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Impact and Enforcement Efficacy of Environmental Regulations on Property Values: A Study of Selected South East States, Nigeria

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Abstract

This study examines how environmental regulations and policies affect property values in South East Nigeria. It is premised on the growing recognition that environmental quality and regulatory frameworks significantly influence the demand and value of real estate. The aim of the study is to analyze the impact and enforcement efficacy of environmental regulations on property values: A case study of selected South East States, Nigeria, in order to identify key regulatory instruments that help to shape the property market in the study area. A quantitative research design was adopted, covering Anambra, Enugu, and Imo States. The population of the study comprised 113 estate surveying and valuation firms in the three selected states, with a sample frame of 95 firms based on retrieved questionnaires. Data were collected using structured questionnaires and analyzed using descriptive statistics of frequencies, percentages, and mean scores, and inferential statistics adopting the one sample t-test. Findings reveal that although environmental regulations and policies have significant impact on property values in the three selected South East States with p-values of 0.000 each respectively, their effectiveness is generally low due to weak enforcement, particularly in Anambra and Imo States. Key determinants of property value identified include land use planning, zoning regulations, housing policies, and taxation policies. It was concluded that ineffective implementation limits the positive impact of these policies on property values. The study recommends stricter enforcement of regulations, mandatory environmental impact

assessments, improved urban planning, and the promotion of sustainable development practices to enhance property market outcomes.

Keywords: Enforcement Efficacy, Environmental Regulations and Policies, Property Values, Estate Surveying and Valuation, South East, Nigeria.

Introduction

Areas with stringent environmental protections and sustainable development policies often see an appreciation in property values (Akinrulire, Idemudia, Okwandu, and Iwuanyanwu, 2024). These regulations can lead to cleaner, more attractive environments, thereby increasing demand (Ayeni, Kemiki, Popoola, and Musa, 2022). For instance, cities that invest in green infrastructure, renewable energy, and sustainable urban planning often experience a boost in property values as they become more desirable places to live (Ayeni, et at 2022)., According to Ayedoke (2014) as cited by Keke, Sado, Ndeche and Adikpe (2025), properties in eco-friendly environments which have been certified based on approved policies tend to command more value than the others with less of such considerations.

Fayomi, Adedokun and Olorunyomi (2022) indicated that political factors defined by the regulations and legal framework operating in a particular area has effects on the level of property investments that can take place in a particular area, which is influences by the availability and acceptability of available properties with an inclusion of zoning laws (Turok, 2016). It is further recognized that other regulatory and policy factors such as property tax, zoning laws as well as rent control where they exist and are operational have effect on the rental market. It is important to note that the level of demand for a particular property even though not up to the acceptable standard can be so high with persons still willing to pay so much to secure the space because of the limited supply of property, and this situation influences property value generally. The South East States of Nigeria particularly experience some environmental challenges such as noise pollution, relatively poor air and water quality (Kalu and Zakirova, 2019), unplanned urban sprawl (Okechukwu and Ugochukwu, 2022) leading to reduction in green spaces and flooding which can be controlled if the regulatory landscapes of the states are adequate and effective as these can affect property values in the region (Sado and Oladejo, 2026).

The aim of this study is to analyze the impact and enforcement efficacy of environmental regulations on property values in South East States of Nigeria in order to be able to ensure and maintain a sustainable development environment for comfortable habitation without detrimental infringements to the comfort of others.

The objective of this study is:

To analyze the impact and enforcement efficacy of environmental regulations and policies on property values in selected South East States, Nigeria

Answering the Question:
What is the impact and enforcement efficacy of environmental regulations and policies on property values in the study area?

Research Hypotheses
H_{01}: Environmental regulations and policies do not significantly have impact on property values in the study area.
For policymakers and urban planners, the insights from this study are instrumental in designing more sustainable and resilient cities. Understanding the relationship between environmental factors and property values enables policymakers to implement regulations and policies that promote environmental sustainability and enhance the quality of life for residents. Urban planners can use this information to prioritize the development of infrastructure and public amenities in areas that maximize property value and minimize environmental risks. This proactive approach facilitates the creation of urban environments that are not only economically vibrant but also environmentally sound and resilient to climate change.

LITERATURE REVIEW
Conceptual Framework
Environmental Kuznets Curve (EKC)
In the initial phases of development, environmental quality frequently declines as a result of industrialization and urban expansion (Stern, 2024). Nevertheless, as income levels increase and societies begin to emphasize sustainability, there is a tendency for environmental quality to improve. Empirical studies suggest that areas with strong environmental regulations and diverse economic structures undergo this transition at a faster pace. For example, research in developing economies has demonstrated that environmental deterioration tends to stabilize and may even reverse once a specific income level is reached (Stern, 2004). In South East Nigeria, the Environmental Kuznets Curve (EKC) provides a framework for examining the impact of evolving economic activities, such as oil extraction and real estate development, on environmental quality and property values over time. Furthermore, it serves as a foundation for discussing policy implications, particularly the necessity of reconciling industrial growth with environmental conservation. The Environmental Kuznets Curve (EKC) illustrates an inverted U-shaped correlation between economic growth and environmental degradation. This theory is categorized into three distinct stages: the pre-industrial stage, the industrial stage, and the post-industrial stage. Each stage emphasizes the relationship between economic development and environmental quality, offering valuable insights into the dynamics of environmental changes over time (Stern, 2004).

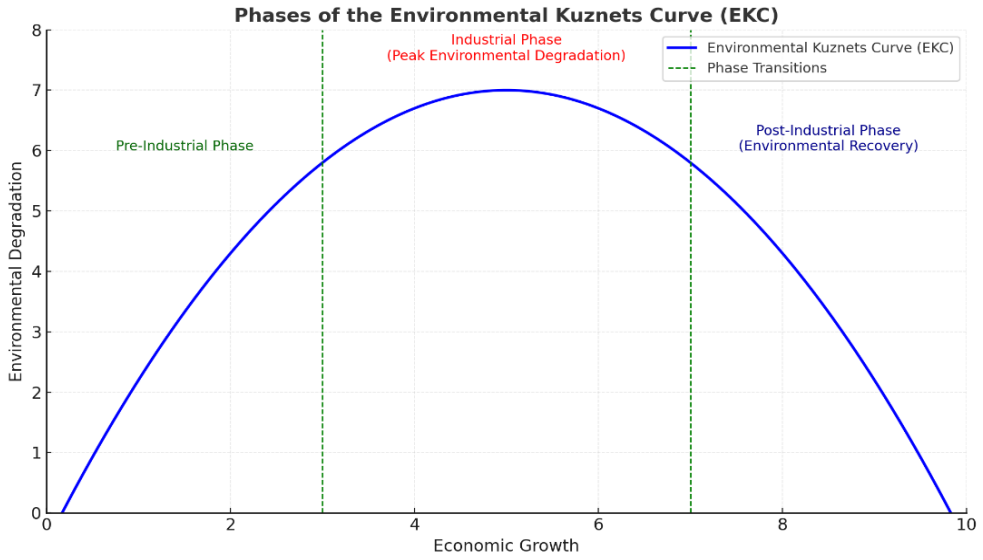


Fig. 1: Phases of Environmental Kuznets Curve
Source: Illustration (2024)

1. **Pre-Industrial Phase (Low Development, Minimal Environmental Degradation)**

In the initial phase, societies are primarily agrarian with low levels of industrialization (Stern, 2004). Economic activities focus on subsistence agriculture, manual labor, and limited trade.

a. **Economic Characteristics**: Low per capita income, limited technological advancements, and minimal industrial activity.
b. **Environmental Impact**: During this phase, environmental degradation is relatively low because of the absence of large-scale industrialization.
c. **Drivers of Degradation**: Deforestation for agricultural purposes and small-scale resource extraction.
d. **Real Estate Context**: Real estate development is limited, and land is primarily valued for its agricultural utility. Urbanization and its environmental consequences, such as air and water pollution, are negligible.
e. **Example in South East Nigeria**: In rural parts of Ebonyi State, traditional farming practices dominate, with minimal impact on the natural environment due to the lack of industrial operations.

2. **Industrial Phase (Advanced Development, Maximum Environmental Degradation)**

The industrial phase signifies a time of swift economic expansion, propelled by industrialization, urban growth, and technological progress (Stern, 2004). This stage is characterized by the most severe environmental degradation.

a. **Economic Characteristics**: Increasing income levels, extensive industrial production, and urban development.

b. **Environmental Impact**: Degradation escalates due to factors such as industrial emissions, excessive exploitation of natural resources, and heightened waste generation.
c. **Key Environmental Issues:** Air and water pollution resulting from industrial operations and a decline in biodiversity due to deforestation and alterations in land use.
d. **Real Estate Context:** Urban growth leads to a heightened demand for real estate, frequently compromising environmental quality. Property values in proximity to industrial areas may suffer due to pollution and other negative external factors.
e. **Example in South East Nigeria**: Industrial operations in Aba, Abia State, have resulted in considerable pollution of local waterways, adversely impacting nearby property values. Additionally, urban sprawl around industrial centers has exacerbated deforestation and soil erosion. (Stern, 2004).

Environmental Regulations and Policies in the Post-Industrial Phase (Remediation)

Government policies related to environmental protection, such as emission standards, waste management, and green building incentives, influence property values by shaping the long-term sustainability and desirability of real estate markets (Pasha and Kiani, 2021). Government policies, relating to the environment, are important factors influencing the real estate market, affecting property values, development, and investment prospects. Various measures that consider the environment, including zoning laws and tax incentives, can exert both direct and indirect impacts on the real estate industry (Pasha and Kiani, 2021). It is imperative that the various types of policies that influence real estate values and development, along with the effects of different governmental tiers; state, local, and federal, on the real estate market are examined.

I. Zoning Regulations and Real Estate Development

Zoning regulations represent a primary form of governmental oversight concerning land utilization (Chukwuemeka, Nnaemeka, and Ukachukwu (2017). These regulations specify the types of structures that may be erected and their permissible locations. The underlying purpose of zoning regulations typically centers on objectives related to environmental sustainability, public health, and effective urban planning. As noted by Chukwuemeka, Nnaemeka, and Ukachukwu (2017), these regulations can have a profound effect on property values by either allowing or restricting specific uses, which can subsequently enhance or diminish market values based on the area and designated land use categories. Zoning laws and sustainability policies can significantly influence property values by imposing requirements that enhance or limit development potential, thus altering demand in specific areas (Jiboye and Obakin, 2020). Studies suggest that when zoning regulations prioritize environmental conservation, such as the maintenance of green areas or the restriction of industrial activities in residential zones, they can enhance the appeal of properties, thereby increasing their values. On the other hand, zoning limitations may restrict the potential for real estate development, resulting in a shortage of available land for development, which can also lead to increased prices (Heliyon, 2023).

II. Land Use Planning

Land use planning, which is intricately linked to zoning regulations (Nwafor, Sado, and Johnnie, 2022) is essential in determining the allocation of space within a community. In areas that are environmentally sensitive, land use planning can restrict the intensity of real estate development to safeguard natural resources, thereby stabilizing property values through sustainable growth (Kok, Monkkonen, and Quigley, 2014). As highlighted by Kok, Monkkonen, and Quigley (2014), the implementation of policies that emphasize ecological conservation in land use planning is becoming increasingly vital in the face of climate change. Properties located in regions with strict environmental land use policies often command a premium due to the enhanced value associated with sustainable planning (Zakka, Permana, and Ho, 2017). For example, urban areas that incorporate green infrastructure typically experience higher real estate values, as prospective buyers are inclined to invest more in properties situated in environmentally sustainable settings.

III. Taxation Policies and Real Estate

Taxation policies, especially those that provide incentives for sustainable development, play a crucial role in shaping real estate markets (Steyo, 2024). Initiatives such as tax reductions for eco-friendly buildings, solar energy systems, and energy-efficient renovations enhance the appeal of properties to both investors and developers. Evidence suggests that tax incentives for sustainable projects lead to heightened property demand, particularly in urban settings where local policies are enacted (Ikeotuonye, Sado, and Nwaikwu, 2026).

Moreover, federal tax initiatives that encourage investment in green real estate, including programs like the Energy Efficient Commercial Buildings Deduction and solar investment tax credits, can further drive market expansion, as highlighted by Onuoha, Kamarudin, and Aliagha (2017). On the other hand, rising property taxes in regions vulnerable to environmental hazards, such as flooding, may diminish property attractiveness and decrease market values (Breitensten, Nguyen, and Walther, 2020).

IV. Housing Policies and Sustainable Development

Government initiatives aimed at promoting sustainable development and affordable housing have a significant effect on property values and the broader real estate market (Kok, Monkkonen, and Quigley, 2014). A study conducted by Akinrulire, Idemudia, Okwandu, and Iwuanyanwu (2024) indicates that affordable housing projects situated near environmentally protected regions tend to experience increased property values, attributed to their proximity to green spaces and conservation areas. Furthermore, policies that advocate for mixed-use developments with a focus on environmental sustainability generally enhance real estate demand in urban settings (Kok et al, 2014). Environmental policies, particularly those related to sustainable urban planning and conservation efforts, can impact property values by changing the supply of developable land or by enhancing the quality of the local environment (Mashhoodi and Pont, 2011). Also, according to Kok et al, (2014), building codes and land use policies can affect property values by restricting or encouraging specific types of development that either enhance or diminish the appeal of a location.

At the state level, regulations such as environmental impact assessment requirements have catalyzed advancements in green building practices, thereby enhancing the appeal of the state's real estate market to environmentally aware investors (Abisuga and Okuntade, 2020). Local governments typically align with state guidelines but have the flexibility to adapt policies to address their specific environmental circumstances, thereby affecting property values in relation to local environmental challenges (Croese and Wood, 2024).

Government policies concerning real estate function at three distinct levels: local, state, and federal. Each level plays a unique role in influencing the regulatory framework that governs environmental considerations in real estate.

A. **Local Policies**: Local authorities frequently implement zoning and land use regulations that govern the immediate development of both residential and commercial properties (Croese and Wood, 2024). Additionally, local policies may encompass environmental initiatives that oversee flood management, building standards, and conservation practices. Such regulations can significantly impact property values by encouraging markets characterized by high demand and limited supply.
B. **State Policies**: At the state level, broader environmental regulations may be established, addressing issues such as air and water quality, energy efficiency, and waste management. State environmental agencies typically work in conjunction with local governments to ensure adherence to these regulations, thereby further shaping real estate development and investment opportunities (Medrane-Sanchen, 2024).
C. **Federal Policies**: Federal regulations primarily concentrate on overarching environmental protection initiatives, including the regulation of greenhouse gas emissions, energy efficiency standards, and comprehensive land use planning. These federal policies can greatly influence real estate investment opportunities, particularly when aligned with national environmental objectives (Harris and Roach, 2021).

Land Use Patterns and Urban Planning: How Urban Development and Land Use Affect Environmental Conditions and Property Values

Land use patterns and urban planning are foundational concepts in urban and regional development (Croese and Wood, 2024). Land use patterns dictate how different parcels of land are allocated for specific purposes, such as residential, commercial, industrial, or recreational use. Urban planning, on the other hand, involves deliberate efforts to organize these land uses to optimize functionality, sustainability, and livability (Croese and Wood, 2024). Together, they significantly influence environmental quality and property values.

The Interrelationship between Land Use Patterns, Urban Planning, and Environmental Conditions

1. **Urban Expansion and Environmental Impact**: Urban expansion denotes the unregulated growth of urban regions into surrounding peri-urban and rural areas. This phenomenon frequently results in the loss of natural habitats, deforestation, and an

increase in impermeable surfaces, which intensifies flooding and the urban heat island effect. In regions experiencing urban expansion, property values may suffer due to inadequate infrastructure, diminished aesthetic appeal, and environmental deterioration. In contrast, properties located at the urban periphery may witness speculative increases in value due to anticipated development opportunities (Croese and Wood, 2024).

2. **Industrial Land Utilization:** Industrial areas are often linked to various forms of pollution, including contamination of air, water, and soil (Croese and Wood, 2024). The proximity to industrial zones typically leads to a decline in residential property values due to health risks and a decrease in environmental quality. Conversely, commercial properties situated in these zones may experience an increase in value owing to their accessibility to industrial clients (Mashhoodi and Pont, 2011).
3. **Integrated Development**: Integrated development combines residential, commercial, and recreational facilities within a unified area. Such developments often encourage sustainable practices, such as decreased vehicular traffic and improved walkability, resulting in heightened desirability and increased property values (Mashhoodi and Pont, 2011).
4. **Green Areas and Environmental Conservation**: Designating land for parks, wetlands, and green corridors plays a crucial role in alleviating urban environmental challenges such as air pollution and water runoff. Proximity to green spaces is consistently linked to higher residential property values, as these areas are regarded as healthier and more visually appealing (Croese and Wood, 2024).

According to Croese and Wood (2024), the challenges of Land Use Planning in South East Nigeria include the following:

i. **Unregulated Land Use and Informal Settlements:** In many cities within South East Nigeria, such as Onitsha and Aba, unregulated land use has led to the proliferation of informal settlements. These areas often lack proper waste management systems, drainage, and green spaces, resulting in severe environmental degradation and declining property values. For example, in Enugu, Enugu State, the integration of green spaces and organized residential layouts in neighborhoods like Independence Layout has enhanced property values, reflecting the benefits of planned land use.
ii. **Conflict between Agricultural and Urban Land Use:** With urban expansion encroaching on agricultural lands, there is a loss of fertile land and ecosystem services. While urban land use may temporarily raise land prices, the long-term environmental costs often lead to decreased property values in affected areas.
iii. **Inadequate Infrastructure Development:** Poorly planned urban areas frequently suffer from inadequate infrastructure, such as roads, drainage, and utilities, which exacerbates environmental risks like flooding and erosion. Properties in such areas are less attractive to investors and experience stagnant or declining values. For example, in Awka, Anambra State, raapid urban expansion has resulted in inadequate drainage systems, leading to frequent flooding during the rainy season, such as experienced

around Ifite and Okpuno. Properties in flood-prone areas often experience depreciation, while areas with proper drainage infrastructure see consistent value appreciation. (Croese and Wood, 2024).

Urban planning must prioritize environmental sustainability by allocating spaces for green areas, implementing effective waste management systems, and promoting the adoption of renewable energy sources. Furthermore, rigorous zoning laws and construction standards can prevent industrial activities from intruding into residential neighborhoods, thereby protecting environmental quality. Collaborations between government entities and private developers can facilitate the establishment of sustainable urban projects, such as eco-friendly housing and mixed-use developments. It is crucial to engage local communities in the urban planning process to ensure that developments align with residents' needs while preserving environmental integrity. When these strategies are successfully executed, investors are likely to experience enhanced returns in well-planned urban areas, owing to improved livability and environmental standards. In contrast, properties situated in poorly planned or inadequately regulated regions are more vulnerable to depreciation as a result of environmental decline and lack of infrastructure. The growing focus on sustainability offers real estate developers the chance to invest in green and mixed-use projects, which generally command higher market values (Harris and Poach, 2021).

Public Perception and Market Response: Environmental Quality and Property Demand

The valuation of properties is influenced not only by physical attributes such as location, size, or construction quality but also significantly by public perception, which is shaped by environmental quality and associated risks (Stewart, 2024). In South East Nigeria, where issues like flooding, erosion, and pollution are common, public perception often drives property demand, pricing, and investment trends. This section explores the impact of public perception on market responses related to perceived environmental quality and outlines strategies to mitigate negative perceptions.

Roles of Public Perception in Property Valuation

1. **Perceived Environmental Quality:** Buyers and investors often associate clean, green, and pollution-free environments with higher living standards, better health outcomes, and greater economic stability. Conversely, areas perceived to have poor environmental quality, such as those affected by industrial pollution or frequent flooding, are viewed as less desirable, leading to lower demand and property values.
2. **Risk Aversion:** Public awareness of environmental risks, such as erosion in Anambra State or flooding in Aba, deters potential buyers. Risk-averse individuals and institutions may avoid investing in these areas entirely. Even when risks are mitigated, residual perceptions of danger or instability can persist, impacting long-term market trends.
3. **Social and Cultural Influences:** In South East Nigeria, cultural beliefs and societal norms can amplify the perception of environmental risks. For instance, communities

may abandon properties affected by natural disasters due to stigmatization or superstitions. Alternatively, areas with a strong community-driven approach to environmental management may enjoy higher demand due to their perceived resilience and livability. (Stewart, 2024).

Properties built with eco-friendly materials or located in sustainable areas generally see an increase in demand and command higher market values. Proximity to parks, green areas, or well-maintained urban settings significantly enhances the appeal and competitiveness of these properties (Croese and Wood, 2024). In contrast, properties in regions prone to erosion, like Nanka, experience reduced demand, as prospective buyers and investors prioritize safety and financial stability (Croese and Wood, 2024). Areas affected by ongoing environmental issues, such as pollution or flooding, often experience a notable decline in property values over time, even if these problems are subsequently resolved (Stewart, 2024). Some markets respond by reducing prices for properties in environmentally at-risk locations, targeting buyers who are willing to take calculated risks. In turn, developers may implement risk mitigation measures, such as building flood-resistant designs or integrating green technologies, to regain buyer confidence.

As noted by Croese and Wood (2024), several factors influence public perception, including:

a) **Media and Communication**: The portrayal of environmental issues in the media, such as flooding incidents in Aba or industrial pollution in Onitsha, plays a crucial role in shaping public opinion. Negative coverage can deter investment, while positive narratives regarding remediation efforts can help rebuild trust. The perception of Nanka as a high-risk area due to gully erosion has resulted in significant outmigration and a decline in property values. Although remediation initiatives can be effective, they often struggle to overcome deeply rooted negative perceptions.

b) **Government and Policy Actions:** Government initiatives, such as flood control measures or stringent enforcement of zoning regulations, convey stability and alleviate public concerns, thereby positively influencing property demand. In contrast, inadequate enforcement of environmental laws undermines trust and exacerbates negative perceptions. Conversely, poor enforcement of environmental regulations damages trust and exacerbates negative perceptions. For instance, despite significant commercial potential, public perception of Aba is marred by its chronic flooding problems. Efforts to improve drainage infrastructure have begun to restore market confidence, but lingering fears still affect property values. Also, Onitsha's reputation as one of the most polluted cities in Nigeria has deterred residential investment. However, its thriving commercial sector maintains demand for industrial and commercial properties despite environmental concerns.

c) **Community Engagement:** Active community involvement in environmental protection efforts, such as tree planting or waste management, enhances the reputation of an area. Example: Areas with well-organized community clean-up programs may attract environmentally conscious buyers and investors. (Croese and Wood, 2024).

Governments and private developers ought to prioritize the reduction of environmental risks by improving infrastructure, encouraging reforestation, and enforcing pollution control measures. Initiatives such as the construction of flood-resistant structures and the enhancement of drainage systems can significantly address public apprehensions regarding flooding. Simultaneously, providing clear and accurate information about environmental risks and mitigation strategies can build trust and confidence among potential buyers and investors. This can be accomplished by releasing Environmental Impact Assessments (EIAs) for new projects, which can reassure stakeholders about the long-term viability of developments. Furthermore, offering tax incentives or subsidies for eco-friendly projects can promote sustainable construction and attract environmentally conscious buyers. For instance, housing developments utilizing solar energy may command higher market values due to their attractiveness to eco-aware investors. Additionally, this strategy can foster local involvement in environmental stewardship, thereby enhancing community ownership and pride while improving the area's image. Regions with unfavorable perceptions can be revitalized through targeted marketing campaigns that highlight successful remediation efforts and future development plans. (Croese and Wood, 2024).

RESEARCH METHODOLOGY

The study adopted the quantitative research design method, covering three states in the South East of Nigeria including: Anambra, Enugu and Imo, which have the major busy city centers in the zone of practicing Estate Surveying and Valuation Firms making up the population of the study. The study concentrated on professionally registered Estate Surveyors and Valuers practicing in the identified firms as listed by the Nigerian Institution of Estate Surveyors and Valuers (NIESV) State Branch Secretariats of the respective study States. Attempt was made to access the entire population of 113 firms: 36 in Anambra, 51 in Enugu and 26 in Imo by adopting the purposive sampling technique, as they were manageable in number. However, the sample frame was determined to be 95 firms with 33 in Anambra, 38 in Enugu and 24 in Imo based on successfully retrieved questionnaires. Data were collected using the instrument of questionnaire and data collected were analyzed using descriptive statistics of frequencies, percentages and mean scores and inferential statistics adopting One Sample t-test with the use of SPSS-Version 24.

RESULTS AND DISCUSSION

Analysis of Objective and Test of Hypotheses

Objective:

To analyze the impact and enforcement efficacy of environmental regulations and policies on property values in selected South East States, Nigeria.

Table 1: Effectiveness of the Existing Environmental Regulations and Policies that Impact Property Values in South East Nigeria

Level of Existence and Effectiveness	Anambra Frequency	(%)	Enugu Frequency	(%)	Imo Frequency	(%)
Not existing at all	3	9.1	3	7.9	2	8.3
Existing but not effective	18	54.5	13	34.2	11	45.8
Undecided	2	6.1	4	10.5	2	8.3
Slightly effective	9	27.3	15	39.5	5	20.8
Fully effective	1	3.0	3	7.9	4	16.7
Total	**33**	**100.0**	**38**	**100.0**	**24**	**100.0**
Mean	**2.61**		**3.05**		**2.92**	

Table 1 shows that the role of environmental regulations and policies in the three selected South East States of Nigeria are basically not effective particularly in Anambra and Imo with the largest proportion of the respondents; 54.5% and 45.8% respectively indicating that such regulations and policies are not effective, while 34.2 % of respondents indicated the same for Enugu. Although a total of 47.3% of respondents in Enugu indicated that the existing regulations and policies are at least slightly effective with 39.5% specifying slightly effective and 7.9% fully effective, this represents less than 50% of the total respondents and as such does not provide a valid confirmation of the effectiveness of environmental regulations and policies in the state. On the average, Anambra and Imo State recorded mean scores of 2.61 and 2.92 which are below 3.0 with Enugu recording 3.05 which is just slightly above 3.0 confirming the low effectiveness of the environmental regulations and policies in the three South East States.

Table 2: Environmental Regulations and Policies that Determine Property Values in South East Nigeria

State	Environmental Regulations and Policies	SD n (%)	D n (%)	U n (%)	A n (%)	SA n (%)	Total n (%)	Mean	Rank
Anambra	Zoning Regulations	2 (6.1)	- -	5 (15.2)	15 (45.5)	11 (33.3)	33 (100)	**4.00**	**3rd**
	Land Use Planning	2 (6.1)	- -	2 (6.1)	18 (54,5)	11 (33.3)	33 (100)	**4.09**	**1st**
	Taxation Policies	6 (18.2)	3 (9.1)	7 (21.2)	12 (36.4)	5 (15.2)	33 (100)	**3.21**	**4th**
	Housing Policies	1 (3.0)	- -	4 (12.1)	19 (57.6)	9 (27.3)	33 (100)	**4.06**	**2nd**
Enugu	Zoning Regulations	4 (10.5)	- -	3 (7.9)	22 (57.9)	9 (23.7)	38 (100)	**3.84**	**3rd**
	Land Use Planning	1 (2.6)	1 (2.6)	6 (15.8)	18 (47.4)	12 (31.6)	38 (100)	**4.03**	**1st**
	Taxation Policies	1 (2.6)	7 (18.4)	7 (18.4)	17 (44.7)	6 (15.8)	38 (100)	**3.53**	**4th**

State	Environmental Regulations and Policies	SD n (%)	D n (%)	U n (%)	A n (%)	SA n (%)	Total n (%)	Mean	Rank
Imo	Housing Policies	- -	4 (10.5)	3 (7.9)	23 (60.5)	8 (21.1)	38 (100)	**3.92**	**2nd**
	Zoning Regulations	2 (8.3)	1 (4.2)	2 (8.3)	10 (417)	9 (37.5)	24 (100)	**3.96**	**1st**
	Land Use Planning	2 (8.3)	1 (4.2)	3 (12.5)	12 (50.0)	6 (25.0)	24 (100)	**3.79**	**2nd**
	Taxation Policies	5 (20.8)	3 (12.5)	5 (20.8)	9 (37.5)	2 (8.3)	24 (100)	**3.00**	**4th**
	Housing Policies	4 (16.7)	1 (4.2)	3 (12.5)	11 (45.8)	5 (20.8)	24 (100)	**3.50**	**3rd**

Where: SD = Strongly Disagree; D = Disagree; U = Undecided; A = Agree; SA = Strongly Agree.

Mean < 3.00: Signifies that the regulation and policy does not determine property value

Table 2 expresses the roles of various environmental regulations and policies in determining property values in South East Nigeria. Majority of the respondents from the three selected states: Anambra, Enugu and Imo at least agreed that the four identified environmental regulations and policies comprising; Zoning Regulations, Land Use Planning, Taxation Policies and Housing Policies are agreed to play vital roles in determining property values.

For Anambra State, the identified environmental regulations and policies all play a role in determining property values, displaying means of over 3.00 respectively, with land use planning playing the most role having mean of 4.09 followed by housing policies and zoning regulations with 4.06 and 4.00 respectively while the least role is played by taxation policies with mean score of 3.21.

For Enugu State, the identified environmental regulations and policies also showed that they all play a role in determining property values, displaying means of over 3.00 respectively, with land use planning playing the most role having mean of 4.03 followed by housing policies and zoning regulations with 3.92 and 3.84 respectively while the least role is played by taxation policies with mean score of 3.53.

Furthermore, for Imo State, all the identified environmental regulations and policies also play vital roles in determining property values displaying means of over 3.00, but with zoning regulations playing the most role having mean of 3.92 followed by land use planning and housing policies with 3.79 and 3.50 respectively while the least role is played by taxation policies with mean score of 3.00.

Test of Research Hypothesis:

H_{01}: Environmental regulations and policies do not have significant impact on property values in the study area.

Table 3: Impact of Environmental Regulations and Policies in the Determination of Property Values in South East Nigeria - *Using One Sample t-test from Table 1*

Impact of Environmental Regulations and Policies	Mean	Std. Deviation	Sig. (2-tailed)
In Anambra State	2.61	1.088	0.000
In Enugu State	3.05	1.184	0.000
In Imo State	2.92	1.316	0.000

$p \leq 0.05$: Means result is significant and the null Hypothesis is rejected at 5% level of significance.

The p values in Table 3 as reflected from the responses in Table 1 all indicated 0.000 for the three respective South East States selected for the study comprising: Anambra, Enugu and Imo, which are less than 0.05. Therefore, we reject the null hypothesis and accept the alternative that state that: *Environmental regulations and policies have significant impact on property values in South East Nigeria.*

Table 4: Regulations or Policies Recommended for Mitigating Negative Environmental Impacts on Property Values

	Anambra		Enugu		Imo	
Recommendations	**n**	**(%)**	**n**	**(%)**	**n**	**(%)**
Strictly Enforcing of Zoning and Land Use Regulations	18	(24.7)	26	(31.0)	13	(25.0)
Mandatory Environmental Impact Assessments (EIAs) for New Developments	19	(26.0)	22	(26.2)	14	(26.9)
Incentives for Sustainable and Green Building Practices	9	(12.3)	8	(9.5)	6	(11.5)
Development of Comprehensive Flood Management and Drainage Systems	14	(19.2)	13	(15.5)	11	(21.2)
Creation and Maintenance of Urban Green Spaces	13	(17.8)	15	(17.9)	8	(15.4)
Total	**73**	**(100.0)**	**84**	**(100.0)**	**52**	**(100.0)**

Where: n = Frequency and % = Percentages

Table 4 shows various recommended regulations and policies that can mitigate negative impact on property values and their percentage of impact in relation to one another.

In Anambra State, mandatory Environmental Impact Assessments (EIAs) for new developments indicated the highest response rate with 26.0%, followed by strictly enforcing zoning and land use regulations, development of comprehensive flood management and drainage systems, and creation and maintenance of urban green spaces with 24.7%, 19.2% and 17.8% respectively, while incentives for sustainable and green building practices is the least with 12.3%.

Also in Enugu State, strictly enforcing zoning and land use regulations showed the highest response rate with 21.0%, followed by mandatory Environmental Impact Assessments (EIAs) for new developments, creation and maintenance of urban green spaces and development of comprehensive flood management and drainage systems with 26.2%, 17.9% and 15.5%

respectively, while incentives for sustainable and green building practices is the least with 9.5%.

Furthermore, in Imo State, mandatory Environmental Impact Assessments (EIAs) for new developments indicated the highest response rate with 26.9%, followed by strictly enforcing zoning and land use regulations, development of comprehensive flood management and drainage systems, and creation and maintenance of urban green spaces with 25.0%, 21.2% and 15.4% respectively, while incentives for sustainable and green building practices is the least with 11.5%.

Discussion of Findings

Impact and Enforcement Efficacy of Environmental Regulations on Property Values - Objective and Hypothesis: The findings from Table 1 indicate that environmental regulations and policies in the study area are generally perceived as ineffective, particularly in Anambra and Imo States, where the majority of respondents indicated that such policies are either non-existent or not effective. Enugu State showed relatively better performance which could be as a result of the State having a better urban plan and coordination due to its administrative maturity as a former regional capital city in the region, although effectiveness of the regulations was still not strongly accepted. Beyond the perceived ineffectiveness of environmental regulations and policies, Table 2 revealed that key regulatory instruments, such as land use planning, zoning regulations, housing policies, and taxation policies have impact on property values, with mean scores exceeding 3.00 in most cases. Land use planning indicated to be the most impactful policy instrument in Anambra and Enugu, while zoning regulations were most significant in Imo.

The hypothesis testing results in Table 3 present a specific direction of outcomes. The null hypothesis (H_{01}) was generally rejected and the alternative (H_{A1}) accepted, suggesting that environmental regulations and policies have significant impact on property values in South East States of Nigeria.

With respect to the Environmental Kuznets Curve (EKC) which illustrates a critical theoretical overview of the empirical findings beyond the perception of the sampled respondents about the enforcement efficacy of environmental regulations in the study area, the framework revealed that environmental degradation is a clear characteristic to various degrees of the selected South East States of Nigeria particularly during the early and intermediate stages of economic transition and urban growth which can be improved with stringent institutional controls, sustainable planning, and enhanced environmental consciousness. However, the quantitative assessment of zoning regulations, land use planning, housing policies, and taxation policies in the region specifically during the transitional development stage indicates rapid urbanization and increasing real estate activities which continue to impact pressure on the quality of the environmental and the property market in general.

Therefore, the significant relationship discovered between environmental regulations and property values through the one-sample t-test supports the EKC proposition that environmental governance through regulatory mechanisms becomes increasingly critical as

economies continue to experience urbanization and diversification. However, the observed weak enforcement mechanisms in Anambra and Imo States is an indication that the South East region has not yet fully transitioned into the phase where institutional effectiveness and environmental management sustainability can substantially reverse environmental decline and maximize positive property market outcomes.

Overall, these findings suggest that while environmental regulations and policies have the potential to impact property values, their current impact is limited by weak implementation and enforcement mechanisms in the States.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of Findings

In summary, the study found that environmental regulations and policies are generally ineffective in the South East, particularly in Anambra and Imo with Enugu showing relatively better effectiveness, though still not strongly established, having key policies impacting property values such as; land use planning being most significant in Anambra and Enugu and zoning regulations in Imo, with others being housing policies and taxation policies The Hypothesis testing revealed that there is significant impact of environmental regulations and policies in the three selected South East States, thereby accepting the alternative (H_{A1}). Additionally, stakeholders strongly recommended: strict enforcement of zoning and land use regulations, mandatory Environmental Impact Assessments (EIAs), improved flood management systems and promotion of green infrastructure to curb environmental regulation and policy issues.

Conclusion and Recommendations

The study concluded that while environmental regulations and policies have the potential to impact on property values their current effectiveness is limited due to weak enforcement and institutional inefficiencies, especially in Anambra and Imo States. It is therefore recommended that:

a) There is an urgent need to strengthen enforcement of environmental regulations and policies, particularly zoning and land use policies by policymakers and the government in general.
b) Also, Governments should make Environmental Impact Assessments (EIAs) mandatory and strictly enforced for all new developments.
c) Urban planners and environmental agencies should promote sustainable urban planning practices, including the integration of green spaces and environmentally friendly designs for properties to enhance their appeal to investors..
d) There should be enhanced monitoring and control of urban pollution, particularly noise and air pollution by those concerned.

The study contributed to the existing body of knowledge by exploring the existence and effectiveness of environmental regulations and policies and their impact in ensuring a sustainable property market.

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