Post-Occupancy Evaluation (POE) of Shopping Malls In Ota, Ogun State, Nigeria

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Abstract:- Shopping center construction projects are completed more quickly than other types of construction, as the retail mall owners and developers want a quick return on investment as quickly as possible. The study focused onthe post-occupancy evaluation of shopping malls in Ogun state. Specifically, the study assessed the physical characteristics of the shopping mall and its environments; examined how well the shopping mall matches users' perception of the adequacy of the spaces within the mall; examined shoppers' satisfaction with the facilities and services in the study area. With the adoption of descriptive statistics (Mean Items Sores, Mean and Standard deviation) as data analysis techniques, the study revealed that the physical characteristics of the shopping are in different conditions from architectural perspectives. The study also indicated that the shopping malls have adequate spaces for the shoppers' movement inside the hall as well as outside the mall for vehicular movement. Lastly, the findings revealed that shoppers are satisfied with the shopping mall facilities and services. Thereby, the study concluded thatthe shopping malls assessed are good conditions in terms of the physical characteristics of the building, the available spaces, and the shopper's perceptions about the facilities and services of the mall.

Keywords:- Shopping, Mall, Environment, Post, Occupancy.

I. INTRODUCTION

The upsurge of shopping malls is increasingly displacing traditional market culture and altering consumer (shopper) behavior in cities. As a result, shopping center construction projects are completed more quickly than other types of construction, as the retail mall owners and developers want a quick return on investment as quickly as possible(Niekerk & Cloete, 2020). Also, shopping malls bring major private capital investment to places where there was previously little, such as new buildings and significant infrastructural improvements. Comparing the current state of a structure to its original design intent might provide valuable information for future design decisions. Because a building is intrinsically complex, assessing its performance can encompass a wide range of technical, functional, social, and aesthetic concerns. Assumed the nature of the construction work of the shopping complex in Nigeria, there is a need for post-occupancy evaluation of such facilities.

Post occupancy evaluation (POE) is a tool with which facility managers can identify and evaluate the behavior of a building (Tookaloo & Smith, 2015). It is also an instrument used by experts for the diagnosis of buildings and facilities to obtain information useful in the management of the building. Thereby, POEs are designed to compare actual

building performance to explicitly stated performance criteria systematically and rigorously (Aliyu, Muhammad, Mohammed, & Singhry, 2016). In addition, it conveys the efficacy of building systems between facility users and management when applied properly.

Apart from its use as a performance indicator, (Kooymans & Haylock, 2006) suggest that POE is used in determining building defects, formulating design and construction criteria, supporting performance measures for asset and facility management, lowering facility life cycle costs by identifying design errors that could lead to increased maintenance and operating costs, and clarifying design objectives. According to (Cranz, Morhaim, Lindsay, & Sagan, 2021), post-occupancy evaluation is a research method that examines how buildings function and contributes to both improvements in the building under study and general knowledge about how to improve buildings. Thus, a building should be assessed for performance after at least six months of occupancy.

However, due to the attitudes of the owners of the shopping malls or the knowledge of the builders as well as the architects, the lack of adequate evaluation of the performance of the mall after the completion of the construction phase might hinder the optimum management of built environment facilities of the mall. In some shopping mall after completion, the available packing space seems not to accommodate the customer's cars to the extent that it results in congestion and increase the customers' waiting time. This and many more might affect the customer's satisfaction and invariably lead to a reduction in patronage. Further, without the utilization of POE, most Architectural Engineering and Construction (AEC) experts today rarely monitor the performance of their building post-construction and there is very little attention to the actual satisfaction of the user (Sedzro, Domea, & Add-Lamptey, 2017).

From the aforementioned, the current study sought to evaluate the condition of shopping malls in Ota, Ogun State, with attention to the ability of the shopping to meet shoppers' demands. The rest of the study is organized as follows; section two presents the methods and materials. While the results are presented in section three, section four consists of a discussion, and section five conclude the study.

II. METHODS AND MATERIALS

The study employed a survey research design and case study to evaluate the condition of shopping malls concerning shoppers' satisfaction. The survey design was preferred because of the nature of the study population, which is, heterogeneous, and spread over a large geographical area. The design would enable the researcher

to collect data that are more primaryand facilitate in-depth analysis of the study. Likewise, the population of the study consists of the individuals who visit the mall primarily for shopping and are engaged in shopping. The real population of the shoppers appears difficult to obtain since there is no database for mall shoppers at the moment in Ogun state. In such an instance, the researcher adopted the Cochran sample size formula, which is appropriate for an unknown population. Using the formula, the sample was Three hundred and Eighty -four (384) and the snowball sampling technique was espoused to select the sample size.

A structured questionnaire and observation checklist (schedule) were used as the research instrument. While a questionnaire was used to solicit information from the shoppers', a checklist was adopted to investigate the physical characteristics of the shopping mall in terms of design and spaces. The statements of the questionnaires were framed from the existing literature and relevant studies. On the scale basis, the statements of the questionnaire was on a 4-point Likert scale of the forms; 4 = Strongly satisfied/ Very adequate, 3 = Satisfied/ Fairly adequate; 2 = Dissatisfied/ Inadequate and SD = Strongly dissatisfied/ Grossly inadequate.

Both descriptive statistics (frequency and simple percentage) and Mean Items Score (MIS) were used as data analysis techniques.

III. RESULTS

A. Questionnaire Response Rate
Out of the 385 questionnaires administered to the customers of Justrite Shopping Mall, Ota, Ogun state, 265 questionnaires were retrieved. The response rate becomes 85% i.e. (265/384* 100 = 69%). Thereby the data analysis was based on 69% of the total administered questionnaires.

B. Characteristics of the Respondents
The demographic information of the respondents that is considered necessary in the study includes; the gender of the respondents, marital status, and age group of the respondents. The distribution of the data is presented in Table 1 as follows;

Demographic	Variable Classifications	Frequency	Percentage
Gender	Male	102	38
	Female	163	62
	Total	**265**	**100**
Marital Status	Single	172	65
	Married	93	35
	Total	**265**	**100**
Age group	18 - 25years	24	09
	26 – 30years	62	23
	31 – 35years	51	19
	36 – 40years	43	16
	41 -45years	36	14
	46 – 50years	28	11
	Above 50years	21	08
	Total	**265**	**100**

Table 1: Demographic Characteristics
Source: Researcher's computation (2022)

Table 1 shows the distribution of demographic characteristics of the respondents. The gender distribution of the respondents indicates that 38% of them were male and 62% of them were female. By implication, more females patronize just rite shopping malls than males.

Further, the marital status distribution of the respondents revealed that 65% of the respondents are single and 35% of them are married. This implies that more singles are patronizing the shopping mall than married. The outcome might be ascribed to the passion for the singles to hang out or have a feeling of the standard shopping mall like Just rite.

The last demographic characteristic considered was the age group. The outcome of the variable indicated that 09% of the respondents are within the age group 18 -25years; 23% of them are within the age group 26 -30 years. Also, 19% of them are within the age group of 31 -35years, and 16% of them are within the age group of 36 -40years. While 14% of them are within the age group 41 to 45years, 11% of them are within 46 -50 years and 8% of them are 50 years above.

Physical characteristics of shopping mall and its environments.

Table 2 shows the mean item scores (MIS) of the responses and the applicable rankings.

Sn	Statements	N	MIS	Ranking
1	Design facilities	265	3.60	3rd
2	Mall image	265	4.45	1st
3	Mall decoration	265	3.21	7th
4	Walling material	265	2.34	10th
5	External doors	265	4.10	4th
6	Floor finish	265	3.02	9th
7	Window	265	4.20	2nd
8	Building design	265	3.12	8th
9.	Mall ambiance condition	265	3.23	6th
10.	Visual comfort (Through artificial lighting and natural lighting)	265	3.42	5th

Table 2: Mean Items Scores (MIS) for physical characteristics of shopping malls

Source: Researcher's computation (2022)

Table 2. indicates the respective rankings by the respondent to assess the physical characteristics of the shopping mall and its environment. From the analysis, the mall image was ranked 1st with a mean value of 4.45; followed by the mall window with a mean value of 4.20. Then, the design facilities of the shopping mall were ranked 3rd. The part of the shopping mall that was ranked least based on the mean item score is floor finish and walling material.

C. Shopping Malls Users' Perception and Adequacy of the Spaces

The second research objective was to examine how the shopping mall users' perceived the adequacy of the spaces within the mall. To answer the research questions, the researcher adopted mean and standard deviation and the result is shown in Table 4.4.

Sn	Statements	Mean	Std. Dev
1.	Circulation (ease of movement)	3.73	0.47
2.	Parking space available	3.36	0.50
3.	Space design and allocation	3.68	0.75
4.	Wayfinding (finding the shelf)	3.91	0.70
5.	Presence of direction signs	3.42	0.61
6.	Flow within the mall	3.28	0.72
7.	Walkways	4.10	0.82
	Grand Mean	3.72	0.46

Table 3: Mean and Standard deviation for Shopping Malls Users' Perception and Adequacy of the Spaces

Source: Researcher's computation (2022)

D. Decision Rule: The mean value < 3.5 = Not adequate; Mean value > 3. 5 = Adequate

Table 3 shows the mean and standard deviation for the responses on shopping Mall users' perception and adequacy of the Spaces. Using the grand mean, which is 3.72 with a corresponding standard deviation of 0.46. Since the mean value of 3.72 is greater than 3.5; it can be inferred that the respondents believed that the mall spaces are adequate.

E. Shoppers' satisfaction with the facilities and services

The mean and standard deviation was employed and the outcome of the analysis is shown in Table 4.

Sn	Statements	Mean	Std. Dev
1	Products quality	3.90	1.06
2	Facility and equipment in the mall	4.60	1.31
3	Price of commodities	3.71	1.24
4.	Variety of products	4.14	1.10
5.	Number of the automatic teller machine	3.29	1.67
6.	Available trolleys	2.34	1.16
7.	Conveniently located	3.40	1.59
	Grand Mean	3.61	1.30

Table 4: Mean and Standard deviation for Shoppers' satisfaction with the facilities

Source: Researcher's computation (2022)

From Table 4 the grand mean for all the statements is 3.62 with a corresponding standard deviation of 1.30. And since the rand mean value of 3.61 is greater than the mean cut-off value of 3.5, evidence revealed that the shoppers are satisfied with the shopping mall's facilities and services at the time of the study.

IV. DISCUSSION

The discussion section of the study presents an interpretation of the findings within the context of the literature as well as the field of study, which is architecture. Three research objectives were formulated and appropriate statistical tools were adopted to analyze the data collected from the shopping mall users in the study area. The result of the first research objective established that the physical characteristics of the shopping are in different conditions from architectural perspectives. As indicated in the study, the "mall image" was ranked first by the users of the shopping mall. Then followed by the "mall window" and the "design facilities" was ranked third. Taking a close look at the shopping mall, the mall image is truly attractive, and the type of windows on the wall fits in the form of ventilation required in the shopping mall environment. Thereby, it is obvious the shopping mall must have a good image, good windows for cross-ventilation, and design facilities. Aside from the types of products available in the mall, the aforementioned architectural elements of a building also matter.

The study also revealed that the spaces in the shopping mall are adequate. One of the requirements for a shopping mall is adequate spaces both within the mall and outside the mall. The spaces within a shopping mall include walkways, for the movement of people from nooks and cranes. In the same vein, the space outside the mall is also important for car parking and vehicular movement. In the realm of architecture, the combination of space plays an essential part in the arrangement of the shopping center's internal space, carries the customer movement path, and is also an important way to plan and connect commercial space.

Lastly, the findings of the study revealed that the shoppers are satisfied with the shopping mall facilities and services. Given the physical characteristics of the shopping mall, the available spaces, and the varieties of products among others, pieces of evidence revealed that the shoppers would be satisfied with the facilities and services.

V. CONCLUSION

The study evaluated the condition of shopping malls in Ogun state to establish shopper satisfaction. Three objectives were formulated in line with the aim of the study. With the use of descriptive statistics (Mean Items Sores, Mean and Standard deviation) the study revealed that the physical characteristics of the shopping are in different conditions from architectural perspectives. The study also indicated that the shopping malls have adequate spaces for the shoppers' movement inside the hall as well as outside the shopping for vehicular movement. Lastly, the study indicated that shoppers are satisfied with the shopping mall facilities and services. Based on the aforementioned, the study concluded that the condition of the shopping malls assessed is good conditions in terms of the physical characteristics of the building, the available spaces, and the shopper's perceptions about the facilities and services of the mall.

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