

Socio-Economic Characteristics and Parameters Defining Paint Usage in Building Facades in Public Residential Housing Estates in Nigeria

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Abstract

Paints are used in the surface treatment of both interiors and exterior walls of residential and public buildings globally and are manufactured in different shades of colours, quality and make. The paint application on building surfaces is the most popular aesthetic expression in Nigeria and therefore its usage, especially on an external surface, depends on the choice that the users make. This paper, therefore, examines the factors that are considered during the selection, choice and usage of materials for building exterior taking into consideration the socioeconomic characteristics of the users. A survey method that involved the administration of a questionnaire was used to obtain data for analysis and inferences. This was done through SPSS 16.0 software. Respondents were drawn from four climatic design zones in public residential buildings that use paint as an external finish and that were first constructed in the state's capital. A total of four hundred and twenty-one (421) users whose external buildings were painted were sampled constituting 72.5% of total 3980 users. Findings revealed that apart from socio-economic characteristics, other major considerations that accounted for the choice of paint as an external finish were quality, experience, aesthetics, cost, maintainability, taste and financial capability while advice from other people did not have any influence on the choice of paint as an external finish in the study area.

Keywords: Choice, climate, design zones, exterior finish, paint.

1.0 Introduction

Every building project involves the choice of building materials or means used for the selection process (Florez, de Brito, and Branco, 2009). In addition, options for selecting suitable building material can be a very complex process, being influenced and determined by numerous preconditions, decisions, and considerations (Wastiels and Wouters, 2008). According to Trusty (2003) and Rahman (2008), selecting the appropriate material for an exterior building finish is a complex process that frequently involves many different considerations on the part of designers, architects, and even end users. Trusty (2003), Chan, and Tong (2007) all agreed that during the design decision-making and selection processes, it is essential to continually assess the information or data that is currently available on building materials and product options to make well-informed and justifiable material decisions. According to Ishak, Chohan, and Ramly (2007), accurate knowledge of the material's characteristics is also necessary for effective specification and utilization. Various researchers have identified climate (Duggal, 2008; Li, 2011; Smith, McCabe, McAllister, Adamson, Viles and Curran, 2011; Ouedraogo, Levermore and Parkinson, 2012), consideration for cost and ability to purchase (Yiu, 2008; Ali, 2009; Garrido, Paulo and Branco, 2011), aesthetic (Zangwill, 2007), taste, value system, exposure, experience, fashion, orientation, class, gender and location (Holm, 2006), cultural factors, awareness/professional advice as factors that determine the choice of usage of building materials.

The criteria for selecting and specifying construction materials depends on the type of building. The requirement for health, residential, commercial, industrial and institutional buildings differ from one another, and the function the building is meant to perform also dictates the choice of building materials. Other critical factors are the number of users, frequency of usage and the socioeconomic characteristics of the users.

2.0 Factors Influencing the Choice of Paint as External Finish

Choosing a particular material out of the available myriads could be challenging. Ishak, Chohan and Ramly (2007) opine that the selection of inappropriate material will affect the future maintenance of the building. Choice, which is the mental process of judging the advantages of multiple options and selecting the preferred one, is subject to many curiosities. According to Foloruso (2014), the decisions to choose a material among many others depend on the following:

- i. Climate- The place of climate in the choice of material is of primary importance. All buildings are built permanently on a site except makeshift ones, thus signifying that it has to face and cope with all forces of climate- rain, sun penetration, wind abrasion, saline air etc., in that particular environment. Adequate knowledge about the performance of various materials in various climatic conditions of the world is inevitable for optimal performance. An environment laden with moisture and high humidity will affect materials' durability (Li, 2011). An increase in the severity of seasons encourages the use of climate-compliant materials (Smith, McCabe, McAllister, Adamson, Viles and Curran, 2011), because climate change is one of the current global challenges (Ouedraogo, Levermore and Parkinson, 2012).
- ii. Cost: Although the ability to buy is a major issue, this may not necessarily imply that the item is inexpensive but rather that it has a long-term comparative advantage over others.
- iii. Quality/Performance- Regardless of the method of obtaining the material, the capacity of a material to bear the stress of many types, ranging from usage to time, is highly important when choosing a material. A significant component of maintaining awareness is the need for quality and quantity, as using low-quality materials that were purchased at a lower cost can ultimately push up maintenance costs in an upward loop (Folorunso, 2014). Distinguishing characteristics are essential in the selection process and materials that have peculiar and essential characteristics are the norm for the tasking job of building.
- iv. Aesthetics: According to Zangwill (2007), aesthetics is a personal assessment of sentiment and taste. The importance that each person attaches to it influences the type of materials that should be used, especially for overall finishing on the inner wall and the exterior facade. According to Holm (2006), this may be determined by taste, value system, exposure, experience, fashion, orientation, class, gender, and building location. Making decisions only primarily on aesthetic value could mean ignoring other factors, which could have an impact on maintenance.
- v. Cultural Factors: A particular people's way of life heavily influences their morals and material preferences. While underdeveloped, under-advanced populations are "contented" with the local resources, educated, advanced, and well-travelled individuals are interested in more sophisticated materials that may not be easily available in their environment.
- vi. Knowledge/professional guidance - Providing a clear explanation of the distinctive qualities, performance, and attributes of construction materials is crucial in assisting the decision-makers in making an informed choice and employing these materials. It reduces the

likelihood of cumulative error that might result from basing decisions on a manufacturer's catalogue and technical specifications, which are frequently meant to increase sales.

The criteria for selecting and specifying construction materials depends on the type of building. Health, residential, commercial, industrial and institutional buildings have different requirements and the type of building material to use depends on the function the structure is intended to serve. Other important considerations are the number of users and frequency of usage, which influence the rate of wear and tear, thereby requiring constant maintenance.

3.0 Research Methodology

3.1 Study Area

The study area is described in respect of the geographical location and the study was carried out in four different public residential housing estates in Abuja, Lagos, Ibadan and Ilorin

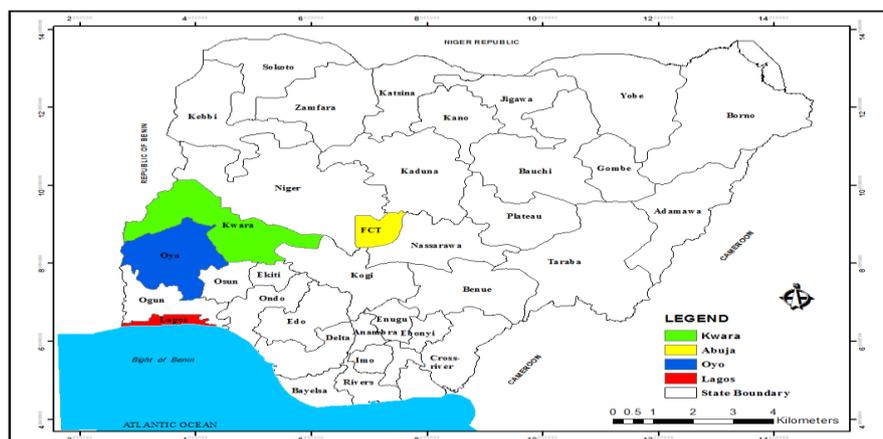


Figure 1: Map of Nigeria showing the locations of Lagos, Ibadan, Abuja & Ilorin
Source: Lagos State Development and Property Corporation (2017)

2.1.1 Jakande Housing Estate, Lagos

Lagos State, Nigeria was created on May 27, 1967, in line with the State Creation and Transitional Provisions, Decree No. 14 of 1967. The administrative structure of the country was changed from regional government to twelve (12) States through this decree. Lagos is located on the south-western coast of Nigeria, along the Bight of Benin on the Atlantic Ocean numbering only one hundred and twenty-six thousand (126,000) as of 1931, its population had grown to about seventeen (17) million (Lagos State Census, 2006). It is bounded on the west by the Republic of Benin, on the east by Ondo and Ogun States (within Nigeria), and the north, by Ogun State, while the south lies and stretches 180 kilometres along the coast of the

Atlantic Ocean. It is the smallest state in the Federation as it occupies 3577 sqkm with 787sqkm which consists of Lagoons and creeks.

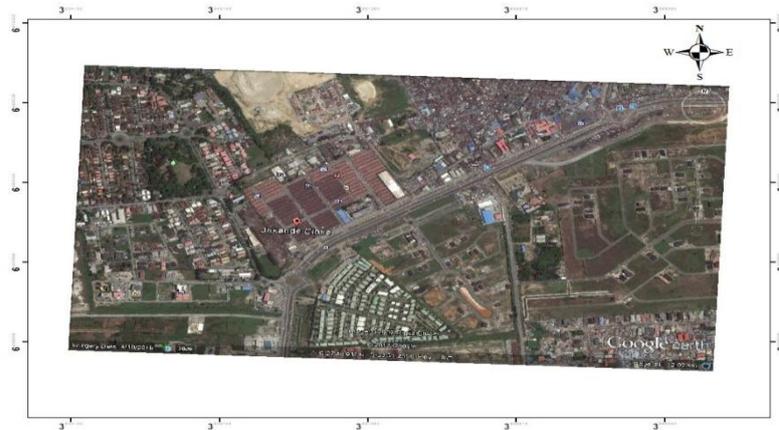


Figure 2: Layout Plan of Jakande Housing Estate, Lagos.

Source: Lagos State Development and Property Corporation (2017)

2.1.2 Bodija Estate, Ibadan

One of the housing estates under this study is the old Bodija Housing Estate. It is situated in Ibadan, the capital of Oyo State. Ibadan is located in south-western Nigeria in the south-eastern part of Oyo State at about 119 kilometres (74 miles) northeast of Lagos and 120 kilometres (75 miles) east of the Nigerian international border with the Republic of Benin. It lies completely within the tropical forest zone but close to the boundary between the forest and the derived savanna. The city ranges in elevation from 150m in the valley area, to 275m above sea level on the major north-south ridge which crosses the central part of the city. The city covers a total area of 3,080 square kilometres (1,190sq mi), the largest in Nigeria (Akinsanola and Ogunjobi, 2014). The city of Ibadan is naturally drained by four rivers with many tributaries: the Ona River in the North and West; the Ogbere River towards the East; the Ogunpa River flowing through the city and the Kudeti River in the Central part of the metropolis. Lake Eleyele is located in the north-western part of the city, while the Osun River and the Asejire Lake bound the city to the east.

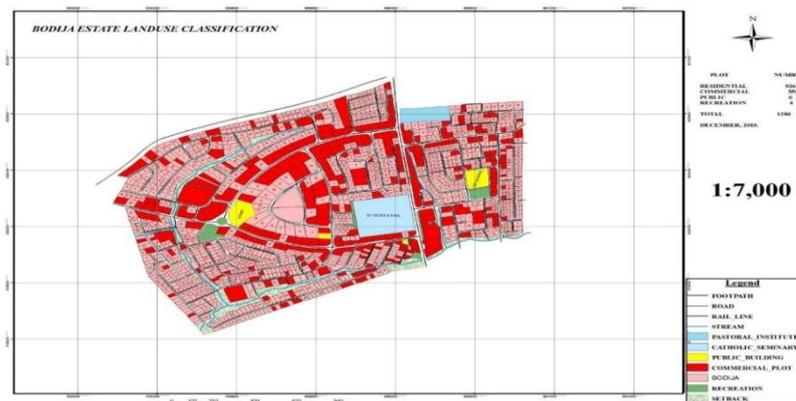


Figure 3: Layout Plan of Bodija Housing Estate in Ibadan

Source: Housing Corporation, Ibadan, Oyo State (2017)

2.1.3 Abuja and Wuse Housing Estate

On February 4th, 1976, the Federal Military Government of Nigeria, led by Gen. Murtala Mohammed, established the city of Abuja as Nigeria's new Federal Capital Territory (FCT). This decision was made to move the capital to the inner part of the country. It was selected by the Federal Government strategically to be placed centrally in the country. This was done to relocate the Federal Capital Territory to a safer part of the country instead of its former location (Lagos), which is at the coast of the country. It occupies a total land mass of about 800 square kilometres and is bounded by Kaduna State on the North, on the South West by Kogi state, on the west by Niger State and on the east and southeast by Nassarawa State.



Figure 4: Layout Plan of Federal Capital Development Authority Estate at Wuse, Zone 2

Source: Federal Capital Development Authority, Abuja

2.1.4 Kwara and Mandate 3 Housing Estate

Ilorin, the capital of Kwara State is located between latitudes 8° 05'N to 10° 05'N (8°30'N) and longitudes 2° 50'E to 6° 05' E (4°33'E). The state has an elongated shape running from west to east and covering an area of about 32,500 sq. km and has River Niger as its natural

boundary along its northern and eastern margins. Kwara State shares a common internal boundary with Niger State in the north, Kogi State in the east, Oyo, Ekiti and Osun States in the south and an international boundary with the Republic of Benin in the west.



Figure 5: Layout Plan of Mandate 3 Estate, Ilorin.

Source: Google Maps (2017)

The study is a survey research type conducted in the government residential estates that use paint as an external finish in Abuja, Lagos, Oyo and Ilorin that fall under savannah, coastal, forest and transitional climatic zones respectively for architectural design in Nigeria. The sampling frame for the study is heads of households and the Stratified random sampling technique was adopted for the study because of the different types of housing units that were within the housing estates. The estates were stratified based on the number of building typologies that were present. Each sub-stratum was then randomly sampled and grouped into households. The heads of households were the basic focus of questionnaire administration. The research population was 3784 and a sample size of 421 was obtained using a sample size calculator.

The factors that determine the choice of paint usage for external surfaces are quality, experience, availability, beauty, cost, people around, advice, maintenance, taste and income, while the socio-economic characteristics among the various participants in the study area are age, marital status, estimated cost of building, sex, occupation of the residents, highest academic qualifications, category of respondents, the income of respondents, type of buildings and the number of occupants.

Descriptive statistics were used to determine the frequency of the occurrence of variables while multiple regression was carried out to determine the predicting variables of choice to the socio-economic characteristics of the residents.

This research investigates the predictors of paint used for the external surface. In carrying out the analysis, all the variables that measured choice were factored into three (using factor analysis) and the factors that had the highest Eigenvalue were saved. Factor 1 is loaded high on quality, beauty, maintenance, taste and income. Factor 2 loaded high on availability, people and advice while factor 3 loaded high on only experience. The factor scores were converted to variables and renamed as quality, peoples' advice and experience respectively. The naming was based on the common characteristics of variables under each factor. Each of the variables was made the dependent variable and regressed against quality, peoples' advice and experience as measures of choice, using Multiple Regression Analysis.

4.0 Data Analysis, Findings and Discussions

Descriptive analyses of the determinants of the use of paint for exterior surfaces across the various climatic design zones are presented with frequency results in Table 1.

95% of the respondents based their choice on the quality of paint probably because of their level of education and exposure more so that they are all residents in the state capitals. Analysis of choice based on their experience shows 82.39% implying that the buildings had witnessed periodic repainting to have allowed for persistent exercise from the respondents while 48.41% are not sure whether availability influenced their choice (Aluko, 2018). This is not in consonant with the findings of Folorunso (2014), who observes that the choice of paint used depends on availability. However, the ease of accessibility of the users to the product through the numerous manufacturing companies and sales outlets made availability important in the use of paint in all the selected zones. The people in all the capital cities of Lagos, Ibadan, Abuja and Ilorin did not have to travel to other areas to purchase paint, irrespective of the brand. This buttresses the assertion that their preference was more on the quality, and the availability of paint did not preclude their preference for the quality.

The analysis presented in the table further confirms the respondents' preference for aesthetics as 87.26% agree that beauty was placed above all other considerations for their choice of using paint as an external finish on their buildings. This finding is supported by Zangwill (2007) that aesthetics is an individual judgment of sentiment and taste. According to him, the premium placed on it by every individual is a factor for selecting the type of materials to use,

especially for overall finishing both on the interior wall and exterior façade. 61.14% based their preference on cost. The result is strengthened by studies carried out by Garrido, Paulo and Branco (2011), Ali (2009) and Yiu (2008), who argue that affordability is a key factor in choosing building materials for usage. This is also corroborated by Ononugbo (2008), who opines that building materials are selected in Nigeria based on cost. The economic situation that has been on a downward trend globally and, particularly, in Nigeria could have made the respondents' choice as cost of paint to constitute such a high percentage. 40.39% were uncertain of the influence of the usage of paint by their neighbours as having any effect on their choice. Also, 46.68% disagreed with the choice based on choice. The implication is that the use of paint by the people around and advice were not considered in their preference.

On the selection of paint based on the ease of maintenance, the finding reveals that 90.96% agreed that their choice was based on the maintainability of the paint finish. Balaras, Drousta, Dascalaki and Kontoyiannidis (2005) opine that the degradation of the exterior surfaces of buildings is one of the major concerns of building owners and maintenance managers since in most cases, maintenance actions are often based on the outward appearance of the buildings. 85.82% prefer paint due to their level of taste. Holm (2006) asserts that choice is dictated by taste, and decisions based on it may disregard other parameters which may consequently affect maintenance. This assertion is in agreement with the responses of the respondents across all the climatic design zones.

The analysis of choice based on income in the table indicates that 83.54%) made their choice based on their financial strength. The ability of the client to purchase a certain material for use is a major factor in the choice of materials, apart from the intended function of the building (Yiu, 2008; Ali, 2009). Although Folorunso (2014) posits that aside from the fact that paint has a comparative advantage over other materials in terms of cost, the cost may not necessarily mean that the article is cheap but it may have a long-term comparative advantage over others, although the ability to purchase is a great factor. Ononugbo (2008) maintains that building materials are primarily selected in Nigeria based on the ability to purchase.

Table 1: Frequency Table for the Choice of Paint Usage

Variables	Strongly Agree Frequency (%)	Agree Frequency (%)	Uncertain Frequency (%)	Disagree Frequency (%)	Strongly Disagree
	(%)	(%)	(%)	(%)	

1	Choice/Quality	315 (77.98)	71 (17.53)	6 (1.48)	13 (3.21)	
2	Choice/experience	181 (44.25)	156 (38.14)	41 (10,02)	27 (6.60)	4 (0.98)
3	Choice/availability	39 (9.54)	99 (24.21)	198 (48.41)	60 (14.67)	13 (3.18)
4	Choice/beauty	117 (28.68)	239 (58.58)	30 (7.35)	19 (4.66)	3 (0.74)
5	Choice/cost	69 (17.08)	178 (44.06)	89 (22.03)	57 (14.11)	11 (2.72)
6	Choice/peoples usage	16 (3.94)	86 (21.18)	164 (40.39)	121 (29.30)	19 (4.68)
7	Choice/advice	16 (3.93)	74 (18.18)	127 (31.20)	165 (40.54)	25 (6.14)
8	Choice/maintenance	115 (28.12)	257 (62.84)	16 (3.91)	19 (4.65)	2 (0.49)
9	Choice/taste	115 (28.12)	236 (57.70)	41 (10.02)	12 (2.93)	5 (1.22)
10	Choice/income	148 (36.27)	193 (47.30)	25 (6.13)	35 (8.58)	7 (1.72)

Tables 2, 3 and 4 show the result of the multiple regression carried out to find the predictors of choice of external paint finish.

Table 2 shows that socio-economic characteristics such as marital status (Coef =1.690, $t = 3.26$; $\rho = 0.001 < .05$), category of ownership (Coef = .277, $t = 2.31$; $\rho = 0.022 < .05$), house type (Coef =-.723, $t = -2.8$; $\rho = 0.005 < .05$) and estimated cost of building (Coef =-1.384, $t = -3.10$; $\rho = 0.002 < .05$) had significant and independent prediction on the choice of external paint usage based on quality. The tables also reveal that other socio-economic characteristics of Sex (Coef =-.050, $t = -0.51$; $\rho = 0.609 > .05$), Age (Coef =.017, $t = .017$; $\rho = 0.939 > .05$), Occupation (Coef =-.007, $t = 0.04$; $\rho = 0.971 > .05$), Education (Coef =-.027, $t = 0.09$; $\rho = 0.929 > .05$), Income of Respondents (Coef =.111, $t = 0,40$; $\rho = 0.689 > .05$) and Number of Occupants (Coef =-.140, $t = 0.44$ $\rho = 0.658 > .05$) are not significant in predicting

the choice of paint usage as external finish in the study area. However, all the variables, jointly, had significant predictions on the choice of external paint finish.

Table 2: Summary of Multiple Regression Analysis Showing the Effects of Socio-economic Characteristics on Choice (Based on Quality) of Using Paint as External Building Finish

Variables	Coef	T	ρ	R^2	Adjusted R^2	F	ρ
Sex	-.050	-0.51	0.609				
Age	.017	0.08	0.939				
Marital status	1.690	3.26	0.001				
Occupation Status	.007	0.04	0.971				
Education	-.027	0.09	0.929				
Category of Ownership	.277	2.31	0.022				
Income of respondents	.111	0.4	0.689				
House Type	-.723	-2.80	0.005	.2391	.1593	3.00	0.0000
House Size	-.140	0.44	0.658				
The estimated cost of building	-	-3.10	0.002				
	1.384						

Table 3 shows that social-economic characteristics such as age (Coef = -5.554, $t = -2.20$; $\rho = 0.028 < .05$), the income of respondents (Coef = .933, $t = -3.80$; $\rho = 0.000 < .05$), house type (Coef = -.594, $t = 2.18$; $\rho = 0.030 < .05$) had significant independent prediction on the choice of external paint finish based on peoples experience, while other socio-economic characteristics of sex (Coef = -.061, $t = 0.59$; $\rho = 0.554 > .05$), occupation (Coef = -.077, $t = -0.34$; $p = 0.732 > .05$), education (Coef = -.106, $t = -0.28$; $p = 0.777 > .05$), category of the occupier (Coef = -.036, $t = -0.14$; $p = 0.890 > .05$), house size (Coef = .036, $t = 0.21$; $\rho = 0.837 > .05$) and estimated cost of building (Coef = -.014, $t = -0.03$; $\rho = 0.976 < .05$) were not independently significant in predicting the choice of paint as an external finish. It is important to note that all the variables jointly and significantly predicted the choice of external paint finish.

Table 3: Summary of Multiple Regression Analysis Showing the Effects of Socio-economic Characteristics on Choice (Based on People's advice) of Using Paint as External Building Finish

Variables	Coef	T	ρ	R^2	Adjusted R^2	F	ρ
Sex	-.061	0.59	0.554				
Age	-.554	-2.20	0.028				
Marital status	1.924	1.90	0.058				
Occupation Status	-.077	-0.34	0.732				
Education	-.106	-0.28	0.777				
Category of respondents	-.036	-0.14	0.890				
Income of respondents	.933	3.8	0.000				
House Type	.594	2.18	0.030	.1546	.0660	1.74	0.006
House Size	.036	0.21	0.837				
The estimated cost of building	-.014	-0.03	0.976				

Table 4 shows that the socio-economic characteristics of marital status (Coef = -.422, t = -2.26; $\rho = 0.025 < .05$), education (Coef = .213, t = -3.83; $\rho = 0.016 < .05$), category of ownership (Coef = -.905, t = 3.27; p = 0.001 < .05), the income of respondents (Coef = -.905, t = -3.26; $\rho = 0.001 < .05$), house type (Coef = .372, t = 2.89; $\rho = 0.004 < .05$), house size (Coef = -.525, t = -3.12; $\rho = 0.002 < .05$) had significant and independent prediction on the choice of paint as external finish based on experience. The table also reveals that socio-economic characteristic of sex (Coef = -.064, t = -0.66; $\rho = 0.511 > .05$), age (Coef = .146, t = 0.64; $\rho = 0.524 > .05$), the estimated cost of building (Coef = .010, t = 0.02; $\rho = 0.988 > .05$), was not significant in predicting the choice of paint as an external finish. However, all the variables jointly had significant predictions on the choice of external paint finish as used in this study.

Table 4: Summary of Multiple Regression Analysis Showing the Effects of Socio-economic Characteristics on Choice (Based on Experience) of Using Paint as External Building Finish

Variables	Coef	T	ρ	R^2	Adjusted R^2	F	ρ
Sex	-.064	-0.66	0.511				
Age	.146	0.64	0.524				
Marital status	-.422	-2.26	0.025				
Occupation Status	-.174	-0.78	0.439				
Education	.213	3.834	0.016				
Category of respondents	.815	3.27	0.001	0.2397	0.1600		0.000
Income of respondents	-.905	-3.26	0.001			3.01	
House Type	.372	2.89	0.004				
Number of occupants	.525	-3.12	0.002				
The estimated cost of building	.010	0.02	0.988				

Test of Hypothesis

H₀1: There is no significant relationship between socioeconomic characteristics and the choice of external paint used.

H_A1: There is a significant relationship between socioeconomic characteristics and the choice of external paint used.

The results in Tables 6, 7 and 8 show that the F-ratio is greater than the critical F-value (3.00 > 1.44) for the choice of external paint used based on quality, (1.74 > 1.444) for the choice based on people's advice and (3.01 > 1.44) for choice based on experience. This suggests going by the decision rule that the null hypothesis is rejected and upheld the alternative hypothesis (there is a significant relationship between socio-economic characteristics and choice of external paint). The implication is that the socio-economic characteristics significantly predict the choice of external paint usage in the study area

Table 6: Determination of choice under Quality

Choice		SS	Df	MS	F-cal	Critical F	Sig
SC	Model	93.434	37	2.525	3.00	1.44	0.0000
	Residual	297.369	353	.842			
	Total	390.804	390				

Table 7: Determination of choice under peoples' experience

Choice		SS	Df	MS	F-cal	Critical F	Sig
SC	Model	60.490	37	1.635	1.74	1.44	0.0059
	Residual	330.835	353	.937			
	Total	391.325	390				

Table 8: Determination of choice under Advice

Choice		SS	Df	MS	F-cal	Critical F	Sig
SC	Model	93.786	37	2.534	3.01	1.44	0.0000
	Residual	297.504	353	.843			
	Total	391.290	390				

5.0 Implications and Conclusion

According to the frequency distribution of respondents' sex, men made up the majority of the sample while women were underrepresented. Most of the responders were middle-aged people between the ages of 31 and 50. All of the residential estates in all of the climatic design zones that were located in the state capitals had the majority of their working population in the public sector. The majority of respondents were married, and the employed respondents in the private and public sectors (including the self-employed) made up the highest percentage of all respondents, according to the marital status of the respondents in all the residential estates across all the climatic design zones. The respondents had a high level of educational achievement because the majority of them held degrees from universities and polytechnics. Homeowners outnumbered tenant-occupiers in the study of the respondent category. According to the respondents' income levels, the vast majority made more than 50,000 naira each month. In all of the different climatic design zones, the kind of residential apartment reveals that bungalows had the largest percentage.

The management of the residential estates was carried out by self-help organizations, as seen by the frequency distribution of the agencies managing the estates across all climatic design zones. The maximum number of inhabitants in buildings in the country, based on the number of individuals living there, was determined to be between 3 and 5. The socioeconomic aspects that affect the decision to use paint as an external finish in public residential buildings in Nigeria include age, income, house type, sex, occupation, education, category of the occupant, house size, and the expected cost of construction. Other parameters are quality, people's advice and experience which were selected from many variables through factor analysis. The results of a multiple regression analysis of the effects of socioeconomic factors on the decision to use paint as an external building finish (based on quality) show that marital status, ownership category, house type, and estimated building cost significantly and independently predicted the decision to use external paint based on quality. It also demonstrates that none of the following factors of sex, age, occupation, education, respondents' income, and the number of occupants significantly predicted whether or not paint would be used as an external finish in the research area. This implies that while not all factors individually influenced the decision, they do so when and if they are combined to determine the external paint finish. Summary of multiple regression analysis demonstrating the effects of socioeconomic characteristics on decision (based on people's advice) to use paint as external building finish reveals that other socioeconomic characteristics, such as sex, occupation, education, and category of the occupier, had no significant independent prediction on the decision to use external paint finish. The implication, therefore, is that the choice of external paint finish was significantly predicted by all the variables acting together. Summary of multiple regression analysis demonstrating the effects of socioeconomic characteristics on choice (based on experience) of using paint as external building finish reveals that the socio-economic characteristics of marital status, education, ownership category, respondents' income, house type, and house size had significant and independent predictive value on the choice of paint as external finish. The findings also show that neither the expected cost of the structure, nor the socioeconomic characteristics of age and sex, were important in predicting the decision to use paint as an exterior treatment. The choice of external paint finish as utilized in this study was significantly predicted by all the variables taken together.

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