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ASSESSMENT OF FACILITIES MANAGEMENT SERVICE QUALITY AND USER SATISFACTION IN SELECTED PUBLIC CONVENTION CENTERS IN SOUTH-EAST NIGERIA

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ABSTRACT

Public convention centers in South-East Nigeria accommodate large, varied, and time-sensitive events; however, no empirical research has investigated whether the facilities management (FM) services they offer align with user expectations. This study evaluated FM service quality and user satisfaction at the International Convention Centre Awka, the International Conference Centre Enugu, and the Emmanuel Iwuanyanwu International Conference Centre in Owerri. A cross-sectional survey involving 361 users, selected from a Yamane-derived sample of 388 through purposive and systematic sampling, was analysed using descriptive statistics, the Relative Importance Index, Pearson correlation, multiple regression, and one-way ANOVA, following the SERVQUAL model and Expectancy-Disconfirmation Theory. The results indicated a moderately high overall perception of service quality (mean = 3.51), with tangibility and assurance receiving the highest ratings, while reliability and responsiveness were rated the lowest. FM service quality was found to be a significant predictor of user satisfaction, with the five SERVQUAL dimensions jointly explaining 34.5% of the variance in satisfaction ($R^2 = 0.345$, $p < .001$) and the overall composite score alone explaining 33.2% ($R^2 = 0.332$, $p < .001$). Power supply failures, insufficient funding, and lack of proactive maintenance identified as the most critical challenges (composite mean = 3.69, $p < .001$). Notable inter-center variation was also observed ($p < .001$), with ICC Awka consistently outperforming the other centers. The study suggests the implementation of reliable power infrastructure, dedicated maintenance budgets, and formal FM governance structures.

Keywords: *Facilities Management; Service Quality; User Satisfaction; SERVQUAL; Public Convention Centers.*

1.0 INTRODUCTION

Facilities management (FM) pertains to the organized oversight of an organization's physical assets, constructed environment, and support services. This includes both hard services, such as electrical, structural, and HVAC systems, and soft services, including cleaning, landscaping, and security, as well as the management of space and human comfort (Akinbogun, 2024; Chinedu and Oladejo, 2019). In the last twenty years, FM has transitioned from a reactive maintenance approach, which addresses issues only as they occur, to strategic, preventive, and performance-driven models. In these models, decision-makers consider not only maintenance costs but also workspace comfort, safety, and the longevity of assets (Atkin and Brooks, 2021; Oladejo, Umeh, and Ogbuefi, 2015).

The quality of FM services is typically evaluated based on dimensions similar to the SERVQUAL model: reliability, responsiveness, assurance, empathy, and tangibility (Parasuraman, Zeithaml, and Berry, 1988). These dimensions collectively influence how building users perceive and assess the services provided. In Nigeria, research on office buildings in Lagos has revealed that inadequate equipment installation, inconsistent funding, administrative deficiencies, and poor enforcement of standards compromise reliability, responsiveness, and assurance. Users' perceptions of service quality significantly decline when routine maintenance is postponed or when essential services such as electricity, water, and waste management are unreliable (Fateye, Oluwole, Ibisola, and Agbato, 2022; Chinedu and Oladejo, 2019). Furthermore, studies on Nigerian workspaces indicate that comfort factors, particularly lighting, ventilation, and noise control, contribute significantly to occupant satisfaction, with insufficient ventilation alone shown to greatly reduce comfort (Ogunleye, Imafidon, Ajayi, and Daramola, 2025).

Public convention centers throughout South-East Nigeria, such as the International Convention Centre Awka, the International Conference Centre Enugu, and similar state-owned event venues, function as versatile locations for conferences, exhibitions, seminars, and governmental activities (Owelle FM, 2025; Kpakpando FM, 2021). As significant public facilities, they encounter unique facilities management (FM) challenges: elevated user traffic, considerable energy demands, and the necessity to maintain aesthetics, comfort, and safety across various event spaces concurrently (Akinbogun, 2024). These circumstances make the quality of FM services a vital factor influencing user satisfaction and, consequently, the reputation of the state governments that manage these centers.

In spite of the strategic significance of these venues for governmental, corporate, and social gatherings, there is currently no empirical evidence to ascertain whether the FM services offered at public convention centers in South-East Nigeria align with the expectations of their varied users. It remains unclear what types of FM services are provided, the quality at which they are delivered, the challenges faced in their effective delivery, or how these elements collectively impact user satisfaction. This lack of evidence leaves facility managers and policymakers without a foundation for making informed decisions regarding maintenance planning, resource distribution, and service enhancement.

This research addresses the existing gap. Its objective is to assess the quality of FM services and user satisfaction in selected public convention centers located in South-East Nigeria, with the goal

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of understanding how particular dimensions of FM service quality affect users' comfort, perceptions, and overall satisfaction with the facilities. The specific aims are to:

a. Identify the types of FM services available in the selected centers;
b. Assess the quality of FM service delivery within these centers;
c. Explore the correlation between FM service quality and user satisfaction;
d. Investigate the challenges that hinder effective FM service delivery; and
e. Establish strategies to enhance user satisfaction in the study area.

In alignment with these aims, the study tests two hypotheses: H_{01}, which posits that there is no significant relationship between FM service quality and user satisfaction in the selected centers; and H_{02}, which asserts that there are no significant challenges impacting effective FM service delivery in the selected centers.

This paper adds to the expanding body of FM literature in Nigeria, which has predominantly focused on commercial and private-sector facilities, by directing empirical focus towards state-owned public convention centers. It provides facility managers with insights into which specific SERVQUAL dimensions most significantly influence user satisfaction, and offers state governments a foundation of evidence for policy-making and resource allocation concerning similar public assets. The study is geographically limited to three of the five states in South-East Nigeria: Anambra, Enugu, and Imo, chosen for their hosting of the region's most notable and frequently visited public convention facilities, and is focused on the operational phase following commissioning of these facilities rather than their design or construction.

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Conceptual Review

Facilities management is broadly recognized as an organizational function that unifies people, place, and process within the built environment to improve the quality of life for occupants and bolster the productivity of the core business (International Organisation for Standardisation, 2024; Afolabi, 2025). This field is typically categorized into hard FM, which encompasses physical infrastructure such as HVAC, plumbing, and lighting, and soft FM, which includes occupant-facing services like cleaning, catering, security, and event support (Akinbogun, 2024). Public convention centers rely on the seamless integration of both categories. Service quality, in this context, refers to the overall assessment of how effectively a service meets or surpasses user expectations. This is a multidimensional construct that is most frequently operationalized through the five dimensions of the SERVQUAL model: reliability, responsiveness, assurance, empathy, and tangibility (Parasuraman, Zeithaml, and Berry, 1988). Research conducted in Nigeria has demonstrated that the quality of FM services positively influences user satisfaction, with security and cleaning services generally receiving the highest satisfaction ratings among outsourced FM services (Tannor, Attakora-Amaniampong, and Appau, 2022).

User satisfaction in FM pertains to the extent to which users believe that the services and physical environment provided meet their needs, expectations, and comfort standards (Okafor and Eze, 2024). It is conceptualized as a psychological reaction to the disconfirmation of previous expectations by actual service performance (Oliver, 1980). Evidence from Nigeria consistently

associates FM challenges, such as inadequate funding, bureaucratic delays, and a lack of skilled personnel, with reduced user satisfaction in institutional buildings (Chinedu and Oladejo, 2019). Similarly, studies on Nigeria's aviation sector attribute user dissatisfaction in high-traffic public facilities to insufficient safety measures, bureaucratic management, and outdated equipment (Oladejo and Sado, 2022), a trend that is directly applicable to convention centers operations. Public convention centers are large, government-owned, multipurpose facilities intended for conferences, exhibitions, and significant ceremonies. They are characterized by high, transient user traffic and the need to coordinate various services simultaneously to cater to the requirements of diverse and often time-sensitive user groups, distinguishing them from commercial offices or residential buildings (Fateye et al., 2022).

2.2 Theoretical Framework

This research is grounded in the SERVQUAL Model and the Expectancy-Disconfirmation Theory (EDT), which together offer both a measurement and explanatory framework for facilities management service quality and user satisfaction. The SERVQUAL model, created by Parasuraman, Zeithaml, and Berry (1988), assesses customer perceptions of service quality by comparing pre-consumption expectations with perceived service performance across five dimensions, commonly referred to as RATER: reliability, assurance, tangibles, empathy, and responsiveness. Quality is viewed positively when perceived performance meets or surpasses expectations, and negatively when it falls short, a gap-based logic particularly relevant for convention centre users, who arrive with expectations influenced by the nature of the event and the venue's reputation. The model's relevance extends beyond its initial commercial context, having been validated in public-sector service environments globally (Libunao and Gaddi, 2025; Assefa, Etana, and Deressa, 2024).

The Expectancy-Disconfirmation Theory, proposed by Oliver (1980), provides the psychological framework for understanding satisfaction formation: users establish expectations before engaging with the service and then compare these expectations to their actual experiences, resulting in confirmation and subsequent satisfaction when performance aligns with expectations, or negative disconfirmation and dissatisfaction when it does not. In the realm of public service, the expectancy-disconfirmation model has become the predominant framework for understanding citizen satisfaction. A meta-analysis conducted by Zhang, Chen, Petrovsky, and Walker (2022) has provided consistent support for this model across various studies. When applied together, SERVQUAL offers five measurable dimensions that this study used to operationalize facilities management (FM) service quality. Meanwhile, the expectancy-disconfirmation theory (EDT) elucidates why users who enter a convention centre with expectations of reliable electricity, prompt cleaning, and safe environments feel dissatisfied when these expectations are not met, and experience significant satisfaction when they are exceeded.

2.3 Empirical Review

Over the past twenty years, facilities management in Nigeria has evolved from an informal, maintenance-focused function into a recognized professional discipline within the built environment sector. However, this evolution has been notably inconsistent: private sectors such as banking, hospitality, and commercial real estate have significantly advanced systematic FM

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practices compared to public institutions. Many public facilities, including schools and healthcare centers, continue to struggle due to inadequate and ineffective management (Ebekozien, 2021; Alalade, Dauda, Ajayi, Saka, and Njuangang, 2024). The disparity between public and private FM practices in Nigeria is rooted in structural challenges, including insufficient funding, weak policy frameworks, and limited professional capacity.

In South-East Nigeria, empirical research on Facility Management (FM) is limited, primarily focusing on healthcare and retail sectors rather than public event venues. Chukwu, Okolie, and Ezekoli (2020) examined FM practices at Nnamdi Azikiwe University Teaching Hospital in Nnewi, highlighting ongoing issues related to maintenance funding and staffing. Similarly, Ikeotuonye and Sado (2022) assessed a shopping mall in Onitsha, discovering that user satisfaction was closely linked to the reliability of essential utilities and the facility staff's responsiveness to complaints. On a broader scale, Fateye et al. (2022) evaluated operation and maintenance practices in Lagos office buildings, revealing that poor equipment installation, inconsistent funding, and inadequate administrative oversight undermine the reliability and responsiveness aspects of FM service quality. This observation is supported by Nicholas, Mohammed, Ufere, and Kuna (2022), who indicated that user satisfaction and the institutional image are significantly influenced by perceived FM service quality in Nigerian public universities.

Outside Nigeria, similar findings from West Africa and beyond reinforce the importance of the SERVQUAL-satisfaction relationship. In Ghana, Tannor, Attakora-Amaniampong, and Appau (2022) along with Tannor, Appau, and Attakora-Amaniampong (2023) established that FM service quality is a significant predictor of user satisfaction in multi-tenanted commercial properties, with security and cleaning services receiving the highest ratings, while responsiveness was rated the lowest, a trend that this study's results would later reflect. In India, Kumar and Lavy (2025) applied the SERVQUAL model to commercial properties and similarly discovered that the quality of FM services significantly influenced occupant satisfaction and the reputation of the property. Together, these studies affirm SERVQUAL as a strong instrument for assessing FM service quality across different contexts, while also illustrating that the specific factors that drive satisfaction and the intensity of underlying issues vary significantly based on local infrastructural and institutional conditions.

2.4 Gap in Literature

Despite extensive research on FM service quality and its correlation with user satisfaction, the majority of existing studies in Nigeria focus on commercial office buildings (Fateye et al., 2022), educational institutions (Nicholas et al., 2022; Odediran, Gbadegesin, and Babalola, 2015), healthcare facilities (Ebekozien, 2021; Alalade et al., 2024), and multi-tenanted residential or retail properties (Ikeotuonye and Sado, 2022; Tannor, Attakora-Amaniampong, and Appau, 2022). These types of facilities exhibit operational characteristics that are fundamentally different from those of public convention centers: in contrast to hospitals, universities, or offices that cater to stable, regular user populations, convention centers accommodate large, transient users attending time-sensitive events, which creates unique FM requirements concerning utility reliability, staff responsiveness, and environmental maintenance that current research fails to adequately address. Moreover, while studies from West Africa and India (Tannor et al., 2022, 2023; Kumar and Lavy,

2025) have enhanced the understanding of FM service quality in commercial and public-use facilities in other regions, their conclusions are based on institutional, infrastructural, and governance contexts that are markedly different from those of government-owned public facilities in South-East Nigeria, where dependence on state budget allocations, the lack of dedicated professional FM departments, and cultures of reactive maintenance pose structural challenges that are not sufficiently addressed in the broader literature.

No empirical research has been found that uses the SERVQUAL framework to evaluate the quality of FM services and its correlation with user satisfaction at any significant government-owned convention centre within the South-East geopolitical zone. This deficiency is significant, as these venues represent vital public infrastructure, and their performance has a direct impact on the capacity and credibility of state governments in the area. Therefore, facility managers and policymakers lack a solid evidence base for maintenance planning, resource distribution, and service enhancement. This study aims to fill this void by offering an original, empirically based, comparative evaluation of FM service quality and user satisfaction across three public convention centers in South-East Nigeria, employing the SERVQUAL model as the measurement framework and Expectancy-Disconfirmation Theory as the explanatory model.

3.0 METHODOLOGY

This research employed a quantitative, cross-sectional survey design, which is suitable for collecting data from a specific population at a single moment in time to describe and analyse the characteristics, perceptions, and relationships of interest (Fateye et al., 2022). The comparative aspect of the design, which assesses FM service quality concurrently across three convention centers in three states, facilitated a meaningful comparison of user perceptions and satisfaction levels within a unified study timeframe, aligning with the established structured-questionnaire, Likert-scale methodological tradition in Nigerian built-environment and FM research.

The research was carried out in the South-East geopolitical zone of Nigeria, concentrating on Anambra, Enugu, and Imo States, which were chosen for hosting the region's most notable and frequently utilized public convention facilities: the International Convention Centre Awka (ICCA), the Enugu International Conference Centre (EICC), and the Emmanuel Iwuanyanwu International Conference Centre (EIICC), Owerri. These facilities are venues owned by the government, specifically designed for large-scale conferences, exhibitions, and official ceremonies. Their extensive operational scale and diverse user base render them suitable environments for assessing FM service delivery.

The study population included all users, which encompassed event attendees, conference delegates, event organisers, and other individuals who physically interacted with the three centers during scheduled events and official activities within the designated data collection period. The estimated accessible population was 12,700, calculated from the average attendance at three recent major events held at each centre (4,867 at ICC Awka, 4,000 at EICC Enugu, and 3,833 at EIICC Owerri), utilizing event attendance registers and facility booking records. The sample size was determined using the Taro Yamane (1967) formula, $n = N / [1 + N(e)^2]$, with a 5% margin of error and a 95% confidence level, resulting in a required sample of 388 respondents, proportionately

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distributed across the three centers (149 at ICC Awka, 122 at EICC Enugu, and 117 at EIICC Owerri).

A two-stage purposive and systematic sampling method was used. Initially, purposive sampling identified individuals who were physically present at each centre as direct users, including event attendees, delegates, organisers, and staff, ensuring that all participants had direct experience with the FM services being evaluated. Subsequently, systematic sampling was implemented within each venue, where questionnaires were distributed to every kth individual identified from the event attendance register at the entrance, with k representing the sampling interval calculated by dividing the estimated event attendance by the centre's sample allocation, in accordance with established practices in Nigerian FM service quality research (Fateye et al., 2022; Koleoso, Omirin, and Adewunmi, 2020). Prior to participation, all respondents were briefed on the purpose of the study and their rights as participants, and informed consent was obtained from each respondent, who were assured of the voluntary nature of their involvement, their right to withdraw at any stage, and the confidentiality of their responses.

Primary data were gathered through a structured questionnaire administered face-to-face at each centre across a series of events held between January and June, 2026, a broader set of events than the three per centre used to estimate the accessible population, conducted by research assistants trained by the principal investigator. The instrument consisted of five sections: Section A collected demographic and background information; Section B evaluated the types of FM services available; Section C assessed perceived FM service quality across the five SERVQUAL dimensions utilizing a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Consistent with Cronin and Taylor (1992), the instrument measured perceived performance only, without a separate expectation (pre-consumption) scale, on the basis that performance-only measures of service quality demonstrate superior explanatory power over the expectation-minus-perception gap approach and avoid the psychometric problems associated with difference scores); Section D gauged overall user satisfaction, also on a five-point scale, which included a single-item global satisfaction rating; and Section E identified perceived challenges to effective FM service delivery, along with an open-ended item requesting suggested improvement strategies. Secondary data were sourced from academic journals, textbooks, government publications, and institutional reports to support the literature review and contextualize the findings.

Content validity was confirmed through a review by a panel of at least five experts, including academics in estate and facilities management, practicing facility managers, and seasoned built-environment researchers, whose feedback enhanced item clarity and relevance before finalization. The reliability of the instrument was evaluated using Cronbach's Alpha after a pilot test was conducted with 30 respondents at a comparable, non-sampled facility. All pilot constructs exceeded the conventional 0.70 threshold for acceptable reliability, and any item showing an item-total correlation below 0.3, or whose removal would significantly increase the construct's alpha, was reviewed and revised.

Data analysis was performed using SPSS Version 25, employing descriptive statistics (frequencies, percentages, means, and standard deviations) to characterize respondents and summarize perceptions of FM service quality and satisfaction. The Relative Importance Index (RII

= ΣW / (A × N), where W represents the weight assigned by each respondent, A denotes the highest scale weight, and N indicates the total number of respondents) was utilized to rank service-quality indicators and challenges. The Pearson Product-Moment Correlation was employed to investigate the relationship between SERVQUAL dimensions and user satisfaction in order to test H_{01}, while both simple and multiple linear regression analyses evaluated the predictive capacity of FM service quality, both as a whole and through its individual dimensions, on satisfaction. A one-sample t-test against the scale midpoint was conducted to test H_{02}, and one-way ANOVA with Tukey HSD post-hoc comparisons was used to examine differences in service quality, satisfaction, and perceptions of challenges across the three centers.

4.0 RESULTS AND DISCUSSION

4.1 Questionnaire Distribution and Demographic Profile

Among the 388 questionnaires that were proportionally distributed across the three convention centers, 361 were accurately completed, collected, and considered appropriate for analysis, resulting in an overall response rate of 93.0%. The remaining 27 copies (7.0%) were either not returned, incomplete, or discarded due to data entry errors.

Table 1: Distribution and Retrieval of Questionnaires

Convention Centre	Administered	Retrieved	Retrieval Rate (%)
ICC Awka	149	139	93.3
EICC Enugu	122	113	92.6
EIICC Owerri	117	109	93.2
Total	388	361	93.0

Source: Field Survey (2026)

ICC Awka represented the highest proportion of respondents at 38.5%, followed by EICC Enugu at 31.3% and EIICC Owerri at 30.2%, which broadly aligns with the proportional sample distribution. Male respondents made up 56.8% of the sample, while female respondents accounted for 41.0% (with 2.2% choosing not to disclose their gender). The predominant age group was 35-44 years at 34.6%, followed by 25-34 years at 28.5%, indicating that the centers are primarily frequented by working-age individuals. A significant portion of respondents held either an HND/B.Sc. (45.2%) or a postgraduate degree (27.7%), suggesting a well-educated respondent pool capable of making informed assessments regarding FM service quality. The largest occupational groups were corporate/business professionals at 31.0% and government officials at 21.6%. Also, 39.1% of respondents were occasional users (visiting once or twice a year), while 29.6% were regular users (visiting three to five times a year), indicating a balanced mix of first-time and repeat visitors.

4.2 Types of Facilities Management Services Provided

Respondents indicated which services were available at their respective centers from a checklist of fifteen FM service types. The most frequently observed services included electricity/power

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supply management (96.1%), security and access control (95.3%), and cleaning and janitorial services (95.0%), confirming their status as essential and highly visible offerings at public event venues. In contrast, elevator/escalator maintenance (55.1%) and internet/ICT infrastructure (62.9%) had the lowest observation rates, reflecting that not all venues are multi-storey or heavily reliant on ICT. General building maintenance (83.4%), air-conditioning/HVAC maintenance (81.4%), and waste disposal management (92.0%) were positioned in the mid-range. Overall, the surveyed centers provide a relatively comprehensive range of both hard services (such as electricity, water, HVAC, and elevators) and soft services (including cleaning, security, and landscaping), consistent with the hard/soft FM dichotomy established in the literature (Akinbogun, 2024).

4.3 Quality of FM Service Delivery (SERVQUAL Dimensions)

Perceptions of FM service quality were measured across the five SERVQUAL dimensions using five-point Likert-scale items, with dimension-level composite means presented in Table 2.

Table 2: Summary of Mean Scores for the Five SERVQUAL Dimensions

SERVQUAL Dimension	Mean	SD	Rank
Reliability	3.28	0.57	4
Responsiveness	3.19	0.57	5
Assurance	3.78	0.55	2
Empathy	3.49	0.53	3
Tangibility	3.80	0.55	1
Overall Quality Composite	3.51	0.43	-

Source: Field Survey (2026)

Tangibility (mean = 3.80) and Assurance (mean = 3.78) received the highest evaluations, whereas Responsiveness (mean = 3.19) and Reliability (mean = 3.28) received the lowest scores. Within the Reliability dimension, the item rated highest pertained to the consistency of cleaning and janitorial services (mean = 3.41), while the lowest rating was associated with the reliability of the water supply system (mean = 3.18). In the Responsiveness category, satisfaction with maintenance turnaround time achieved the highest mean (3.32), while the lowest was recorded for timely communication regarding service disruptions (3.01). Regarding Assurance, the confidence in FM staff's capability to manage the facility effectively received the highest mean of any item in the entire assessment (3.85). In the Empathy dimension, the adaptation of services to various user groups was rated highest (3.64), while the equal treatment of all users, irrespective of their status, was rated lowest (3.41). This trend suggests that, although convention centers are generally viewed as well-maintained and staffed by competent, trustworthy personnel, users express relatively lower satisfaction concerning the consistency of essential utility services and the promptness of fault resolution. This observation aligns with the findings of Fateye et al. (2022) and Chinedu and Oladejo (2019), who similarly identified lapses in reliability and responsiveness, particularly

regarding power supply and timely fault resolution, as the weakest elements of FM service delivery in Nigerian public and commercial buildings. The overall composite mean of 3.51 (SD = 0.43) indicates a moderately high perception of FM service quality overall, with evident opportunities for enhancement in reliability and responsiveness specifically.

4.4 User Satisfaction with FM Services

User satisfaction was assessed through eight Likert-scale items and a single global satisfaction rating.

Table 3: Respondents' Overall Satisfaction with FM Services

S/N	Statement	Mean	RII
1	Satisfied with reliability of FM services	3.57	0.714
2	Satisfied with responsiveness of FM staff	3.22	0.644
3	Satisfied with assurance/professionalism of FM staff	3.24	0.649
4	Satisfied with empathy and personalised attention	3.29	0.657
5	Satisfied with physical condition and appearance	3.39	0.679
6	Quality of FM services meets expectations	3.52	0.703
7	Would recommend centre based on FM service quality	3.38	0.675
8	Satisfied with overall quality of services provided	3.38	0.676

Source: Field Survey (2026)

The overall composite satisfaction mean for the eight items was 3.37 (SD = 0.76), indicating a moderate level of satisfaction. Among the dimensions, satisfaction with reliability achieved the highest mean score of 3.57, while satisfaction with responsiveness recorded the lowest mean of 3.22. The responsiveness finding is consistent with the dimension-level trends in Table 2, where responsiveness was also ranked lowest. Reliability's position diverges from Table 2, however, where it ranked fourth out of five dimensions on quality; users who found reliability comparatively weaker on the quality measure nonetheless reported the highest satisfaction with it, suggesting that satisfaction with reliability may be driven less by its absolute quality rating and more by its salience or importance to users' overall experience.

In the single-item global rating, 46.8% of participants classified themselves as "Satisfied" or "Very Satisfied," in contrast to 12.7% who reported dissatisfaction. The global mean score of 3.42 (SD = 0.85) closely aligns with the composite score, thereby supporting the convergent validity of the satisfaction construct.

Upon re-evaluation of the instrument reliability using the retrieved dataset, strong internal consistency was confirmed across all constructs (Table 4), with values ranging from 0.73 (Empathy) to 0.94 (User Satisfaction), all exceeding the conventional threshold of 0.70 commonly accepted in social science research.

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Table 4: Cronbach's Alpha Reliability Coefficients

Construct	No. of Items	Cronbach's Alpha (α)
Reliability	5	0.766
Responsiveness	5	0.774
Assurance	5	0.760
Empathy	5	0.730
Tangibility	5	0.765
Overall FM Service Quality	25	0.906
User Satisfaction	8	0.943
Challenges to FM Service Delivery	10	0.785

Source: SPSS Output (2026)

4.5 Challenges Affecting FM Service Delivery

Ten challenge statements were ranked by Relative Importance Index. The most severe challenge was disruption caused by power supply failures (mean = 4.15, RII = 0.829), followed by inadequate funding and maintenance budget constraints (RII = 0.772) and the absence of a formal, proactive maintenance schedule (RII = 0.755).

Table 5: Challenges Affecting FM Service Delivery, Ranked by RII

Rank	Challenge	Mean	RII
1	Power supply (electricity) failures disrupt FM service delivery	4.15	0.829
2	Inadequate funding and maintenance budget constraints	3.86	0.772
3	Absence of a formal, proactive maintenance schedule	3.77	0.755
4	Overall FM challenges negatively impact satisfaction with the venue	3.73	0.745
5	Poor enforcement of building maintenance standards	3.66	0.731
6	Procurement delays and bureaucratic processes slow service delivery	3.63	0.726
7	Inadequate FM staffing relative to facility size and usage	3.59	0.718
8	Inadequate channels for reporting complaints and feedback	3.59	0.718
9	FM staff lack adequate technical training and competence	3.49	0.698
10	Lack of dedicated FM governance structures	3.47	0.694

Source: Field Survey (2026)

This ranking closely aligns with the reliability and responsiveness weaknesses identified in Table 2, confirming that power instability and funding/maintenance planning gaps are the primary structural constraints on FM service delivery in the surveyed centers, a pattern strongly corroborated by Fateye et al. (2022) and Ogunbayo, Aigbavboa, Thwala, and Akinradewo (2022).

4.6 Hypothesis Testing

H_{01} (no significant relationship between FM service quality and user satisfaction) was tested using Pearson correlation between the five SERVQUAL dimensions, the overall FM service quality composite, and user satisfaction.

Table 6: Pearson Correlation Matrix (SERVQUAL Dimensions and User Satisfaction)

Dimension	Reliability	Responsiveness	Assurance	Empathy	Tangibility	User Satisfaction
Reliability	1.000	.453**	.467**	.498**	.472**	.478**
Responsiveness	.453**	1.000	.563**	.549**	.502**	.421**
Assurance	.467**	.563**	1.000	.515**	.527**	.412**
Empathy	.498**	.549**	.515**	1.000	.521**	.449**
Tangibility	.472**	.502**	.527**	.521**	1.000	.482**

Source: SPSS Output (2026). N = 361. **Correlation significant at 0.01 level (2-tailed).

All five dimensions exhibited a positive and significant correlation with user satisfaction: Reliability ($r = .478$), Responsiveness ($r = .421$), Assurance ($r = .412$), Empathy ($r = .449$), and Tangibility ($r = .482$), all with $p < .001$. When these dimensions were combined into a single overall FM service quality composite, the correlation with satisfaction increased to $r = .576$ ($p < .001$), indicating a moderate-to-strong, statistically significant relationship. Consequently, H_{01} was rejected, leading to the conclusion that a significant positive relationship exists between FM service quality and user satisfaction, aligning with the findings of Nicholas et al. (2022) and Kumar and Lavy (2025).

To further investigate this relationship, both simple and multiple linear regression analyses were performed. The simple regression analysis, which assessed overall FM service quality as a predictor of satisfaction, yielded statistically significant results ($F(1, 359) = 178.63$, $p < .001$), with quality explaining 33.2% of the variance in satisfaction ($R^2 = 0.332$; $B = 1.012$, $t = 13.37$, $p < .001$). Similarly, the multiple regression analysis, which included all five SERVQUAL dimensions simultaneously, was also significant ($F(5, 355) = 37.32$, $p < .001$), with the dimensions together accounting for 34.5% of the variance ($R^2 = 0.345$, Adjusted $R^2 = 0.335$), representing a slight enhancement over the single-composite model (Table 7).

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Table 7: Multiple Regression Coefficients (SERVQUAL Dimensions Predicting User Satisfaction)

Predictor	B	Beta (β)	t	Sig.	VIF
(Constant)	-0.197	-	-0.722	.471	-
Reliability	0.314	.235	4.419	< .001	1.533
Responsiveness	0.126	.095	1.662	.097	1.779
Assurance	0.089	.064	1.121	.263	1.775
Empathy	0.186	.131	2.281	.023	1.777
Tangibility	0.304	.222	3.979	< .001	1.685

Source: SPSS Output (2026). Dependent variable: User Satisfaction Composite. $F(5,355) = 37.317$, $p < .001$, $R^2 = 0.345$.

Reliability, Empathy, and Tangibility were identified as statistically significant independent predictors of satisfaction (all $p < .05$), whereas Responsiveness and Assurance did not achieve significance when the other dimensions were accounted for. Reliability exhibited the highest standardized coefficient ($\beta = .235$), followed by Tangibility ($\beta = .222$) and Empathy ($\beta = .131$). This suggests that the reliability of essential utility and maintenance services, along with the physical state of the facility, has the most substantial independent impact on user satisfaction, despite all five dimensions showing a positive correlation with satisfaction at the bivariate level. The VIF values (1.53-1.78) remained well below the conventional threshold of 5, indicating no significant multicollinearity issues. Given that both regression models were statistically significant, H_{01} was rejected: FM service quality, both as a composite construct and through its individual SERVQUAL dimensions, significantly predicts user satisfaction in the study area.

H_{02} (the absence of significant challenges affecting FM service delivery) was evaluated using a one-sample t-test, which compared the composite challenges score to the scale midpoint of 3.0, reflecting a neutral position.

Table 8: One-Sample t-Test of the Composite Challenges Score (Test Value = 3.0)

Variable	N	Mean	SD	t	df	Sig. (2-tailed)
Composite Challenges Score	361	3.69	0.44	29.667	360	< .001

Source: SPSS Output (2026)

The composite challenges score (mean = 3.69, SD = 0.44) was significantly higher than the neutral midpoint, $t(360) = 29.67$, $p < .001$. H_{02} was therefore rejected: significant challenges do affect effective FM service delivery in the selected centers, with power supply instability, inadequate funding, and the absence of proactive maintenance scheduling constituting the most pressing constraints.

4.7 Comparative Analysis Across the Three Convention Centers

One-way ANOVA, with Tukey HSD post-hoc comparisons where significant, assessed whether FM service quality, user satisfaction, and perceived challenges differed significantly across the three centers.

Table 9: One-Way ANOVA Comparison of FM Service Quality, Satisfaction, and Challenges Across Convention Centers

Metric	EICC Enugu (Mean)	ICC Awka (Mean)	EIICC Owerri (Mean)	F (2, 358)	Sig.
Overall FM Service Quality	3.46	3.75	3.25	53.754	< .001
User Satisfaction	3.28	3.64	3.13	16.033	< .001
Challenges to FM Service Delivery	3.50	3.58	4.03	63.473	< .001

Source: SPSS Output (2026). Tukey HSD post-hoc comparisons confirmed that the majority of pairwise differences were statistically significant (p < .05).

ICC Awka consistently achieved the highest ratings for FM service quality (mean = 3.75) and user satisfaction (mean = 3.64). For perceived challenges, however, EICC Enugu recorded the lowest burden (mean = 3.50), narrowly ahead of ICC Awka (mean = 3.58); both were significantly lower than EIICC Owerri, which recorded the highest perceived challenge burden (mean = 4.03) alongside the least favourable ratings for quality and satisfaction. The significant differences observed between the centers (all $p < .001$) likely indicate variations in infrastructure age, funding history, and management practices, thereby providing empirical support for facility-specific FM policy interventions rather than a uniform approach across the three centers.

4.8 Suggested Strategies for Improving User Satisfaction

Respondents identified key improvements they deemed essential for enhancing FM service delivery through an open-ended item. The most frequently mentioned strategy was improving the reliability of power supply, either through functional backup generators or solar alternatives, cited by 59.3%, which directly corresponds to the primary challenge identified in Table 5. This was followed by the recruitment and training of more competent FM staff (46.5%) and the establishment of a formal, proactive maintenance schedule (40.2%). These suggestions reflect users' desire for a more capable workforce and a transition from reactive to preventive maintenance practices, in line with the strategic FM orientation discussed in Section 2.1 (Akinbogun, 2024; Atkin and Brooks, 2021). Additionally, establishing clearer complaint and feedback channels (33.5%) and increasing and ring-fencing FM funding (24.7%) completed the top five suggested strategies. The close alignment between the ranked challenges (Table 5) and these user-generated strategies provides internally consistent evidence that respondents' evaluations of service quality, satisfaction, and necessary improvements are coherent and rooted in shared service experiences.

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4.9 Discussion of Findings

The sampled convention centers provide a varied, albeit inconsistent, range of FM services: essential services such as power, security, and cleaning were nearly universally accessible, whereas specialized services like elevator maintenance and ICT infrastructure were offered less consistently. The evaluation based on SERVQUAL revealed a moderately high overall perceived service quality (mean = 3.51), with tangibility and assurance receiving the most favorable ratings, while reliability and responsiveness were rated the least favorably. This pattern closely mirrors findings from previous Nigerian FM literature (Fateye et al., 2022; Chinedu and Oladejo, 2019; Ogunleye et al., 2025). Correlation and regression analyses demonstrated a statistically significant, moderate-to-strong positive relationship between FM service quality and user satisfaction, with the five SERVQUAL dimensions collectively accounting for 34.5% of the variance in satisfaction. Reliability and tangibility emerged as the strongest independent predictors, supporting the SERVQUAL-satisfaction relationship identified by Nicholas et al. (2022) and Kumar and Lavy (2025), and aligning with the Expectancy-Disconfirmation Theory's assertion that satisfaction occurs when perceived service performance meets or surpasses user expectations.

Power supply failures, inadequate funding, and the lack of a proactive maintenance culture have been identified as statistically significant and practically relevant challenges, supported by both the RII ranking and the one-sample t-test, and aligning with the findings of Fateye et al. (2022) and Ogunbayo et al. (2022). The comparative ANOVA analysis further indicated notable inter-centre differences, with ICC Awka consistently surpassing EICC Enugu and EIICC Owerri in terms of quality and satisfaction metrics. This suggests that facility-specific factors, such as the age of infrastructure, funding history, and management practices, significantly influence user experience, even within the same general category of public convention centers. Lastly, the thematic analysis of strategies suggested by users closely aligned with the quantitative results: respondents primarily advocated for a more dependable power supply, enhanced training for FM personnel, and a transition towards planned preventive maintenance. This directly reflects the challenges and quality shortcomings identified earlier in the analysis, thereby reinforcing the coherence and internal validity of the study's overall findings.

5.0 CONCLUSION

This study assessed FM service quality and user satisfaction across three public convention centers in South-East Nigeria, employing the SERVQUAL model and Expectancy-Disconfirmation Theory as its foundational framework. The findings confirm that the quality of facilities management services is a vital factor influencing user satisfaction in these venues: users generally perceive the physical condition of the centers and the professionalism of FM staff positively; however, the reliability of essential utility services and the responsiveness of FM staff to complaints remain the most significant weaknesses in service delivery. Ongoing challenges, primarily an unreliable power supply, inadequate and poorly allocated maintenance funding, and the lack of a formal, proactive maintenance culture, represent the most significant barriers to effective FM service delivery. The notable differences among individual centers further illustrate that FM performance in public facilities cannot be assumed to be consistent, even within the same ownership category, thus requiring facility-specific rather than generalized diagnostic and improvement strategies. Overall, the study underscores the importance of the SERVQUAL

framework, particularly the dimensions of reliability and tangibility, in influencing how users of large public event facilities in Nigeria perceive and assess FM service delivery.

6.0 RECOMMENDATIONS

In light of the findings, the following recommendations are proposed.

a. The management of the convention centers, in collaboration with their respective state governments, should prioritize investments in reliable, redundant power supply systems, including appropriately sized backup generators and, where possible, solar hybrid systems, as power supply failure was identified as both the most critical challenge and the most frequently recommended area for enhancement.
b. A dedicated maintenance budget should be established and safeguarded against arbitrary reallocations, addressing the funding inadequacy recognized as the second most pressing challenge and enabling the shift from reactive to planned preventive maintenance that respondents explicitly requested.
c. Facility administrators ought to establish a formal and documented preventive maintenance schedule for all hard-service systems, including electrical, water, HVAC, and elevator systems. This should be supported by a computerized maintenance management system where resources allow, aiming to decrease the frequency of system failures and enhance the reliability aspect of service quality.
d. The capacity of FM staff should be bolstered through structured training in technical skills and customer service, as responsiveness received the lowest SERVQUAL mean score, and respondents specifically requested personnel who are more skilled and responsive.
e. Formal channels for complaints and feedback, such as help desks, mobile reporting platforms, and suggestion systems, should be implemented at each centre to enhance the timeliness and visibility of fault resolution, directly addressing the responsiveness gap identified in this study.
f. In light of the statistically significant differences between centers, state governments and facility administrators should perform facility-specific diagnostic reviews instead of applying uniform FM policies across all centers, paying particular attention to the structural and funding deficiencies noted at EIICC Owerri.
g. A dedicated and formally established FM department or unit, with clearly defined governance structures and accountability lines, should be created at each convention centre where one does not currently exist, to institutionalize these recommended improvements and maintain advancements in service quality and user satisfaction over time.

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