

An Analysis of The Influence of Developers' Demographic Characteristics on Compliance Rate With Planning Standards in Ughelli Urban, Delta State, Nigeria

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DOI: <https://doi.org/10.51244/IJRSI.2026.1307000001>

Received: 04 July 2026; Accepted: 09 July 2026; Published: 22 July 2026

ABSTRACT

This study examined the influence of developers' demographic characteristics on compliance with planning standards in Ughelli Urban, Delta State, Nigeria. Despite the existence of statutory planning regulations and development control mechanisms, non-compliance with planning standards remains widespread, resulting in setbacks encroachment, excessive plot coverage, unauthorized developments, environmental degradation, and declining urban sustainability. The study investigated whether developers' demographic characteristics specifically sex, age, educational attainment, income, and occupation influence compliance with planning standards. The study was anchored on the Theory of Planned Behavior and adopted a survey research design. Primary data were obtained through questionnaires, interviews, field observations, and reconnaissance surveys, while secondary data were sourced from relevant literature and official documents. A total of 384 respondents were selected using cluster and stratified random sampling techniques across the four residential zones of Ughelli Urban. Data were analyzed using descriptive statistics and inferential statistics, including independent samples t-test and One-Way Analysis of Variance (ANOVA). The findings revealed that education ($p < 0.001$), income ($p = 0.002$), and occupation ($p = 0.012$) significantly influenced compliance with planning standards, whereas sex ($p = 0.471$) and age ($p = 0.154$) had no significant influence. The study concludes that compliance with planning standards is driven primarily by developers' socio-economic characteristics rather than biological attributes. It recommends the incorporation of planning education into secondary school curricula, increased public awareness on planning regulations, and the introduction of government subsidies for planning approval fees to enhance compliance among low-income developers. The study contributes empirical evidence that can strengthen development control policies and promote sustainable urban development in Delta State and similar rapidly urbanizing cities in Nigeria.

Keywords: planning standards, demographic characteristics, development control, compliance, developers, physical planning, Ughelli Urban, Delta State, sustainable urban development.

INTRODUCTION

Urbanization has become one of the defining features of contemporary development, particularly in developing countries where rapid population growth, rural–urban migration, industrialization, and economic transformation have accelerated the expansion of urban centres. Although urbanization creates opportunities for economic growth, employment generation, improved infrastructure, and enhanced access to social services, it also exerts considerable pressure on land resources, housing, transportation systems, and the natural environment. The inability of planning institutions to effectively manage this rapid growth has resulted in unauthorized developments, incompatible land uses, inadequate infrastructure, environmental degradation, flooding, traffic congestion, and the proliferation of informal settlements. Consequently, effective physical planning has become indispensable for promoting orderly urban development, environmental sustainability, and improved quality of life (United Nations Human Settlements Programme [UN-Habitat], 2022; United Nations, 2023).

Physical planning is one of the primary mechanisms through which governments regulate urban growth and ensure sustainable spatial development. Central to this process are planning standards, which prescribe minimum requirements for land-use zoning, building setbacks, plot coverage, building height, road reservations, parking facilities, drainage systems, environmental buffers, and public open spaces. These standards provide statutory and technical guidelines for achieving orderly, safe, healthy, and aesthetically pleasing urban environments. According to UN-Habitat (2022), compliance with planning standards enhances efficient land utilization, disaster risk reduction, environmental protection, and urban resilience. Similarly, the International Society of City and Regional Planners (2023) noted that planning standards provide the legal and technical framework necessary for balancing economic growth, environmental conservation, and social development.

Compliance with planning standards is fundamental to effective development control because it ensures that physical developments conform to approved plans and statutory regulations. Through development control, planning authorities monitor, regulate, and supervise development activities from project approval to completion. Effective compliance promotes orderly urban growth, public safety, infrastructure efficiency, environmental sustainability, and improved urban aesthetics. Conversely, poor compliance often results in unauthorized developments, encroachment on road setbacks and public rights-of-way, excessive plot coverage, incompatible land uses, poor drainage systems, and environmental deterioration, thereby undermining sustainable urban development (Akinyode & Khan, 2022; UN-Habitat, 2022).

Despite the existence of planning legislation and development control agencies in many developing countries, compliance with planning standards remains a persistent challenge. Across Sub-Saharan Africa, rapid urbanization has outpaced the institutional and technical capacities of planning authorities, leading to frequent violations of development regulations. Studies have identified weak enforcement, bureaucratic delays, corruption, political interference, inadequate public awareness, limited manpower, and financial constraints as major barriers to planning compliance (Adebayo et al., 2023; Owei & Otubu, 2021). These constraints have contributed to increasing incidences of illegal developments, inefficient land utilization, and declining urban environmental quality.

Although previous studies have concentrated largely on institutional and regulatory factors, comparatively little attention has been devoted to the demographic characteristics of developers. Developers play a central role in initiating and implementing physical development projects, and their personal characteristics may influence their willingness and ability to comply with planning regulations. Variables such as age, gender, educational attainment, occupation, income level, development experience, and investment objectives can shape developers' awareness of planning requirements, financial capacity, perception of regulatory agencies, and compliance behaviour. For instance, educated and experienced developers are generally more likely to understand statutory planning procedures and appreciate the long-term economic and environmental benefits of compliance than inexperienced or financially constrained developers (Akinmoladun et al., 2024; Mensah & Cobbinah, 2023).

Behavioural and institutional theories further suggest that regulatory compliance is influenced not only by enforcement mechanisms but also by the socio-economic characteristics, knowledge, attitudes, and motivations of regulated actors (Mensah & Cobbinah, 2023). Understanding developers' demographic characteristics therefore provides valuable insights for designing targeted regulatory policies, public awareness programmes, and institutional reforms aimed at improving compliance with planning standards (Organisation for Economic Co-operation and Development [OECD], 2023).

In Nigeria, physical planning administration has been strengthened through the Nigerian Urban and Regional Planning Act and complementary state planning laws, including the Delta State Urban and Regional Planning Law (2021). Nevertheless, implementation continues to be constrained by weak institutional capacity, inadequate manpower, political interference, and persistent planning violations. Ughelli Urban has experienced rapid residential and commercial expansion accompanied by encroachment on setbacks, excessive plot coverage, unauthorized developments, and other forms of non-compliance with statutory planning standards. While previous studies have examined development control challenges, limited empirical evidence exists on how developers' demographic characteristics influence compliance with planning standards in Ughelli Urban. This

knowledge gap underscores the need for this study, which investigates the influence of developers' demographic characteristics on compliance rates with planning standards.

Aim, Objectives and Hypothesis

The study aimed at analyzing the influence of developers' demographic characteristics on compliance rate with planning standards in Ughelli Urban, Delta State, Nigeria. The study specifically focused on the sex, age, education, income and occupation of the respondents in the study area.

The hypothesis of the study stated thus, the housing developers' demographic characteristics does not significantly influence the compliance rate of developers with planning standards in Ughelli urban".

LITERATURE REVIEW

Conceptual Review

Planning Standards

Planning standards are legally established guidelines that prescribe the minimum requirements for regulating physical development and promoting orderly, safe, and sustainable urban growth. They specify acceptable parameters for land-use zoning, building setbacks, plot coverage, density, infrastructure provision, environmental protection, and public facilities to ensure efficient land utilization and coordinated spatial development. These standards serve as benchmarks for development control and provide planning authorities with criteria for assessing compliance by developers.

Ultimately, planning standards safeguard public health, safety, environmental quality, and urban resilience while facilitating sustainable and well-managed settlements (Shinggu et al., 2020; United Nations Human Settlements Programme [UN-Habitat], 2022; International Society of City and Regional Planners, 2023). Examples of planning standards are presented in tables 1, 2 and 3.

Table 1: Minimum setback of dwelling from boundary line

Types of residual development	Minimum setback in meters		
	Front	Side	Rear
Slum rehabilitation and upgrading scheme	2.5	1.5	3
Low cost housing	3	1.5	4.5
Normal housing	4.5	3	6

Source: Ministry of Lands and Survey, Kenya (2002)

Table 2: Minimum Setbacks from boundary Line by FCDA

Category	Maximum	Setback (m meters)
Residential	Plot Coverage (%)	Front Back Side
Special Residential Plot	40	6.0 3.5 3.0
Low Density	40	6.0 3.5 3

Medium Density	45	6.0 3.0 3
High Density	55	6.0 3.5 4

Source: Development Control Regulations (FCDA) 1996

Table 3: Minimum Percentage Plot Coverage in Nigeria

S/N	Types of Residential development	MINIMUM % PLOT COVERAGE		
		Detached House	Semi-Detached House	Row Housing
1	Rehabilitation of slum dwellers and improvement of substandard area	50	65	65
2	Low cost housing	50	60	65
3	Normal housing development	40	50	60

Source: Vagale (1971) in Uloko and Agbonoga (2013)

Demographic Characteristics

Demographic characteristics refer to the measurable socio-economic and personal attributes that distinguish individuals or groups within a population. These characteristics commonly include age, gender, educational attainment, marital status, occupation, income, household size, and work experience, and they are widely used to explain variations in human behaviour, decision-making, and socio-economic outcomes (United Nations, 2024). Demographic characteristics constitute important explanatory variables in planning, housing, and development studies because they influence individuals' access to resources, awareness, perceptions, and behavioural responses to public policies and regulations. In the context of physical planning, developers' demographic characteristics shape their knowledge of planning regulations, financial capacity, risk perception, investment decisions, and willingness to comply with statutory planning standards. Consequently, demographic analysis provides valuable evidence for policy formulation, urban governance, and sustainable development interventions aimed at improving regulatory compliance and enhancing development control (World Bank, 2024; United Nations, 2024).

Theoretical Inclination

Theory of Planned Behavior (TPB)

This study is anchored on the Theory of Planned Behavior (TPB), propounded by Icek Ajzen in 1991. The theory posits that an individual's behaviour is primarily determined by behavioural intention, which is influenced by three interrelated constructs: attitude toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991). Although originally developed within social psychology, TPB has been widely applied in planning, environmental management, construction management, and regulatory compliance studies to explain why individuals comply with or violate statutory requirements (Ajzen, 2020; Bamberg et al., 2021).

According to the TPB, individuals are more likely to comply with regulations when they possess favourable attitudes toward compliance, perceive that significant others or institutions expect such behaviour (subjective norms), and believe they have the resources and capacity to comply (perceived behavioural control). These behavioural determinants are themselves shaped by socio-economic and demographic characteristics such as age, educational attainment, occupation, income level, development experience, and gender. For instance, highly educated developers are generally more knowledgeable about planning regulations and the long-term benefits of compliance, while experienced and financially capable developers are more likely to satisfy statutory

requirements relating to setbacks, plot coverage, infrastructure provision, and development approval. Conversely, developers with limited financial resources or inadequate knowledge may perceive compliance as burdensome, thereby increasing the likelihood of planning violations (Bamberg et al., 2021; Organisation for Economic Co-operation and Development, 2023).

The theory is particularly relevant to this study because compliance with planning standards is not determined solely by legal enforcement but also by the behavioural dispositions and socio-economic circumstances of property developers. Demographic characteristics influence developers' perceptions of planning regulations, their willingness to comply, and their capacity to meet statutory requirements. Consequently, TPB provides a robust theoretical lens for examining how developers' demographic characteristics influence compliance rates with planning standards in Ughelli Urban, Delta State. The theory further supports the proposition that improving compliance requires not only stronger enforcement but also enhanced public awareness, professional education, institutional transparency, and policies that address the socio-economic constraints facing developers. Therefore, the Theory of Planned Behavior offers an appropriate explanatory framework for analysing the relationship between developers' demographic characteristics and compliance with planning standards in the study area.

Empirical Review

Developers' Demographic Characteristics Influence on Compliance with Planning Standards

Adejumo and Badiru (2024), in their study on Residents' Compliance with Building Setbacks in Ibadan North Local Government Area of Oyo State, Nigeria revealed that among all socio-economic variables considered, the contribution of education to the residents' level of compliance with building setback was the highest. The implication of this study particularly as it concerns the level of awareness of developers to physical planning regulations should be well noted. An educated mind is usually well informed. It is therefore wise to say that the level of education of a developer will invariably influences his compliance rate with planning standards.

Daromola, Mobalaji and Oyelade (2024), revealed in their study on *Residents' Perception of Physical Planning Regulations in three Secondary Cities in Nigeria (A case study of Oshogbo, Ile-Ife and Iwo)* that residents was not quite aware of physical planning regulations in each study areas and that those with some knowledge of such regulations acquired it in the course of interacting with planning agencies. It was also found that administrative practices on the enforcement of physical planning regulations were not quite effective. This study brings to bear the impact of education and the level of awareness of physical planning regulations on compliance with planning regulations. A situation where residents get to know about physical planning from planning agency will produce nothing else than non-compliance with planning standards

In a study of compliance with open space standards in residential areas of Oyo, Nigeria Temitope et al (2023) discovered "that there is low awareness of open space requirements among home owners in the three residential zones. The compliance level in the core area was the lowest because the area was largely built prior to the introduction of planning regulations and coupled with the residents' low status. The study also revealed that the sub-urban area had the highest level of compliance because the home towns in this area have a higher socio-economic status and personal preferences for ample open space in their compounds".

Eugene (2019) on his study on factors affecting implementation and compliance with housing standards for sustainable housing delivery in Bayelsa State, Nigeria revealed that factors such as administrative practices, uncertainty of standards, socio-economic, demographic and socio-cultural factors affect implementation and compliance with housing standards for sustainable development. These factors as revealed by Eugene (2019) are crucial in ensuring that developers adhere to relevant planning standards and therefore important to take them into consideration during policy formulation tailored toward compliance to planning standards for sustainable development in Nigeria and across the globe.

Egbonwonu, Iyi, Ugwu and Obinna (2024) in their study on influence of developers' socio-economic characteristics on compliance to development control regulations in urban residential zones: case of Enugu, South-East, Nigeria found that statistically that age and educational attainment of the developers greatly influenced development control regulations compliance in the study area. This revelation as discovered in this

study by Egbonwonu et al (2024) is apt considering the level of exposure garnered by a literate developer who should be acquainted to physical planning apparatus in our society. It is therefore clear from this study, that educational attainment has a great role to play in compliance level of developers to physical planning standards.

Jimoh,, Al-Hasan, Imimole and Ahmed (2017), in their study on the contravention of development control measures in Auchi, Edo State Nigeria revealed “that development control regulations are largely contravened in Auchi. Findings in their study indicated that the most violated aspects of building regulations are plot coverage, front setbacks (63%) and center line (61%), encroachment of the right of ways of roads, 132kv electric power lines and drains. They underlined various factors for these forms of development control contravention to include level of education, income level of builders and the level of certification by physical planning officials covering the study area”.

Olugbamila, Afolabi, Oluandara and Akerele (2023) revealed in their study on Residents ocio Economic characteristics and their level of Development Control Regulations in Gated communities of Ibadan metropolis, Nigeria that socio economic characteristics of the people is a determinant in evaluating residents awareness and compliance with development control issues. The study found out that the level of awareness of residents with the identified elements of physical planning regulations and practices across the three gated Communities were a little above average. Statistical analysis revealed a significant relationship between marital status and their level of awareness of development control regulations. It also revealed a significant relationship between the level of income of residents and level of awareness of physical planning regulations and practices.

Offiong, Ofiong and EKpe (2014), focused on the social-economic characteristics of property owners who comply with building regulations in Calabar, Nigeria. The study concluded that the socio-economic characteristics of property owners or residents, in particular income and education status determine the extent of adherence to building regulations in the study area.

The study by Kuen-Tsag, Taiwan (2005) found that the social-economic features such as time of life, employment, monthly earnings and family size of respondents had an effect on compliance with building regulations. As documented in Alnsour and meaton (2009), demographic characteristics are also included in factors that influence compliance with the regulations on physical planning.

Saaed, Nurwati,Mohamad and Alaa (2021) revealed in their study on A Biblio-Systematic Analysis of factor affecting the compliance of residential planning standards and regulations: A conceptual framework revealed five classes of variables which affected the planning deviation in most case studies. The administrative, legislations, social, economic and demographic considerations perform a significant part in ensuring adherence at local and government stage with planning violations. They noted that each of the identified factors has an impact on the level of compliance and its impact varies from urbanization to urbanization, and each factor could have an impact on a single, dual or even tripartite issue, such as the level of income that could in a number of ways, lead to a planning violation. According to Saaed et al (2021), based on the administrative factors and the legislation and the standards which means that these are essential factors that require updating and revision from time to time before the other aspect such as social and economic factors since the economy and social situation is often considered as a fait accompli that would be difficult to change in the near future.

Engine (2019) on his study on factors affecting implementation and compliance with Housing standards for sustainable housing delivery in Bayelsa State, Nigeria, listed factors such as administrative practices, uncertainty of standards, socio-economic, demographic and socio-cultural factors as affecting implementation and compliance with Housing Standards for sustainable Housing delivery in Bayelsa State, Nigeria. Engine (2019) listed the socio-economic factors to include factors such as challenges posed by large family size, poor income level, low public awareness of planning and building regulations and lack of access to housing finance facilities. He traced the problem of poor compliance and implementation of minimum housing standards to the uncertainty of planning and housing standards applicable in the state and the result manifest in poor compliance and implementation of the said standards. He sees Administrative practices as in weak management practices and control mechanism from the Planning Agency usually resulting to poor compliance with planning and housing standards.

Adejumo, (2024) in his Study on residents Compliance with building setbacks in Ibadan North Local Government Area of Oyo State, Nigeria revealed that among all socio-economic variables considered, the contribution of education to the residents level of compliance with building setback was the highest. The study also found out that there was no association between income and the level of compliance with setback standards in the study area. Adejumo (2024) found out that the use of airspace or setbacks is more common in high and medium residential density. The study concluded that except for education of residents, socio-economic attributes do not determine the compliance to housing setback.

Victory, Delight, Oluwatunmise and Odubanjo (2025) revealed in their study on Impact of Demographic Factors on Legal Regulatory Compliance within the Nigerian Construction Industry that demographic characteristics significantly influence compliance behavior. Order professionals and those with greater years of experience exhibited a stronger understanding and adherence to regulatory requirements. Similarly, higher level of education correlated with greater confidence in interpreting and applying legal standards. The professional role was also significant, as Engineers and Architects demonstrated higher compliance than contractors and other groups. Key challenges identified include limited regulatory awareness among younger professionals, complex legal requirements for less educated practitioners, and inconsistent enforcement practices affecting contractors. Egbonwonu, Iyi, Ugwu and Ubani (2024) on their study on influence of developer's socio-Economic characteristics on compliance to development control regulations in urban residential zone, Case of Enugu, South-East, Nigeria revealed that age and educational attainment of the developers greatly influenced development control regulations compliance in the study area.

From the review, literature on the influence of specific demographic variable such as income, age, education and sex on compliance with physical planning standards are scanty. Most studies on the influence of demographic characteristics on compliance with physical planning standards did not unbundle the demographic variables in considering their influence on compliance.

MATERIALS AND METHODS

Study Area

The study area is Ughelli Urban. Ughelli is the headquarters of Ughelli North Local Government Area of Delta State, Nigeria. The study area lies within latitude 5°30N and 6° 15 north of the equator and longitudes 6°00 and 6°45 east of the Greenwich meridian (Figure 1). Ughelli North Local government area is bounded to the east by Isoko North local government area, to the west, it shares boundary to the south with Ughelli south and Patani local government areas (Ateraire, and Ezeomodo 2016). Ughelli North local government area was created from the defunct Ughelli local government area in August 27, 1991 with headquarters in Ughelli, the study area. Ughelli is a town in southern Nigeria and the oldest kingdom of the 24 kingdoms of the urhobo people. The study area is surrounded by neighboring communities and villages. Ughelli is surrounded to the south by Ogor, to the north by Ufuoma and Erhuemukowarien and to the west by Effuru-otor and Oteri (Rume, 2023).



Figure 3. 4 Ughelli Town (Study Area)

Source: Google Map (ed)(nd) Retrieved September 3, 2023 from <https://www.google.com/maps>

Ughelli Urban is characterized by a humid tropical climate, low-lying topography, coastal plain sandy soils, and tropical rainforest vegetation that has been modified by urbanization and agriculture. The area exhibits diverse land uses comprising residential, commercial, industrial, recreational, and institutional developments, supported by a rapidly growing population driven by administrative, industrial, and commercial activities. The economy is sustained by trading, farming, manufacturing, petroleum-related industries, and service provision, while housing ranges from traditional mud structures to modern block buildings, reflecting varying levels of urban development and planning.

Methods

The study adopted a survey research design to investigate the influence of developers' demographic characteristics on compliance with planning standards in Ughelli Urban, Delta State. Both primary and secondary data were utilized. Primary data were obtained through questionnaires, interviews, direct observations, reconnaissance surveys, and field measurements, while secondary data were sourced from textbooks, journals, government publications, maps, reports, and other documented materials. The study population comprised residents, property developers, officials of the Town Planning Authority, and built environment professionals within the four study zones of Ughelli Urban, namely Ughelli, Ekiugbo, Otovwodo, and Afiesere, with a projected population of 103,024 in 2025.

A cluster sampling technique, complemented by stratified random sampling, was employed to ensure adequate representation of the four zones. Using the representative sample size table at a 95% confidence level and 5% margin of error, a sample of 384 respondents was selected and proportionately allocated among the study zones according to their population sizes. Data were collected using structured questionnaires organized into sections covering respondents' demographic characteristics, housing characteristics, planning compliance, factors influencing compliance, and implementation of planning standards. Additional institutional questionnaires were administered to planning officials and other built environment professionals.

The reliability of the research instrument was assessed using Cronbach's Alpha, yielding coefficients ranging from 0.704 to 0.948, indicating acceptable to excellent internal consistency across all questionnaire constructs. Prior to the main survey, a pilot study was conducted to evaluate the suitability and clarity of the instrument. Twelve trained research assistants administered the questionnaires and conducted interviews across the study area.

Data analysis combined descriptive and inferential statistical techniques. Descriptive statistics like charts was used to summarize respondents' characteristics and address the research objective. Inferential statistics like One-Way Analysis of Variance (ANOVA), was employed to test the research hypothesis.

FINDINGS AND DISCUSSIONS

Analyzing Study Objectives

To analyze the housing developers' demographic characteristics influence on compliance with planning standards)

In this section, data were extracted from respondents to ascertain their characteristics as these further strengthened the researchers' view on some key research questions in an attempt to resolve them through statistical instruments.

Age of Respondents

The ages of respondents have been categorized into five classes. This is shown in Figure 2. Fifty-three of the respondents which represent 13.8% are below 35 years of age, one hundred and eleven respondents fall within the age bracket of 36 – 40 years representing 28.7% of the respondents while the respondents that fall within the age bracket of 41-50 years are one hundred and twenty representing 31.2% of respondents. Sixty-one respondents fall within the age bracket of 51-60 years representing 15.9% of respondents and thirty nine respondents are 61 years and above representing 10.2% of the respondents. The spread of the respondents across the five categories

is an indication that a sizeable number of respondents are in the working and resourceful age of the population and this group may have at one time or the other be engaged in matters pertaining to planning standards.

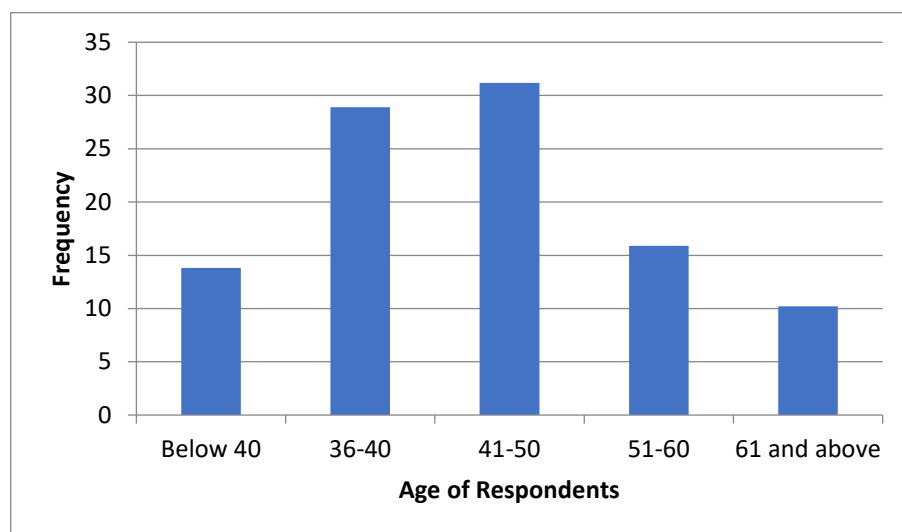


Figure 2: Bar chart showing Ages of Respondents

Source: Researcher's Field Survey, 2026

Sex of Respondents

Gender issue was also considered crucial in the administration of the questionnaire. Figure 3 indicates the gender of respondents for this survey. One hundred and seventy five respondents are female representing 45.6% of respondents, while two hundred and nine of the respondents are male representing 54.4% of respondents. The ratio of male to female in the administration of questionnaire reflects gender balance and the views expressed through this in their responses did not tilt towards one gender.

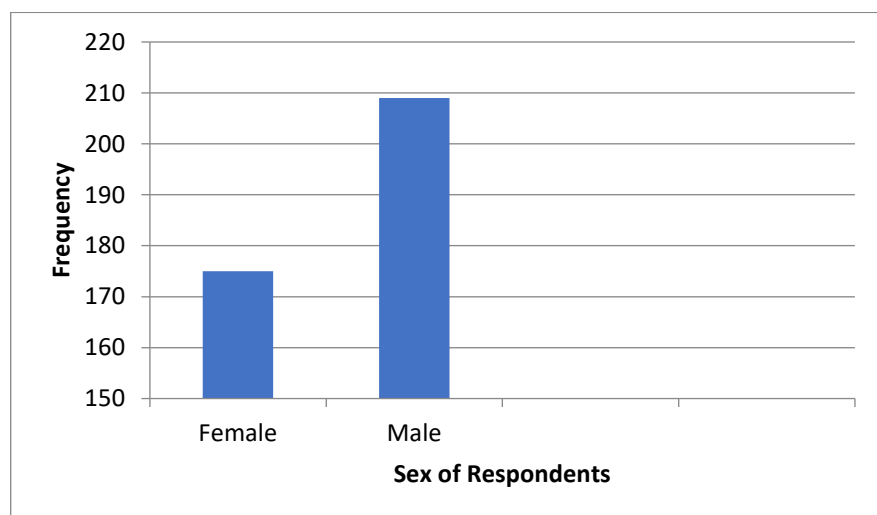


Figure 3: Bar Chart showing Sex of Respondents

Source: Researcher's Field Survey, 2026

Educational Qualification of Respondents

The educational qualification of respondents in this type of study will determine to some extents the understanding of questions posed to respondents, and their practical insight into the area of research. Figure 4 indicates the educational qualification or level of education of respondents. Only 31 respondents had no formal education representing 8.1% of the total respondents. Fifty nine respondents representing 15.4% had primary six leaving certificate, while 141 respondents representing 36.7% had West Africa School Certificate with 116

respondents having Diploma/Degree representing 30.2%. Thirty Seven respondents representing 9.6% had other certificates. From the above analysis, it is clear that 91.9% of respondents have formal education which could enhance their understanding of the questions posed to them without having to secure the services of an interpreter. The implication of this level of education by respondents is that it aided in having a reliable data for this study as the respondents, based on their level of education have a proper understanding of the research being carried out. The implication of the spread of educational level by having sizeable number of respondents been literate is the fact that they fully understand the study being carried out and the impact of their responses on the outcome of the research. It also implies that residents of the study area are well acquainted with the issues of planning standards and their place in housing development in Ughelli urban.

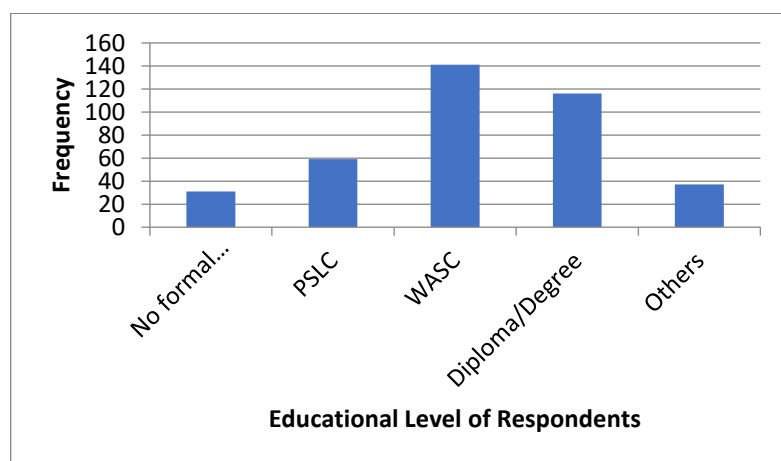


Figure 4: Bar Chart Showing Educational Level of Respondents

Source: Researcher's Field Survey, 2026

Monthly Income of Respondents

Figure 5 indicates the spread of monthly earning of respondents. 85 respondents representing 22.1 earned less than 70,000 on monthly basis, while 131 respondents representing 34% earned between 70,000 to 120,000 monthly. 82 respondents representing 21.4% received between 120,000 to 170,000 as their monthly income. 40 respondents earned between 170,000 to 220,000 monthly representing 10.4%. Only 46 respondents representing 12% received above 220,000 as monthly income. From the trend observed relying on the data generated, the earnings of respondents are generally low when paired with the current inflationary trend in Nigeria. The level of earning by respondents usually is a determinant of their willpower in carrying out physical development planning activities and also the ability to adhere to planning standards. Low income earners tend to cut corners in carrying out development activities believing they are saving cost to be channeled to other area.

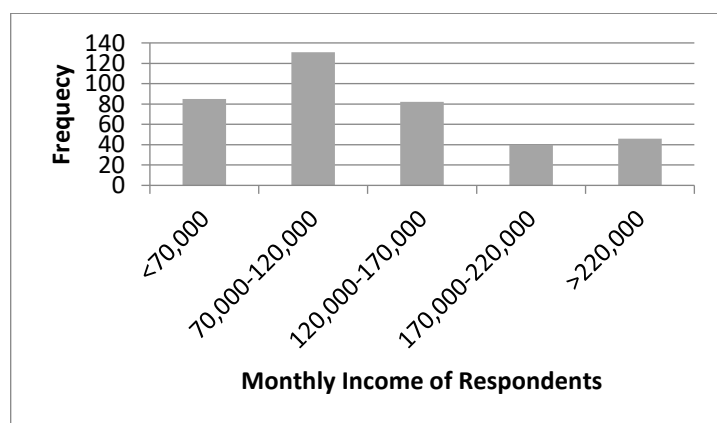


Figure 5: Bar Chart Showing Monthly Income of Respondents

Source: Researcher's Field Survey, 2026

Occupation of Respondents

Figure 6 indicates the spread of occupation of the respondents. 46 of the respondents are farmers, representing 12% while 128 respondents engage in trading activities. This represents 33.3%. 95 respondents are private sector workers representing 24.7%. 93 respondents representing 24.2% are Civil Servants with 22 respondents engaged in Artisan work representing 5.7%. There is a direct relationship between respondents' occupation and income. In other words, the occupation of respondents invariably influences his or her income. This, in the long run influences decision making of respondents.

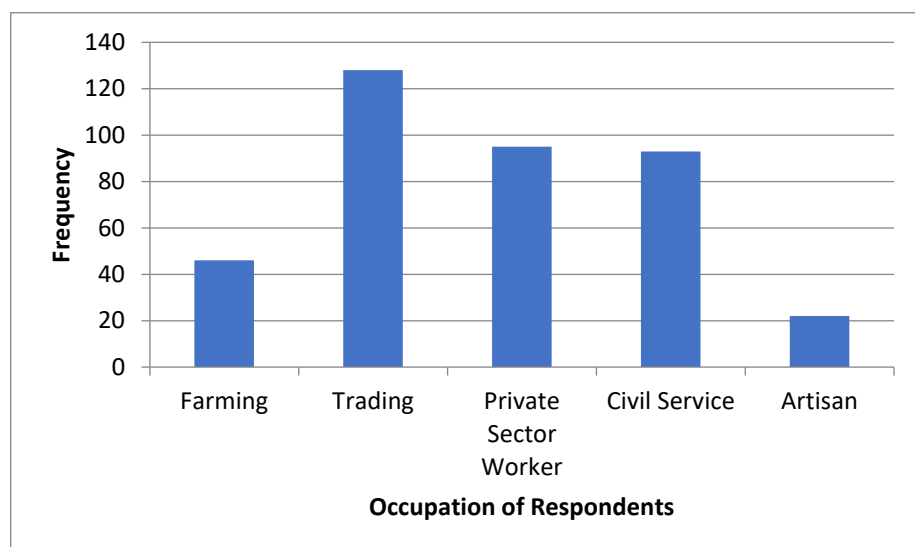


Figure 6: Bar Chat showing Occupation of Respondents

Source: Researcher's Field Survey, 2026

Analyzing Study Hypothesis

The housing developers' demographic characteristics cannot significantly influence the compliance rate of developers to planning standards

A series of statistical tests were conducted to examine the effect of demographic characteristics on compliance with physical planning regulations. Independent samples t-test revealed that sex had no significant effect on compliance ($p = 0.471 > 0.05$). the results in table 4 was obtained.

Table 4: Summary of Results

Variable	Analysis type	Value	P-value	Decision
Sex	T-test (T-statistic)	0.721	0.471	Not significant
Education	ANOVA (F-statistic)	0.000	0.000	Significant
Income	ANOVA (F-statistic)	0.002	0.002	Significant
Occupation	ANOVA (F-statistic)	0.012	0.012	Significant
Age	ANOVA (F-statistic)	0.154	0.154	Not significant

Source: SPSS Version 23

Similarly, analysis of variance (ANOVA) showed that age did not significantly influence compliance ($p = 0.154 > 0.05$). However, ANOVA results indicated that education level ($p = 0.000 < 0.05$), income ($p = 0.002 < 0.05$), and occupation ($p = 0.012 < 0.05$) had significant effects on compliance.

Based on these findings, the null hypothesis (H_0) is rejected, indicating that certain demographic factors significantly influence compliance with physical planning regulations.

DISCUSSION OF FINDINGS

The objective of this study is to analyse the housing developers' demographic characteristics influence on compliance with planning standards in the study area. Series of statistical tests were conducted to examine the effects of demographic characteristics on compliance with physical planning regulations. Independent samples t-test revealed that sex had no significant effect on compliance ($p = 0.471 > 0.05$). Similarly, analysis of variance (ANOVA) showed that age did not significantly influence compliance ($p = 0.154 > 0.05$). The results of the statistical analysis using ANOVA indicated that education level ($P = 0.000 <$), income ($P = 0.002 < 0.05$) and occupation ($P = 0.0012 < 0.05$) had significant effects on compliance with physical planning standards. The study revealed that among all of education to residents considered, the contribution of education to the residents' level of compliance with building setback was the highest. This indicates that compliance is largely influenced by socio-economic factors rather than biological or demographic attributes. Individuals with higher education levels are more likely to understand planning regulations, while those with higher income levels may have greater financial capacity to comply. Occupational differences may also reflect varying levels of exposure to planning requirements. The findings suggest that compliance with physical planning regulations is influenced more by socio-economic factors than by demographic characteristics such as age and gender. Individuals with higher levels of education are more likely to understand and adhere to planning regulations. Similarly, income plays a critical role, as compliance often requires financial resources. Occupational differences may also reflect varying levels of awareness and exposure to regulatory requirements. The lack of significant influence of age and gender suggests that compliance behaviour is not determined by biological or generational differences but rather by access to knowledge and economic capacity.

The outcome of this study is in line with the study carried out by Adejumo and Badiru (2024), on Residents compliance with Building setbacks in Ibadan North Local Government Area of Oyo State, Nigeria where it revealed that among all socio-economic variable considered in the study, the contribution of education to residents' level of compliance with building setback was the highest. The study is also in consonance with the study by Bowye, Yiridomoh and Bebellah (2024), on their study with compliance with land use regulations in peri-urban areas in Ghana where they revealed that economic, institutional, legal and social factors determined the levels of compliance with land use planning guidelines in peri-urban wa. The finding in this study is also in agreement with the study by Afolabi, Olugbamula and Badiora (2024), on factors influencing compliance with physical planning regulations in gated communities of Ibadan municipality, Nigeria indicated that residents' income level is one of the socio-economic characteristics influencing compliance to physical planning standards. Just as in this study, a significant relationship was established between income level and level of awareness of development control regulations. This study is also in line with the findings of Egbonwonu et al (2024) on their study on the influence of developers' socio-economic characteristics on compliance to development control regulations in urban residential zone, case of Enugu, South East, Nigeria where they asserted that the educational attainment of the developers greatly influence development control regulations compliance in the study area.

CONCLUSION AND RECOMMENDATIONS

Conclusion

From the study, the question on the influence of demographic characteristics on compliance rate of developers with planning standards in Ughelli Urban was resolved. The study found out that the compliance with physical planning regulations is influenced more by socio-economic factors than by demographic characteristics such as age and gender. This result further explained while the compliance level in Ughelli zone and Otovwodo zone are higher than Afiesere zone as the former zone has better economic and educational empowerment than the later.

Hence, it is vital to state that this study has made us to know key socio-economic variables such as income that usually influences compliance with residential standards and therefore the need to take this into cognizance in future physical planning programs especially when planning schemes are being made so that the governments can always give support and even introduce physical planning subsidy to the less privileged developers that would like to build their houses unhindered.

Recommendations

1. There is the need to add elementary town planning education in the curriculum of senior secondary schools to increase awareness about Town Planning Standards and its benefits. This is very important as it can be seen from the study that education play a crucial role to compliance with planning standards. Individuals with higher levels of education are more likely to understand and adhere to physical planning regulations. However, it should be noted that a fundamental knowledge of physical planning regulations and its benefits could bridge the gap.
2. The Delta State Government should be encouraged to introduce physical planning subsidy in the fees paid by developers. From the study, individuals with higher income levels may have greater financial capacity to comply. Since finance play a significant role in the obtaining of physical planning permit, it will go a long way if the fees paid are subsidized to encourage greater number of developers irrespective of their financial muscles to get building permit approval.

REFERENCES

1. Adebayo, M. A., Oduwaye, L., & Ojo, O. (2023). Development control and urban sustainability in rapidly growing African cities. *Journal of Urban Management*, 12(3), 245–260.
2. Adejumo, S. A., & Badiru, F.O. (2024). Residents' Compliance with Building Setbacks in Ibadan North Local Government Area of Oyo State, Nigeria. *Wukari International Journal*. Vol. 8 (5)
3. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
4. Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
5. Akinmoladun, O. I., Adegun, O. B., & Alabi, M. O. (2024). Socio-economic determinants of compliance with physical planning regulations among private property developers in Nigeria. *Journal of Housing and the Built Environment*, 39(1), 155–176.
6. Akinyode, B. F., & Khan, T. H. (2022). Urban development control and planning compliance in developing countries: Emerging issues and policy implications. *Cities*, 126, 103698.
7. Alnsour, J., & Meaton, J (2009). Factors Affecting Compliance with Residential Standards in the City of Old Salt. Jordan. *Habitat International*. 33(4). 301-309. <https://dx.doi.org/10.016/j.habitatint.2008.08.003>
8. Ataraire, D. O., & Ezeomodo, I. C. (2016). The environmental effects of seasonal flooding in Ughelli north local government area of Delta state. *Internal Journal of Innovation Research and Advanced Studies*. Vol. 3 (12)
9. Bamberg, S., Ajzen, I., & Schmidt, P. (2021). Choice of travel mode in the theory of planned behavior: Advances and extensions. In M. P. Kine (Ed.), *Predicting and changing behavior* (2nd ed.). Psychology Press.
10. Daromola, O., Mobalaji, D., & Oyelade, T. (2024). Residents' Perception of Physical Planning Regulations in Three Secondary Cities in Nigeria (A case study of Oshogbo, Ile –ife and Iwo). *Africa Journal of Housing and sustainable development*. Vol. 5 (1) Pp 56 – 96.
11. Bonye, S.Z., Yiridomoh, G.Y., & Bebellah, F.D. (2021), Compliance with land use regulations in peri urban areas in Ghana. *Geo Journal* Vol. 86(6) Pp. 2845-2859.
12. Delta State Urban and Regional Planning Law (2003)
13. Egbonwuwu, J., Iyi, E., Ugwu, L., & Ubani, O. (2024). Influence of Developers' Socio-Economic Characteristics on Compliance to Development Control Regulations in Urban Residential zone: Case of Enugu, South-East, Nigeria. *International Journal of Social sciences and management Research*. Vol. 10 (8). Retrieved June 5, 2026 from <https://www.iiarjournals.org>

14. Eugene, E. A. (2019). Factors Affecting Implementation and Compliance with Housing Standards for sustainable Housing Delivering in Bayelsa State, Nigeria. *European Scientific Journal* Vol. 15 (3). <https://dx.doi.org/10.19044/esj.2019.v15n3p210>
15. Federal Capital Development Authority (FCDA), Abuja Development Control Regulation (1996)
16. Kenyan Ministry of Lands and Survey (2002). *Physical planning handbook*. Republic of Kenya, Nairobi
- Ministry of Water Resources, Works and Housing,(2015). “National Housing Policy, Government of Ghana
17. Mensah, C., & Cobbinah, P. B. (2023). Planning compliance and urban governance in Sub-Saharan Africa: A systematic review. *Land Use Policy*, 129, 106640.
18. Offiong, V.E., Offiong, R.A. & Ekpe, I. A. (2014) Socio-Economic Characteristics of Property Owners and Level of Compliance with Building Regulations in Calabar, South Southern Nigeria. *International Journal of Humanities, Social Sciences and Education* Vol. 1(1) 26-32.
19. Organisation for Economic Co-operation and Development. (2023). *Government at a glance 2023*. OECD Publishing.
20. Rume, A. (2023). Discover Ughelli, Delta State . lone Africa in Wikipedia
21. Saaed, A.A., Nurwati, B. Mahammad, D., & ALaa, J.K. (2021) A. Biblio - Systematic Analysis of Factors Affecting the Compliance of Residents Planning Standards and Regulations: A Conceptual Framework. *Civil Engineering and Architecture* Vol. 9(3).
22. Shinggu, J.J; Kadala, S.B.; & Joseph,S.(2020).”planning standard, compliance and implication in Nigeria. *International Journal of environmental design and construction management*. Vol.18 No p.296. Retrieved September 7, 2023 from <https://www.cambridgenigeriapub.com>
23. United Nations. (2023). *The Sustainable Development Goals report 2023*. United Nations.
24. United Nations Human Settlements Programme. (2022). *World Cities Report 2022: Envisaging the future of cities*. UN-Habitat.
25. United Nations. (2024). *World population prospects 2024: Summary of results*. United Nations Department of Economic and Social Affairs, Population Division.
26. World Bank Open Data: World Development Indicators. (2024). *World Development Indicators 2024*.
27. Victory, C. C., Delight, I., Oluwatunmise, G. S., & Odubanjo, G. (2025). Impact of Demographic Factors on Legal Regulatory Compliance within the Nigerian Construction Industry. *International Journal of Research Publication and Reviews*. Vol. 6 (8). Retrieved June 5, 2026 from <https://www.researchgate.net>