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# Fuel Subsidy Removal and Tourist Behaviour in River Ethiope, Nigeria

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**ABSTRACT**

This study examined the impact of Nigeria's fuel subsidy removal on tourist behavior in River Ethiope, Abraka, Delta State. It investigated how subsidy removal affected travel mode, cost, frequency, demand for tourism products and services, and overall visitor satisfaction. Using a survey and a combination of simple and systematic random sampling, data were collected from tourism visitors. Three hypotheses tested via regression analysis all revealed significant relationships between fuel subsidy removal and tourists' travel behavior, product/service demand, and satisfaction. The findings indicate that fuel subsidy removal substantially influences tourism patterns in the Abraka region. The study concluded that there is a significant relationship between fuel subsidy removal and the overall satisfaction of tourism visitors in demand for tourism products and services along the River Ethiope region. It recommended, among others, the improvement of coordination among tourism agencies, government financial support for operators, promotion of sustainable tourism, and enhancement of public transport to mitigate subsidy removal effects and improve visitor experiences.



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## 1. INTRODUCTION

The major factor influencing transportation costs and rates in Nigeria is fuel. According to Innocent, Ogbu, and Job (2015), fuel plays a vital role in the production and delivery of goods and services across all sectors of the economy. Hence, many countries consider it essential to subsidize fuel to ensure affordability and accessibility for their citizens. Similarly, Onyishi, Eme, and Emeh (2012) explain that governments provide fuel subsidies to correct market failures caused by poverty and to promote the production and distribution of goods and services. In developing nations, such subsidies are typically aimed at helping

the poor, weak, and vulnerable to participate in economic activities and to shield fragile economies from external market shocks. Ezeh (2012) describes fuel in Nigeria as an inelastic commodity; its demand and supply are not easily adjusted. Consumers have limited alternatives since options such as electric trains, solar-powered systems, or reliable hydropower are scarce or inefficient. Consequently, fuel subsidies influence both supply and demand factors in the tourism industry, particularly affecting transportation costs, hotel rates, entertainment, catering, security, and promotion.

According to *The Oxford Advanced Learner's Dictionary* (Hornby, 2005), a subsidy is a government-provided financial incentive to industries to lower production costs and enhance competitiveness. The World Bank (1997) similarly views fuel subsidy as a government policy that reduces the price of energy below its actual market value, thereby shielding citizens from global crude oil price volatility. In Nigeria, the fuel subsidy programme seeks to make petroleum products, such as premium motor spirit (PMS) and diesel, more affordable for citizens. When fuel pump prices rise, the cost of living and production also increase nationwide. The goal of subsidizing fuel, therefore, is to make goods and services affordable and maintain citizens' standard of living. The paradox lies in the fact that while fuel is a major source of federal revenue, its subsidization is also one of the few ways citizens benefit directly from the nation's oil wealth. Thus, any increase in fuel prices without corresponding welfare measures often leads to public hardship, protests, and resistance from labour unions and civil society (Campbell, 2011).

Fuel subsidy removal often triggers higher demand due to misuse, smuggling, and waste, potentially causing shortages. The connection between fuel use and goods production in Nigeria is weak, but fuel's link to transportation is very strong since it powers distribution, which in turn raises the final cost of goods and services. As Anyanwu (1997) notes, fuel is indispensable in moving people and goods, making it central to economic activity. Transportation, powered largely by fuel, facilitates both domestic and international trade (Good & Jebbin, 2015; Okeafor, 1998). Efficient transportation ensures goods reach consumers, completing the production process. The key challenge for Nigeria's transport system is balancing cost reduction and capacity expansion amid fluctuating fuel prices, wages, and tariffs (Jean, Claude, & Brian, 2006). Furthermore, Jean, Claude, and Brian (2006) assert that people's choice of transportation mode depends on factors like the nature of goods, available infrastructure, and distance, all of which are heavily influenced by fuel costs. Adeniran (2016) adds that transport costs comprise both fixed costs (infrastructure) and variable costs (fuel and energy), with distance being a major determinant of overall expenses within regional tourism systems.

Over the years, fuel subsidies in Nigeria have been marred by corruption and fraud, particularly during reimbursement to importers. Cases of "round-tripping" and inflated subsidy claims have been reported (Adeniran, 2016). While short-term subsidy removal increases transportation and tourism costs, it may later lead to market adjustments. However, the recent total subsidy removal, implemented without adequate infrastructure or alternative energy sources, has intensified hardship for citizens and disrupted tourism and transport sectors. Public opinion remains divided: critics argue that subsidy removal is socially insensitive and economically destabilizing, while supporters believe it can be beneficial if managed properly with compensatory policies such as wage increases and improved public transport. Ultimately, the mixed reactions underscore the need to assess how fuel subsidy removal specifically affects Nigeria's economy, particularly tourism along the River Ethiope in Abraka.

## Literature Review

In the past, tourism development efforts by both the government and private sector in Nigeria have primarily focused on specific attractions such as hotels, parks, beaches, museums, and historical sites regarded as leisure or recreation hotspots. However, this approach has been criticized for neglecting the interconnected and holistic nature of tourism, which links environments, people, and places. It also overlooks how government policies and programmes influence tourism (Chokor, 1993; World Tourism Organization [WTO], 2003). Since tourism encompasses diverse and overlapping activities that cut across environmental, economic, and social sectors, there is a need for a more comprehensive and integrated planning model. Such a model would ensure that government policies and development strategies directly impact the tourism industry. Within this context, tourism planning is now increasingly viewed through a systems framework, one that treats tourism as an interconnected and sustainable system composed of interrelated subsystems.

## Systems Concept

Hall and Fagan (1976) describe a system as "a set of objects together with relationships between the objects and between their attributes". Three key elements are emphasized in this definition: **objects**, which represent the various components of a system; **attributes**, which denote the properties or characteristics of these components; and **relationships**, which connect the different parts and give the system its coherence. According to Onokerhoraye (1989), these interactions and interconnections among components are what create the system's overall wholeness.

The system's approach has gained significant attention in geographic research in recent decades. Scholars such as Stoddart (1967) and Barry (1964) advocated for formulating geographic inquiries within a systems framework, leading to new theoretical developments in the field (Harvey, 1969). Notable applications include Chorley's (1962) use of open-system thermodynamics in geomorphological studies, Leopold and Langbein's (1972) exploration of entropy and steady-state systems, Berry's (1964) analysis of urban systems, and Curry's (1967) study of settlement location patterns using systems theory. In the Nigerian context, Mabogunje (1970) applied systems analysis to rural–urban migration, while Awaritefe and Awaritefe (2008) adopted it to promote sustainable tourism development in Delta State.

These examples collectively demonstrate the usefulness of the systems concept as a theoretical lens for understanding complex interrelationships. Consequently, applying the systems approach provides a valuable framework for examining how fuel subsidy removal affects tourism destination development within the Abraka tourism region.

## Application of Systems Concept to Tourism

According to Leiper (1999) and the World Tourism Organization (WTO, 1994, 1999, 2003), the tourism system is composed of two main components: the **tourism demand subsystem** and the **tourism supply subsystem**. The demand subsystem includes both domestic and international tourists, as well as residents who utilize various tourism offerings. The supply subsystem, on the other hand, consists of the attractions, infrastructure, accommodations, services, and activities that make up the tourism product. Additionally, institutional elements such as government tourism boards, hospitality associations, legislative frameworks, and regulatory policies form essential parts of the supply subsystem, ensuring the tourism sector functions efficiently and delivers the expected benefits. Effective tourism planning should therefore promote an **integrated and holistic development** of both

demand and supply subsystems to achieve **sustainable tourism growth**. This requires aligning tourism policies and plans with broader national, regional, or state development frameworks to prevent land-use conflicts, promote harmony among different users of resources, and enhance cooperation between tourists and host communities.

The **integrated systems approach** has become a widely endorsed model for tourism planning because it ensures that all components of the tourism system, natural, cultural, and historical, are managed sustainably for present and future benefit (Lea, 1998; Gunn, 2002). Enhancing tourism quality often depends on improving these subsystems, particularly those linked to environmental, cultural, and heritage resources. Conversely, neglect or destruction of these vital resources reduces tourist patronage, degrades the environment, and creates social and cultural challenges for local communities. As Ashworth (2001) and WTO (1994, 2003) note, adopting an integrated systems approach is crucial for achieving **quality and sustainable tourism development**. It involves thoroughly assessing and analyzing all subsystems, especially those related to supply and demand, to determine the most suitable type and location of tourism initiatives. Within this framework, the study examines how the tourism subsystems in the **River Ethiope tourism region at Abraka,** including tourism products, markets, policies, and institutional structures, are affected by the **removal of fuel subsidy**.

**Tourism Policy**

Over the past few decades, tourism policy has attracted significant academic attention (Hall & Jenkins, 1995; Burns & Novelli, 2007; Bramwell & Meyer, 2007; Dredge & Jenkins, 2007). Several studies have also sought to integrate key concepts from public policy research into the study of tourism policy (Hall, 2005; Scott, 2011). However, as Hall (2004) observes, the influence of government and public policy on tourism has not been sufficiently explored. Many important aspects of how public policies impact the tourism sector remain inadequately examined and require further investigation.

**Tourism and Public Policy**

It is widely recognized that tourism should be defined more broadly to expand the analytical scope of tourism policy. This broader perspective should view tourism policy as a dynamic and interconnected system, acknowledging that it often involves conflicts among stakeholders with differing levels of power, ideologies, and values. Tourism generates numerous interactions and relationships that arise from the movement of people who visit, stay temporarily, or reside occasionally in specific destinations.

Tourism policy can therefore be understood as a collection of discourses, decisions, and actions undertaken by governments, often in partnership with private and social actors, to achieve various tourism-related goals. It represents a deliberate course of action that moves beyond theory and political rhetoric to concrete implementation, involving the allocation of public resources. Effective tourism policy consists of coherent or at least intentionally coordinated actions.

However, tourism policy is not the sole responsibility of government institutions. On the contrary, it actively engages private sector stakeholders and civil society, raising important questions about governance and the extent of governmental influence within the tourism industry (Hall, 2011; Bramwell & Lane, 2013).

**Tourism (The Tourism Industry or Sector)**

The term *tourism* or *tourism industry* refers to the network of businesses and government institutions that provide services to travelers away from their usual places of

residence. At the retail level, this includes hotels, motels, resorts, restaurants, transportation services, car rentals, travel agencies, fuel stations, national and state parks, recreation centers, and privately owned attractions, among others (United States Travel Data Centre, 1975). Essentially, tourism encompasses the activities of individuals visiting destinations for leisure or vacation, as well as the services designed to cater to their needs.

According to the World Tourism Organization (2001), international tourism is the world's leading source of export revenue and plays a major role in the balance of payments for many countries. In 1996, global earnings from international tourism amounted to approximately 423 billion U.S. dollars, surpassing revenues from petroleum products, automobiles, telecommunications equipment, textiles, and other major exports. The organization further highlighted that tourism is the largest global industry, contributing up to 10 percent of the world's Gross Domestic Product (GDP).

Over time, tourism has grown to occupy a crucial position in national economies, with many countries investing heavily to promote themselves as top travel destinations. As Awaritefe (2003) observes, tourism serves as a powerful tool for national economic development, with great potential to generate foreign exchange and create employment opportunities.

**Government Policy Outcomes on Tourism**

Governments, scholars, and tourism practitioners have increasingly shown interest in understanding the impacts of public policies on tourism. For instance, Deegan (2000) examined successful tourism experiences in several Western nations and emphasized the importance of exploring the causal relationships between government policies and tourism performance. Similarly, Baretje (1982) stressed the need for accurate assessment of tourism policy outcomes to support sound policy decisions. As a result, evaluating government policies, actions, and programmes, especially those related to tourism, has gained growing recognition (Hall & Jenkins, 2004). However, establishing direct causal links between public policy and tourism development remains challenging due to the influence of multiple external factors, notably economic conditions in major tourist source markets (Chambers & Airey, 2001).

According to Adeniran (2016), the removal of fuel subsidy means that the government no longer covers the difference between the actual cost of fuel importation and the pump price. This policy essentially signifies full deregulation of the downstream oil sector, allowing open competition among private investors. Consequently, fuel prices are determined by prevailing market forces based on importation costs. Because Nigeria's refineries are largely non-functional, the country depends heavily on imported fuel (Adeniran, 2016).

Broadly, a subsidy refers to any policy measure that keeps consumer prices for goods or services below market levels. Subsidies can take various forms, some directly affect prices through grants, tax incentives, or price controls, while others have indirect impacts through regulations or government-funded research that favors certain products, such as fuel. Generally, subsidies fall into two main categories:

1. **Production subsidies**, which are more common in developed economies, and
2. **Consumer subsidies,** are prevalent in developing nations like Nigeria.

In essence, a subsidy functions as a *reverse tax*, a deliberate government intervention designed to support consumers or producers in specific markets. The World Bank (1997) defines it as a government initiative aimed at reducing consumer prices or increasing producer revenues. Subsidies are widely practiced across countries and are applied to commodities such as petroleum, food, and agricultural inputs like fertilizers and machinery (United Nations [UN], 2022). In Nigeria, fuel subsidy represents a federal government

programme designed to make petroleum products, particularly premium motor spirit (PMS) and diesel, more affordable and to shield citizens from fluctuations in global crude oil prices (UN, 2022). Essentially, the government pays the difference between the pump price and the actual cost of fuel, ensuring that citizens, especially low-income earners, are not overburdened by high energy costs. Fuel subsidy was introduced long before the Buhari administration as a social welfare policy aimed at cushioning the effects of economic hardship on Nigerians.

**Fuel Subsidy Removal**

The Nigerian economy has benefited from different forms of subsidies for decades, including those for fuel, education, electricity, and foreign exchange. Fuel subsidy, in particular, originated in the 1970s and became formalized in 1977 with the enactment of the **Price Control Act**, which prohibited selling certain commodities, including petroleum products, above government-approved prices. The history of fuel subsidy removal in Nigeria has been characterized by policy shifts, repeated attempts at withdrawal, and persistent controversy (Emeh, 2012). The first instance occurred in 1978 under General Olusegun Obasanjo, when fuel prices were raised from **8.4 kobo** to **15.37 kobo** per litre to generate more government revenue ahead of the 1979 elections and to address citizens' social needs (Ering & Akpan, 2012).

During Obasanjo's second tenure as a civilian president, several fuel price adjustments followed. On **June 1, 2000**, the pump price was increased to **₦30.00**, then reduced to **₦25.00** a week later after public protests, and further adjusted to **₦22.00** on **June 13, 2000** (George, Elegbeleye, Chukwudozie, & Idowu, 2014). Subsequent increases occurred to **₦26.00** in **2002, ₦40.00** in **2003**, and **₦70.00** in **2007**, later exceeding **₦100.00** per litre. When President Umaru Musa Yar'Adua took office in **2007**, the **Nigeria Labour Congress (NLC)** pressured his administration to revert the price to **₦65.00**. In **2012**, former President Goodluck Jonathan attempted to remove the subsidy entirely, but strong public opposition forced a price reduction from **₦97.00** to **₦87.00** per litre (Vanguard News, May 25, 2016). Under President Muhammadu Buhari (2015–2023), fuel prices stabilized around **₦145.00** per litre, while diesel and kerosene were deregulated in **2016**.

Fuel subsidy on **Premium Motor Spirit (PMS)** remains a major economic burden, consuming a significant portion of national revenue. Factors contributing to the increasing subsidy costs include global crude oil price fluctuations, currency depreciation, and disputed consumption volumes. Although complete subsidy removal was not achieved before 2023, successive governments debated reforms aimed at addressing inefficiencies. Upon assuming office, **President Bola Ahmed Tinubu** declared that the subsidy was no longer sustainable, leading to an immediate price surge to **₦540.00** per litre and later over **₦650.00**. This development caused a sharp rise in transportation costs, food prices, and general living expenses. Many citizens, particularly civil servants without salary adjustments, have faced worsening economic hardship, business closures, and rising crime rates (Akintayo, 2023).

Akintayo (2023) notes that with fuel prices exceeding **₦617.00**, transportation fares have increased by over **200%**, while costs of food, beverages, water, and household essentials have escalated dramatically. The situation has plunged Nigerians into one of their most challenging socio-economic periods in recent history. Similarly, **Ozili and Obiora (2023)** identified several socio-economic consequences of subsidy removal, including soaring housing costs, rising prices of construction materials, healthcare products, clothing, and repair services, all of which indirectly affect the tourism industry and its capacity to thrive.

**Socio-economic Effect of Fuel Subsidy Removal**

**a. Increased Poverty and Vulnerability**

The removal of fuel subsidy has triggered a sharp rise in the prices of goods and services, worsening poverty levels and deepening economic hardship among Nigerians. The absence of immediate palliative measures or social welfare interventions has intensified hunger and financial distress. Many households now face reduced disposable income, limited food supply due to high transportation costs for farm produce, and increased medical expenses, leading to higher mortality rates. Education has also become less affordable, while businesses struggle with shrinking profit margins, high operating costs, and declining customer patronage. Consequently, several enterprises have shut down due to low sales and increased expenses. Furthermore, citizens have reduced spending on leisure, recreation, and tourism, as transportation costs to hospitality and tourist destinations have become prohibitively high.

**b. Job Loss, Rising Crime, and Criminal Behaviour**

The elimination of fuel subsidies has resulted in significant job losses, especially in the informal sector that depends heavily on fuel (Houeland, 2022). The formal sector has also been affected, as small and medium-sized enterprises (SMEs) close down due to the unbearable cost of fuel, which has eroded profit margins (Ozili & Obiora, 2023). Many of these affected businesses belong to the tourism and hospitality industries. As unemployment rises, so does insecurity. Crime rates have surged as many Nigerians struggle to survive economically (Yunusa & Yusuf, 2023).

**c. Socio-Cultural Implications**

Nigerians are known for their resilience and adaptability in times of economic hardship (Ozili & Obiora, 2023). This resilience has been evident in the relatively low number of public protests over the past decade against unfavorable government actions, ranging from the **End SARS** movement to issues surrounding COVID-19 palliatives, corruption, and electoral malpractices. As such, many Nigerians have adopted coping mechanisms to withstand the negative impacts of fuel subsidy removal on their households and businesses. These coping strategies include reducing transportation costs by walking short distances, avoiding unnecessary travel, minimizing impulsive and luxury purchases, and cutting back on spending related to recreation, leisure, tourism, and hospitality. Adjustments in social and cultural practices, such as scaling down ceremonies, festivals, and communal celebrations, also reflect adaptive cultural responses to economic pressure. According to **Akintayo (2023)**, the effects of fuel subsidy removal have extended beyond Nigeria's borders, influencing fuel prices in neighboring countries such as the **Benin Republic, Niger, Cameroon, and Sudan**, which previously benefited from cheaper smuggled fuel. Consequently, travel and tourism activities between Nigeria and these countries have declined significantly.

**Tourism Consumer Behaviour**

Consumer behaviour in tourism encompasses the decisions, actions, thoughts, and experiences that enable travelers to fulfill their needs and desires (Solomon, 1996). It includes all activities associated with acquiring, using, and disposing of tourism products and services, as well as the decision-making processes that occur before and after these

actions (Engel, Blackwell, & Miniard, 1995). In tourism and marketing research, consumer behavior is among the most extensively explored topics, often referred to as travel behavior or tourist behavior. Despite its significance, few comprehensive reviews of consumer behaviour theories and models exist in tourism studies. Notable exceptions include Moutinho (1993), who examined social and psychological influences on travel decisions to develop a model of tourist behaviour, and Dimanche and Havitz (1995), who reviewed four key concepts, ego-involvement, loyalty and commitment, family decision-making, and novelty-seeking, to advance the methodological study of consumer behaviour in tourism.

The limited number of comprehensive reviews can be attributed to the broad and complex nature of the topic. Travel behaviour is a continuous process comprising multiple interconnected stages and concepts that are difficult to study in isolation (Mill & Morrison, 2002). Researchers have tended to focus on specific elements, such as loyalty (Riley, Nininen, Szivas, & Willis, 2001), social influences (Moutinho, 1993), or travel patterns (Hong, Lee, & Jang, 2009), without situating them within a holistic framework of tourist behavior. Studies have also examined individual stages of travel, such as pre-visit planning, on-site experiences, or post-visit evaluations (Frias, Rodriguez & Castaneda, 2008), particularly in understanding how destination images are formed.

Mazanec (2009) notes that tourism research progress is hindered by the repetitive use of traditional conceptual frameworks and measurement tools. Similarly, McKercher, Denizci-Guillet, and Ng (2012) argue that tourism studies often rely on theories and models imported from other disciplines without evaluating their relevance to tourism contexts. Some recent studies have questioned the suitability of these borrowed models. For instance, Boksberger, Dolnicar, Laesser, and Randle (2011) found that the self-concept, as defined in marketing, cannot be directly applied to tourism. In contrast, Lam and Hsu (2006) demonstrated that the theory of planned behaviour could effectively explain the relationship between attitudes and destination choice decisions. Overall, research on travel behaviour remains fragmented due to several factors:

1. Many studies replicate isolated consumer behaviour concepts from marketing or management fields without integrating them into a broader tourism context.
2. Repeated investigations of similar relationships (e.g., satisfaction and loyalty) yield incomparable results because of differing tourist types and destination contexts, limiting generalization.
3. Quantitative methods dominate the field, yet experimental designs that establish clear cause-and-effect relationships are still underdeveloped, often leading to misleading conclusions.
4. Few studies adopt longitudinal or holistic perspectives necessary to fully capture the complexity of tourist behaviour and its evolving processes.

## Tourism Resources, Attractions and Their Demand in the Study Area

Tourist attractions in the Abraka tourism region along the River Ethiope can be broadly classified into three main categories: (1) natural flora and fauna, (2) cultural and social attractions, and (3) sites of current interest, including historic and archaeological monuments.

### (a) Areas of Natural Flora and Fauna

Key natural attractions in the Abraka tourism region, identified by Awaritefe (2015), serve as the foundation for tourism activities and excursions. These sites must be managed

under controlled conditions to safeguard local flora and fauna. The area hosts diverse vegetation types, including mangrove and freshwater swamp forests, tropical lowland rainforests, and scattered grasslands, which draw tourists. Awaritefe (2015) and Nwabuishi (2023) categorized these resources as primary and secondary attractions. Similarly, freshwater swamp forests and treeless grassland patches were classified and evaluated as primary or secondary attractions.

Previous studies (Awaritefe & Ejemeyovwi, 2004; Awaritefe, 2015; Nwabuishi, 2023) also document the rich wildlife in the region, including insects, reptiles, snails, crocodiles, turtles, snakes, antelopes, baboons, chimpanzees, monkeys, rodents, and diverse bird species, along with inland water systems that support fishing tourism. Conservation measures are practiced in forest reserves, sacred community forests, and water areas. Awaritefe (2015) recommended the following attraction grades based on natural resource significance:

1. **Grade A:** 4 primary attractions, suitable for visits longer than 1 hour.
2. **Grade B:** 7 secondary attractions, suitable for visits shorter than 1 hour.
3. **Grade C:** 3 minor attractions with potential appeal.

**(b) Areas of Cultural and Social Attractions**

Cultural and social tourism in Abraka reflects the indigenous tribal traditions, social and religious practices, and local lifestyles (Awaritefe, 2005; Abotutu, 2006). Settlements were categorized into three types:

1. Ancient or pre-colonial settlements
2. Colonial settlements
3. Recent or post-colonial settlements

An inventory of settlements was evaluated using 35 criteria with a 1–5 point grading system, resulting in six settlement categories for cultural tourism:

1. First-order attraction settlements (5)
2. Second-order attraction settlements (7)
3. Other interesting settlements (4)
4. Settlements in ruinous condition (2)
5. Settlements with exceptional individual or group buildings (2)

**(c) Areas of Current Interest: Historic, Archaeological, and Monumental Sites**

The third category encompasses historic and archaeological attractions, including monuments linked to local tribal rivalries, the slave trade, early European trade and missionary work, and British colonial occupation (Awaritefe, 2015). Significant sites include palaces, churches, schools, bridges, hotels, and educational facilities. These were classified into three grades:

1. **Grade A:** 2 major sites suitable for visits longer than 1 hour
2. **Grade B:** 7 sites suitable for visits shorter than 1 hour
3. **Grade C:** 3 less significant sites with potential appeal

These natural, cultural, and historic attractions have been integrated into tourism development strategies and policy frameworks for Delta State. Additionally, Delta State's tourism policy (2016) emphasizes conserving cultural heritage and protecting environmental quality as essential for sustainable tourism development.

**Subsystems of Travel Routes/Modes and other Tourism Infrastructures/Facilities and Services**

Earlier tourism research in the Abraka region, including studies by Awaritefe and Ejemeyovwi (2004), highlights key transport links connecting the area to other parts of Nigeria. Air travel is available via Osubi Airport, while seaports at Warri, Sapele, Koko, and Burutu facilitate maritime access. Within Delta State, Abraka is connected through a network of roads and waterways, with canoes commonly used on rivers and creeks. Despite these connections, the transport system remains underdeveloped, limiting access to many areas with significant tourism resources.

Studies on tourism perception and use of the river resort center in Abraka (Awaritefe, 1993, 2015) found that tourists typically travel in groups, using buses, trucks, or private cars. Foreign tourists tend to stay longer at destinations compared to domestic visitors, who mostly take day trips due to limited income and high travel costs. The area hosts only a few tour operators and travel agencies because of low demand, although some high-end hotels exist, capitalizing on Abraka's unique tourism assets. While nearby towns like Asaba and Warri have relatively well-developed tourism infrastructure, many tourism sites in Abraka still lack adequate facilities. Essential services for tourists, such as medical care, information and educational resources, shopping, recreation, and other support services, remain underdeveloped or unavailable.

**Tourism Control Subsystem: Institutional Elements and Policy**

The Federal Government of Nigeria oversees tourism development through the Ministry of Trade and Tourism in collaboration with the National Tourism Development Corporation (Federal Government of Nigeria, 1990). At the state level, all 36 states are expected to have a Ministry of Tourism and a Tourism Board to manage and regulate tourism activities. In Delta State, tourism development is guided by the National Tourism Policy (Federal Government of Nigeria, 1990).

Within Delta State, the Ministry of Information, Culture and Tourism, along with the Delta State Tourism Board, is responsible for regulating, marketing, and managing tourism operations. The private sector mainly handles commercial tourism activities. The primary objectives of tourism policy in both Delta State and Nigeria are to generate employment, increase income, and enhance the well-being of citizens. Tourism development strategies emphasize mobilizing private sector participation and creating an enabling environment for private investment. At the local level, each of Delta State's 21 Local Government Areas (LGAs) is expected to establish a Tourism Committee to oversee tourism activities; however, currently, only a few LGAs have functional committees (Delta State Ministry of Culture and Tourism, 2008).

**Tourism Demand Subsystem in Abraka**

The tourism demand sub-system primarily comprises foreign and domestic tourists, as well as residents who utilize tourism products in the study area. Previous research (Awaritefe, 2004, 2005) and official records (Delta State Ministry of Culture and Tourism, 2008) provide data on both the volume and qualitative aspects of tourist travel behavior across various tourism regions in Delta State. However, since tourism data are collected using different sources and methodologies, measurements and estimates often vary considerably. Additionally, some tourist activities were not fully captured by earlier studies or official statistics, so many figures and their interpretations should be treated with caution.

Available data for the Abraka tourism region from 2001 to 2014 indicate approximately 1.3 million overnight trips (Awaritefe, 2015), averaging about 334,010 overnight vacation trips per year. In 2005 alone, total overnight visitors were estimated at 389,000. Assuming an average stay of 3.5 nights, this equates to roughly 1.2 million overnight stays. With an average daily expenditure of N20,000 per tourist (approximately £100), total tourism receipts for 2005 were estimated at N1.2 billion annually (Awaritefe, 2015).

**Tourists Demographics**

Earlier research on tourist demographics in the Abraka region (Awaritefe & Ejemeyovwi, 2004; Awaritefe, 2005, 2006; Nwabuishi, 2023) shows that most visitors are domestic tourists, primarily interested in environmental appreciation, educational experiences, and recreational activities. The majority of these tourists are male, unmarried, and aged between 18 and 46 years, with an average age of 32. These studies also indicate that most domestic tourists earn over N150,000 per month, significantly higher than the national average of N25,000, hold higher certificates, diplomas, or first degrees, and belong to the working or middle class, while a smaller proportion are students.

Foreign tourists visiting Abraka are predominantly Europeans from countries such as Britain, France, Italy, Germany, the United States, and Canada, with a smaller number from Asia and other African nations. Domestic tourists typically have medium to large family sizes, travel with spouses or friends, and often use personal vehicles. In contrast, foreign tourists are mostly single or have small families with fewer than two children, and tend to travel in larger groups using buses, trucks, or cars.

**Tourist Origin and Destination Environment Subsystems that Stimulate Travel**

Earlier research on tourist demographics in the Abraka region (Awaritefe & Ejemeyovwi, 2004; Awaritefe, 2005, 2006; Nwabuishi, 2023) shows that most visitors are domestic tourists, primarily interested in environmental appreciation, educational experiences, and recreational activities. The majority of these tourists are male, unmarried, and aged between 18 and 46 years, with an average age of 32. These studies also indicate that most domestic tourists earn over N150,000 per month, significantly higher than the national average of N25,000, hold higher certificates, diplomas, or first degrees, and belong to the working or middle class, while a smaller proportion are students.

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**Feedback Information (Positive and Negative)**

Previous studies on tourist behavior regarding factors that influence travel decisions and motivation to visit tourism destinations highlight challenges related to the cost and quality of tourism infrastructure and amenities, particularly transportation, entertainment and leisure facilities, accommodation, catering services, sports and recreational facilities, health services, and safety/security. While the specific environmental features perceived as negatively affecting tourists' experiences varied across destinations, visitors consistently indicated that the aspects they valued most, such as transportation, accommodation, entertainment, catering, safety, and natural or cultural environments, were the most impacted. Tourists expressed notable dissatisfaction with the inadequate provision and poor

quality of human-made features, especially infrastructure, accommodation and catering, security measures, and entertainment and leisure facilities (including sports events and spaces). Consequently, there is a strong demand from tourists for improved quality and better provision of these components, as well as reductions in associated costs.

## 2. METHOD

This study adopted a survey research design, utilizing questionnaires administered to respondents at randomly selected tourism centers to examine the potential relationship between the government's fuel subsidy removal policy and the tourism behavior of visitors to destinations along the River Ethiope in Abraka, Delta State, Nigeria. The survey approach enabled the collection of data and insights, providing a detailed understanding of the anticipated effects of the policy change.

Population size also plays a role in the extent of tourism development. According to the Federal Republic of Nigeria Official Gazette (2009), Delta State has a total population of 4,112,445 (National Population Census, 2006). Ethiope East has a population of 200,942 (Federal Bureau of Statistics, 2009), while Abraka is estimated at 25,123, excluding the student population (Population Media Centre, 2014; modified from Ministry of Lands, Surveys and Urban Development, 2002). A target population of 375 tourist respondents was selected for the study using a simple random sampling method across various tourism destinations in the region.

A combination of simple random and systematic sampling techniques was used to select both tourism destinations and respondents. Five key tourism destinations along the River Ethiope were chosen using simple random sampling, and 75 tourists were systematically selected from each destination, yielding a total sample of 375 respondents. Structured questionnaires were employed for data collection. Respondents were asked to complete the questionnaire, which was divided into four sections. Part A collected demographic information; Part B focused on the effects of fuel subsidy removal on tourists; Part C explored the relationship between government fuel subsidy removal and tourist activity along the River Ethiope; and Part D examined the effects on tourist behavior.

The validity of the questionnaire was ensured through expert review by the study supervisor, a lecturer from the Department of Geography and Regional Planning, Delta State University, Abraka, and a lecturer from the Department of Hospitality and Tourism Studies, Admiralty University of Nigeria, Ibusa. Reliability was tested using the test-retest method: 40 questionnaires were administered to respondents on two occasions, three weeks apart, and analyzed with Pearson's correlation coefficient. The reliability coefficient of 0.816 indicated a strong positive relationship between the variables, confirming the instrument's reliability.

Data for the study were collected solely from primary sources, specifically structured questionnaire surveys designed to capture tourists' perceptions and the impact of fuel subsidy removal on their experiences. A total of 375 questionnaires were administered at selected tourism sites along the River Ethiope to assess the level of impact experienced by visitors due to the policy change. The study integrated data from both the demand and supply subsystems of the tourism industry in the Abraka region.

The collected data were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics were employed to determine the mean, standard deviation, coefficient of variation, frequency, and percentage distribution of tourist demographics. Regression analysis was used to examine the relationship between fuel subsidy removal and tourism travel patterns, tourist behavior, and overall satisfaction.

## 3. RESULTS AND DISCUSSION

The hypotheses formulated were tested using regression statistical tools:

**Research Hypotheses One**

There is no significant correlation between the removal of fuel subsidies and tourism travel patterns, including transportation mode, travel expenses, and travel frequency of visitors to tourism destinations along the River Ethiope region in Abraka.

***Table 1: Regression Model Summary***

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | .200[a] | .040 | .032 | .993 | 5.143 | .002[b] |

Source: SPSS Output, 2025

Table 1 shows that the regression model is significant (F = 5.143, p = .002) at the 0.05 level, indicating a meaningful relationship between fuel subsidy removal and tourism travel behavior, including transportation mode, travel costs, and travel frequency. Based on this analysis, the null hypothesis ($H_0$) is rejected, and the alternative hypothesis ($H_1$) is accepted, confirming that fuel subsidy removal significantly affects tourism travel in terms of transport mode, travel expenses, and travel frequency of visitors to tourism destinations along the River Ethiope, Abraka.

**Research Hypotheses Two**

There is no significant relationship between fuel subsidy removal and the tourism behavior of visitors regarding their demand for tourism products and services.

***Table 2: Regression Model Summary***

| *Model* | R | R Square | Adjusted R Square | Std. Error of the Estimate | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | .292[a] | .085 | .078 | .969 | 11.547 | .000[b] |

**Source: SPSS Output, 2025**

Table 2 shows that the regression model is significant (F = 11.547, p = .000) at the 0.05 level, indicating a significant relationship between fuel subsidy removal and the tourism behavior of visitors in their demand for tourism products and services in the River Ethiope tourism destinations region, Abraka. Based on this analysis, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted, confirming that fuel subsidy removal significantly influences visitors' tourism behavior in terms of their demand for tourism products and services along the River Ethiope tourism destinations region, Abraka.

**Research Hypotheses Three**

There is no significant relationship between fuel subsidy removal and the overall satisfaction of tourism visitors regarding their demand for tourism products and services.

***Table 3: Model Summary***

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | .150[a] | .023 | .015 | 1.002 | 2.849 | .037[b] |

**Source: SPSS Output, 2025**

Table 3 shows that the regression model is significant (F = 2.849, p = .037) at the 0.05 significance level, indicating a significant relationship between fuel subsidy removal and the overall satisfaction of tourism visitors regarding their demand for tourism products and services in the River Ethiope tourism destinations region, Abraka. Based on this analysis, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted, confirming that fuel subsidy removal significantly affects the overall satisfaction of tourism visitors in their demand for tourism products and services along the River Ethiope tourism destinations region, Abraka.

**Discussion of Results**

The results of this study offer important insights into the impact of fuel subsidy removal on tourism in the River Ethiope region, Abraka. Regression analysis indicated a significant relationship between fuel subsidy removal and tourism travel, considering transportation mode, travel cost, and travel frequency (F = 5.143, p = .002). This is further supported by the correlation analysis, which yielded an r-value of .200 and an R-squared of .040. Similarly, Ozili & Obiora (2023) found that fuel subsidy removal has notable socio-economic effects, including increased poverty and reduced spending on leisure and recreation, which can influence tourism travel patterns.

The study also found a significant relationship between fuel subsidy removal and tourism behavior regarding the demand for tourism products and services. Adeniran (2016) supports this, noting that subsidy removal increases fuel prices, thereby impacting multiple sectors, including tourism. The correlation analysis further reinforces the significance of this relationship.

Additionally, regression results demonstrated a significant relationship between fuel subsidy removal and the overall satisfaction of tourism visitors concerning their demand for tourism products and services. Ezeh (2012) emphasized that fuel, being an inelastic product in Nigeria, limits alternatives for consumers, which can affect tourist satisfaction.

These findings align with previous research emphasizing the role of government in tourism (Jenkins & Henry, 1982). Hall & Jenkins (2004) highlighted the complexity of assessing the effects of government policy on tourism, noting that precise causal links are difficult to establish due to external factors such as economic conditions. Chambers & Airey (2001) similarly argue that fuel subsidy removal's effect on tourism may be influenced by factors like the economic climate in major source markets. Overall, the study demonstrates that fuel subsidy removal significantly affects tourism in the River Ethiope region, influencing travel behavior, demand for tourism products and services, and overall visitor satisfaction. The literature underscores the multifaceted nature of this relationship and highlights the need for further research to better understand the broader implications of subsidy policy on tourism.

## 4. CONCLUSION

The study revealed that the removal of fuel subsidies has a substantial and multifaceted impact on tourism activities in the River Ethiope region, Abraka. Specifically, it showed that tourism travel is significantly influenced by changes in transportation options,

travel costs, and the frequency with which tourists visit the area. With the rise in fuel prices resulting from subsidy removal, tourists are compelled to reconsider their preferred modes of transportation, often opting for more economical options or reducing the number of trips they make, which directly affects the flow of visitors to tourism destinations along the River Ethiope.

Moreover, the study highlighted a significant relationship between fuel subsidy removal and tourism behavior, particularly concerning the demand for tourism products and services. As fuel prices rise, the overall cost of accessing tourism facilities, including accommodation, recreational activities, and other ancillary services, increases, prompting tourists to adjust their spending patterns. This shift in behavior affects not only the volume of consumption but also the type of tourism products and services sought by visitors, potentially reducing demand for higher-end or luxury tourism offerings while increasing interest in more affordable or locally available options.

In addition, the study identified a notable connection between fuel subsidy removal and overall visitor satisfaction with tourism experiences in the region. Rising operational and travel costs can diminish the quality of tourism experiences, as tourists may spend less on leisure, recreation, and other enjoyment-related activities due to higher expenses. Reduced satisfaction can impact repeat visitation rates, tourist loyalty, and the overall reputation of the River Ethiope region as a desirable tourist destination.

Overall, the findings underscore that fuel subsidy removal is not merely an economic policy issue but also a critical factor shaping tourism patterns, consumer behavior, and visitor satisfaction. These insights emphasize the need for targeted interventions by policymakers, tourism operators, and other stakeholders to mitigate the negative consequences of fuel subsidy removal on tourism development, ensuring that the River Ethiope region continues to attract and satisfy both domestic and international tourists. Based on these findings, the following recommendations are proposed:

i. Government and tourism stakeholders should consistently monitor and assess the effects of fuel subsidy removal on the tourism sector, adjusting strategies as needed.
ii. There should be cooperative efforts between government, tourism operators, and other stakeholders to develop and implement measures that mitigate the negative impacts of fuel subsidy removal on tourism.
iii. Tourism policies should be reviewed and updated to reflect the effects of fuel subsidy removal, including measures that support operators and encourage sustainable tourism development.
iv. The promotion of sustainable tourism, such as eco-tourism and cultural tourism, can reduce reliance on fuel and enhance economic diversification in the region.
v. Tourism operators are encouraged to explore alternative energy options, like solar or wind power, to lessen dependency on fuel and reduce the impact of rising fuel costs.
vi. Financial assistance or incentives, such as subsidies, tax relief, or low-interest loans, could help tourism operators manage the increased operational costs resulting from fuel subsidy removal.

Implementing these recommendations can help policymakers and stakeholders foster sustainable tourism development in Nigeria while minimizing the adverse effects of fuel subsidy removal on the tourism industry.

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**Appendix**
**SPSS RESULT OUTPUT**
**HYPOTHESIS 1**

```
REGRESSION
  /DESCRIPTIVES MEAN STDDEV CORR SIG N
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS CI (95) R ANOVA
  /CRITERIA=PIN (.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Q13
  /METHOD=ENTER Q16c Q16b Q16a.
```

**Regression**

**Notes**

| | | |
|---|---|---|
| Output Created | | 20-MAY-2025 15:28:50 |
| Comments | | |
| Input | Data | C:\Users\2ONIA\Documents\New Entry ManiData.sav |
| | Active Dataset | DataSet2 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 375 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any variable used. |

| | | |
|---|---|---|
| Syntax | | REGRESSION<br>/DESCRIPTIVES MEAN STDDEV CORR SIG N<br>/MISSING LISTWISE<br>/STATISTICS COEFF OUTS CI(95) R ANOVA<br>/CRITERIA=PIN(.05) POUT(.10)<br>/NOORIGIN<br>/DEPENDENT Q13<br>/METHOD=ENTER Q16c Q16b Q16a. |
| Resources | Processor Time | 00:00:00.05 |
| | Elapsed Time | 00:00:00.03 |
| | Memory Required | 6064 bytes |
| | Additional Memory Required for Residual Plots | 0 bytes |

**Descriptive Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| Fuel subsidy removal | 1.46 | 1.010 | 375 |
| Travel frequency | 2.77 | .889 | 375 |
| Travel costs | 2.70 | .864 | 375 |
| Transport mode | 2.55 | .885 | 375 |

**Correlations**

| | | Fuel subsidy removal | Travel frequency | Travel costs | Transport mode |
|---|---|---|---|---|---|
| Pearson Correlation | Fuel subsidy removal | 1.000 | -.167 | -.195 | -.192 |
| | Travel frequency | -.167 | 1.000 | .880 | .884 |
| | Travel costs | -.195 | .880 | 1.000 | .909 |
| | Transport mode | -.192 | .884 | .909 | 1.000 |
| Sig. (1-tailed) | Fuel subsidy removal | . | .001 | .000 | .000 |
| | Travel frequency | .001 | . | .000 | .000 |
| | Travel costs | .000 | .000 | . | .000 |
| | Transport mode | .000 | .000 | .000 | . |
| N | Fuel subsidy removal | 375 | 375 | 375 | 375 |

| | | | | | |
|---|---|---|---|---|---|
| | Travel frequency | 375 | 375 | 375 | 375 |
| | Travel costs | 375 | 375 | 375 | 375 |
| | Transport mode | 375 | 375 | 375 | 375 |

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | Transport mode, Travel frequency, Travel costs[b] | . | Enter |

a. Dependent Variable: Fuel subsidy removal
b. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .200[a] | .040 | .032 | .993 |

a. Predictors: (Constant), Transport mode, Travel frequency, Travel costs

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 15.222 | 3 | 5.074 | 5.143 | .002[b] |
| | Residual | 366.042 | 371 | .987 | | |
| | Total | 381.264 | 374 | | | |

a. Dependent Variable: Fuel subsidy removal
b. Predictors: (Constant), Transport mode, Travel frequency, Travel costs

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. | Lower Bound | Upper Bound |
| 1 | (Constant) | 2.061 | .174 | | 11.878 | .000 | 1.720 | 2.402 |
| | Travel frequency | .069 | .134 | .061 | .515 | .607 | -.195 | .334 |
| | Travel costs | -.169 | .155 | -.145 | -1.093 | .275 | -.473 | .135 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Transport mode | -.130 | .154 | -.114 | -.847 | .397 | -.433 | .172 |

a. Dependent Variable: Fuel subsidy removal

**HYPOTHESIS 2**

```
REGRESSION
 /DESCRIPTIVES MEAN STDDEV CORR SIG N
 /MISSING LISTWISE
 /STATISTICS COEFF OUTS CI(95) R ANOVA
 /CRITERIA=PIN(.05) POUT(.10)
 /NOORIGIN
 /DEPENDENT Q13
 /METHOD=ENTER Q17a Q17b Q17c.
```

**Regression**

**Notes**

| | | |
|---|---|---|
| Output Created | | 20-MAY-2025 15:19:22 |
| Comments | | |
| Input | Data | C:\Users\2ONIA\Documents\New Entry ManiData.sav |
| | Active Dataset | DataSet2 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 375 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any variable used. |

| | | |
|---|---|---|
| Syntax | | REGRESSION /DESCRIPTIVES MEAN STDDEV CORR SIG N /MISSING LISTWISE /STATISTICS COEFF OUTS CI(95) R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT Q13 /METHOD=ENTER Q17a Q17b Q17c. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Memory Required | 6064 bytes |
| | Additional Memory Required for Residual Plots | 0 bytes |

**Descriptive Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| Fuel subsidy removal | 1.46 | 1.010 | 375 |
| Goods purchase | 2.67 | .869 | 375 |
| Drinks purchase | 2.77 | .827 | 375 |
| Accommodation usage | 2.42 | .883 | 375 |

**Correlations**

| | | Fuel subsidy removal | Goods purchase | Drinks purchase | Accommodation usage |
|---|---|---|---|---|---|
| Pearson Correlation | Fuel subsidy removal | 1.000 | -.181 | -.216 | -.256 |
| | Goods purchase | -.181 | 1.000 | .939 | .876 |
| | Drinks purchase | -.216 | .939 | 1.000 | .845 |
| | Accommodation usage | -.256 | .876 | .845 | 1.000 |
| Sig. (1-tailed) | Fuel subsidy removal | . | .000 | .000 | .000 |
| | Goods purchase | .000 | . | .000 | .000 |
| | Drinks purchase | .000 | .000 | . | .000 |
| | Accommodation usage | .000 | .000 | .000 | . |

| | | | | | |
|---|---|---|---|---|---|
| N | Fuel subsidy removal | 375 | 375 | 375 | 375 |
| | Goods purchase | 375 | 375 | 375 | 375 |
| | Drinks purchase | 375 | 375 | 375 | 375 |
| | Accommodation usage | 375 | 375 | 375 | 375 |

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | Accommodation usage, Drinks purchase, Goods purchase[b] | . | Enter |

a. Dependent Variable: Fuel subsidy removal
b. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .292[a] | .085 | .078 | .969 |

a. Predictors: (Constant), Accommodation usage, Drinks purchase, Goods purchase

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**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 32.558 | 3 | 10.853 | 11.547 | .000[b] |
| | Residual | 348.706 | 371 | .940 | | |
| | Total | 381.264 | 374 | | | |

a. Dependent Variable: Fuel subsidy removal
b. Predictors: (Constant), Accommodation usage, Drinks purchase, Goods purchase

**Coefficients[a]**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. | 95.0% Confidence Interval for B Lower Bound | 95.0% Confidence Interval for B Upper Bound |
|---|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 2.193 | .176 | | 12.477 | .000 | 1.848 | 2.539 |
| | Goods purchase | .534 | .188 | .460 | 2.841 | .005 | .164 | .904 |
| | Drinks purchase | -.390 | .178 | -.319 | -2.188 | .029 | -.740 | -.040 |
| | Accommodation usage | -.445 | .119 | -.389 | -3.736 | .000 | -.679 | -.211 |

a. Dependent Variable: Fuel subsidy removal

**HYPOTHESIS 3**

```
REGRESSION
 /DESCRIPTIVES MEAN STDDEV CORR SIG N
 /MISSING LISTWISE
 /STATISTICS COEFF OUTS CI(95) R ANOVA
 /CRITERIA=PIN(.05) POUT(.10)
 /NOORIGIN
 /DEPENDENT Q13
 /METHOD=ENTER Q18a Q18b Q18c.
```

**Regression**

**Notes**

| | | |
|---|---|---|
| Output Created | | 20-MAY-2025 15:21:56 |
| Comments | | |
| Input | Data | C:\Users\2ONIA\Documents\New Entry ManiData.sav |
| | Active Dataset | DataSet2 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 375 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any variable used. |

| | | |
|---|---|---|
| Syntax | | REGRESSION /DESCRIPTIVES MEAN STDDEV CORR SIG N /MISSING LISTWISE /STATISTICS COEFF OUTS CI(95) R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT Q13 /METHOD=ENTER Q18a Q18b Q18c. |
| Resources | Processor Time | 00:00:00.03 |
| | Elapsed Time | 00:00:00.01 |
| | Memory Required | 6064 bytes |
| | Additional Memory Required for Residual Plots | 0 bytes |

**Descriptive Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| Fuel subsidy removal | 1.46 | 1.010 | 375 |
| Transportation | 1.29 | .453 | 375 |
| Accommodation | 1.27 | .444 | 375 |
| Food | 1.22 | .417 | 375 |

**Correlations**

| | | Fuel subsidy removal | Transportation | Accommodation | Food |
|---|---|---|---|---|---|
| Pearson Correlation | Fuel subsidy removal | 1.000 | -.042 | -.023 | -.082 |
| | Transportation | -.042 | 1.000 | .955 | .845 |
| | Accommodation | -.023 | .955 | 1.000 | .885 |
| | Food | -.082 | .845 | .885 | 1.000 |
| Sig. (1-tailed) | Fuel subsidy removal | . | .211 | .328 | .056 |
| | Transportation | .211 | . | .000 | .000 |
| | Accommodation | .328 | .000 | . | .000 |
| | Food | .056 | .000 | .000 | . |
| N | Fuel subsidy removal | 375 | 375 | 375 | 375 |
| | Transportation | 375 | 375 | 375 | 375 |
| | Accommodation | 375 | 375 | 375 | 375 |

| | | | | |
|---|---|---|---|---|
| Food | 375 | 375 | 375 | 375 |

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | Food, Transportation, Accommodation[b] | . | Enter |

a. Dependent Variable: Fuel subsidy removal

b. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .150[a] | .023 | .015 | 1.002 |

a. Predictors: (Constant), Food, Transportation, Accommodation

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 8.585 | 3 | 2.862 | 2.849 | .037[b] |
| | Residual | 372.679 | 371 | 1.005 | | |
| | Total | 381.264 | 374 | | | |

a. Dependent Variable: Fuel subsidy removal

b. Predictors: (Constant), Food, Transportation, Accommodation

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. | Lower Bound | Upper Bound |
| 1 | (Constant) | 1.672 | .164 | | 10.172 | .000 | 1.349 | 1.995 |
| | Transportation | -.491 | .384 | -.220 | -1.279 | .202 | -1.245 | .264 |
| | Accommodation | 1.000 | .450 | .440 | 2.222 | .027 | .115 | 1.885 |
| | Food | -.690 | .267 | -.286 | -2.590 | .010 | -1.215 | -.166 |

a. Dependent Variable: Fuel subsidy removal