2009). As Nigeria shifts to diversify its economy through tourism, understanding this vulnerability to energy costs is vital for shaping the nation's economic future.

The World Travel and Tourism Council (WTTC, 2025) projects that Nigeria's tourism sector will contribute ₦11.2 trillion ($7.5 billion) to GDP in 2025, a rise from the ₦10.9 trillion recorded in 2024. This significant progress is possible through harnessing of the nation's rich cultural heritage and creative arts, entertainment and hospitality services, which can attract more tourists and stimulate economic growth in sub-Saharan Africa. Despite Nigeria's economic growth and significant tourism potential, the country remains vulnerable to resource-based economy challenges with volatile growth patterns (Fritova Economics, 2017), while much of its

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tourism potential remains unrealized due to inadequate policy implementation and infrastructure development (Linus, Abdul & Lawal, 2024). These challenges had negative impact on the growth of the tourism industry in Nigeria (Amalu, Phil-Eze, & Ajake, 2020). Therefore, as Nigeria's tourism industry seeks to compete in the highly competitive global tourism market, assessing the impact of fuel subsidy removal on the tourism destination patronage is critical to understanding its broader economic implications.

Fuel subsidy is government-funded decrease in the market price of fossil fuels, implemented to lower consumer costs below usual market rates (Ovaga & Okechukwu, 2022). This fiscal intervention typically involves direct price controls, tax exemptions, or compensatory payments to fuel distributors. The President Bola Tinubu formally removed fuel subsidy in 2023 so as to cut down government expenditure. Thereafter, inflation climbed sharply, which degenerated the cost-of-living crisis and fueled tension among the populace. This represents a significant economic policy shift that has complex impact and widespread implications across all sectors of the economy, particularly tourism (Anyaogu, 2024). Historically, fuel subsidies were seen as a means of cushioning the economic burden on Nigerian citizens, but they also contributed to market distortions and fiscal leakages which have positive and negative consequences (Sakanko, Ayomilafe & Safinayu, 2024). While the policy was intended to correct long-standing inefficiencies and free up government revenue for infrastructure and social investment, its unintended consequence has been a sharp increase in transportation and commodity costs (Adeola, 2025).

In the post-subsidy economy, Nigeria has witnessed increased transportation and living costs for both rural and urban services, which are critical to tourism operations (World Bank, 2023). The increasing cost of goods and services has made purchasing power much less strong, which have direct impact on travel behavior and domestic tourism patterns (Mbaegbu & Nwanze, (2025); Oba & Diminyi, 2025). For tourism, an industry highly dependent on mobility, affordability, and discretionary spending, these changes pose serious challenges to patronage and operational sustainability. The continued consequences of fuel subsidy removal continue to disrupt Nigeria's hospitality and tourism industries, necessitating empirical assessment of its multi-dimensional effects on sectoral growth and sustainability (Anugwolu, 2023), particularly in Epe, Lagos State, Nigeria where this study is based.

Epe, a coastal town in Lagos State, Nigeria, is uniquely positioned as a potential tourism hub due to its rich cultural festivals, scenic waterfronts, and traditional markets, including the popular fish market and ancient shrines. Its proximity to Lagos metropolis makes it accessible for both local and international tourists. In recent years, local governments and private investors have made modest efforts to promote tourism in Epe as part of the broader Lagos state tourism development agenda (Lagos State Ministry of Tourism, Arts and Culture, 2022). However, the recent economic transitions have influenced how both local and international tourists engage with tourism products in Epe. The rise in fuel prices and inflation rates has altered consumption patterns and travel preferences, prompting a reevaluation of the sustainability and resilience of tourism destinations within the context of a liberalized economy (Okonkwo & Balogun, 2023). Furthermore, tourism businesses in Epe now face new operational constraints, ranging from higher logistics costs to fluctuating consumer demand.

This article explores impact of fuel subsidy removal on tourism patronage in Epe, Lagos State, Nigeria. It aims to understand the dynamics of tourist behavior in the context of economic restructuring and to suggest strategies that need to be adopted by stakeholders in the tourism sector so as to navigate these changes. Understanding these dynamics is critical for developing adaptive tourism policies that can support local and developing economies, promote sustainable travel, and ensure equitable economic benefits to destination marketers, planners, and tourism policy-makers in Sub Saharan Africa.

II. LITERATURE REVIEW

Fuel consumption subsidies, has become a general global phenomenon implemented to motivate production, decrease inequality, alleviate energy scarcity, and stabilize local prices (Estache & Leipziger, 2009; Taylor, 2020). As a government policy intervention strategy, it reduces the market price of fuel production to enable consumers pay less than the prevailing market price (Ovaga and Okechukwu, 2022). Fuel subsidies have been a longstanding feature of Nigeria's fiscal framework, rooted in the government's desire to stabilize domestic fuel prices and alleviate economic pressures on citizens. It can be economically beneficial because it reduces costs for consumers and mitigates the effects of fluctuating international oil market price. Essentially, fuel subsidy covered 79% of the actual price per liter, meaning the government absorbed 79% of the cost. As a result, consumers only paid 21% of the true market price per liter (Nwachukwu et al., 2013). The main purpose of fuel subsidy is to alleviate poverty and enhance citizen's living standards (Onyeizugbe & Onwuka, 2012). Dauda, (2021) identified two categories of subsidies: (a) producer subsidies (when the government raises the market price received by producers), and (b) consumer subsidies (when the price paid by consumers is below the market rate). McCulloch et al. (2020) argues that fuel subsidies impose a greater fiscal burden on the government than their benefits, as the state covers the portion of petroleum product price that consumers are meant to pay.

Petroleum products continue to play a crucial role in powering households and businesses worldwide. In 2020, global energy subsidies reached USD 6 trillion (7% of global GDP), led by China (USD 2.2 trillion), the U.S. (USD 0.66 trillion), and Russia (USD 0.52 trillion) as the largest contributors (Maih, Omotosho, & Yang, 2024). Notably, in 2017, oil-producing developing nations accounted for 48.3% of global pre-tax subsidies, highlighting their reliance on fossil fuel support (Estache & Leipziger, 2009). According to

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the International Energy Agency, global fossil fuel subsidies increased from 325 billion in 2018 to 325 billion in 2018 to 1 trillion in 2022, which exceeded both worldwide aid ($204 billion) and the combined government revenues of developing nations (Ozili & Obiora, 2023). Adeola (2025) reports that Nigeria's fuel subsidy payments reached over ₦4 trillion annually by 2022, creating substantial fiscal leakage and severely constraining federal/state investments in critical infrastructure and development sectors. The intense global debate on fuel subsidy reform, driven by subsidies' fiscal burden, social and environmental impacts, and link to oil price volatility, provides a critical context for Nigeria. The contentious removal of its subsidy without first implementing palliatives has raised significant concerns about the policy's economic and social effects, necessitating a thorough examination of its implications (Ozili & Obiora, 2023).

Restructuring Nigeria's petroleum sector has emerged as a critical economic priority in recent policy debates. This resolve is reflected in the growing body of literature analyzing the country's fuel subsidy framework and its impacts (Adekunle, & Oseni, 2021; Asare et al., 2020; Moerenhout, & Yang, 2021; Ogwuche et al., 2024; Omitogun et al 2021; Omosunmibo 2025; Omotosho 2020; Ovaga & Okechukwu 2022; Ozili & Arun, 2023; Ozili & Obiora 2023; Umeji & Eleanya 2021). Resulting from this growth are proponents arguing that subsidy removal would free fiscal resources for critical public investments (transportation, energy, housing), while critics warn of immediate inflation and disproportionate burdens on low-income households (Omosunmibo 2025). However, despite divergent perspectives, there is little discussion about the impact of the recent fuel subsidy removal in the Nigerian hospitality and tourism industry.

The removal of fuel subsidies in 2023 in Nigeria represents a significant economic policy shift with far-reaching implications for the tourism and hospitality sector. In reality, the lingering effects of fuel subsidy removal continue to interrupt the hospitality, travel, and tourism sectors, necessitating a deeper analysis of its implications. Some studies highlight the immediate inflationary effects of subsidy removal on transportation and hospitality operations (Adeola, 2025; Ozili 2023; Emeka & Unachukwu, 2024; Ogwuche et al., 2024; Raifu & Afolabi 2024). Anugwolu (2023) outlines three primary challenges facing tourism stakeholders: falling visitor numbers driven by rising transport costs, growing operational expenses across key sectors, and the imperative to respond to evolving traveler demographics and consumption patterns.

- *Tourism and Hospitality Demand*

Taking a leaf from tourist market research, some researchers divide the factors influencing tourists in choosing their vacation destination into demand factors and supply factors (Mihai et al., 2023).

Tourism demand is vital to the hospitality industry as the number of guests depends on tourist arrivals, and while the sector is highly vulnerable to changing factors such as price, income, preference and substitutes, affecting tourism, some evidence suggests that hotels and restaurants exhibit resilience, particularly during financial crises (Sampaio, Sebastiao & Farinha, 2024; Song, Li, & Witt, 2012). The literature on tourism demand treats destination patronage as underpinned by inter-related factors such as economic viability, tourist socio-psychological factors, structural changes in the market dynamics, and policy frameworks (Adeola, 2023; Crompton, 1979; Crouch, & Ritchie, 1999; Prideaux, 2000). It is rooted in the notions of "utility maximization", the idea that tourists, as rational decision-makers, seek to optimize their satisfaction (utility) by selecting destinations that offer the best combination of perceived benefits relative to costs, within their constraints (Lancaster, 1966; Crouch & Ritchie, 1999). Essentially, tourists seek to enhance benefits (e.g., experiences, convenience, value) while minimizing costs (e.g., price, effort, risk) (Lancaster, 1966; Crouch & Ritchie, 1999). Menchenko & Javed (2023) identified three economic factors influencing tourism and hospitality demand as income levels, exchange rates and overall economic stability.

Thus, in tourism and hospitality, demand is significantly influenced by the cost of transportation, accommodation, and general travel expenditure. Empirical studies (Sampaio, Sebastiao & Farinha, 2024) reveal significant shifts in tourism and hospitality demand characteristics, offering valuable strategic implications for industry stakeholders. Although tourism and hospitality demand drivers vary, tourism critically impacts the hospitality industry, as declining tourist numbers immediately constrain hospitality sector revenues (Sampaio et al., 2024). Research findings by Akadiri, Akadiri & Alola (2017) shows that international tourist arrivals significantly increase carbon dioxide emissions in the long run. Other studies also establish that tourist flows are significantly influenced by both risk perceptions (Farmaki, 2021; Novelli et al., 2018; Sano & Sano, 2019; Sampaio et al., 2022) and macroeconomic factors, including GDP per capita, real exchange rates, population size, and trade openness (Ali Soofi et al., 2018). Tourists might decide where to stay and duration of stay based on these factors which helps to forecast and determine hotel performance (Binesh, Belarmino, & Raab (2021).

- *Fuel Subsidy Removal Impact on Tourism Patronage*

Assessing the impact of fuel subsidy removal on tourism patronage is crucial to redirecting government spending from subsidies to tourism development which is a key sector for Sub-Saharan African countries, particularly Nigeria's economic growth. Generally, the impact of fuel subsidy removal is likely to provide palliatives and other economic relief programs to cushion the adverse effect on individuals and businesses (Ozili & Obiora, 2023). Additionally, beyond data collection, it delivers added value by interpreting, synthesizing, and linking findings to highlight key implications and relationships for tourism and hospitality sector.

Several researchers (Adadu & Bemgba, 2024; Akinyotu, 2024; Akpan & Uford, 2024; Akpojotor et al., 2025; Edet, 2023; Idris et al., 2024; Ogboru & Taiwo, 2024; Ogwuche et

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al., 2024; Wododo et al., 2012) have approached the impact of fuel subsidy removal from different perspectives. The core dimensions that are frequently highlighted irrespective of divergent approaches include, human security, economic growth and development, family income and sustainability. However, although the empirical work of Alli, Jubril, & Bello, (2024) is currently one of the major driving -force in developing an increased understanding and knowledge of fuel subsidy removal impact, several models are evident in literature. Examples include Markov-switching dynamic stochastic general equilibrium model (Maih, et al., 2024). The others on oil price shocks highlights their nonlinear, asymmetric macroeconomic effects, with studies like Hamilton (1996); Kilian (2009) and Caldara et al. (2019) examining their sources, while others (e.g., Rahman and Serletis 2010; Hwang and Zhu (2024) and Gazzani et al. (2024)) analyze central bank responses. Nonlinear econometric methods are needed to capture time-varying impacts, though challenges like non invertibility in SVARs persist. DSGE models with regime-switching (e.g., Schorfheide 2005) address structural shifts, but gaps remain in linking oil volatility to policy design for oil-rich economies like Nigeria.

While small open-economy DSGE models (e.g., Omotosho 2019a) examine the macroeconomic effects of oil shocks, they seldom integrate regime-switching to analyze policy reforms like subsidy removal. Empirical studies confirm these reforms spur inflation and inequality (e.g., Coady et al. 2019), yet general equilibrium analyses remain scarce. This study employs an econometric framework to evaluate how Nigeria's fuel subsidy removal influences tourism demand, pricing, and sectoral performance. Building on Alli et al. (2024), we integrate tourist responsiveness to shocks, providing policy-relevant insights for protecting the hospitality sector during economic restructuring

III. METHODOLOGY

Data collection took place at Epe Resort and Spa, a premier tourist destination located at the end of the Epe-Lekki Express Way Lagos, Nigeria. This luxury retreat center serves as a sanctuary for tourists seeking rejuvenation and offer world-class hospitality services, making it one of Lagos State's most prestigious resort destination. The target population comprised three distinct groups: (1) tourists visiting the tourist resort, managers and staff with operational knowledgeable of destination activities. The target population includes tourists who arrived at the tourist destinations and senior managers and staff at the tourist destination and Ministry of Tourism who are customers, policy-makers and knowledgeable about industry practices. Both qualitative and quantitative techniques were utilized for data analyses. The rationale for selecting a mixed-method which integrates both qualitative and quantitative data strategy was to enhance and provide a comprehensive understanding of complex phenomena (Ahmed, Pereira, & Jane, 2024). A purposive sampling technique was employed for selecting managers and staff participants, while tourists were sampled through convenience sampling during the study period. The research instruments focused on examining the impact of fuel subsidy removal on tourists' spending and length of stay at tourist destination area. The questionnaire was structured under the following thematic dimensions; (i) general questions seeking to establish socio-demographic characteristics of the respondents; (ii) the effect of increase in fuel price on tourist spending at tourist destinations were measured with 5 variables (iii) effect of fuel subsidy removal on length of stay of tourist at tourist destinations were measured with 5 variables. All measures were on a four-point Likert-style rating scale anchored on '4 for strongly agree, 3 for agree, 2 for disagree and 1 for strongly disagree'. The questionnaire was administered to the respondents. In about 70% of the cases, questionnaires were handed out to customers for self-completion, whereas in about 30% of the cases, the researchers read out the questionnaire to respondents and scored the answers given. In all, 200 questionnaires were shared and 150 respondents responded to the questionnaires. As sample sizes grow larger (typically exceeding n=200), the chi-square test becomes increasingly likely to detect statistically significant associations, even when effect sizes are practically negligible (exacerbating Type I error risk). This occurs because the test's sensitivity to minor deviations from expected values strengthens with larger N, potentially producing misleading significance for trivial effects (Schumacker, 1996). Consequently, large-sample chi-square results always require complementary effect size analysis to distinguish statistical significance from practical importance. Data analysis procedures employed descriptive statistics for data characterization and Chi-square tests of independence for categorical and relationship analysis. The descriptive analysis creates the table of the observed and expected frequencies which is used to calculate the chi-square value. Then, the degree of freedom for the Chi-square test of independence was calculated. The specific technique serves to determine whether the data are significantly different from what is observed (Turney, 2022). Additionally, the analysis not only indicates the significance of any observed differences but also offers detailed insights into which specific categories contribute to the identified differences (McHugh, 2013). Accordingly, this methodological approach enabled determination of statistical significance of fuel subsidy impacts, specific patronage shifts in tourism behavior and practical implications for hospitality and tourism industry stakeholders. The interview guide focused on how the tourism industry will survive and thrive after a policy change that has drastically increased its primary operational cost. This was thematically analyzed.

IV. ANALYSES OF FINDINGS

- *The Impact of Fuel Subsidy Removal on Tourism Patronage in Epe, Nigeria*

To investigate the impact of fuel subsidy removal on tourism patronage, a survey was applied to assess respondents' perceptions of how recent fuel price increases have affected tourism in Epe. The findings reveal an overwhelming consensus by the tourists that the fuel price increase has had a significant and negative impact. For every statement, the vast majority of respondents selected "Strongly Agree" (SA). The increasing percentage for "Strongly Agree" and "Agree" (SA+A) is exceptionally high for all statements,

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ranging from 95.33% to 100%. Statements 2 and 3 in table 1 show the strongest agreement, with 100% of respondents acknowledging an increase in transportation prices and 100% noting a reduced frequency of visits to tourist destinations.

Table 1 Perceived Impact of Increased Fuel Prices on Tourism Activities in Epe

S/n	Impact on tourist behavior and costs	SA	A	D	SD	Total
1	The increase in fuel price affected your spending on tourism activities in Epe	126	19	0	5	150
2	There is increase in Price of transportation to get to the selected tourist	140	10	0	0	150
3	There is reduced frequency of visits to this tourist destination due to the increase in fuel prices	142	8	0	0	150
4	There are changes in the price of goods and services at the tourist destinations since the increased in fuel prices?	114	20	6	10	150
5	Have you observed any changes in the prices of goods and services at Epe's tourist destinations since the increase in fuel prices	112	31	0	7	150
	Total	634	88	6	22	0
	Expected Frequencies	126.8	17.6	1.2	4.4	0
	Percentage Responses	84.53%	11.73%	0.81%	2.93%	100%

- *Field Survey*

The data indicates that large majority of the respondents which are over 89% for both statements 4 and 5 also confirmed that the fuel price increase has led to higher prices for tourism products and services at the tourist destinations. The levels of disagreement ("Disagree" and "Strongly Disagree") are insignificant across all categories, reinforcing the strength of the consensus. Therefore, the table clearly demonstrates that from the perspective of the respondents, the increase in fuel prices has directly led to increased costs for transportation and on the spot tourism products and services, which has, in turn, significantly reduced how often they visit tourist sites in Epe.

➢ *Relationship Between Fuel Price Increases and Tourist Spending*

- H_1: There is no significant relationship between increased in fuel price and tourist spending at selected tourist destinations in Epe.

One area of interest in this study was to determine if a statistically significant relationship exists between increased fuel prices and tourist spending in Epe. The Chi-Square (X^2) test of independence used to test the above hypothesis is presented in Table 2. The degree of freedom (df) for a chi-square test are calculated as (r-1) x (c-1), ie. (5-1) x (4-1) = 12. Therefore at 5% of significance df 12 = 21.026.

Table 2 Hypothesis Test 1: Chi-Square Test of Independence for the Relationship Between Fuel Price Increases and Tourist Spending

Cell	Observed Frequency	Expected Frequency	O - E	$(O - E)^2$	$(O - E)^2/E$
A	126	126.8	-0.8	0.64	0.0051
B	19	15.6	3.4	11.56	0.7410
C	0	1.2	-1.2	1.44	1.2
D	5	4.4	0.6	0.36	0.082
E	140	126.8	13.2	174.24	1.3741
F	10	15.6	-5.6	31.36	2.0102
G	0	1.2	-1.2	1.44	1.2
H	0	4.4	-4.4	19.36	4.4
I	142	126.8	15.2	231.04	1.8221
J	8	15.6	-7.6	57.76	3.7026
K	0	1.2	-1.2	1.44	1.2
L	0	4.4	-4.4	19.36	4.4
M	114	126.8	-12.8	163.84	1.2921
N	20	15.6	4.4	19.36	1.2410
O	6	1.2	4.8	23.04	19.2
P	10	4.4	5.6	31.36	7.1272
Q	112	126.8	-14.8	219.04	1.7274
R	31	15.6	15.4	237.16	15.2026
S	0	1.2	-1.2	1.44	1.2

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T	7	4.4	2.6	6.76	1.5364
Total					70.6637

- *Field Survey*

From the analysis above, x^2 calculated value is 70.664 while x^2 tabulated value is 21.026. This shows that X^2 calculated 70.664 is greater than X^2 tabulated 21.026, i.e., X^2 calculated 70.664 > X^2 tabulated 21.026. Therefore, the null hypothesis (H_0), which stated "There is no significant relationship," is rejected. This decision is based on the comparison between the calculated chi-square statistic (X^2 = 70.664) and the critical value from the chi-square table (X^2 = 21.026 at a 5% significance level with 12 degrees of freedom). Given that the test statistic substantially exceeds the critical value, we reject the null hypothesis of independence. There is a statistically significant association between the increase in fuel prices and tourist spending in Epe at the 5% significance level. Thus, the fuel price increase is not an independent incident but is directly associated with changes in how tourists spend and behave, such as reduced visit frequency and higher perceived costs for transportation and services.

➢ *Tourist Perceptions and Behaviors Concerning Fuel Price Increases in Epe Nigeria*

The survey of 150 respondents indicated their level of agreement (Strongly Agree-SA, Agree-A, Disagree-D, Strongly Disagree-SD) with five distinct statements about their travel habits and spending in Epe in response to increased fuel prices. The expected frequencies if there were no specific pattern (the null hypothesis) and the percentage distribution of the total responses for each category are presented in table 3.

The data presented in Table 3 reveals several strong and statistically significant trends in how tourists are adapting to higher fuel prices. There is an overwhelming consensus that tourists are spending more at tourism destinations due to the fuel price increase (Statements 4 & 1). 99.3% (149 out of 150) of respondents agreed or strongly agreed with Statement 4 ("I spend more..."), indicating a direct and nearly universal financial impact.

Table 3 Tourist Perceptions and Behaviors Regarding Fuel Price Increases in Epe, Nigeria

S/n	Tourist adaptation to economic shift	SA	A	D	SD	Total
1	There are special promotions and discounts from hotels in response to the	94	40	6	10	150
2	I visit tourist destinations in Epe LGA often	10	6	36	98	150
3	I spend longer time at this destination during the increase in fuel price	31	9	10	100	150
4	I spend more at tourism destinations due to the increase in fuel price	120	15	5	10	150
5	I spend shorter time during the increase in fuel price at Tourism destination	7	9	9	125	150
	Total	278	70	56	346	750
	Expected Frequencies	55.6	14	11.2	69.2	150
	Percentage Responses	37.07%	9.33%	7.47%	46.13%	100%

- *Field Survey*

The data shows a critical distinction as strong majority of the respondents (88%, 132 out of 150) disagreed or strongly disagreed that they spend a "shorter time" at destinations (Statement 5). This is further supported by the fact that more respondents reported spending *longer* times (40 in total for Statement 3) than shorter times (9 in total for Statement 5), suggesting that trips may be becoming longer, perhaps to justify the higher travel cost. In contrast, tourism patronage (frequency) appears to be severely affected. 89.3% (134 out of 150) of respondents disagreed or strongly disagreed with the statement "I visit tourist destinations in Epe LGA often" (Statement 2). This implies that while tourists might make fewer trips, when they visit tourist destinations, they stay for a similar or even longer duration and end up spending significantly more.

The substantial difference between the "Observed Frequencies" (the actual survey results) and the "Expected Frequencies (what would be expected by random chance) across all response categories confirms that these patterns are statistically significant. This means the observed trends are very unlikely to be a coincidence and are directly related to the fuel price increases. Thus, the impact of the fuel price increase is a sharp reduction in the frequency of visits to Epe. However, for those who do visit, the effect is a clear increase in total spending per trip, with no evidence to suggest that the length of their stay is shortened.

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➢ *The Relationship Between Fuel Subsidy Removal and Tourist Length of Stay in Epe LGA*

- H_2: There is no significant relationship between fuel subsidy removal and length of stay at tourist destinations in Epe LGA.

A Chi-Square Test of Independence (see Table 4) was performed to determine the above hypothesis, if a statistically significant relationship exists between the removal of fuel subsidies (the independent variable) and the length of time tourists stay at destinations in Epe LGA (the dependent variable). The test compares the actual survey responses (Observed Frequencies) with the values you would expect to find if no relationship existed between the two variables (Expected Frequencies)

Table 4 Chi-Square Test of Independence for the Relationship Between Fuel Subsidy Removal and Tourist Length of Stay

Cell	Observed frequency	Expected frequency	O - E	(O - E) ²	(O - E) ²/E
A	132	80.6	51.4	2641.96	32.7787
B	10	8.4	1.6	2.56	0.3048
C	0	5.6	-5.6	31.36	5.6
D	8	55.4	-47.4	2246.76	40.5552
E	0	80.6	-80.6	6496.36	80.6
F	7	8.4	-1.4	1.96	0.2333
G	9	5.6	3.4	11.56	2.0643
H	13	55.4	-42.4	1797.76	32.4505
I	0	80.6	-80.6	6496.36	80.6
J	2	8.4	-6.4	40.96	4.8762
K	19	5.6	13.4	179.56	32.0643
L	129	55.4	73.6	5416.96	97.7791
M	127	80.6	46.4	2152.96	26.7117
N	18	8.4	9.6	92.16	10.9714
O	0	5.6	-5.6	32.36	5.6
P	5	55.4	-50.4	2540.16	45.8512
Q	144	80.6	63.4	4019.56	49.870
R	5	8.4	-3.4	11.56	1.3762
S	0	5.6	-5.6	31.36	5.6
T	1	55.4	-54.4	2959.36	53.4181
Total				34826.6	609.309

The analysis produces a decisive result that shows Test Statistic: $X^2 = 609.309$, while Critical or tabulated Value: X^2 (α=0.05, df=12) = 21.026. Since the calculated chi-square value (609.309) is substantially greater than the critical value from the table (21.026), the null hypothesis (H_0) is rejected at the 5% significance level. Therefore, we reject the null hypothesis H_0, and accept that there is a statistically significant indication to state that a relationship does exist between fuel subsidy removal and the length of stay of tourists in Epe LGA**.** In order words, there is a significant difference between the observed and expected frequencies in the table, indicating a potential association or relationship between the variables being studied. The disparity between the observed tourist behaviors and what would be expected by random chance is too large to be coincidental. Therefore, changes in fuel prices are significantly associated with changes in how long tourists choose to stay at destinations.

The recommendations in Table 5 focus on various stakeholders and aspects to address the effects of fuel subsidy removal on tourism industry patronage in Epe Lagos, Nigeria and elsewhere. Therefore, it is designed to guide the successful implementation of the project, fostering a relationship between fuel subsidy removal and tourism industry patronage.

➢ *Strategic Recommendations for the Tourism Industry in Post-Subsidy Removal*

The in-depth interview with various senior managers and staff on strategic priorities to survive, thrive after a policy change and navigate the post-subsidy era in Nigeria. The thematic categories that emerged focus on sustainability, affordability, and local collaboration (see Table 5). This seems to be borne out of the new economic realities created by the fuel subsidy removal in the country. The removal of the subsidy caused a sharp increase in the cost of fuel, which is a primary input for the entire tourism value chain. This immediately forced a strategic hinge towards affordability (to retain customers) and sustainability**.** The crisis exposed the sector's vulnerability thereby requiring resilience and risk mitigation. In a higher-cost environment, competing on price alone becomes difficult. Therefore, the industry is shifting its value proposition towards authentic community-based experiences and sustainability which can justify best value over cost. Management emphasized a critical shift toward a sustainability transition**,** specifically by adopting renewable energy to ensure long-term operational viability. They also stressed the urgent need for government policy and incentives, such as tax breaks, to alleviate financial pressure on businesses.

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From an operational standpoint, staff highlighted the importance of maintaining transportation affordability through partnerships with local providers for tourist discounts. To mitigate high fuel costs, promoting low-carbon mobility options for visitors was also identified as a key tactic.

Collaboration emerged as a central theme. Both management and staff advocated for infrastructure development and community-based initiatives to enhance the tourist experience through better facilities and unique local events. Ultimately, a broader macro-economic green shift toward green tourism and renewable energy was seen as essential for the sector's future resilience.

Table 5 Strategic Recommendations for the Tourism Industry in Post-Subsidy Removal

S/n	Strategy theme	Specific recommendation	Key stakeholders
1	Sustainability transition	Establish and enforce the use of renewable energy resources for tourism sustainability	Hospitality and tourism businesses
2	Policy and incentives	Government should implement supportive policies such as tax breaks or grants for impacted tourism businesses.	Government (federal, state, local)
3	Transportation affordability	Explore partnerships with local transportation providers to negotiate discounted rates or package deals for tourists.	Tourism operators, Transport unions
4	Low-carbon mobility	Encourage tourists to use alternative, low-carbon transportation options to mitigate the impact of increased fuel costs.	Tourists, tourism marketers
5	Infrastructure Development	Develop and maintain tourist-friendly facilities (e.g., well-maintained roads, parking areas, public transport).	Government (state, local), planners
6	Community-based initiatives	Foster collaborations to create unique community experiences (e.g., cultural festivals, eco-tourism initiatives).	Tourism businesses, local communities
7	Macro-economic green shift	Implement sustainable economic growth policies focused on green tourism and renewable energy production	Government, (National), Developing economies

V. DISCUSSION AND CONCLUSION

The external shocks impact on the tourism sector in Africa has experienced increasing attention in different contexts such as on single countries, or a region within Africa and global perspectives (Ahir, Bloom, Furceri, (2018); Ahmed, et al., (2018); Devereux, (1999); Chisadza, et al., (2022); Corden, (1982); Edwards, (1986); Ekeocha, et al., (2021); Elshennawy, & Siddig, (2023); Flaig, Stone, (2017); Istiak, (2021); Manrique-de-Lara-Penate, et al., (2022); Saayman, et al., (2012). Wamboye, et al., (2020). However, these aspects have been addressed, although to a limited extent, within the contexts of urban based tourism landscape (Oba & Diminyi, 2025). This study helped to fill the gap within the context of fuel subsidy removal with tourism patronage in an emerging sub-Saharan African economy tourism spot of Epe, Lagos Nigerian. This research has helped to fill this gap.

The study examines the specific impact of fuel price increases on tourist spending patterns and length of stay in Epe, a local government area in Nigeria with emerging tourism significance. The study is established through the detailed calculations of expected frequencies and chi-square values for each cell in the contingency tables. The calculated chi-square values as presented in Table 2 and 4 (70.6638 for spending patterns and 609.309 for length of stay) vastly exceeded the critical value of 21.026 at 12 degrees of freedom and 0.05 significance level, providing strong evidence to reject both null hypotheses. The results reveal statistically significant, empirical evidence validated by chi-square tests that fuel price increases directly impact tourist spending and length of stay in Epe, Nigeria. This finding aligns with the assertion made by Poutakidou, & Menegaki (2023), who argued that energy price shock put the tourism sector at risk by lowering tourist expenditure. Actually, the energy crisis had an impact on both the consumers and the businesses, notwithstanding, the tourism industry recovered most significantly from COVID-19 and secondarily from the financial effects of the inflationary energy crisis, which demonstrates resilience.

The findings of this study suggest that fuel price increases have significantly affected tourist spending patterns in Epe with regards to transportation, frequency of visits, purchase of goods and services and choice of alternative destinations. Previously, that concern has been explored by Oh & William, (2011); in terms of examining the impact of higher fuel prices on tourist visit and travel behavioral (Mily, Haque & Islam, 2024) in Metropolitan city. This supports the findings of Poutakidou and Menegaki (2023) that energy price shock results to lower tourist expenditure. The study confirms that Nigerian tourists, like their counterparts globally, exhibit price-sensitive behavior when faced with increased travel costs, adjusting their spending patterns and destination choices accordingly

More so, the findings revealed complex and somewhat contradictory behaviors among tourists with regards to extended stays, shorter visits, increased spending and limited promotional responses from hotels because of the economic situation. Beforehand, such concern has been discovered by Perez-Ricardo & Garcia-Mestanza, (2025); Petricek & Chalupa, (2020), stating that tourists are highly sensitive to price fluctuations of tourism products which affects their demand behavior. These behavioral patterns reveal the complex and sometimes contradictory coping strategies (shorter stays yet higher spending) and suggest that tourists are using coping strategies to maintain tourism participation despite economic pressures. The findings of this study

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strongly suggest and support the use of renewable energy for tourism sustainability and resilience in the midst of economic shock. The have helped to expand the focus on energy price volatility and tourism economics, resilience, and consumer behavior in emerging economies. Notably, this study connects localized consumer data with broader economic forces, offering valuable insights for various tourism stakeholders (operators, marketers, planners). It contributes a strategic framework for building resilience through value-based marketing, proximity tourism, sustainable infrastructure, and community-based initiatives.

This study has a number of limitations and, therefore, opportunities for further studies. It is suggested that the geography and sample size be increased for more generalized. This study did not include qualitative data on detail report of how tourists spend during economic shock which is required for identifying patterns. This study did not provide a theoretical explanation on the fact that price increases caused the change in spending, therefore, more advanced statistical analysis like regression analysis is required. More evolving effects of fuel price shocks on tourism behavior over time is required. The study focus on fuel can also be expanded with other factors affecting tourist spending and length of stay. Thus, external economic shocks, essentially transform tourist behavior and destination competitiveness, requiring a paradigm shift from price-based to value-based and proximity-driven tourism models. Future research could explore the long-term sustainability of the adaptation strategies recommended in the study and also conduct comparative studies with other emerging tourism markets in sub-Saharan Africa countries.

REFERENCES

[1]. Akadiri, S. S., Akadiri, A. C., & Aleola, U. V. (2027). Is there growth impact of tourism? Evidence from selected small island states. *Current Issues in Tourism, 22*(12), 1480-1498 https://doi.org/10.1080/13683500.2017.1381947

[2]. Akpojotor, R. U., Mordi, C. U., Onoka, H. O., & Ogah, B. O. (2025). Impact of fuel subsidy removal on staff welfare and student's academic performance in tertiary institutions in Delta State. *British Journal of Education, 13*(3), 16-27. https://doi.org/10.37745/bje.2013/vol13n31627

[3]. Akpan, S. N & Uford, 1. C. (2024). Effect of fuel subsidy removal on purchase of consumer goods in Nigeria: A literature review. *International Journal of Economics, Business and Social Science Research 2*(4), 30-38.

[4]. Amalu, E., Phil-Eze, O., & Ajake, A. (2020). Assessing the impact of economic and cultural diversity on tourism development in Nigeria. *GeoJournal, 85*(2). https://doi.org/10.1007/s10708-019-10032-2

[5]. Anugwolu, C. (2023). The business of tourism: Fuel subsidy implications for the Nigerian hospitality, travel and tourism industry. Red Clay Story. https://redclayadvisory.com/about-us/. Retrieved 27 April, 2025.

[6]. Anyaogu, I. (2024). Nigeria's NNPC raises fuel prices as it ditches costly subsidies. Available online at: https://www.reuters.com/business/energy/nigerias-nnpc-raises-fuel-prices-it-ditches-costly-subsidies-2024-10-10. Retrieved 30/09/25.

[7]. Ayeni, D. A., & Ebohon, O. J. (2012). Exploring sustainable tourism in Nigeria for developmental growth. *European Scientific Journal, 8*(20), 126–140.

[8]. Baker, S. R.; Bloom, N.; & Davis, S. J. (2016). Measuring economic policy uncertainty. *Q. J. Econ., 131*, 1593–1636. https://doi.org/10.1093/qje/qjw024

[9]. Binesh, F., Belarmino, A., & Raab, C. A (2021). Meta-analysis of hotel revenue management. *Journal of Revenue Pricing Management, 20*(5), 546–558. https://doi.org/10.1057/s41272-020-00268-w

[10]. Bloom, N. (2009). The impact of uncertainty shocks. *Econometrica, 77*(3), 623–685. https://doi.org/10.3982/ECTA6248

[11]. BudgIT. (2023). The real cost of fuel subsidy in Nigeria: A policy brief. https://yourbudgit.com/fuel-subsidy-report-2023/

[12]. Caldara, D., Fuentes-Albero, C., Gilchrist, S., & Zakrajšek, E. (2016). The macroeconomic impact of financial and uncertainty shocks. *Eur. Econ. Rev., 88*(C), 185–207. https://doi.org/10.1016/j.euroecorev.2016.02.020

[13]. Can, M., & Gozgor, G. (2016). Revisiting the tourism-growth nexus: evidence from a new index for the market diversification of tourist arrivals. *Current Issues in Tourism, 21*(10), 1157-1170. https://doi.org/10.1080/13683500.2016.1268103

[14]. Crompton, J. L. (1979). Motivations for pleasure vacation. *Annals of Tourism Research*, 6(4), 408-424. https://doi.org/10.1016/0160-7383(79)90004-5

[15]. Crouch, G. I., & Ritchie, J. R. (1999). Tourism, competitiveness, and societal prosperity. *Journal of Business Research, 44*(3), 137-152. https://doi.org/10.1016/S0148-2963(97)00196-3

[16]. Duro, J. A., Osório, A., & Perez-Laborda, A. (2024). Modeling uncertainty in tourism markets. *Ann. Tour. Res., 107*, 103795. https://doi.org/10.1016/j.annals.2024.103795

[17]. Elgin, C., & Elveren, A. Y. (2024). Unpacking the economic impact of tourism: A multidimensional approach to sustainable development. *Journal of Cleaner Production, 478*(1), 143947. https://doi.org/10.1016/j.jclepro.2024.143947

[18]. Farmaki, A. (2021). Memory and forgetfulness in tourism crisis research. *Tourism Management, 83*, 104210. https://doi.org/10.1016/j.tourman.2020.104210

[19]. Feuerbacher, A. & Flaig, D. (2025). Tourism in Africa and economic vulnerabilities to exogenous shocks. *Economic Modelling 152* (107258). https://doi.org/0.1016/j.econmod.2025.107258

ISSN No: -2456-2165 https://doi.org/10.38124/ijisrt/26jan1296

[20]. Fritova Economics. (2017). Nigeria's economic vulnerability and resilience. *Fritova Reports, 7*(2), 45–59.
[21]. Gössling, S., Hall, C. M., & Scott, D. (2021). *Tourism and water: Interactions and impacts*. Channel View Publications.
[22]. Gurbuz, S. (2017). Survey as a quantitative research method. Available online at: https://www.researchgate.net. Retrieved 26/06/27.
[23]. Hailemariam, A., & Ivanovski, K. (2021). The effect of economic policy uncertainty on us tourism net exports. *Tour. Econ., 28*(8), 2219–2227. https://doi.org/10.1177/13548166211025334
[24]. Idris, A., Kitabu, M. U., Musa, M. M. & Shehu, A. (2024). Effect of fuel subsidy removal on socio-economic development of Chanchaga local government area of Niger state. *Kashere Journal of Politics and International Relations 2*(2), 340-354.
[25]. IMF. (2021). Subsidy reform in the middle east and north Africa. International Monetary Fund.
[26]. Jurado, K., Ludvigson, S. C., & Ng, S. (2015). Measuring uncertainty. *American. Economic. Review., 105*(3), 1177–1216. https://doi.org/10.1257/aer.20131193
[27]. Linus, J. O., Abdul, A., & Lawal, F. C. (2024). Developing the tourism resources of Nigeria as a potential source of revenue. *American International Journal of Business Management (AIJBM), 7*(12), 64-67.
[28]. Khalid, U., Okafor, L. E., & Shafiullah, M. (2019). The effects of economic and financial crises on international tourist flows: A cross-country analysis. *Journal of Travel Research*, *59*(2), 315–334. https://doi.org/10.1177/0047287519834360
[29]. Kozak, K. (2015). Statistics using technology, second edition. Lolu.com and Amazon.com
[30]. Kuok, R. U. K.; Koo, T. T. & Lim, C. (2022). Economic policy uncertainty and international tourism demand: A global vector autoregressive approach. *Journal of Travel Research*, *62*(3), 540–562. https://doi.org/10.1177/00472875211072551
[31]. Lagos State Ministry of Tourism, Arts and Culture. (2022). Annual report on tourism and cultural heritage in Lagos State. Lagos State Government.
[32]. Linus, J. O., Abdul A., & Lawal, F. C. (2024). Developing the tourism resources of Nigeria as a potential source of Revenue. *American International Journal of Business Management, 7*(12), 64-75.
[33]. Maih J., Omotosho, B. S. & Yang, B. (2024). Mitigating the impact of fuel subsidy removal in an oil producing emerging economy, working paper series N° 385, African Development Bank, Abidjan, Côte d'Ivoire.
[34]. McHugh, M. L. (2013). The Chi-square test of independence. *Biochemia Medica, 23*(2):143–149. https://doi.org/10.11613/BM.2013.018
[35]. Mily, S. N., Haque, M. B., & Islam, M. A. (2024). Unveiling the consequence of unprecedented fuel price hike in Bangladesh on consumer travel behavior. *Sustainable Transport and Livability 1*(1). https://doi.org/10.1080/29941849.2024.2409081
[36]. Novelli, M., Gussing Burgess, L., Jones, A., & Ritchie, B. W. (2018). 'No Ebola…still doomed'-The Ebola-induced tourism crisis. *Annals of Tourism Research, 70*, 76–87. https://www/doi.org/10.1016/j.annals.2018.03.006
[37]. Oba, D. O., & Diminyi, C. A. (2025). Urban tourism and inflation: assessing the effect of fuel subsidy removal on city-based tourists' activities in Nigeria. *African Scholars Multidisciplinary Journal (Asmj), 10*, 138 – 143.
[38]. Ogboru, J. O., & Akinyotu, O. E. (2024). Evaluation of the impact of fuel subsidy removal on family income and sustainability in Ondo city, Nigeria. *International Journal of Home Economics, Hospitality and Allied Research, 3*(1), 117-128. https://doi.org/10.57012/ijhhr.v3n1.010
[39]. Ogwuche, D. O., Adejor, G. A., Dabish, D. A., Garbar, R. I., & Dole, F. (2024). Assessing the impact of fuel subsidy removal on economic growth in Nigeria: A VECM Approach. *Lapai Journal of Economics 8*(1):1-13. https://doi.org/10.4314/lje.v8i1.1
[40]. Oh, C. & Hammitt, W. (2011). Impact of increasing gasoline prices on tourism travel patterns to a state park. *Tourism Economics 17*(6), 1311-1324. https://doi.org/10.5367/te.2011.0093
[41]. Okonkwo, C., & Balogun, F. A. (2023). Fuel subsidy removal and its implications for domestic tourism in Nigeria. *African Journal of Tourism and Sustainable Development, 5*(1), 88–105.
[42]. Olonade, O, Oritsela, E, Motsemme, N., & Ngwane, T. (2025). The impact of tourism on socio-economic development in Lagos, Nigeria. *Journal of Infrastructure, Policy and Development*. *9*(2), 9486. https://doi.org/10.24294/jipd9486
[43]. Osinubi, T. T., & Osinubi, O. I. (2020). Tourism's contribution to Nigeria's GDP: Evidence from the post-2000 era. *Journal of Development Economics, 9*(2), 120–135.
[44]. Ovaga, O. H., & Okechukwu, M. E. (2022). Subsidy in the downstream oil sector and the fate of the masses in Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review, 1*(6), 1-20. Available from: https://www.researchgate.net/publication/372959038_Implications_of_Fuel_Subsidy_Removal_on_the_Nigerian_Economy (Retrieved Apr 27 2025).
[45]. Pérez-Ricardo, E. & García-Mestanza, J. (2025). Exploring booking intentions through price elasticity of demand in tourism accommodations using large-scale data analytics. *European Research on Management and Business Economics 31*(1). https://doi.org/10.1016/j.iedeen.2025.100271
[46]. Petricek, M., & Chalupa, S. (2020). Price elasticity of demand for accommodation services - empirical application in Prague. *Journal of Interdisciplinary Research, 10*(1), 221-224.
[47]. Poutakidou, G. & Menegaki, A. N. (2023). Do energy prices put the tourism sector at risk? *Economies*, *11*(7), 197. https://doi.org/10.3390/economies11070197

ISSN No: -2456-2165 https://doi.org/10.38124/ijisrt/26jan1296

[48]. Prideaux, B. (2000). The role of the transport system in destination development. *Tourism Management*, 21(1), 53-63. https://doi.org/10.1016/S0261-5177(99)00079-5

[49]. Raifu, I. A., & Afolabi, J. A. (2024). Simulating the inflationary effects of fuel subsidy removal in Nigeria: Evidence from a novel approach. *Energy RESEARCH LETTERS*, *5*(4). https://doi.org/10.46557/001c.94368

[50]. Roudi S., Arasli H., Akadiri S. S. (2019). New insights into an old issue – Examining the influence of tourism on economic growth: Evidence from selected small island developing states. *Current Issues in Tourism*, *22*(11), 1280–1300. https://doi.org/10.1080/13683500.2018.1431207

[51]. Rivi, D. & Momoh, Z. (2025). Effects of tourism on economic growth. *Quaestus Multidisciplinary Research Journal*, 53-63.

[52]. Sakanko, M. A., Augustine, A. F. & Yahaya, S. U. (2023). Fuel subsidy and Nigerians' welfare. Nigeria policy academy, Wudil-Kano: Advanced Concept Publishers. Available from: https://www.researchgate.net/publication/380722195_Fuel_subsidies_oil_price_shocks_and_macroeconomic_instability_in_Nigeria [Accessed Sep 08 2025].

[53]. Sampaio, C., Farinha, L., Sebastião, J. R. & Fernandes, A. (2023). Tourism industry at times of crisis: A bibliometric approach and research agenda. *Journal of Hospitality and Tourism Insights*, *6*(4) 1464–1484. https://doi.org/10.1108/JHTI-08-2021-0223

[54]. Sano, K. & Sano, H. (2019). The effect of different crisis communication channels. *Annals of Tourism Research, 79(C),* 102804. https://doi.org/10.1016/j.annals.2019.102804

[55]. Taiwo, A. R. (2024). The impact of fuel subsidy removal on the construction industry in Nigeria (A study of Setraco Nigeria Limited and Reynolds Construction Company). *International Journal of Novel Research and Development* (IJNRD) *9*(5), f986 - f996.

[56]. Turney, S. (2022). Chi-Square (X^2) tests / types, formula & examples. Available at: https://www.scribbr.com/statistics/chi-square-tests/. Accessed 26/06/25.

[57]. United World Tourism Organization (UNWTO) (2020). Tourism and COVID-19: Unprecedented economic impacts. https://www.unwto.org/tourism-and-covid-19-unprecedented-economic-impacts.

[58]. UNWTO. (2022). *Tourism Recovery Tracker*. United Nations World Tourism Organization.

[59]. Vourdoubas, J. (2020). The Nexus Between Tourism and Renewable Energy Resources in the Island of Crete, Greece. *American Scientific Research Journal for Engineering, Technology, and Sciences*, *63*(1), 28-40. https://asrjetsjournal.org/American_Scientific_Journal/article/view/5502

[60]. Widodo, T., Sahadewo, G. A., Setiastuti, S. U., & Chaerriyah, M. (2012). 'Cambodia's electricity sector in the context of regional electricity market integration' in Wu, Y., X. Shi, and F. Kimura (eds.), Energy market integration in East Asia: Theories, electricity sector and subsidies, ERIA research project report 2011-17, Jakarta: ERIA, 173-206.

[61]. World Bank. (2023). Nigeria development update: Seizing the opportunity. Washington, DC: World Bank Group

[62]. World Bank Group, (2025). Tourism and competitiveness. Available online @ https://www.worldbank.org/en/topic/competitiveness/brief/tourism-and-competitivenes.

[63]. World Travel & Tourism Council (WTTC) (2025). WTTC: Nigeria's tourism sector set to reach N11.2 trillion GDP by 2025**.** Available online at: https://wttc.org/research/economic-impact/cities. https://rexclarkeadventures.com/wttc-nigerias-tourism-sector-gdp/