

*Full Length Research Paper*

# Physical architecture and customer patronage of banks in Nigeria: An empirical study

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**This study assesses the impact of physical architecture on customer patronage of quoted banks in South-south zone of Nigeria. 14 quoted banks at the Nigeria Stock Exchange Market were used for the study. The research considered firm level of analysis and top managers unit of analysis. Customers of the chosen banks were also used. By this arrangement, 42 managers and seven customers randomly selected constituted our respondents for the study. Descriptively, data were generated and presented while inferentially, the Spearman's Rank Correlation Coefficient was used in testing the postulated hypotheses. The result of the analysis showed that there is a positive and significant correlation between physical architecture and customer patronage. The study specifically revealed that physical architecture significantly impacts sales volume, profit margin, and customer retention. Furthermore, the study concluded that physical architecture strongly affects customer patronage. The authors therefore recommended that the improvement on customer patronage is predicated on the bank's ability to efficiently improve on its operational equipment and to ensure that they perform optimally while reducing customers' waiting time.**

**Key words:** Spatial layout, functionality and retail bank patronage.

## INTRODUCTION

Design factors can create attraction and uniqueness to appeal to people at the focal point by signaling a pleasant and worthwhile experience. The design aspects of banks and retail stores are an ideal convergence of artistic ideas, instinct and business in a planned and profitable manner. According to Din (2000), retailers need to create or find out new environment in which space, cost and flexibility are designed in such a way that they effectively communicate brand value and attract consumers. Bank's design layout may communicate value by increasing

search efficiency, comfort, inventory capacity, product quality, price, product displays etc. Signage and window dressing is the face index of the store that can attract or repel customers from the store. Customers may develop associations of trust, value, quality of goods and services, price warranty and guarantees, as they come across visuals such as signage, window dressing, logo, etc based on past shopping experiences, signs and graphics used in the store act as bridge between the merchandize and the target market. Design factors create theoretical

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effect, add Spersonality, beauty and communicate store image. Therefore, this study is designed to examine the impact of physical architecture on customer patronage of banks in the South-south zone of Nigeria.

## THEORETICAL BACKGROUND

### Physical architecture and customer patronage

Physical architecture refers to the ways in which machinery, equipment, and furnishings are arranged, the size and shape of those items, and the spatial relationships among these elements. More so, it refers to the functional ability of the same items to facilitate performance and the accomplishment of goals. Within the leisure service context, architecture accessibility refers to the way in which furnishings and equipment, service area and passage ways are arranged; and the spatial relationships among these elements (Bitner, 1992). An effective layout will provide for ease of entry and exist, and will make ancillary service areas such as concessions, restrooms, and souvenir stands more accessible to customers. Effective architecture in discount stores and banks facilitates the fulfillment of functional needs (Wakefield and Blodgett, 2005). Interesting and effective physical architecture may also facilitate fulfillment of hedonic or pleasure needs. That is, by making ancillary service areas more accessible customers are able to spend more time enjoying the primary service offering.

Surprisingly, little has been published about the effects of physical architecture on sales volume in commercial service settings such as banks (Wener, 2000; Seidel, 2002). Logic suggests that physical architecture and functionality of the environment are highly salient to customers in self service environments where they must perform on their own and cannot rely on employees to assist them. Similarly, if the tasks to be performed are very complex, efficiency of layout and physical architecture will be more important than when the tasks are mundane or simple. When either the employees or customers are under time pressure, they will also be highly conscious of the relative ease with which they can perform their tasks in the environment.

However, it is important to emphasize that physical architecture that makes people or customers to feel constricted may have a direct effect on customer quality perceptions excitement levels, and indirectly on their desire to return (customer retention). This implies that service or retail facilities that are specifically designed to add some level of excitement, arousal or satisfaction to the service experience such as in an upscale restaurant or commercial bank should provide ample space to facilitate exploration and stimulation within the physical environment (Wakefield and Blodgett; 2005). From the

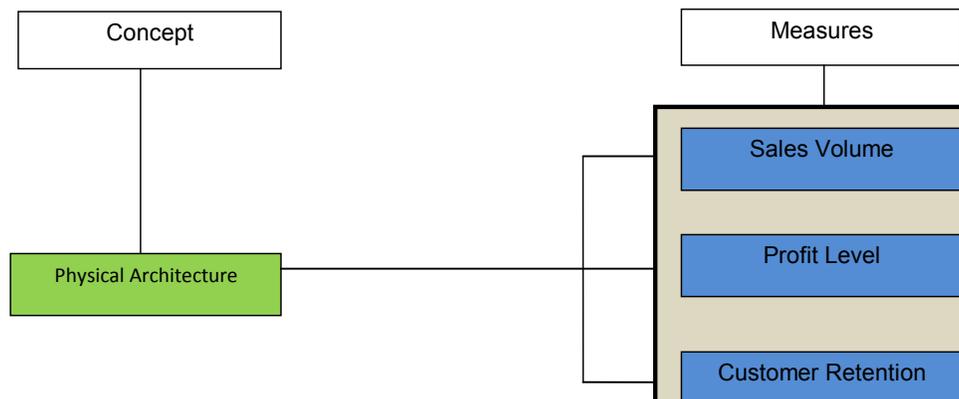
forgoing discussion, we are inclined to believe that physical architecture can influence patronage in banks.

Furthermore, services encounter environments are purposeful environments (i.e. they exist to fulfill specific needs of consumers, often through the successful completion of employee actions); this underscores the relevance of physical architecture of business surroundings. The study of Baker et al (2002) showed strong evidence that customer's perception towards display and layout influence the customer's value perception. The value perception has a strong impact on customer patronage. When customers find that the merchandise or services is easily identified, the higher the possibility that customers will purchase on the merchandise. Efficient design of layout aids people in getting the right direction and to understand signs in stores and offices (Bitner, 1992). More so, customers that are successfully attracted to a store or office have a chance to purchase on product and spread positive word of mouth to friends and family (Barth, 1993).

On the other hand, physical architecture refers to the ability of the same items to facilitate performance and the accomplishment of goals. Much of the empirical research in organization behavior and psychology illustrated effects of the physical architecture and from the employee's point of view. Little has been published about the effects of physical architecture on customers in commercial service settings.

The impact of furnishing can be evidenced through the affective response of comfort; and this is also an important aspect of service environment that attracts profit margin and retention. For instance, seating comfort is likely to be a particularly salient issue for customers of leisure and banking services that must seat for a number of hours or minutes observing or participating in some of banking transactions and or some form of entertainment. Seating comfort is affected by both the physical seat itself and by the space between the seats. Some seats may be comfortable or uncomfortable because of their design or condition (new vs. deteriorating, padded vs non padded, bench seats vs seats with backs). Seats may also be comfortable or uncomfortable because of their proximity to other seats; customers may be physically or psychologically affected if they are forced to seat too close to the customers next to them (Baker, 2000). Indeed, previous research related to perceived crowding (Eroglu and Michelet, 1990; Hui and Bateson, 1991) suggests that cramped seating quarters are likely to be perceived as displeasing and of poor quality, hence may negatively impact on customer retention, sales volume and resultant profit level.

Furthermore, the amount of space between rows of seat is also an important dimension; because it affects the ease with which customers may exit their seats to use ancillary service such as rest rooms, concession areas, etc. More so, when rows are too narrow other customer



**Figure 1.** Customer patronage measures. Source: authors Desk Research (2014).

are frequently forced to stand or shift in their seats to let other customers pass by. However, the arrangement of space i.e. efficient positioning of items to pave way for easy movement and access to facilities by customers in a banking environment will significantly impact on sales volume, customer retention and profit margin.

Physical architecture can be an effective way to manage perceptions of progress in a queuing situation (Haynes, 2000). Furthermore, physical architecture may lead consumers to attribute the cause of a delay to the service organization. For example, bank customers were angry at delays they attributed to the bank when they observed tellers waiting for their computers to respond. After the bank installed partitions concealing computer terminals, tellers were perceived to be busy throughout the entire transaction and complaints decline (Martin, 2001). Physical architecture thus contributed to consumers' affective responses, and this led to lower perception of waiting time duration. Similarly, if consumers attribute delays to an organization due to poor facility layout and design then negative effect and increased time perception may result.

Conversely, effective and proper arrangement of facilities, equipment and their optimal/efficient performance will resultantly enhance the organization's customer retention. Parasuraman et al. (1988) conceptualized customer retention as "a global judgment, or attitude relating to the superiority of the service. In this regard, understanding and meeting customers' needs are essential for the success of any business or organization, no matter how small or large (Timm, 2008). There is general agreement that the delivery of high service quality can create a competitive advantage for retailers by differentiating them in terms of meeting the needs of their customers better than their competitors do (Darshan, 2006; Chilya et al., 2009) (Figure 1).

Therefore, from the forgone discussion, we are inclined to think that the design of physical architecture, i.e. the

equipment spacing, and spacious banking hall that will enhance easy customer traffic and mobility will encourage patronage, increase retention, volume of transactions and ultimately impact on the firms profit level. Hence, we develop the following hypotheses for the study. These are stated as follows:

*H1: There is a significant relationship between physical architecture and sales volume*

*H2: There is a significant relationship between physical architecture and Profit margin.*

*H3: There is a significant relationship between physical architecture and Customer Retention.*

## STUDY METHODOLOGY

This study adopted the cross sectional survey method and the objectivist research strategies. The major decisions of the study were based on the nomothetic methodology. This approach focuses attention upon the process of developing questionnaire and testing hypotheses in accordance with the canons of scientific rigor (Ahiazu, 2006).

The primary data were drawn from fourteen (14) functional and registered quoted banks in the south-south zone of Nigeria which also constitute our target population and level of analysis. More so, these banks were registered with the Corporate Affairs Commission (CAC), Nigerian Deposit and Insurance company (NDIC), and the Nigeria Stock Exchange (NSE). Forty two (42) copies of structured questionnaire were distributed on the ratio of three copies per bank. Our unit of analysis constitutes the bank's general managers and other top management staff who have direct contact with the customers.

The generated data were presented in tables and percentages and the various hypotheses were tested by employing the Spearman's Rank Correlation Coefficient to ascertain the relationship between physical architecture and customer patronage. The research instrument was designed using likert scale in the measurement of the two Constructs, Physical Architecture and Customer Patronage which ranges from "very high extent" to "very low extent". Most of the instruments used to measure the constructs in this study were adapted from previous studies in order to ensure content validity (Bitner, 1992). Items measuring physical

**Table 1.** Reliability coefficient of variables measured.

S/NO	Dimensions/measures of the study variables	No of items	No of cases	Cronbach's Alpha
1	Physical Architecture	5	42	0.762
2	Sales Volume	5	42	0.906
3	Profit Margin	5	42	0.875
4	Customer Retention	5	42	0.935

Source: SPSS Output version 15.0.

**Table 2.** Result of spearman rank correlation coefficient between physical architecture (PA) and sales volume (SV).

		Physical architecture	Sales volume
Spearman's rho	Physical architecture	Correlation coefficient	1.000
		Sig. (2-tailed)	.692**
		N	.000
Spearman's rho	Sales volume	Correlation Coefficient	.692**
		Sig. (2-tailed)	1.000
		N	.000

\*\* . Correlation is significant at the 0.01 level (2-tailed). Source: Research Data 2014 and SPSS ver. 15 window output.

**Table 3.** Result of spearman rank correlation coefficient between physical architecture (PA) and profit margin (PM).

		Physical architecture	Profit margin
Spearman's rho	Physical architecture	Correlation coefficient	1.000
		Sig. (2-tailed)	.622**
		N	.000
Spearman's rho	Profit margin	Correlation coefficient	.622**
		Sig. (2-tailed)	1.000
		N	.000

\*\* . Correlation is significant at the 0.01 level (2-tailed). Source: Research Data 2014 and SPSS ver. 15 window output.

architecture, including facility layout, facility design and equipment functionality are obtained from Darshan, (2006) and Haynes, (2000). Customer patronage was measured by items such as: sales volume, profit level and customer retention which were adapted from Cronin et al. (2000), Asiegbu et al. (2011), Adiele et al. (2011) and Athanasoglou et al. (2005). The validation process led us to seeking the opinion of experts in services marketing and service environment strategist. Towards this end, ten copies of structured questionnaire were pretested on selected managers of the different banks within the context of our study.

The Cronbach's Alpha coefficient was used to ascertain or test for instrument reliability. It is also an indicator of the internal consistency of a measure (Witney, 1996; Ahiauzu, 2006). From the analysis the results were all above the threshold of (0.70) as suggested by Nunnaly (1978), indicating that our research instrument was reliable. We therefore regard the items in the instrument as being internally related to the factors they are expected to measure (Table 1).

## ANALYSES OF RESULTS

The hypotheses and data on Physical Architecture and Customer Patronage of banks in the south-south zone of Nigeria are presented in Tables 2, 3 and 4 respectively.

### Result of spearman rank correlation coefficient between physical architecture (PA) and sales volume (SV)

*Ho<sub>1</sub>: There is no significant relationship between physical architecture and sales volume in Banks in South-South Zone of Nigerian*

Table 2 shows that the correlation coefficient variables

**Table 4.** Result of spearman rank correlation coefficient between physical architecture (PA) and customer retention (CR).

		Physical architecture	Customer retention
Spearman's rho	Physical architecture	Correlation coefficient	1.000
		Sig. (2-tailed)	.704**
		N	.000
Customer retention		Correlation coefficient	.704**
		Sig. (2-tailed)	1.000
		N	.000

\*\* . Correlation is significant at the 0.01 level (2-tailed). Source: Research Data 2014 and SPSS ver. 15 window output.

ranked x and Y is (.692). This positive value of rs says that there is a strong rank correlation between Physical Architecture (x) and sales volume (Y) in the sample of banks in south-south zone of Nigeria. Furthermore, the Cronbach's Alpha values for physical architecture and sales volume are (.762) and (.906) respectively as shown in Table 2. Since the p-value (0.000) is less than the level of significance at (0.05), we therefore reject the null hypothesis and uphold the alternate hypothesis which says that there is a significant relationship between physical architecture and sales volume in the Banks in south-south zone of Nigeria.

#### **Result of spearman rank correlation coefficient between physical architecture (PA) and profit margin (PM)**

*Ho<sub>2</sub>: There is no significant relationship between physical architecture and profit margin in the banks in South-South Zone of Nigerian.*

Table 3 shows that the correlation coefficient variables ranked x and Y is (.622). This positive value of rs (.622) indicates that there is a strong rank correlation between physical architecture (x) and profit margin (Y) in the sample of Banks in south-south zone of Nigeria. Moreso, the Cronbach's Alpha values for physical architecture and profit margin are (.762) and (.875) respectively as shown in (Table 1). Since the p-value (0.000) is less than the level of significance at (0.05), we therefore reject the null hypothesis and uphold the alternate hypothesis which says that there is a significant relationship between physical architecture and profit margin in Banks in south-south zone of Nigeria.

#### **Result of spearman rank correlation coefficient between physical architecture (PA) and customer retention (CR)**

*Ho<sub>3</sub>: There is no significant relationship between Physical*

#### *Architecture and Customer retention in Banks in South-South Zone of Nigeria.*

The Spearman's Rank test result in Table 4 shows that the correlation coefficient of the variables Rank- x and Rank -Y is .704. The positive value of rs (.704) revealed that there is a strong rank correlation between physical architecture (x) and customer retention (Y) in the sample of Banks in south-south zone of Nigeria. More so, the Cronbach Alpha values for physical architecture and customer retention are (.762) and (.935) respectively (Table 1). Since p-value (0.000) is less than the level of significance at (0.005), we therefore reject the null hypothesis and uphold the alternate hypothesis .This implies that there is a significant relationship between physical architecture and customer retention in the banks in South-south zone of Nigeria.

## **DISCUSSION OF THE FINDINGS**

### **Relationship between physical architecture and customer patronage**

The test of hypotheses one, two and three as shown in Tables 2, 3 and 4, respectively revealed that a strong and positive relationship exists between physical architecture and each of the measures of customer patronage in the sample of banks in South-south zone of Nigeria. The positive value of (.692), (.622) and (.704) also showed the strength of the relationships between the variables. The Cronbach's Alpha values for physical architecture (.762), sales volume (.906), profit margin (.875) and customer retention (.935) indicated the rate at which our research instruments were reliable (Table 1).

Furthermore, the p-value (0.00) is less than the level of significance of (0.05); therefore, we reject the null hypotheses and conclude that a positive and significant relationship exists between physical architecture, sales volume, profit margin and customer retention.

This finding corroborates the views of Wakefield and Blodget (2005), that an effective layout will provide ease

of entry and exist, and will make ancillary service areas such as concessions, restrooms, and souvenir be more accessible to customers. Similarly, Wakefield and Blodgett (2005) argued that effective architecture in discount stores and banks facilitates the fulfillment of functional needs. Notably, interesting and effective physical architecture was found to facilitate fulfillment of hedonic or pleasure needs. That is, by making ancillary service areas more accessible customers are able to spend more time enjoying the primary service offering. However, it is important to emphasize that physical architecture that makes people or customers to feel constricted may have a direct effect on customer quality perceptions excitement levels, and indirectly on their desire to return (customer retention). This is consistent with the views of Wakefield and Blodgett (2005) that service or retail facilities that are specifically designed to add some level of excitement, arousal or satisfaction to the service experience such as in an upscale restaurant or commercial bank should provide ample space to facilitate exploration and stimulation within the physical environment (Wakefield and Blodgett; 2005). From the foregone discussion, we are inclined to opine that physical architecture can influence patronage in banks.

Skogland and Siguaw (2004) similarly examined the people factor and satisfaction with hotel and bank ambience and reported that they positively affect word-of-mouth loyalty. Their finding corroborates with the views of Timm (2008), that underscored the importance of bank design and amenities as drivers of sales volume. Hence, Chiliya et al. (2006) opined that organizations build themselves around what is good for their customer and change their organizational ambience, structures, systems and processes to build great customer experiences in order to continually sustain growth despite fierce competition. This assertion is in line with our findings in Table 2 which showed a significant relationship between physical architecture and sales volume as evidenced in the strong value of (69.2%).

Furthermore, in the view of Goddard et al. (2004a), as banks move into the twenty first century, they must focus more than ever before on creating new streams of revenue in order to increase shareholders value. Critical to this effort is the need to assess and analyze the profitability of the bank's current customers, relationships, services customer retention rate and products. It is only through such analysis that bank can determine which customers to fight for, which customer relationship to expand, and which prospective customer to pursue. This statement corroborates with our study finding in Table 3 which indicated a significant relationship between physical architecture and profit margin as evidenced in the positive value of 62.2%.

Similarly, for any business organization, even the banking industry to perform creditably and remain in business, there must be inherent customer retention

program and strategies. Customer retention affects both revenues and cost in the equation of profitability. This equation equates profitability to be equal to revenue and cost is lowered due to lesser generation and marketing costs of such revenue. Sales volume plays a key role in the profit level of any organization. Higher sales volume will always reflect in higher profit margin or increasing demand and the number of units sold. Arguably, from the above discussions, there is a relationship between physical architecture, sales volume, profit margin and customer retention. This statement agrees with our finding in Table 4 which indicated a strong and significant relationship between physical architecture and customer retention as observed in the strong value of 70.4%. Another positive consequence of customer retention is that it can help the firm gain competitive advantage and an expansion of their market share as customers willingly buy other products as well as refer others to the organization (Christopher and James, 2012). The impact of furnishing can be evidenced through the affective response of comfort; and this is also an important aspect of service environment that attracts profit margin and retention. The study of Baker et al. (2002) showed strong evidence that customer's perception towards display and layout will influence the customer's value perception. The value perception has a strong impact on customer patronage. From the discussion thus far, we conclude that physical architecture positively and significantly affects customer patronage.

## CONCLUSION AND RESEARCH IMPLICATIONS

This article has explored some of the pertinent areas in which physical architecture and customer patronage are predicated upon and also established the relationship between these constructs. Based on the findings obtained from summary of discussion, empirical related literature; thus far, we conclude that physical architecture affect customer patronage of banks in the south-south zone of Nigeria. Furthermore, amongst the measures of patronage, physical architecture strongly affects customer retention of banks under investigation as evidenced in Table 4.

Similarly, the implication of the study is that the use of physical architecture as a strategy to enhance customer patronage in banks should be recognized since both theoretical and empirical evidence has proven that the dimensions of physical architecture positively correlate with customer patronage.

We suggest that, banks should take cognizance of the fact that physical architecture (i.e. efficient facility layout, facility design and functionality of their equipment) can help facilitate their service delivery process thereby reducing customer waiting time, crowding and complaint. From our findings and discussion thus far, we develop a

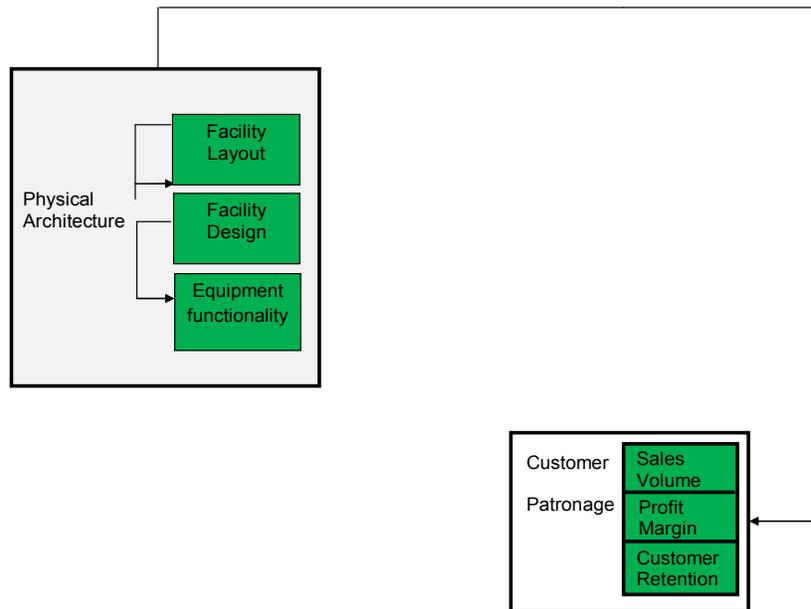


Figure 2. Physical architecture and customer patronage model.

new physical architecture and customer patronage heuristic model presented in Figure 2.

**Conflict of Interests**

The authors have not declared any conflict of interests.

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