

Evaluating The Enablers of Effective Sustainable Management Practices for Public Ultra-Modern Market Infrastructure in Niger-Delta Region

¹NKPILE, B.S., ²IHUAH, P.W. and ³Ogbonda, J.U.

^{1,2&3}Department of Estate Management Rivers State University, Port Harcourt

ABSTRACT: This research investigates the pivotal factors facilitating the successful implementation of sustainable management practices in public ultra-modern markets, essential components of urban landscapes facing numerous challenges. Despite the growing acknowledgment of sustainability in urban development, a significant gap exists in comprehending the specific drivers behind effective management within these bustling market infrastructures. Utilizing a mixed-method approach, combining cross-sectional surveys and personal interviews, 239 administered questionnaires with a 76.7% response rate, reveals this study employs a pragmatic case study design focused on the Niger-Delta Region, Nigeria. Questionnaires were distributed, and interviews and observations conducted in New Town Market (Port Harcourt, Rivers State), Swali Market (Yenegoa, Bayelsa State), and Uvwie Market (Warri, Delta State). The study, based on key enablers of sustainable management, including organizational structure design, teamwork ethos, knowledge sharing, commitment levels, good governance, regular sustainable management meetings, and motivation for the management practice team. Quantitative data were analyzed through frequency tabulation, percentages, mean, and Relative Importance Index (RII), while qualitative data underwent transcription and analysis employing data reduction, content analysis, and thematic analysis. The findings underscore the significance of these enablers in enhancing infrastructure management effectiveness within public ultra-modern markets in Nigeria.

Key Words: Effectiveness, Enablers, Public Infrastructure, Sustainable Management, Ultra-Modern Market.

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I. INTRODUCTION

In the contemporary landscape of urban development, public ultra-modern markets emerge as pivotal hubs for economic activities, social interactions, and community well-being. Recognizing their crucial role in fostering local commerce and contributing to the urban fabric, the imperative for effective and sustainable management practices becomes apparent. Evaluating the enablers of infrastructure management that drives the efficacy of sustainable management practices within public ultra-modern market infrastructure is significant to any development. The global trend of urbanization and escalating resource demands underscore the importance of adopting sustainable approaches in managing public markets. These practices, addressing environmental concerns, economic viability, and social inclusivity, align with broader goals of urban resilience and equitable development. The study seeks to unravel the factors contributing to the successful implementation of sustainable management strategies in public ultra-modern markets, offering valuable insights for policymakers, facility managers, and urban development stakeholders. The complexity of public ultra-modern markets in the Niger-Delta Region necessitates a comprehensive examination of factors influencing their sustainable management. Diverse stakeholders, including vendors, consumers, local authorities, and urban planners, create a dynamic environment with competing interests. Understanding stakeholder perceptions and interactions with sustainability initiatives is crucial for devising socially inclusive, economically viable, and environmentally sound management strategies.

The existing literature often lacks specificity when applied to the context of these markets, requiring a nuanced investigation into enablers that facilitate the integration of sustainable practices, from waste management to energy efficiency and stakeholder collaboration to technological innovation. The lack of a standardized

framework for evaluating enablers hinders the development of cohesive solutions. By delving into the enablers of effective sustainable management practices, this study contributes to the discourse on urban infrastructure governance, considering environmental impact mitigation, operational efficiency, community engagement, and economic sustainability. Anticipating to inform evidence-based decision-making, the research bridges the gap between theoretical frameworks and practical implementation, offering valuable insights into the unique challenges and opportunities presented by public ultra-modern markets. The study aspires to guide stakeholders toward fostering vibrant, resilient, and sustainable urban marketplaces amid intensifying urbanization and evolving market dynamics. The central question driving this research is: What are the key enablers of effective sustainable management practices in public ultra-modern markets? The answers aim to provide insights that inform decision-making, contributing to the development of vibrant, resilient, and sustainable urban marketplaces.

II. LITERATURE REVIEW

Sustainable management practice, barriers to sustainability implementation and success factors for sustainable management practice as related literature reviewed was address the issue on evaluating enablers of effective sustainable management practice.

2.1 Sustainable Management Practice

Sustainable management practices refer to the strategic and operational activities that organizations undertake to balance economic, environmental, and social considerations, aiming for long-term viability and positive impacts on multiple stakeholders. These practices encompass the integration of sustainability principles into decision-making processes, organizational policies, and daily operations to achieve a harmonious coexistence between business objectives and broader societal and environmental goals. According to Melnyk et al. (2003), sustainable management practices involve the adoption of environmentally responsible strategies, social inclusivity, and economic efficiency. Organizations embracing sustainable management practices seek to minimize negative environmental impacts, promote social equity, and ensure economic resilience over time. This involves a holistic approach that considers the entire life cycle of products or services, ethical treatment of employees, engagement with local communities, and adherence to environmental stewardship. This definition aligns with the broader concept of sustainability, which was initially introduced by the Brundtland Commission in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Sustainable management practices, therefore, extend this concept to the realm of organizational management, emphasizing responsible and forward-thinking approaches that go beyond immediate profit considerations. In the realm of sustainable management practices, barriers and success factors play pivotal roles in shaping the effectiveness of initiatives within organizations. Schneider et al. (2011) highlight the global significance of the provisions of public infrastructure, but also stress the need for enhanced sustainability efforts.

2.2 Barriers to Implementation of Sustainable Management Practices

Barriers to sustainability implementation include organizational struggles to integrate sustainability and environmental practices due to a lack of expertise and resource provision (Salzmann et al., 2005). Limited research on sustainability practices in public ultra-modern market infrastructure underscores the importance of understanding these barriers. Melnyk et al. (2003) caution that sustainable management systems, while based on international standards, may not inherently enhance organizational efficiency. A key barrier identified is the absence of a strategic approach at the organizational and corporate levels, emphasizing the necessity of integrating sustainability into the overall corporate strategy (Lozano, 2013). Figge et al. (2002) emphasize the critical role of linking environmental and social management with economic success, making integration into the corporate strategy vital for organizational commitment. Organizations may hesitate to implement sustainability practices due to perceived high costs (Steger, 2000). However, the initial investments required for system development, including resource allocation, expertise, and technological advancements, can lead to improved resource utilization, growth, and enhanced reputation. Regulatory framework absence, particularly in developing countries like Libya, further contributes to implementation challenges (Bromley, 2007). Failures are also linked to insufficient training, support, and development, potentially resulting in resistance to lasting changes within organizations (Sammalisto and Brorson, 2008; Babakri et al., 2003; Campos et al., 2014). Robust auditing and monitoring systems are crucial for successful implementation (Chavan, 2005). However, hindrances to the adoption of sustainable management systems span public awareness, regulatory frameworks, resource provision, strategic direction, training, and leadership commitment. These factors collectively influence adoption and implementation, emphasizing the need for an integrated approach, particularly in developing countries.

2.3 Success Factors for Sustainable Management Practices

On the other hand, success factors for sustainable management practices involve seamless integration into the overall corporate strategy (Johnson, 2007; Ahrens and Chapman, 2007; Whittington, 2007). Key among these factors is the organizational integration of business functions, objectives, and long-term goals within the overall corporate strategy. Sustainability, argue scholars such as Johnson (2007), Ahrens and Chapman (2007), and Whittington (2007), should be seamlessly integrated into management control and strategy. Involving all participants and stakeholders to become champions for sustainability management and reporting is vital, requiring systematic integration at technical, organizational, managerial, and individual levels. A 'community of practice' approach, involving all participants and stakeholders, is crucial for championing sustainability (Brown and Duguid, 1991; Zutshi and Sohal, 2004). Top management support, creating a culture of involvement and empowerment, significantly contributes to success (Daily and Huang, 2001; Jayashree et al., 2015). Bureaucratic structures hinder change, emphasizing the importance of top management commitment (Janson and Gunderson, 1994, cited in Daily and Huang, 2001). Culture change, strong direction from top management, and embedding sustainability into the corporate strategy are identified as key success factors (Kitazawa and Sarkis, 2000; Figge et al., 2002). Financial capabilities and competent human resources further contribute to successful sustainability practices (Figge et al., 2002; Rebelo et al., 2016). Understanding and addressing these factors are essential for effective sustainability management, particularly in public ultra-modern market infrastructure, especially in developing countries like Niger-Delta Region Nigeria.

III. RESEARCH METHODOLOGY

This study on the enablers of effective sustainability management employs a mixed-method research approach, incorporating both quantitative and qualitative methods. Conducted in the Niger-Delta Region of Nigeria, focusing on public ultra-modern market infrastructure, the research utilizes a triangulation of results to enhance the robustness of findings. The research design adopts a mixed-method approach, combining a cross-sectional survey with personal interviews, applying a case study research design grounded in pragmatism. The study is descriptive and exploratory in nature, gathering data from 239 respondents, including market masters/support service providers, traders, and officials from the Ministry of Commerce and Industry. The sample size for this study was randomly selected based on the population of 239 respondents, consisting of market masters/support service providers (124), traders (49), and officials of the Ministry of Commerce and Industry (15). The study focuses on three public ultra-modern markets: New Town Market (Port Harcourt, Rivers State), Swali Market (Yenegoa, Bayelsa State), and Uvwie Market (Warri, Delta State). Data collection involved the distribution of 239 self-administered questionnaires, complemented by in-depth personal interviews and a physical survey of the constructed facilities. A total of 188 usable responses were received, yielding a response rate of 76.7%, considered representative and acceptable. Quantitative data were analyzed using simple frequency tabulation, percentages, mean, and the Relative Importance Index (RII) to ascertain the enablers of sustainable management for public infrastructure. Additionally, professionals in the field were purposively selected for interviews based on their expertise and knowledge. Apart from questionnaire administration, participant observation played a crucial role in primary data collection. Qualitative data were transcribed and analyzed using data reduction, content analysis, and thematic analysis methods to provide a clearer explanation of the study's research objectives. This mixed-method approach ensures a comprehensive exploration of the enablers of effective sustainability management in public ultra-modern market infrastructure in the Niger-Delta Region of Nigeria.

IV. DATA PRESENTATION AND RESULTS

Data and results analyzed was presented based the following subheadings:

4.1 Enablers of Effective Sustainable Management Practices

Table 1 reveals the enablers of effective sustainable management in public ultra-modern market infrastructure. The respondents were required to indicate to what extent they agreed that design of organizational structure, spirit of teamwork, sharing of sustainable management practice knowledge and skills, level of commitment, good governance, regular meetings on sustainable management practices and motivation for sustainable management practice team were enablers for effective sustainable management using a five-point Likert scale 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree. The table shows that 'design of organizational structure' was ranked first with mean score of 4.128, RII = 0.826, 'spirit of teamwork' was ranked second with mean score of 4.077, RII = 0.815, sharing of sustainable management practice knowledge and skills with mean score of 4.072, RII = 0.814 (3rd), 'level of commitment' with mean score of 3.949, RII = 0.790 (4th), 'good governance' with mean score of 3.872, RII = 0.787 (5th), regular meetings on sustainable

management practices with mean score of 3.869, RII = 0.774 (6th), and ‘motivation for sustainable management practice team’ was ranked with mean of 3.821, RII = 0.764 (7th). The results showed that design of organizational structure, spirit of teamwork, sharing of sustainable management practice knowledge and skills, level of commitment, good governance, regular meetings on sustainable management practices and motivation for sustainable management practice team were seen as the main enabler of effective sustainable management practices that could make infrastructure management more effective in its application on public ultra-modern market infrastructure.

Table 1: Enablers for Effective Sustainable Management Practices (188)

Enablers for Effective Sustainable Management	Sum	Mean	S.D.	RII	Rank
Design of organizational structure	776	4.128	0.978	0.826	1 st
spirit of teamwork	766	4.077	0.839	0.815	2 nd
sharing of sustainable management practice knowledge and skills	765	4.072	0.957	0.814	3 rd
level of commitment	742	3.949	0.857	0.790	4 th
good governance	749	3.872	0.978	0.787	5 th
regular meetings on sustainable management practices	727	3.869	0.951	0.774	6 th
motivation for sustainable management practice team	718	3.821	1.048	0.764	7 th

Source: Source: Author’s Field Survey, 2024.

4.2 Analysis of Interviews on Enablers of Effective Sustainable Management

This section presents the results from the qualitative aspect of the study. The results are presented and discussed in themes which emerged from the analysis of the interviews conducted in the study. The themes are design of organizational structure, spirit of teamwork, sharing of sustainable management practice knowledge and skills, level of commitment, good governance, regular meetings on sustainable management practices and motivation for sustainable management practice Team. These themes enable the understanding of enablers of effective sustainable management practice in Niger-Delta with greater depth and in context. Table 4.16 contains the themes and the variables (sub-themes) for each theme). The market masters and government officials from Ministry of Commerce and Industry identified and explained 7 enablers of effective sustainable management in the Niger-Delta Region as shown in Table 4.16. Explanations of each programme and their procedures as provided by the market masters and government officials are included below.

Table 2: Thematic Analysis Results

S/N.	Themes	Variables
1	Design of organizational structure	Simplify roles and responsibilities within the sustainable management structure.
		Present dedicated roles for sustainability and environmental management
		Integrate sustainability goals into the overall organizational structure
2	Spirit of teamwork	Include level of collaboration and cooperation among sustainable management teams.
		Present a positive and inclusive organizational culture.
		Foster team-building activities and strategies to a sense of unity among staff
3	Sharing of sustainable management practice knowledge and skills	Involve the establishment of knowledge-sharing platforms.
		Accessibility and effectiveness of training programs related to sustainable practices.
		Incentives for employees to share their insights and experiences regarding sustainable management practices.
4	Level of commitment	Incorporate dedicated resources (financial, human, and time) to sustainable initiatives.
		Establish key performance indicators (KPIs) related to sustainability.
		Employee engagement and involvement in sustainability projects
5	Good governance	include the effectiveness and transparency of decision-making processes related to sustainability.
		Adherence to ethical standards and compliance with environmental regulations.
		Present of a sustainability governance framework and reporting mechanisms.
6	Regular meetings on sustainable management practices	include the frequency and effectiveness of meetings focused on sustainability.
		Include relevant stakeholders in these meetings.
		Document and disseminate outcomes and action items from meetings.
7	Motivation for sustainable management practice Team	Involve the use of incentives and recognition for teams achieving sustainability goals.
		align individual and team goals with broader sustainability objectives.
		Employee satisfaction and morale regarding involvement in sustainable initiatives.

Source: Source: Author’s Field Survey, 2024.

The interviewees concluded by saying that: assessing and improving these variables within each theme, organizations' capacity for effective sustainable management practices can enhance their productive. This analysis provides a foundation for developing targeted strategies to strengthen the enablers of sustainable infrastructure management within public ultra-modern markets in Niger-Delta.

V. DISCUSSION OF FINDINGS

Discussion of findings was based on the following subheadings:

5.1 Enablers of Effective Sustainable Management Practices

From the results in Table 1; it was shown that more than half of the respondents with mean score of 3.00, RII = 0.60 design of organizational structure, spirit of teamwork and sharing of sustainable management knowledge and skills were the main enablers of effective sustainable management practices in public ultra-modern markets. From the findings, it could be concluded that effective sustainable practice required a transformation, or a change, among management teams. In order for effective sustainable management to be successful, management should properly design their organizational structure, appointing knowledgeable and skilled facility managers, promote sharing of sustainable management knowledge, increase the spirit of team working and have strong change management. The study underscores the significance of organizational structure design as a crucial enabler of effective sustainable management practices. A well-designed structure aids top management in talent identification and ensures ample human resources to achieve organizational goals. Multiple influential actors, including stakeholders, senior managers, government, employees, and clients, shape the strategic behavior and performance of the organization. The collaborative nature of public sector buildings emphasizes the importance of teamwork in fostering effective sustainable management practices. Respondents highlighted the critical role of change management, viewing it as a catalyst for implementing sustainable management and transitioning from the current state to a desired future state. The findings stress the importance of knowledgeable facility managers with a sustainable management background for effective implementation. Additionally, increasing awareness and integrating sustainable management into organizational culture are acknowledged as key contributors to sustainable management development. Therefore, the findings of this study revealed that the benefits of sharing sustainable management knowledge have become one of the key enablers that need to be considered. It is important especially for stakeholders of public sector buildings to understand how sustainable management could and should contribute to supporting the function of public ultra-modern market infrastructure.

5.2 Summary of Discussion from Interviewees Response on Enablers of Effective Sustainable Management

Design of Organizational Structure: include clarity of roles and responsibilities, dedicated roles for sustainability and environmental management, integration of sustainability goals, flexibility for adaptation, communication channels, cross-functional collaboration and performance metrics for sustainability

Spirit of Teamwork: include cohesive team identity, diversity and inclusion, empathy and team support, collaborative problem solving, shared accountability, effective team leadership: flexible team structures, continuous communication and feedback and team resilience.

Sharing of Sustainable Management Practice Knowledge and Skills; include knowledge-sharing platforms, training programs and workshops, mentorship and peer learning, documentation and case studies, communities of practice, cross-departmental collaboration, incentives for knowledge sharing, regular workshops and seminars, global benchmarking and feedback mechanisms.

Level of Commitment; it includes leadership commitment, resource allocation, integration into corporate strategy, goal setting and measurement, stakeholder engagement, employee training and development, incorporation into performance evaluation, continuous improvement, public reporting and communication and alignment with global standards.

Good Governance: it includes transparent decision-making, ethical conduct and integrity, legal compliance, accountability mechanisms, stakeholder inclusivity, risk management, strategic planning and vision, performance monitoring and evaluation, independent audits and assessments, documented policies and procedures, board oversight, public accountability and reporting

Regular Meetings on Sustainable Management Practices; which includes frequency and consistency, agenda setting, cross-functional representation, knowledge sharing and best practices, performance review and metrics, problem-solving and decision-making, trainers and subject matter experts, action item tracking and follow-up, documentation and meeting minutes, continuous learning opportunities, employee engagement and recognition and feedback mechanisms

Motivation For Sustainable Management Practice Team; include recognition and appreciation, clear alignment with organizational values, professional development opportunities, inclusive decision-making, performance recognition system, aligning personal goals with sustainability objectives, setting challenging but achievable goals, creating a positive work environment, feedback and performance evaluation, flexible work policies, encouraging innovation and creativity, social and environmental impact recognition.

VI. CONCLUSION AND RECOMMENDATIONS

This study was conducted with principal aim to examine the enablers of effective sustainable management practice for public ultra-modern market infrastructure in Niger-Delta Region, Nigeria. The research delineated that an effective organizational structure for sustainable management practices encompasses roles, sustainability goal integration, adaptability, cross-functional collaboration, and performance metrics. This holistic approach ensures the ingrained integration of sustainability into the organizational culture. Teamwork for sustainable management involves building a cohesive identity, embracing diversity, fostering empathy, encouraging collaborative problem-solving, and promoting shared accountability. This comprehensive strategy creates a positive and collaborative environment conducive to effective sustainable management practices. Knowledge and skill-sharing involve creating platforms for information exchange, implementing training programs, fostering mentorship, and encouraging cross-departmental collaboration. A multifaceted approach ensures a robust knowledge-sharing culture, enhancing organizational capacity for effective sustainable management. Commitment to sustainable management involves leadership commitment, resource allocation, integration into corporate strategy, stakeholder engagement, and alignment with global standards. Good governance in sustainable management includes transparent decision-making, ethical conduct, accountability mechanisms, and strategic planning, ensuring responsible business practices. Regular meetings on sustainable management practices foster communication, knowledge sharing, and accountability. Motivating a sustainable management team involves recognition, alignment with organizational values, professional development, and fostering a positive work environment, crucial for successful and sustainable organizational initiatives. Therefore, in the applications of sustainable management practices to public infrastructure; facility managers should comply/ apply:

- i. Organizational Structure Enhancement
- ii. Teamwork Cultivation
- iii. Knowledge and Skill Sharing Initiatives
- iv. Comprehensive Commitment to Sustainability
- v. Good Governance Practices
- vi. Regular and Well-Structured Meetings
- vii. Motivation Strategies for Sustainable Management Teams

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