SERVICESCAPE AND CUSTOMER PATRONAGE OF FUEL STATIONS IN PORT HARCOURT

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Abstract

The research explored the impact of the servicescape on customer loyalty at fuel stations in Port Harcourt. Specifically, it assessed how ambient conditions affect customer loyalty and how spatial layout and functionality influence consumer loyalty at fuel stations in Port Harcourt. The study utilized a descriptive survey research design. The population included fifty-five (55) registered fuel stations in Port Harcourt, Rivers State, along with an indefinite number of customers over 18 years of age residing in the area. Using Topman's formula, the sample size was determined to be 246, but 233 questionnaires were recovered. Judgmental and convenient sampling methods were employed. Data analysis involved descriptive statistics, including frequency and percentage distributions, and the hypotheses were tested using multiple regression models. The findings indicated that ambient conditions (such as lighting) significantly influence customer loyalty at fuel stations in Port Harcourt. Additionally, spatial layout and functionality (including equipment arrangement, ease of entry and exit, equipment functionality, and space availability) also have a significant impact on customer loyalty. The study concluded that employing servicescape dimensions as strategies to enhance customer loyalty at fuel stations is essential, given that both theoretical and empirical evidence demonstrate a positive correlation between servicescape dimensions and customer loyalty. It was recommended that fuel stations should continuously enhance their spatial layout to improve customer comfort, ensuring that their equipment functions properly as a key factor for customer loyalty.

Keywords:

Servicescape, Spatial layout. Ambient conditions. Customer Patronage, Fuel Stations. Port Harcourt

INTRODUCTION

Over the past decade, the impact of the physical environment on customer loyalty has become a significant focus for business and marketing professionals aiming for efficient product distribution and increased customer retention. Specifically, the physical environment is a crucial factor in differentiating businesses and communicating with customers, allowing for easier evaluation of the service sector, which includes intangible elements. In essence, servicescape shapes consumer perceptions by providing reliable information on the quality and performance of services offered byfirms.As noted by Shostacke (2002), the importance of servicescape in consumers' perception of services has garnered substantial interest in the literature. This is because the service setting plays a vital role in shaping expectations, differentiating service firms, facilitating customer and employee objectives, and influencing the nature of consumer experiences.

Servicescape is defined as the environment where services are delivered, involving interaction between the firm and customers, along with tangible elements that support the performance of goods and services firms (Zeithaml & Bitner, 2003). It includes the physical structures, vehicle and equipment arrangements, interior furniture, uniforms, signs, printed materials, and visible cues indicating service quality. Consequently, servicescape is a component of the service marketing mix, enabling customers to evaluate the firm.According to Namasivayam and Lin (2008), servicescape encompasses the physical condition of the firm, including its general layout, structural design, and decor. It also refers to the built environment with an artificial surrounding rather than a natural or social setting (Bitner, 1992). The physical environment is particularly significant in service-related sectors such as hotels, hospitals, cinemas, and schools. However, its importance cannot be overstated in

firms where customer service is provided, as effective control of the servicescape can lead to customer satisfaction and increased repeat purchases (Namasivayam& Lin, 2008).

Servicescape is considered a critical element in shaping customers' physiological, cognitive, and emotional states, as well as their behavior. For consumers visiting a service or retail location, the service environment is the first aspect of the service they encounter. At this stage, consumers are likely to form impressions of the level of service they will receive.Servicescape encompasses the tangible aspects of services, which are viewed as man-made physical environments where services are provided. Potential customers may not be able to touch, hear, see, smell, or taste services before purchasing them. Therefore, marketers use communication features to make services more tangible and provide assurance in the customer's purchasing decision (Churchill & Peter, 1998).

Physical evidence includes all tangible representations of services, such as brochures, letterheads, signage, reports, recipes, equipment, and sometimes the physical facilities where services are delivered and facilitated. Moreover, servicescape represents the outward appearance of the organization, which can be critical in forming initial impressions or establishing customer expectations. The ability of the physical surroundings to facilitate the achievement of organizational and marketing objectives is evident. A long-standing marketing principle is that understanding and satisfying customers lead to superior business results. An organization engages with its customers to achieve understanding and increase support through the design of service environments, service quality, and service personnel.When the service environment and the physical design of the equipment align with customer expectations, satisfaction will increase, leading to a higher degree of customer loyalty.

Customer patronage refers to the approval or support given by buyers to a particular brand. According to Oliver (2011), customer patronage denotes a deeply held commitment to repurchase a firm's goods and services, even at the expense of competitors' offerings. Soeck (2012) defines patronage as repeat purchasing behavior at a specific store for either the same products or other goods. Patronage forms the foundation for a well-established and growing market share.Kotler (2007) suggests that consumers have varying degrees of loyalty to specific service stores and other entities. According to the Oxford English Dictionary (2008), customer patronage refers to an individual or entity that consumes or uses something or purchases goods/services for personal consumption or use. Therefore, patronage is seen as the degree to which a buyer consistently exhibits purchase behavior from a product or service firm, maintaining a positive attitude and disposition towards the product or service provider (Grembler& Brown, 1996).

The purpose of servicescape is to support the organization's marketing programs by effectively managing tangible cues to benefit both the customer and the organization. Servicescape is significant as it influences not only consumers' cognitive, emotional, and physical states but also customer behavior, which affects loyalty.

The intangibility of services presents challenges in marketing service-related products because potential buyers cannot evaluate them before purchase. Therefore, marketers must provide signals about the quality and benefits of services. Additionally, service delivery errors or shortcomings cannot be rectified or reclaimed.According to McDougall and Snatsinger (1987), intangibility has been widely regarded by many marketing scholars as the most critical and unique characteristic of services. This is because service products cannot be displayed, demonstrated, or illustrated, preventing consumers from making a pre-purchase evaluation of all service attributes.

Many fuel stations, despite their indifference to customers' basic psychological needs, neglect important selling points such as amenities, dispensing pump accuracy, product quality, attentive service, station orderliness, spatial layout, cleanliness of stations and staff, ambient conditions, staff attitude, signs, symbols, artifacts, and customer dispatch efficiency. Other issues include inadequate convenience and functional POS services and outdated equipment.

Furthermore, the intangibility of some service-related products makes it challenging for consumers to evaluate service offerings, particularly quality and value for money, before purchase. This also poses difficulties for marketers in positioning new service product offerings. Due to these challenges, marketers strive to manipulate evidence to appeal to individual customers, often providing various servicescape elements that may or may not lead to customer loyalty. In light of the aforementioned issues, this research examines the influence of servicescape and customer patronage of fuel stations in Port Harcourt.

AIM AND OBJECTIVES OF THE STUDY

The main aim of this study was to examine the influence of servicescape on customer patronage of fuel stations in Port Harcourt. The specific objective were to:

i. examine the influence of Ambient Conditions on customer Patronage in fuel stations in Port Harcourt.

ii. examine the effect of Spatial Layout and Functionality on Consumers patronage of fuel stations in Port Harcourt.

1.4 RESEARCH HYPOTHESES

The following null hypotheses were provided for the study:

$H0_1$: Ambient conditions has no significant influence on customer satisfaction of fuel stations in Port Harcourt.

$H0_2$: Ambient conditions has no significant influence on repeat purchase of fuel stations in Port Harcourt.

H0₃: Spatial layout and functionality has no significant effect on customer satisfaction of fuel stations in Port Harcourt.

H0₄: Spatial layout and functionality has no significant effect on repeat purchase of fuel stations in Port Harcourt.

1.0 LITERATURE REVIEW

Operational/Conceptual Framework
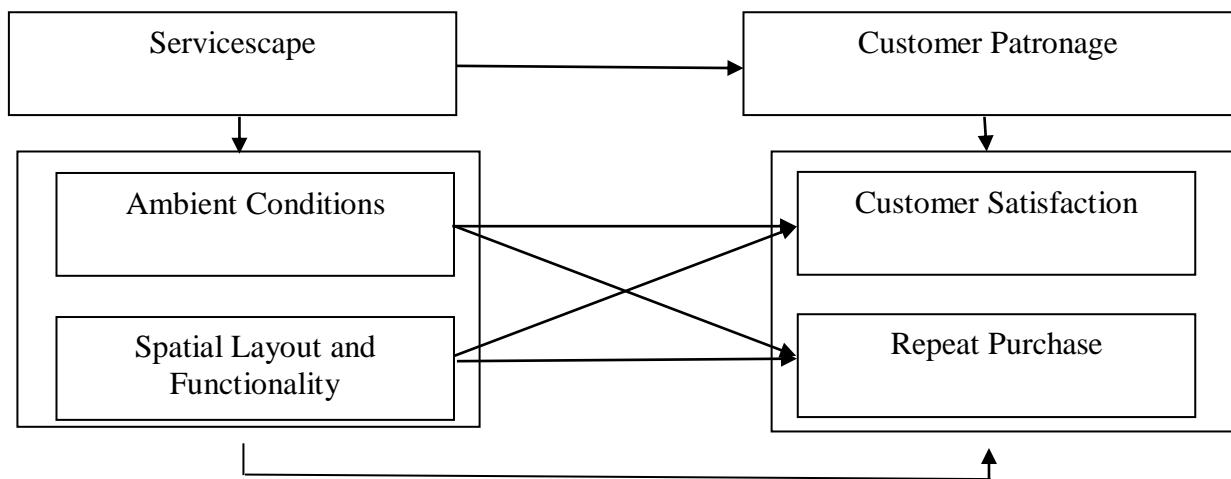
Figure 1: Operational/Conceptual Framework for servicescape and customer patronage of fuel stations in Port Harcourt.
Source: Adapted from Bitner (1992)

Concept of Servicescape

McDougall and Snetsinger (1990) characterized servicescape as the grade to which a service can provide a clear tangible image. Servicescape assumes a basic job in forming desires, separating service firms, encouraging client and representative objectives, and inspire the nature of customer experience (Bitner, 1992). Physical condition incorporates the presence of physical structure finishing, vehicles, inside outfitting, hardware, regalia, signs, printed materials and other noticeable prompts that give evidence of service quality. Servicescape is hence, a component of service promoting blend which empower the client to assess a firm.

The capacity of physical proof is to help the associations marketing / advertising program by making it conceivable to deal with the substantial signs to the best of favorable position of the client and the representatives. Along these lines, Servicescape incorporates all the endeavors taken by the specialist organization to tangiblize their service administration.

Servicescape can be characterized utilizing different terms, Bitner's (1992) arrangement is one of the most utilized in the writing and inspected servicescape under three measurements which are ambient conditions, (temperature, music, lighting, commotion, smell), spatial format and functionality (Machines, types of equipment, design and so on.) and signs, symbols and artifacts. Lucas (2003) opined ambient conditions, interior decor, cleanliness, layout/Navigation, staff friendliness and service promptness. Lucas (2003) also opined that there are three main dimensions of physical proof which are; Building design, décor, equipment and ambience. He considered the fixed elements of evidence: its architecture, landscape and site design. Baker et al. (2002) suggested design observations, employee acuity, music perceptions time/effort, cost perceptions, monetary & price perceptions, interpersonal service quality perceptions, merchandise quality perceptions, mechanize value perceptions, and store patronage intentions. Besides, as indicated by Baker (1987), administrations cape is the physical condition, which Kotler (2007) characterizes as a climate.

Servicescape comprises all facets of the organizations physical competence (the administrative cape) and other related forms of touchable communication that have deep influence in client experience, impact the stream of the experience, the connotation customers assign to it, their gratification, and the passionate connections with the business delivering the experience (Rosenbaum, 2005). Servicescape includes exterior facilities (landscape, exterior design, signage, parking surroundings environment) and interior facilities (design and décor, signage, equipment, layout, air quality, temperature and ambient servicescape along other

tangible cues like corporate cards, billing statements, experts, stationary, employee dress, uniforms, brochure, web pages and virtual services cape) (Rosembaum & Deltra, 2007).

Spatial Layout and Functionality and Customer Patronage

Spatial design refers to how apparatus, tools, and furnishings are arranged, as well as the size and structure of these items and their spatial relationships. Spatial layout involves organizing service equipment, including their spatial dimensions (Bitner, 1992). This concept encompasses the arrangement of furnishings and equipment and their spatial interactions (Ryu & Jang, 2017). Ideally, the placement of objects and furnishings within a service environment should facilitate free movement throughout the facility, enabling customers to complete their tasks efficiently during their service encounter (Grayson & McNeil, 2019). For instance, aisle space should be wide enough to allow shoppers to browse comfortably without feeling crowded or cramped (Hui & Bateson, 2011). Furthermore, employing user-friendly layout designs can improve customer search time and service reliability, thus enhancing service delivery (Sulek & Lind, 2015). However, if the layout hinders movement, it may lead to frustration and a more dissatisfying customer experience (Bitner, 1992).

Spatial layout generally involves how equipment and fittings are organized and the size and shape of these items. An effective design can provide ease of entry and exit and accessibility to other secondary services. Spatial designs are often a strategic method to manage perceptions of progress in queuing situations (Haynes, 2020). The physical architecture of a service space may lead consumers to attribute delays to the service organization. For example, in a petrol station, the ability to drive in or out of the station depends on the arrangement of equipment within the station. Therefore, spatial layout contributes to customers' effective responses, leading to a lower perception of waiting time in a filling station. Conversely, if consumers attribute delays to an organization's poor spatial layout, it

may result in negative effects and increased perceived waiting time. Effective and proper spatial design of facilities and equipment, and their optimal performance, will enhance customer patronage. Layouts in well-designed stores facilitate functional needs while interesting and mood-altering layouts may provide hedonic value (Wakefield & Blodgett, 2014).

Functionality refers to the capacity of apparatus to facilitate performance and the execution of the purpose for which they are intended. It involves the ability of equipment, furniture, and fittings to help achieve employee and customer goals. Much empirical research in organizational behavior and psychology has highlighted the effects of spatial layout and functionality, typically from the employee's perspective (Wineman, 2016), with some exceptions in research on retail store layout, crowding, and orientation aids (Awasthi &Suvivastara, 2014). The spatial layout and functionality of the physical environment are particularly important because service environments must meet customer needs and purposes. The visual and functional environment for service delivery and consumption is enabled through spatial layout and functionality, which determine service operation efficiency, user-friendliness, and shape customer experience (Lovelock & Wiltz, 2017). Therefore, we conclude that effective spatial layout that facilitates easy customer traffic and mobility will encourage patronage, increase repurchase, satisfaction, and referrals to petrol stations. This will be measured in terms of ease of entry and exit, equipment arrangement, equipment functionality, and modernity of equipment in the service area.

Theoretical Framework

Resource-Based Theory by Jay Barney (1991)

The resource-based theory posits that effective and efficient use of a firm's resources is crucial for creating a sustainable competitive advantage. According to Porter (2011), the theory emphasizes a firm's resources as determinants of its competitiveness within the industry. The theory has evolved over the past decades, with various scholars using terms such as resources, capabilities, assets, or competencies to describe factors affecting a firm's physical resources, human capital, and organizational capital resources. The resource-based view (RBV) suggests that competitive advantage and performance outcomes result from firm-specific resources and capabilities that are costly for competitors to duplicate (Barney, 1991).

These resources and capabilities can be significant components of sustainable competitive advantage and superior firm performance if they possess certain unique characteristics. They must be valuable, rare, partially imitable, and non-substitutable (Barney, 1991). The RBV adopts an inside-out perspective on why organizations succeed or fail in the marketplace (Dicksen, 1996). Resources that are valuable, rare, imitable, and non-substitutable (Barney, 1991) enable businesses to develop and maintain competitive advantages and leverage these resources for superior performance (Grant, 1991). According to the RBV, an organization can be considered a collection of physical resources, human resources, and organizational resources (Barney, 1991). Resources that are valuable, rare, and partially imitable are the main sources of sustainable competitive advantage and continued superior performance (Barney, 1991).

The resource-based theory focuses on the idea that a firm's internal resources can become a direct source of sustainable competitive advantage (SCA). According to Yang and Konrad (2011), the RBV is concerned with organizational performance heterogeneity. The objective is to combine and deploy a range of internal resources strategically to create competitive

advantage for the organization. These resources include physical capital (buildings, machinery, stock), financial capital (investments, cash reserves, operational capital), human capital (knowledge, skills, and experience of employees), and corporate capital (trademarks, patents, systems). Yang and Konrad (2011) explain that these resources become valuable when they enable the organization to implement its business strategy.

Servicescape and its components are internal resources for fuel stations that, when properly combined, can ensure competitive advantage over other stations in Port Harcourt Metropolis, especially as their products are services that cannot be seen unless the firm provides visible cues through which consumers can judge their expectations. Thus, the resource-based theory supports this study by highlighting the need for firms to properly combine their specific resources to gain competitive advantages over their competitors in the same industry.

Review of Empirical Studies

Ogbuji, Onuaha, and Usman (2016) examined the relationship between spatial layout and customer patronage of cinemas in Port Harcourt. Data was collected from 375 respondents across three cinemas using questionnaires. The hypothesis was tested with Pearson Product Moment Correlation Coefficient, revealing a significant association between spatial layout and customer patronage. The study concluded that spatial layout is a crucial marketing factor for cinema services and recommended continuous improvements in spatial layout and proper equipment functioning to enhance customer comfort and retention.

Emir (2016) explored the connection between service atmosphere and customer loyalty. Data was gathered from 650 questionnaires given to German tourists in Antalya, with 485 completed forms analyzed using Structural Equation Model (SEM). The findings indicated a significant relationship between hotel atmosphere components and employee factors, with the

strongest relationships found in pleasant music, attractive landscape arrangements, and short registration waiting times. The study recommended that management pay close attention to employee behavior and training, as these significantly influence customer perceptions.

Asiegbu et al. (2012) investigated the impact of servicescape on the marketing performance of Nigerian commercial airlines. Using a quantitative research approach and a cross-sectional survey design, data was collected from 110 respondents, including crew resource managers, aircraft maintenance personnel, pilots, financial accountants, and customer service managers from 29 airlines. The analysis, using Pearson and Stepwise regression statistics, revealed that servicescape dimensions like ambience, personnel competence, and service systems design significantly affect marketing performance metrics such as sales growth, market share, and profitability. The study recommended that Nigerian commercial airlines adopt strategies that ensure reliable, safe, and comfortable flights with well-maintained aircraft, competent staff, and customer-friendly service systems.

Onuoha and Nnenanya (2017) examined how servicescape affects customer patronage at fuel stations in Abia State. Using a survey research design, data was gathered from 450 respondents across 30 fuel stations in three major cities. The study tested three hypotheses using Pearson's product moment correlation coefficient, finding that servicescape dimensions significantly impact customer patronage. The study concluded that fuel stations should treat servicescape as a vital marketing strategy to sustain customer patronage and profitability.

Kwabena et al. (2011) examined the connection between the multidimensionality of service scape and customer patronage. Three speculation were detailed. To test the potential outcomes, an overview with 104 members chose through comfort inspecting from six lodgings in the city of Accra. It was framed that positive relationship exists between the feeling of the inns and patronage by clients. Positive relationship was additionally detailed

between spatial format and patronage by clients. It was again discovered that signs images and curios were decidedly connected with customer patronage. This investigation presents us with a casing work and features the capability of physical setting as important and fitting technique in drawing in clients in the lodging business.

Adiele and Okpara (2014) evaluated the effect of physical design on client support of cited banks in south-south zone of Nigeria. The 14 cited banks at the Nigeria stock trade showcase were utilized for the examination. The exploration thought about firm degree of examination, top chiefs unit of investigation and clients of the picked banks were likewise utilized. The examination received the cross sectional overview technique and objectivist explore systems. By this plan, 42 chiefs and seven clients haphazardly chose established our respondents for the examination. Illustratively, information were created and introduced while inferentially, the Spearman's Rank relationship coefficient was utilized in testing the hypothesized theories. The aftereffect of the examination indicated that there is a positive and noteworthy connection between physical design and client support. The investigation explicitly uncovered that physical design essentially impacts deals volume, overall revenue and client maintenance. Besides, the investigation presumed that physical design emphatically influences client support. The creators thusly suggested that the enhancement for client support is predicated on the banks' capacity to proficiently enhance its operational hardware and to guarantee that they perform ideally while lessening clients holding up time.

Salian (2012) examined the impact of servicescape on the customer satisfaction in hotels and resorts sector of Lumit. Data was collected through survey questionnaire. The unit of analysis for this study is the customers for every hotels and resorts in Perak but the aim mainly at lumit. Data was solicited from 808 customers through the convenience sampling method. The computed data was analyzed using multiple regression. From the results, it was determined that the interior facility dimension was the most important to customers.

Adiele et al. (2015) investigated the effect of physical proof on client support of cited Banks in south-south zone of Nigeria. 14 cited Banks at the Nigeria Stock Exchange Market were utilized for the investigation. The examination considered firm degree of investigation and top director's unit of examination. Clients of the picked banks were additionally utilized. By this course of action, 42 chiefs and 7 clients haphazardly chose comprised our respondents for the investigation. Engagingly, the investigation factors were introduced and inferentially, the Spearman Rank Correlation Coefficient was utilized in testing the different speculations. What's more, we utilized the Pearson Partial Correlation to determine the degree to which the authoritative variables intervene the connection between physical proof and client support. The consequence of the investigation indicated that there is a solid positive and critical connection between physical proof and client support.

Amue, Adiele and Friday (2013) studied physical setting and patronage of Three Star Hotel in Nigeria Federal Capital Territory Abuja The study created and tested a model to clarify clients' physiological, subjective and passionate conduct. The creators set forth a coordinated model that clarify how physical setting assumes a basic job in forming clients desire. The model proposes three impacts of physical settings: encompassing condition, spatial format and signs, images and ancient rarities. The creators study worker dynamic related with the physical settings that moderate the impacts on client support. The inspecting casing of the investigation was 21 three star lodgings. Subjective and quantitative research approaches were utilized to gather information. For the subjective methodology, clients from 10 three star inns situated in the core of Abuja were met. The screening yielded 210 potential respondents. Further screening yielded 130 reactions of the conceivable 210, of the 130 reactions, 120 were usable for a reaction pace of 57 percent. The example speaks to clients of the three star inns in Abuja and information was broke down utilizing normal least square. The outcomes from the observational investigation of three star lodgings in Abuja and

government capital region shows support for the impacts of encompassing conditions, spatial design and signs, images, and curios.

METHODOLOGY

Research Design: Descriptive Survey research design was adopted for the study. This design was chosen because it permits investigating description and recording of information in their natural setting. It aided the researcher to ascertain customers views, ideas, feelings and perception of servicescape strategies of fuel stations in Port Harcourt. The major source of data collection was primary, using questionnaire as the instrument for data collection. Descriptive statistics was employed in the data presentation and hypotheses were tested with regression model.

Population: The population of this study were fifty-five (55) registered fuel stations in Port Harcourt, Rivers State according to Rivers State Yellow Page Directory 2015-2016.

Sample Size Determination: Since it was difficult for the researcher to study the infinite population of fuel station customers in Port Harcourt, Topman formula was adopted for study to determine the sample size as follows:

Topman formula, $n = \frac{Z^2 pq}{e2}$; Where: n = Sample size; z = Standard deviation (or the desired 1.96); e = estimated standard error of 5%; p = Percentage picking a choice, expressed as decimal (0.8 used for sample size needed); q = Percentage against a choice

$n = \frac{1.96^2 . \ 0.8 \ X \ 0.2}{0.05 \ X \ 0.05}$: $n = \frac{1.96^2 . \ 0.8 \ X \ 0.2}{0.05 \ X \ 0.05}$: $n = \frac{3.8416 \ \ X \ 0.16}{0.0025}$: $n = \frac{0.614656}{0.0025}$: $n = 245.8624$

$n \approx 246$

Therefore, 246 fuel stations customers constituted the total sample size of the study.

Sampling Technique: Judgmental and convenient sampling techniques were adopted for this study. These techniques helped the researcher to select customers who are knowledgeable on servicescape for a certain number year. This helped to reduce the degree of bias of the respondents' opinion on servicescape and patronage during the process of gathering information from the primary source.

Source of Data Collection: Primary data were used for the study.The primary data for the study was sourced using structured questionnaire to be administered to the customers of fuel stations in Port Harcourt.

Instrument for Data Collection: Structured questionnaire was the major instruments of data collection because it aided the researcher to gather firsthand data from the respondents. In the questionnaire, the questions were clearly stated, unambiguous and capable of eliciting the intended responses. The statements were designed structurally using 5point Likert scale such as Strongly agree (SA = 5), Agree (A = 4), Disagree (D = 3), Strongly disagree (SD = 2) and Uncertain (UN=1).

Method of Data Analysis: The demographic profile and the questionnaire items were analyzed with descriptive statistics such as mean, frequency counts and simple percentages, etc. Hypotheses 1, 2, 3 and 4 were tested with multiple regression model. Regression is designed to ascertain the causes and effect between dependent variable and independent variables. Analysis of data was done through the use of Statistical package for social sciences (SPSS), version 20.

RESULTS AND DISCUSSION

The study being predominantly quantitative, generated data using the structured questionnaire; a total of 246 copies of questionnaire were distributed to target customers of fuel stations in Port Harcourt within a specified time-frame; copies were manually distributed through established contacts in the selected fuel stations, thereafter retrieval was also accomplished through same contacts in the companies.

Table 1 Questionnaire administration

Respondents	Distributed Questionnaire	%	Returned Questionnaire	%	Not Returned
Female	94	38.2	88	35.8	6
Male	152	61.8	145	58.9	7
Total	**246**	**100**	**233**	**94.7**	**13**

Source: Field Survey, 2023

As shown in Table 1 above, a total of 246 copies of questionnaire were administered to both male and female customers of fuel stations in Port Harcourt, in order to examine the effect of servicescape on customer patronage. However, from the administered copies, 233 were completely filled and returned, implying that, 13 copies of the questionnaire were lost in the process. In effect, 233 of the respondents constituted the sample frame which translates into 94.7% rate of return of completed copies of questionnaire.

Demographic characteristics of the respondents

Table 2: Demographic characteristics of the respondents

Variables	Categories	Frequency	Percentage
Gender	Female	94	38.2
	Male	152	61.8
	Total	**233**	**100**
Age	18 – 27	30	12.9
	28 – 37	63	27.0
	38 – 47	91	39.1
	Above 48	49	21.0
	Total	**233**	**100**
Marital Status	Single	64	27.5
	Married	136	58.4
	Divorced	19	8.1
	Widowed	14	6.0
	Total	**233**	**100**
Educ. Qualification	Doctorate	6	2.6
	Master's Degree	20	8.6
	Bachelor's Degree	73	31.3
	Diploma	64	27.5
	SSCE	49	21.0
	FSLC	21	9.0
	Total	**233**	**100**

Table 2 above revealed that, 61.8% of the respondents were male as against 38.2% who were female. Conveniently, at the time of administering the copies of the questionnaire, the researcher had access to more men customer than women. Thus, men patronized fuel stations than women in the study area.

Table 2 also revealed that, 39.1% of the respondents were within 38 – 47 years of age. This was followed by 27.0% and 21.0% of the respondents who fell within 28 – 37 years of age and above 48years of age respectively. The least were 12.9% of the respondents who fell within 18 – 27 years of age. This implies that, matured and rational customers who understand the implications of servicescape on patronage were sampled for the study.

More so, 58.4% of the respondents were married as against 27.5% of the respondents who were single. In addition, 8.1% and 6.0% of the respondents were divorced and widow respectively. Table 2 further revealed that, 31.3% of the respondents were Bachelor's Degree holders, followed by 27.5% and 21.0% of the respondents who have acquired Diploma and SSCE respectively. The least were Doctorate degree holders with 2.6% of the sampled customers. The high educational qualification of the respondents implies that, most of the

respondents in the study who were able decode the implications of servicescape on patronage were sampled for the study.

Table 3: Rate of patronage of filling stations

Years	Frequency	Percentage
Below 1 year	2	0.9
1 – 5 years	13	5.6
6 – 10 years	123	52.8
11 – 15 years	70	30.0
16 yrs and above	25	10.7
Total	**233**	**100**

From the result in Table 3, 52.8% of the respondents have been buying from fuel for the past 6 – 10 years in the study area. Followed by 30.0% of the respondents who have been buying from petroleum products for the past 11 – 15 years in the study area. However, only 0.8% of the respondents purchased fuel in less than a year. Thus, ascertaining and obtaining reliable data as regards to the effect of servicescape on patronage among the respondents became certain.

Table 4: Occupation of the respondents

Occupations	Frequency	Percentage
Business owners	60	25.8
Commercial transporters	74	31.7
Private automobile owners	55	23.6
Domestic consumers	44	18.9
Total	**233**	**100**

Table 4 revealed that, large percentage of the respondents 31.7% and 25.8% of the respondents were commercial transporters and business owners respectively. Followed by 23.6% who were private automobile owners. The least were 18.9% of the respondents who were domestic consumers.

Regression Analysis

Model One

Table 5: Regression Analysis showing the effect of Ambient Conditions (AC) and Spatial Layout and Functionality (SLF) on Customer Satisfaction (CS).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.968[a]	.937	.935	23.18074	.449

a. Predictors: (Constant), Ambient Conditions, Spatial Layout and Functionality

b. Dependent Variable: Customer Satisfaction

Table 5 demonstrates a significant relationship between ambient conditions, spatial layout and functionality, and customer satisfaction. The findings indicated a regression relationship (R) of 0.968 and an R2 value of 0.937. This suggests that 93.7% of the variation in customer satisfaction can be attributed to these combined factors, while the remaining 6.3% is due to other factors not examined in this study. The results also indicated a strong and positive relationship between the variables. The Durbin-Watson statistic, 0.449, indicates no evidence of first-order serial multi-collinearity. The variables examined exhibited non-linearity.

Table 6: ANOVA

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.440	2	34.737	15.535	.000b
	Residual	2.781	231	2.236		
	Total	72.221	233			

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Ambient Conditions, Spatial Layout and Functionality

Table 6 demonstrates the strength of variation in customer satisfaction at a significance level of 0.000, indicating a meaningful relationship. The ANOVA results for influence values show a numerator with degrees of freedom (df) = 2 and a denominator df = 231. This is supported by the P value = 0.000, which is less than 5%. This suggests that ambient conditions, spatial layout, and functionality collectively provide a significant explanation of the relationship between servicescape and customer satisfaction.

Table 7: Coefficients

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.377	2.046		4.161	.000
	Ambient Conditions	.421	.362	.453	6.469	.000
	Spatial Layout and Functionality	.593	.460	.330	5.582	.000

a. Dependent Variable: Customer Satisfaction

Regression Model: Customer Satisfaction = 3.377+(0.421AC + 0.593SLF)

Based on the coefficient table above, a significant and positive relationship exists between ambient conditions, spatial layout, functionality, and customer satisfaction. The variables have significance levels below 0.05, indicating a 95% confidence level. The unstandardized coefficient beta for ambient conditions is 0.421, meaning that a unit increase in ambient conditions results in a 0.421 increase in customer satisfaction. Similarly, the unstandardized coefficient beta for spatial layout and functionality is 0.593, meaning that a unit increase in spatial layout and functionality leads to a 0.593 increase in customer satisfaction. **4.1.2 Model Two**

Table 8: Regression Analysis showing the effect of Ambient Conditions (AC) and Spatial Layout and Functionality (SLF) on Repeat Purchase (RP).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.849[a]	.720	.714	3.21477	.771

a. Predictors: (Constant), Ambient Conditions, Spatial Layout and Functionality

b. Dependent Variable: Repeat Purchase

Table 8 illustrates the significant association between ambient conditions, spatial layout, functionality, and repeat purchase. The results show a regression relationship (R) of 0.849 with an R-squared (R2) value of 0.720. This indicates that 72.0% of the variation in repeat purchase is explained by the combined factors of ambient conditions, spatial layout, and functionality. The remaining 28.0% of the variance is attributed to factors not examined in this study. The table further highlights a positive and robust relationship among these variables. The Durbin-Watson statistic of 0.771 suggests no first-order serial correlation issues, indicating the variables are free from linear dependencies.

Table 9: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.096	2	88.908	15.511	.000[b]
	Residual	22.574	231	5.732		
	Total	99.760	233			

a. Dependent Variable: Repeat Purchase

b. Predictors: (Constant), Ambient Conditions, Spatial Layout and Functionality

As evidenced in Table 9, the Pv was 0.000<0.05, which posited a significant association between ambient conditions and spatial layout and functionality and repeat purchase. The F-ratio (F2, 233=15.511) showed significant interaction existed in the model. The t-ratio

showed significance influence of ambient conditions and spatial layout and functionality on repeat purchase.

Table 10: Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.506	1.245		2.834	.000
	Ambient Conditions	.915	.847	.839	3.984	.000
	Spatial Layout and Functionality	1.555	1.046	.925	3.772	.000

a. Dependent Variable: Repeat Purchase

Regression Model: Repeat Purchase = 2.506+(0.915AC + 1.555SLF)

Premised on Table 10, a significant and positive relationship existed between ambient conditions and spatial layout and functionality and repeat purchase. It further showed that the variables have below 0.05 significance levels of 95%. Unstandardized coefficient beta for ambient conditions was 0.915, which means that if ambient conditions increases by a unit, repeat purchase increases by 0.915. Also for spatial layout and functionality was 1.555, which means that if spatial layout and functionality increases by a unit, repeat purchase increases by 1.555.

DISCUSSION OF THE RESULTS

The study examined the relationship between ambient conditions, spatial layout, and customer patronage at fuel stations in Port Harcourt. Results revealed a significant and positive association between these factors and measures of customer satisfaction and repeat purchase. The findings reject the null hypotheses, affirming that both ambient conditions and spatial layout play crucial roles in influencing customer behavior and satisfaction levels.

Ambient conditions, particularly lighting, emerged as a key determinant affecting customer patronage. This aligns with previous research by Varley (2016), Levy and Weitz (2017), and Broekemier et al. (2018), underscoring the impact of environmental factors like lighting, noise, music, and scent on customer perceptions and responses. The study found that favorable ambient conditions enhance the overall customer experience and increase patronage at fuel stations.

Similarly, spatial layout and functionality were identified as significant contributors to customer satisfaction and repeat purchase. The arrangement of service equipment and the provision of adequate space for easy movement were highlighted as crucial factors. This finding resonates with Amue et al. (2013), who emphasized the importance of physical settings in shaping customer expectations and enhancing service patronage.

Conclusion

Fuel stations, while primarily selling physical products, also provide essential services that significantly impact customer satisfaction and loyalty. The study underscores the critical role of ambient conditions (such as lighting) and spatial layout and functionality in shaping the service environment. These dimensions should be carefully managed and optimized to improve customer comfort and enhance patronage.

Recommendations

Based on the study's findings, the following recommendations are proposed:

1.Fuel stations should continually enhance their spatial layout and functionality to improve customer comfort. This includes ensuring the proper functioning of equipment and optimizing space for efficient service delivery.

2. Management should prioritize the maintenance and upkeep of facilities to minimize customer queuing times and enhance overall service efficiency. Repairing or replacing damaged items and maintaining cleanliness are essential steps in this regard.

3. Leveraging ambient conditions and spatial layout as tools to mitigate the negative impacts of waiting times can significantly enhance customer satisfaction. Management should focus on creating a welcoming and efficient service environment through strategic use of these dimensions.

These recommendations aim to support fuel stations in leveraging servicescape dimensions to attract and retain customers, thereby fostering sustained business growth and profitability.

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