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# EFFECT OF SUSTAINABLE PROJECT MANAGEMENT ON THE DEVELOPMENT OF REAL ESTATE IN URBAN AREA OF ENUGU STATE NIGERIA

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***Abstract:*** *The study examined the effect of Sustainable Project Management on the Development of Real Estate in Urban Area of Enugu State Nigeria. The specific objectives were to; examine the effect of environmental stewardship on the Development of Real Estate in Urban Area of Enugu State Nigeria. Evaluate the effect of social equity on the Development of Real Estate in Urban Area of Enugu State Nigeria. A descriptive survey design was adopted for the study. Data for the study was collected using appropriate tools, specifically questionnaires design with five-point Likert scale. The data collected were subsequently coded and imported into SPSS 28.0, the hypothesis's result was determined using Multiple Regression analysis. The result revealed that environmental stewardship has a significant positive effect on the Development of Real Estate in Urban Area with a p-value of (0.037<0.05) while social equity has a significant positive effect on the Development of Real Estate in Urban Area with a p-value of (0.000<0.05) of Enugu State Nigeria. The study concluded that sustainable project management plays a crucial role in shaping the real estate landscape of Enugu State by integrating environmental stewardship and social equity into development practices. The study recommended that local government authorities should establish policies that mandate environmental assessments for all real estate projects. These assessments should focus on minimizing ecological footprints, preserving green spaces, and promoting biodiversity.*
***Keywords:*** *Development, Real-Estate, Management, Project, Sustainable*

## 1.1 Introduction

Project management is a structured approach to planning, executing, and closing projects effectively and efficiently. It encompasses a variety of methodologies, tools, and techniques designed to achieve specific goals within defined constraints, such as time, budget, and resources (Malik, et al 2023). The discipline of project management has evolved significantly over the past few decades, driven by the increasing complexity of projects and the necessity for organizations to deliver results in a competitive environment. The Project Management Institute (PMI) defines project management as "the application of knowledge, skills, tools, and techniques to project activities to meet project requirements" (PMI, 2021). This definition underscores the multifaceted nature of project management, which integrates

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various elements such as scope, time, cost, quality, human resources, communication, risk, procurement, and stakeholder management.

Sustainable project management is a holistic approach that integrates environmental, social, and economic considerations into all stages of the project lifecycle (Gupta, 2021). It extends the traditional project management focus on scope, time, and cost to include the long-term impacts and value creation of a project. It's about ensuring that projects achieve their goals while minimizing their negative impacts on the planet and society (Banaduc, et al 2022). Sustainability in the project profession is an approach to business that balances the environmental, social, economic aspects of project-based working to meet the current needs of stakeholders without compromising or overburdening future generations (Armenia, et al 2019). Sustainable project management integrates environmental, social, and economic aspects into project management processes.

Sustainable project management is revolutionizing real estate development in urban areas by integrating environmental, social, and economic considerations into every stage of a project's lifecycle (Malik, et al 2023). This approach goes beyond traditional project management's focus on time, cost, and scope, emphasizing long-term value creation and minimal negative impact on the planet and society. It ensures projects meet current needs without compromising future generations (Stanitsas, and Kirytopoulos, 2023). In Enugu State, Nigeria, the integration of sustainability principles into project management is essential for addressing issues such as urbanization, resource depletion, and climate change. This approach not only enhances the quality of life for residents but also ensures that development is economically viable and environmentally responsible.

### 1.2 Statement of the Problem

The rapid urbanization of Enugu State, Nigeria, has led to significant challenges in real estate development, characterized by inadequate housing, environmental degradation, and strained infrastructure. Despite the increasing demand for sustainable practices in urban planning, many real estate projects in the region continue to follow traditional management approaches that neglect environmental, social, and economic sustainability. This oversight results in developments that contribute to pollution, social inequities, and unsustainable resource use, ultimately compromising the quality of life for residents.

Furthermore, the lack of awareness and integration of sustainable project management (SPM) principles hampers the ability of stakeholders including developers, government agencies, and communities to address pressing urban challenges effectively. As a result, there is a critical need to explore the potential effects of SPM on real estate development in Enugu's urban areas. This investigation aims to identify how the adoption of sustainable practices can enhance project outcomes, promote environmental stewardship, and foster social equity in the face of ongoing urban pressures.

The problem lies in the insufficient application of sustainable project management principles in real estate development in Enugu State, which exacerbates existing urban challenges and hinders the

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creation of resilient, livable communities. Addressing this gap is essential for ensuring that future real estate projects contribute positively to the urban environment and the well-being of its inhabitants.

### 1.3 Objective of the Study

The main objective is to examine the effect of Sustainable Project Management on the Development of Real Estate in Urban Area of Enugu State Nigeria. The specific objectives were to;

i. Examine the effect of environmental stewardship on the Development of Real Estate in Urban Area of Enugu State Nigeria.

ii. Evaluate the effect of social equity on the Development of Real Estate in Urban Area of Enugu State Nigeria.

### 1.4 Hypotheses of the Study

i. Environmental stewardship has no significant effect on the Development of Real Estate in Urban Area of Enugu State Nigeria.

ii. Social equity has no significant effect on the Development of Real Estate in Urban Area of Enugu State Nigeria.

## Review of Related Literature

### 2.1 Conceptual Review

### Sustainable Project Management

Sustainable Project Management, also known as Green Project Management, involves using various methods, tools, and techniques to achieve specific goals while taking into account the entire lifecycle of a project. This ensures a net positive impact on the environment, society, and economy (Clinning & Marnewick, 2018). In today's world, where environmental issues and sustainability are paramount, Green Project Management has become an essential framework. It ensures that projects not only meet their objectives but also positively contribute to the planet's health. This approach integrates sustainability principles into traditional project management, highlighting the need to minimize environmental harm, reduce resource use, and encourage social responsibility (Doskočil & Lacko, 2018).

Often referred to as Sustainable Project Management or Eco-Friendly Project Management, Green Project Management focuses on integrating environmentally and socially responsible practices throughout the project lifecycle. Its core principles aim to minimize negative environmental effects, conserve resources, decrease waste, and promote ethical, sustainable practices (Doskočil & Lacko, 2018). Sustainable Project Management goes beyond merely adding new considerations; it represents a fundamental shift in project management. Essentially, it involves rethinking the 'Iron Triangle' of budget, scope, and schedule to include social and environmental factors in the decision-making process.

Sustainability in project management goes beyond the traditional focus on time, cost, and scope by adopting a multi-dimensional approach that considers the long-term effects and benefits of projects.

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Gupta (2021) emphasizes the importance of integrating sustainability into all project management activities, such as conceptualization, budgeting, scheduling, and implementation. This integration serves not only as a response to environmental and social pressures but also as a strategic approach to ensure the viability and success of projects in a rapidly evolving global landscape. The increasing emphasis on sustainability in project management is reflected in the growing use of sustainability indicators and frameworks. Stanitsas and Kirytopoulos (2021) underscore the necessity of identifying and using sustainability indicators in construction project management. These indicators help practitioners align their projects with sustainable goals, ensuring that environmental, social, and economic factors are properly addressed.

**Environmental Stewardship**

Environmental stewardship involves the responsible management and care of the natural environment through conservation and sustainable practices. It embodies a commitment to safeguarding the earth's resources for future generations. This review compiles various scholarly definitions and viewpoints on environmental stewardship, highlighting key themes and differing opinions. According to Ebikapade and Baird (2016), environmental stewardship is defined as "the responsible use and protection of the natural environment through conservation and sustainable practices," emphasizing a proactive approach to resource management. Malik et al. (2023) describe environmental stewardship as "the ethical responsibility to manage and protect the environment for the benefit of current and future generations," adding an ethical dimension to the stewardship concept. A notable pioneer in this field suggests that stewardship entails a "land ethic," where humans recognize their role within the ecological community.

Proponents of a harmonious relationship with nature stress the importance of respecting all living beings. Armenia et al. (2019) build on this idea by proposing that stewardship includes "the collective actions of communities to manage natural resources sustainably," which highlights the significance of local knowledge and community participation in environmental management. Eckersten et al. (2023) contend that environmental stewardship is vital for sustainable development and economic resilience, defining it as "the integration of ecological integrity into economic decisions and policies." This perspective emphasizes the necessity for economic systems to support ecological sustainability. Ershadi et al. (2021) highlight the importance of governance in environmental stewardship, arguing that effective policies and regulations are crucial for encouraging responsible environmental practices. He proposes that stewardship should be viewed through policy frameworks that incentivize sustainable behavior. Some scholars, like Hawthorne, stress the ethical aspects of stewardship, advocating for a moral duty to protect the environment, while others, such as Costanza, focus on practical implications, suggesting that economic incentives are essential for fostering stewardship.

Fagarasan et al. (2023) emphasize the significance of community-based stewardship, arguing that local knowledge and practices are essential for effective environmental management. This approach

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contrasts with top-down methods that prioritize government regulations, as noted by Ershadi et al. (2021). Scholars like Leopold advocate for a holistic perspective that goes beyond local boundaries, while others stress the importance of localized stewardship practices tailored to specific ecological contexts. This tension highlights the broader debate regarding the appropriate scale for practicing stewardship. Environmental stewardship is a complex concept that includes ethical, ecological, and economic dimensions. Scholars present a variety of definitions and viewpoints, reflecting the intricate relationship between humans and the environment (Banaduc et al., 2023). As environmental challenges continue to escalate, understanding these diverse perspectives will be crucial for developing effective stewardship practices that encourage sustainability and conservation. Future research should investigate how to integrate these differing views to create a more comprehensive approach to environmental stewardship.

**Social Equity**

Social equity refers to the fair allocation of resources, opportunities, and privileges within a society, ensuring that all individuals have equal access to opportunities regardless of their backgrounds. This concept is vital for creating inclusive communities and tackling systemic inequalities. This review compiles various scholarly definitions and perspectives on social equity, highlighting key themes and differing viewpoints (Trocki et al., 2020). Upadhyay and Sa-ngiamwibool (2021) discuss social equity in terms of justice, suggesting that a just society arranges inequalities to benefit the least advantaged. Their "Difference Principle" underscores that social and economic inequalities should advantage everyone. Zahid et al. (2023) broaden the concept of equity by emphasizing the importance of recognition alongside distribution. She argues that social equity must address not only economic disparities but also the cultural injustices faced by marginalized groups. Sen (1999) highlights capabilities in his definition of social equity, asserting that true equity involves ensuring that all individuals have the capabilities to pursue their own goals.

Critics argue that traditional measures of wealth and income distribution are insufficient for capturing the complexity of social equity. Piketty (2014) examines equity through the perspective of wealth distribution, advocating for progressive taxation and policies designed to mitigate wealth concentration. He believes that economic equity is essential for achieving broader social justice. Kymlicka (2002) contends that social equity should be incorporated into public policy, highlighting the importance of governance in creating fair systems. He asserts that equitable policies must account for the diverse needs of various groups, especially minorities and disadvantaged populations. Agyeman et al. (2003) present a framework for environmental justice that intersects with social equity, arguing that fair environmental policies must address the unequal impact of environmental hazards on marginalized communities.

Scholars such as Upadhyay and Sa-ngiamwibool (2021) primarily concentrate on distributional equity, whereas Fraser stresses the importance of recognizing cultural and social identities. This tension

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underscores the complex nature of equity and the need to address both economic and social aspects. Sen's capabilities approach differs from Piketty's emphasis on material wealth; while Sen focuses on enabling individuals to realize their potential, Piketty is concerned with structural inequalities in wealth distribution. Some scholars advocate for a localized understanding of social equity, arguing that policies should be customized to specific communities, while others call for a global framework to tackle transnational inequalities. This illustrates the broader debate regarding the appropriate scale for addressing social equity.

The concept of intersectionality, introduced by Crenshaw (1989), emphasizes that social equity cannot be fully grasped without considering how various identities—such as race, gender, and class—intersect to create distinct experiences of disadvantage. This viewpoint enhances the discussion on equity by underscoring the complexity of social injustices. Social equity is a multifaceted idea that includes distributional, recognition, and capabilities perspectives. Scholars provide a range of definitions and opinions, reflecting the intricate relationships among individuals, communities, and institutions. As social inequalities persist, understanding these diverse perspectives will be essential for formulating effective policies and practices that advance social equity. Future research should investigate how to integrate these differing views to develop a more comprehensive understanding of social equity in various contexts.

**Real Estate Development**

Real estate development involves the process of enhancing land or properties to maximize their value, which can include residential subdivisions, commercial centers, and mixed-use projects. This aspect of real estate necessitates extensive planning, financing, and adherence to regulatory requirements (Chin & Chau, 2003). The real estate industry encompasses the buying, selling, leasing, and management of properties, which include residential, commercial, and industrial real estate. This sector is vital to the economy, affecting job creation, wealth generation, and urban development. Understanding the dynamics of the real estate industry requires examining its key components, market influences, and the various stakeholders involved. At its core, the real estate business comprises several essential activities: brokerage, property management, development, investment, and financing.

Real estate brokers facilitate transactions between buyers and sellers by providing valuable market insights and negotiating deals. Property management involves overseeing rental properties to ensure they are well-maintained and profitable, while also managing relationships with tenants (Baker & Sirmans, 2005). The real estate market is affected by various factors, including economic conditions, interest rates, demographic trends, and government policies. Economic indicators such as employment rates, GDP growth, and inflation can significantly influence the demand for real estate (Haurin, Parcel, & Haurin, 2004). For example, during times of economic growth, the demand for housing and commercial spaces usually increases, driving prices higher. Conversely, economic downturns can result in decreased demand and lower prices. Interest rates also play a critical role in the real estate sector;

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lower interest rates typically lead to increased borrowing, making it easier for individuals and businesses to finance property purchases (Mishkin, 2015).

The real estate industry encompasses a wide range of stakeholders, each with unique interests and roles, including real estate agents, developers, investors, tenants, and government entities. Each stakeholder plays a part in the overall functioning of the market and helps shape its direction. This sector is dynamic and multifaceted, significantly impacting the economy. By understanding its key components, market influences, and the various stakeholders involved, one can better grasp the complexities of real estate transactions and the factors driving market trends. As urbanization progresses and economic conditions change, the real estate industry will continue to be a crucial focus for investors, policymakers, and consumers alike (Rosen and Gyourko, 2001).

### 2.2 Theoretical Framework

### Modernization Theory and the Environment

Scholars like Polanyi (1957) and Giddens (1990, 1991) have explored the shift from premodernity to modernization as a process of "disembodying." This involves removing social relations from their local and traditional contexts and reorganizing them across broad temporal and spatial scales. In *The Great Transformation*, Polanyi demonstrates how this disembodying process changed traditional premodern societies into the modern capitalist economy of the nineteenth century. This transformation can be viewed as the differentiation of society into separate spheres: economic, political, and lifeworld. For instance, economic activities became increasingly independent from traditional structures such as religion, family, and kinship, adopting a distinct economic rationality. A significant consequence of the growing autonomy of the economic sphere and the rise of economic rationality has been environmental degradation, as noted by Polanyi and others.

Ecological modernization theorists argue that a form of "reem bedding" is essential to restore the balance between nature and modern society. However, modern social relations and practices cannot simply be reinserted into traditional and local contexts. Unlike de-modernization and deindustrialization theorists such as Ullrich (1979) and Sarkar (1990), ecological modernization asserts that current economic practices should be embedded within ecological limits without reverting to the historical process of disembodying. Modern economic practices are deeply entrenched in contemporary society, characterized by significant time-space separation and a relatively independent economic rationality, and are connected to modern scientific, technological, and governmental institutions. Therefore, ecological modernization theory examines the possibility of "reem bedding" economic practices—taking their ecological aspects into account—within a modern framework. This modern "reem bedding" process should lead to the institutionalization of "ecology" within the social practices and institutions related to production and consumption. Institutionalizing ecological interests in these processes necessitates redirecting economic activities toward more environmentally sustainable practices, which involves an "emancipation" or differentiation of ecology. This

differentiation of ecological rationality and the creation of an ecological sphere, which would function relatively independently of economic considerations, represents a logical theoretical advancement.

### 2.3 Empirical Review

Shah and Ganji (2019) present preliminary findings on the use of sustainable project management practices within social enterprise projects. Their research tackles the challenges stemming from insufficient sustainable infrastructures in social-based initiatives across both for-profit and non-profit organizations. The study emphasizes the absence of sustainable behavior adoption within these organizations and identifies areas for enhancement considering the economic and organizational context. The originality of this research lies in its early exploration of the connections between sustainable practices and project management programs in social projects.

Molaei, Hertogh, Bosch-Rekveldt, and Tamak (2020) investigate the factors affecting the integration of sustainability into the project management of infrastructure projects, specifically highway projects, during early phases. Their research is founded on a thorough literature review and a qualitative cross-case analysis of three sustainability-focused highway projects in the Netherlands. The study identifies essential success factors for incorporating sustainability and develops a model for integrating key roles in the project management of infrastructure initiatives. This model is grounded in the triple bottom line of sustainability, uniting all roles involved in project management.

García Villena, Gracia Villar, Dzul López, Álvarez, Delgado Noya, and Vidal Mazón (2021) Create a project framework strategy that incorporates the process groups of the Project Management Body of Knowledge (PMBOK®) standard with a sustainability and corporate social responsibility model. A Sustainability Management Plan that integrates sustainability standards across a training project's life cycle is organized using this approach. Through a multi-criteria selection process, the Project Design, Management, and Evaluation training proposal was selected, illustrating how sustainability and corporate social responsibility are integrated into project management standards.

Mrzygłocka-Chojnacka, Stanek, and Kuchta (2021) suggest using simulation throughout the project definition process to select implementation strategies for certain project tasks or phases that will help deliver the value that stakeholders have come to expect. Their strategy facilitates the process of stakeholders reaching a consensus over the value that the project should provide. According to the case study, the project's chances of success can be considerably raised by using simulation during the predictive project stage.

## 3. Methodology

### Study Area

The study is conducted in Enugu State, Nigeria, a major urban center with a growing real estate industry. Enugu State, located in the southeastern region of Nigeria, is a prominent urban center with a rich history and significant economic activities. The state capital, Enugu, often referred to as the "Coal City," serves as a hub for commercial, political, and industrial activities, making it one of the key cities

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in the region. In recent years, Enugu has witnessed considerable growth in its real estate sector, driven by population growth, urbanization, and increasing demand for residential, commercial, and industrial properties. The rapid development of property markets in Enugu State is evident in the surge of new housing projects, commercial centers, and mixed-use developments. This urban expansion is accompanied by an increasing focus on sustainability, particularly in the realms of energy efficiency, water conservation, and environmentally friendly building practices. The state government, alongside private developers, has begun embracing sustainable construction technologies and policies aimed at reducing the environmental impact of urban development. These initiatives reflect a broader trend toward adopting green building practices, which aim to minimize resource consumption and enhance the overall sustainability of infrastructure in the area.

## Method

The core purpose of research design is to create a framework for collecting, analyzing, and interpreting data. For this study, a descriptive survey design will be employed. This approach focuses on describing data and the characteristics of a population, aiming to gather factual, accurate, and systematic information while detailing the subjects examined. It is particularly beneficial due to the relatively large population from which the data was obtained. The research was carried out in selected private sectors across southeastern Nigeria, chosen for their established integrity over the years. This study utilized the survey research design to illustrate how Sustainable Project Management on the Development of Real Estate in Urban Area of Enugu State Nigeria. Data for the study was collected using appropriate tools, specifically questionnaires design with five-point Likert scale. The survey was relevant because it gathered primary data essential for analyzing the relationships among variables. The data collected were subsequently coded and imported into SPSS. To make sure the things of interest were recorded, the data was modified, coded, then recoded. After that, descriptive specific frequencies were used to examine and characterize the data. In the meantime, the hypothesis's result was determined using Multiple Regression analysis. If the regression statistical measures were under the $\alpha = 0.05$ significance level, they were deemed acceptable and significant.

## 4. Data Presentation and Analysis

### 4.1 Data Presentation

The study population constituted 236 citizens. Approximately 180 questionnaires were returned indicating a return rate of 76.3% which was acceptable. Descriptive and correlation measures were used to analyze the data. Pilot tests on 36 questionnaires were performed and found a Cronbach's alpha of 0.775 which was satisfactory. The results were presented in tables, as detailed below.

### 4.2 Results

#### 4.2.1 Gender of Respondents

The study population comprised of a greater number of females than males as shown in the pie chart below.

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Table 2: Gender Distribution of Respondents

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Male | 107 | 59.4 | 59.4 | 59.4 |
| | Female | 73 | 40.6 | 40.6 | 100.0 |
| | Total | 180 | 100.0 | 100.0 | |

Table 3: Age Distribution of Respondents

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Under 21 years | 8 | 4.4 | 4.4 | 4.4 |
| | 21-30 years | 109 | 60.6 | 60.6 | 65.0 |
| | 31-40 years | 49 | 27.2 | 27.2 | 92.2 |
| | Above 40 years | 14 | 7.8 | 7.8 | 100.0 |
| | Total | 180 | 100.0 | 100.0 | |

Table 4: Distribution of Respondents' Location

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Urban | 117 | 65.0 | 65.4 | 65.4 |
| | Local | 62 | 34.4 | 34.6 | 100.0 |
| | Total | 179 | 99.4 | 100.0 | |
| Missing | System | 1 | .6 | | |
| Total | | 180 | 100.0 | | |

Table 5: Distribution of Respondents' Educational Level

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Below High School | 6 | 3.3 | 3.3 | 3.3 |
| | High School Graduate | 31 | 17.2 | 17.2 | 20.6 |
| | University Degree | 131 | 72.8 | 72.8 | 93.3 |

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| | | | | | |
|---|---|---|---|---|---|
| | Master's or Higher | 12 | 6.7 | 6.7 | 100.0 |
| | Total | 180 | 100.0 | 100.0 | |

Table 2-5 displays the demographic information of the respondents, which presents the gender, age, location, and educational qualification of the respondents. The information suggests that for gender majority of the respondents are males with approximately (107; 59%) response rate. The modal age range was between 21-30 years old with approximately (109; 61%) response rate. When considering the location, most of the citizens who participated are from the urban area with (117; 65%) response rate out of the entire sample. Finally, the educational qualification of the respondents shows that most of the citizens have their university degree certificate (131; 72.8%).

## 4.3 Multiple Regression Analysis

Table 4.3: Multiple Regression Table

| Model 1 | Beta | Std. Error | t-Statistic | P-value |
|---|---|---|---|---|
| Environmental stewardship | 0.71145 | 0.41319 | 1.72184 | 0.031 |
| Social equity | 0.22714 | 0.03241 | 7.00833 | 0.000 |
| Constant | 2.90181 | 0.11028 | 26.3131 | 0.000 |
| Adj $R^2$ | 0.698 | | | |

Source: SPSS version 28.0

The above table 4.3; is the multiple regression table showing the result of the regression analysis for both hypotheses one and two. This result was tested at 5% level of significance and is shows that all the predictors' variables have a significant effect on the outcome variables. This is further explained in the below hypothesis.

## 4.3 Hypotheses of the study

### 4.3.1 Hypothesis One

**i. $H_{o1}$: Environmental stewardship has no significant effect on the Development of Real Estate in Urban Area of Enugu State Nigeria.**

Regression Model of Hypothesis 1

Below is the equation for a model for Hypothesis 1

$$\mathbf{DRE = \beta_0 + \beta_1 ES + \varepsilon_i} \qquad (1)$$

DRE = Development of Real Estate

ES = Environmental Stewardship

Table 4.4.1: Regression Coefficient for model 1

| Model 1 | Beta | Std. Error | t-Statistic | P-value |
|---|---|---|---|---|
| Environmental Stewardship (ES) | 0.71199 | 0.41319 | 1.72315 | 0.037 |

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| | | | | |
|---|---|---|---|---|
| Constant | 2.90181 | 0.11028 | 26.3131 | 0.000 |
| Adj $R^2$ | 0.698 | | | |

Source: SPSS version 28.0

Table 4.4.1 shows the values of adjusted R Square, unstandardized beta coefficient, standard error, t value, and P value. The value of adjusted R square is 0.698 meaning thereby 69.8% variation in the Development of Real Estate (DRE) is explained by Environmental Stewardship (ES) and the rest of the variation is unexplained in Development of Real Estate due to variables that has not been considered in this model.

Besides, the value of the unstandardized beta coefficient is 0.71199 which means that if environmental stewardship (ES) increases by one unit, then Development of Real Estate (DRE) will increase by 0.71199 units. This effect is statistically significant as the p-value is =0.037 which is less than 0.05 at 95% confidence interval. Therefore, the null hypothesis is rejected, and it can be said that there is a significant effect of Environmental Stewardship (ES) on Development of Real Estate (DRE).

### 4.4.2 Hypothesis Two

**$H_{o1}$: Social equity has no significant effect on the Development of Real Estate in Urban Area of Enugu State Nigeria.**

Regression Model of Hypothesis 2

Below is the equation for a model for Hypotheses 2

$$\mathbf{DRE = \beta_0 + \beta_1 SE + \varepsilon_i} \qquad (2)$$

DRE = Development of Real Estate

SE = Social Equity

Table 4.4.2: Regression Coefficient for Model 2

| Model 1 | Beta | Std. Error | t-Statistic | P-value |
|---|---|---|---|---|
| Social Equity (SE) | 0.22714 | 0.03241 | 7.00833 | 0.000 |
| Constant | 2.90181 | 0.11028 | 26.3131 | 0.000 |
| Adj $R^2$ | 0.698 | | | |

Source: SPSS version 28.0

Table 4.4.2 shows the values of adjusted R Square, unstandardized beta coefficient, standard error, t value, and P value. The value of adjusted R square is 0.698 meaning thereby 69.8% variation in the Development of Real Estate (DRE) is explained by social equity (SE) and the rest of the variation is unexplained in Development of Real Estate due to variables that has not been considered in this model. Besides, the value of the unstandardized beta coefficient is 0.22714 which means that social equity (SE) increases by one unit, then Development of Real Estate (DRE) will increase by 0.22714 units. This effect is statistically significant as the p-value is <0.000 which is less than 0.05 at a 95% confidence interval.

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Therefore, the null hypothesis is rejected, and it can be said that there is a significant effect of social equity (SE) on Development of Real Estate (DRE).

### 4.4 Discussion of Findings

The study examined the effect of Sustainable Project Management on the Development of Real Estate in Urban Area of Enugu State Nigeria. The Cronbach's alpha for these selected items was 0.775 as shown in Table 4.1, this result indicates that the items were reliable for measuring the variables we have selected.

The multiple linear regression results in Table 4.4.1 and 4.4.2 suggest that for hypothesis one, at a 5% level of significance, the environmental stewardship has a statistically significant effect on the Development of Real Estate in Urban Area of Enugu State Nigeria. while for hypothesis two, at a 5% level of significant the social equity has a statistically significant effect on Development of Real Estate in Urban Area of Enugu State Nigeria. This result is based on their respective p-values which are below the threshold of < 0.05.

## 5. Conclusion

The impact of sustainable project management on the development of real estate in the urban areas of Enugu State, Nigeria, is profound and multifaceted. This approach not only promotes environmental stewardship but also enhances social equity, both of which contribute significantly to the overall development of real estate in the region.

Firstly, the emphasis on environmental stewardship within sustainable project management has led to more responsible land use and resource conservation. By prioritizing eco-friendly practices, developers are able to minimize negative environmental impacts, leading to healthier urban ecosystems. This not only improves the quality of life for residents but also increases the long-term viability of real estate investments.

Secondly, the focus on social equity ensures that the benefits of real estate development are distributed more fairly among different community members. Sustainable project management fosters inclusive practices that engage local stakeholders, thereby addressing issues such as affordable housing and access to essential services. This commitment to social equity not only enhances community cohesion but also drives demand for real estate, as developments are more likely to be embraced by the community when they reflect its values and needs.

Sustainable project management plays a crucial role in shaping the real estate landscape of Enugu State by integrating environmental stewardship and social equity into development practices. This holistic approach not only promotes sustainable growth but also ensures that urban developments are resilient, inclusive, and beneficial to all residents. As Enugu State continues to evolve, embracing these principles will be essential for fostering a sustainable and equitable urban future.

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**Recommendations**

To maximize the positive effects of sustainable project management on the development of real estate in the urban areas of Enugu State, Nigeria, the following recommendations are proposed:

**i.** Local government authorities should establish policies that mandate environmental assessments for all real estate projects. These assessments should focus on minimizing ecological footprints, preserving green spaces, and promoting biodiversity. Encourage developers to adopt sustainable building materials and energy-efficient technologies. Incentives, such as tax breaks or grants, can be offered to projects that meet environmental sustainability criteria.

**ii.** Engage local communities in the planning and decision-making processes of real estate developments to ensure their needs and concerns are addressed. Regular consultations and feedback mechanisms should be established to foster community participation. Implement policies that prioritize the construction of affordable housing units within new developments. This can help mitigate housing shortages and ensure that diverse socioeconomic groups have access to urban living spaces.

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