Assessing the Integration of Managerial Resilience and Sustainability of Public Sector in Southwest, Nigeria

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ABSTRACT

This study examines the integration of managerial resilience and sustainability within the public sector of Southwest Nigeria. Addressing the pressing need to enhance organizational effectiveness and societal well-being, the research identifies barriers and enabling strategies for promoting resilience and sustainability, assesses the influence of managerial resilience on social, economic, and environmental sustainability indicators, and provides recommendations for policymakers and organizational leaders. The population of interest comprised managers working within the public sector across the Southwest region of Nigeria. A sample size of 150 public managers was determined, representing a diverse range of departments and agencies within the Southwest region. The research instrument, i.e., the questionnaire, was developed based on a review of existing literature on managerial resilience, sustainability, and public sector management. Utilizing a combination of structural and measurement models, the study reveals significant positive relationships between managerial resilience and dimensions of sustainability, highlighting the critical role of resilient leadership in navigating challenges and promoting sustainable practices. The findings underscore the importance of investing in capacity-building initiatives, streamlining processes, and promoting stakeholder engagement to foster a resilient and sustainable public sector. Overall, this research contributes valuable insights into advancing resilience and sustainability within the public sector of Southwest Nigeria, with implications for policy formulation and organizational practice.

Keywords: Managerial Resilience, Innovation, Performance, Sustainability, Public Sector

1. Introduction

In recent years, the concept of managerial resilience and its integration with sustainability has gained significant attention, particularly in the context of public sector management. Managers in the public sector face unique challenges that require them to navigate complex bureaucratic structures, political influences, and resource constraints while striving to maintain organizational effectiveness and service delivery. However, despite the growing recognition of the importance of

resilience, especially in the face of dynamic environmental and socio-political challenges, the integration of managerial resilience and sustainability remains underexplored, particularly in regions such as Southwest Nigeria. This study aims to address this gap by focusing on assessing the integration of managerial resilience and sustainability in the public sector context of Southwest Nigeria.

Resilience, in the context of organizational management, refers to the ability of an organization to withstand and adapt to disruptive events while maintaining essential functions and services. In the public sector, where accountability, transparency, and public service delivery are paramount, the need for resilient management practices is particularly critical. However, research suggests that managers in the public sector often struggle with resilience due to various factors such as bureaucratic inertia, lack of autonomy, and resistance to change (Bracci & Tallaki, 2021). For example, studies from developed countries like the United States and the United Kingdom have highlighted the challenges faced by public sector managers in fostering resilience amidst budget cuts, policy changes, and increasing public expectations (Bracci & Tallaki, 2021).

These challenges are further exacerbated in developing countries like Nigeria, where public sector institutions often grapple with systemic issues such as corruption, institutional inefficiency, and inadequate infrastructure (Ojogiwa, 2021). For instance, Nigeria's public sector has been characterized by bureaucratic red tape, patronage networks, and political interference, which hinder effective decision-making and responsiveness to crises (Ojogiwa, 2021). As a result, public sector managers in Nigeria often find themselves ill-equipped to deal with unexpected disruptions, leading to inefficiencies, service delivery gaps, and a lack of accountability (Akpan et al., 2022).

The consequences of inadequate managerial resilience in the public sector are far-reaching and have implications for organizational performance, service delivery, and sustainable development. Inefficient use of resources, lack of innovation, and inability to respond effectively to crises can undermine public trust, impede socio-economic progress, and perpetuate inequality (Benjamin & Foye, 2022). Moreover, in the context of sustainability, resilience is closely linked to the ability of organizations to adapt to environmental changes, mitigate risks, and pursue long-term viability (Zavala-Alcívar et al., 2020). Therefore, understanding and enhancing managerial resilience in the public sector is essential for promoting sustainable development and achieving societal goals.

Given the critical importance of managerial resilience and its integration with sustainability in the public sector, there is a pressing need for empirical research to examine these issues, particularly in the context of Southwest Nigeria. By assessing the current state of managerial resilience, identifying barriers and enablers, and exploring potential strategies for enhancing resilience and sustainability, this study seeks to contribute to both theoretical knowledge and practical insights for public sector management. By drawing on existing literature and empirical evidence from both developed and developing countries, this study aims to provide a comprehensive understanding of the challenges and opportunities associated with integrating managerial resilience and sustainability in the public sector, with implications for policy, practice, and future research.

1.1 Problem Statement

Despite the growing recognition of the importance of managerial resilience and its integration with sustainability, there remains a significant gap in understanding the challenges and opportunities associated with these concepts in the public sector context, particularly in Southwest Nigeria. Public sector managers in this region face a myriad of complex challenges, including bureaucratic inefficiencies, political influences, resource constraints, and societal expectations, which can hinder their ability to effectively navigate crises and sustainably deliver services (Ojogiwa, 2021). While research from developed countries has shed light on the barriers to resilience among public sector managers, there is a dearth of empirical evidence specific to the Nigerian context, thereby limiting our understanding of the unique challenges and opportunities present in this setting.

Moreover, the consequences of inadequate managerial resilience in the public sector are profound and have far-reaching implications for organizational performance, service delivery, and sustainable development (Akpan et al., 2022). In Southwest Nigeria, where public sector institutions play a crucial role in addressing socio-economic challenges and promoting inclusive growth, the inability of managers to effectively respond to crises and adapt to changing circumstances can undermine public trust, impede progress, and perpetuate inequality (Ojogiwa, 2021). Therefore, there is an urgent need to examine the integration of managerial resilience and sustainability in the public sector of Southwest Nigeria to identify key barriers, enablers, and strategies for enhancing organizational effectiveness and promoting sustainable development.

Furthermore, existing literature on managerial resilience and sustainability in the public sector primarily focuses on developed countries, with limited attention given to the unique contextual factors shaping resilience in Nigeria and other developing countries. This lack of empirical evidence hinders our ability to develop contextually relevant strategies and interventions to address resilience challenges in Southwest Nigeria's public sector. Consequently, there is a critical gap in knowledge that must be addressed to inform evidence-based policy-making, organizational practices, and capacity-building initiatives aimed at enhancing managerial resilience and promoting sustainable development in the region. In light of these challenges and gaps in the literature, this study aims to assess the integration of managerial resilience and sustainability in the public sector of Southwest Nigeria.

The specific objectives are to:

i.   To identify the barriers and enabling strategies for enhancing resilience and sustainability of Public sector in Southwest, Nigeria;

ii. assess the influence of managerial resilience on social sustainability of Public sector in Southwest, Nigeria;

iii. To assess the influence of managerial resilience on the economic sustainability of Public sector in Southwest, Nigeria; and

iv. To assess the influence of managerial resilience on environmental sustainability of Public sector in Southwest, Nigeria.

2. Literature Review

2.1 Managerial Resilience

Managerial resilience, a concept that has garnered increasing attention in organizational studies, refers to the capacity of managers to withstand and adapt to adversity, uncertainty, and change while maintaining essential functions and achieving organizational goals (Bracci & Tallaki, 2021). According to Bracci and Tallaki, managerial resilience involves not only the ability to bounce back from setbacks but also the capacity to proactively anticipate and respond to challenges, thereby ensuring organizational sustainability and success. This notion aligns with the perspective of Cristiano, Ulgiati, and Gonella (2021), who emphasize the dynamic nature of resilience, highlighting the importance of continuous learning, adaptation, and innovation in navigating turbulent environments. In essence, managerial resilience encompasses a range of cognitive, emotional, and behavioral skills that enable managers to effectively lead their organizations through adversity and uncertainty.

Scholars such as Chen, Xie, and Liu (2021) emphasize the multifaceted nature of managerial resilience, identifying various dimensions such as individual, team, and organizational resilience. Individual resilience refers to the personal attributes and coping strategies of managers, including optimism, adaptability, and problem-solving skills, which enable them to thrive in challenging circumstances. Team resilience, on the other hand, pertains to the collective capacity of teams to collaborate, communicate, and support one another in times of crisis, fostering a sense of cohesion and solidarity (Chen, Xie, & Liu, 2021). Finally, organizational resilience encompasses the structures, processes, and culture within organizations that facilitate effective response and adaptation to disruptions, encompassing aspects such as strategic planning, resource allocation, and crisis management protocols (Cristiano, Ulgiati, & Gonella, 2021). Collectively, these dimensions of resilience contribute to the overall ability of managers and organizations to navigate uncertainty and achieve sustainable performance outcomes.

2.2 Dimensions of Managerial Resilience in the Public Sector

In the public sector, managerial resilience manifests across multiple dimensions, each playing a crucial role in ensuring effective leadership and organizational adaptability amidst adversity. One dimension is **individual resilience**, which pertains to the personal attributes and coping mechanisms of public sector managers in navigating challenges. For instance, research by Bracci and Tallaki (2021) highlights how individual resilience among public sector leaders in the United States enabled them to effectively manage crises such as natural disasters and economic downturns, exemplified by the leadership of former New York City Mayor Rudy Giuliani during the aftermath of the September 11 attacks. Similarly, in Singapore, individual resilience among public sector managers has been instrumental in steering the country through various crises, including the Asian financial crisis of 1997 and the SARS outbreak in 2003 (Zeng et al., 2022). These examples underscore the importance of cultivating resilience at the individual level to navigate complex challenges in the public sector.

Another dimension of managerial resilience in the public sector is **organizational resilience**, which encompasses the capacity of public sector organizations to anticipate, respond to, and recover from disruptions. For instance, research by Lawson et al. (2020) examines the barriers to operationalizing resilience in the water sector in the United Kingdom, highlighting challenges such as fragmented governance structures and limited collaboration between stakeholders. In contrast, the Netherlands provides an example of effective organizational resilience in the public sector, particularly in flood management, where the Delta Program has successfully coordinated efforts across government agencies, civil society, and the private sector to mitigate flood risks and enhance resilience (Zeng et al., 2022). These contrasting examples underscore the critical role of organizational resilience frameworks and collaboration mechanisms in building resilience in the public sector.

Moreover, **technological resilience** emerges as a significant dimension in the contemporary public sector, given the increasing reliance on digital technologies for service delivery and crisis response. Countries like Estonia have demonstrated exemplary technological resilience by leveraging e-governance platforms and digital infrastructure to maintain essential services and facilitate citizen engagement during crises such as the COVID-19 pandemic (Agboola & Tunay, 2023). Conversely, challenges with technological resilience in the public sector have been observed in countries like Nigeria, where inadequate ICT infrastructure and cybersecurity vulnerabilities have posed barriers to effective digital governance and service delivery (Agboola & Tunay, 2023). These examples underscore the importance of investing in technological resilience to enhance the agility and responsiveness of public sector organizations.

On a final note, **policy resilience** represents the capacity of public sector leaders to adapt and innovate in response to evolving policy challenges and societal needs. For instance, in Sweden, the concept of "dynamic resilience" has been integrated into public policy frameworks to enable flexible and adaptive governance approaches that can address complex and interconnected challenges such as climate change and migration (Zeng et al., 2022). Conversely, challenges with policy resilience have been evident in countries like Venezuela, where political instability and ideological rigidity have hindered effective policy formulation and implementation, exacerbating economic and social crises (Zeng et al., 2022). These examples highlight the importance of policy agility and innovation in building resilience in the public sector and addressing emergent challenges effectively.

Specifically, the dimensions of managerial resilience in the public sector are multifaceted and interrelated, encompassing individual, organizational, technological, and policy dimensions. By understanding and addressing these dimensions, public sector leaders can enhance their capacity to navigate complex challenges, promote organizational agility, and foster sustainable development. However, challenges such as resource constraints, institutional inertia, and political pressures can impede efforts to build resilience, underscoring the need for strategic investments, collaborative partnerships, and adaptive governance approaches. Ultimately, cultivating resilience in the public sector is essential for ensuring effective leadership, maintaining service delivery, and addressing emergent threats in an increasingly uncertain world.

2.3 Sustainability of Public Sector

Sustainability in the public sector refers to the ability of governmental organizations to effectively manage resources, deliver services, and address societal needs in a manner that promotes long-term well-being and prosperity for current and future generations (Corrales-Estrada et al., 2021). This encompasses a holistic approach that considers environmental, social, and economic dimensions, aiming to balance the needs of the present without compromising the ability of future generations to meet their own needs (Zavala-Alcívar et al., 2020). Sustainable public sector management entails prudent fiscal policies, transparent governance practices, equitable service provision, and proactive measures to mitigate and adapt to environmental risks and social challenges. By embracing sustainability principles, public sector organizations can enhance their resilience, foster public trust, and contribute to the overall well-being and prosperity of society.

Arguably, sustainability is essential for the legitimacy and effectiveness of public sector institutions, particularly in the face of increasingly complex and interconnected challenges such as climate change, urbanization, and socio-economic disparities (Zavala-Alcívar et al., 2020). By adopting sustainable practices, governments can reduce their ecological footprint, minimize waste, and promote resource efficiency, thereby safeguarding natural ecosystems and mitigating environmental degradation (Corrales-Estrada et al., 2021). Moreover, sustainable public sector management fosters social equity and inclusivity by ensuring equitable access to essential services such as healthcare, education, and infrastructure, thereby reducing disparities and promoting social cohesion (Corrales-Estrada et al., 2021). From an economic perspective, sustainability can drive innovation, enhance productivity, and create new opportunities for economic growth and job creation, thereby contributing to the resilience and prosperity of communities and nations (Zavala-Alcívar et al., 2020). Overall, sustainability is not only a moral imperative but also a strategic imperative for public sector organizations seeking to address pressing societal challenges and secure a prosperous future for all.

2.3.1 Dimensions of Sustainability of Public Sector

In the realm of public sector sustainability, three key dimensions stand out: social, economic, and environmental sustainability. Firstly, **social sustainability** in the public sector refers to the capacity of governmental institutions to foster inclusive and equitable societies, ensuring the well-being and empowerment of all citizens (Zavala-Alcívar et al., 2020). For instance, countries like Norway and Sweden have implemented comprehensive social welfare systems that provide universal access to healthcare, education, and social services, contributing to high levels of social cohesion and well-being among their populations (Zavala-Alcívar et al., 2020). In contrast, Nigeria faces significant challenges with social sustainability, as evidenced by persistent poverty, inequality, and social unrest, particularly in marginalized regions such as the Niger Delta and Northeast (Ajibola, 2020). These disparities not only undermine social cohesion but also pose risks to political stability and economic development, highlighting the urgent need for targeted interventions to address social inequalities and promote inclusive growth.

Secondly, **economic sustainability** in the public sector involves prudent fiscal management, investment in human capital, and promotion of economic growth and prosperity (Zavala-Alcívar et al., 2020). Countries like Singapore and South Korea have achieved remarkable economic sustainability through strategic investments in education, infrastructure, and innovation, driving rapid economic growth and development (Zavala-Alcívar et al., 2020). Conversely, Nigeria grapples with economic sustainability challenges such as over-reliance on oil revenues, corruption, and weak institutional capacity, which have hindered sustainable development and led to economic volatility (Ajibola, 2020). The consequences of these challenges are evident in recurrent fiscal deficits, high unemployment rates, and inadequate provision of public services, underscoring the imperative for structural reforms to promote economic diversification, transparency, and accountability in Nigeria's public sector.

Lastly, **environmental sustainability** in the public sector pertains to the responsible stewardship of natural resources, mitigation of environmental risks, and promotion of ecological resilience (Corrales-Estrada et al., 2021). Countries like Germany and Denmark have emerged as global leaders in environmental sustainability, implementing ambitious policies to reduce greenhouse gas emissions, promote renewable energy, and conserve biodiversity (Corrales-Estrada et al., 2021). In contrast, Nigeria faces significant environmental sustainability challenges, including deforestation, pollution, and inadequate waste management, which pose threats to public health, ecosystem integrity, and sustainable development (Aluko et al., 2024). The consequences of environmental degradation are particularly acute in cities like Lagos, where air and water pollution have reached alarming levels, adversely impacting the health and well-being of residents (Aluko et al., 2024). Addressing these challenges requires concerted efforts to strengthen environmental governance, enforce regulations, and promote sustainable land use and resource management practices in Nigeria's public sector.

Basically, achieving sustainability in the public sector necessitates addressing social, economic, and environmental dimensions holistically. By promoting social equity, economic prosperity, and environmental stewardship, governments can enhance the well-being of their citizens, foster inclusive growth, and ensure the long-term viability of ecosystems. However, realizing these goals requires political will, institutional capacity, and multi-stakeholder collaboration to overcome entrenched challenges and pursue a path of sustainable development. In the case of Nigeria, addressing social, economic, and environmental sustainability challenges is imperative for building a resilient and prosperous future for all Nigerians.

2.4 Theoretical Review

One salient theory for examining managerial resilience and sustainability in the public sector is the Adaptive Cycle theory proposed by Gunderson and Holling (2002). This theory, rooted in ecology, posits that systems, including organizations, go through distinct phases of growth, conservation, release, and reorganization in response to disturbances or shocks. In the context of the public sector, this theory suggests that governmental institutions exhibit resilience when they can effectively navigate through these phases, adapting their structures, policies, and practices to maintain functionality and achieve sustainability. For instance, during times of crisis such as

natural disasters or economic recessions, resilient public sector organizations may transition from a period of exploitation and conservation to one of creative destruction, where old systems are restructured or replaced to accommodate new realities (Chen, Xie, & Liu, 2021). By applying the Adaptive Cycle theory, researchers can analyze how public sector organizations respond to disruptions, identify opportunities for innovation and renewal, and develop strategies to enhance resilience and sustainability over time.

Another relevant theory is Institutional Resilience, which focuses on the capacity of institutions to withstand and adapt to changes in their external environment while maintaining their core functions and values (Bracci & Tallaki, 2021). Rooted in institutional theory, this perspective emphasizes the role of formal and informal rules, norms, and structures in shaping organizational behavior and responses to crises. In the public sector context, institutional resilience theory highlights the importance of organizational cultures, governance frameworks, and stakeholder relationships in enabling governments to navigate complex challenges and sustainably deliver services (Bracci & Tallaki, 2021). For instance, in countries like Finland and Denmark, where trust in government institutions is high, public sector organizations have demonstrated greater resilience in responding to crises such as the COVID-19 pandemic, leveraging existing social capital and institutional trust to mobilize resources and coordinate responses effectively (Bracci & Tallaki, 2021). By applying Institutional Resilience theory, researchers can explore how institutional factors influence the resilience and sustainability of public sector organizations, identify barriers and enablers, and develop recommendations for strengthening institutional capacity and governance structures to enhance resilience and sustainability in the public sector.

3. Methods and Materials

For the assessment of the integration of managerial resilience and sustainability in the public sector of Southwest Nigeria, an explanatory research design was employed. This design allows for the exploration of the relationship between variables and the investigation of causal relationships, aligning well with the study's objective of understanding how managerial resilience influences sustainability in the public sector (Saunders et al., 2022). The population of interest comprised managers working within the public sector across the Southwest region of Nigeria. This selection was justified due to the significant role that managers play in shaping organizational resilience and sustainability strategies, particularly in governmental institutions responsible for service delivery and policy implementation (Creswell et al., 2016).

A sample size of 150 public managers was determined, representing a diverse range of departments and agencies within the Southwest region. The inclusion criteria for participants included managerial roles within public sector organizations, with a minimum of two years of managerial experience to ensure sufficient familiarity with organizational processes and challenges related to resilience and sustainability (Saunders et al., 2022). Data collection was facilitated through a structured questionnaire administered via Google Forms. The use of Google Forms provided several advantages, including ease of administration, accessibility across diverse geographical locations, and the ability to collect and analyze data in real-time (Saunders et al., 2022).

The research instrument, i.e., the questionnaire, was developed based on a review of existing literature on managerial resilience, sustainability, and public sector management. Sources such as academic journals, textbooks, and validated scales were consulted to ensure the validity and reliability of the questionnaire (Creswell et al., 2016). Additionally, a pilot study was conducted to test the clarity, relevance, and comprehensiveness of the questionnaire among a small sample of public managers, leading to necessary adjustments and refinements to improve the instrument's validity and reliability (Saunders et al., 2022).

Data collection involved the administration of the questionnaire to the sample population, with respondents providing their perspectives on various aspects of managerial resilience and sustainability in the public sector. Structural and measurement models were then employed to analyze the relationships between different variables and test the proposed hypotheses (Saunders et al., 2022). This methodological approach allowed for a rigorous examination of the integration of managerial resilience and sustainability in the public sector of Southwest Nigeria, providing valuable insights for policymakers, practitioners, and researchers.

4. Data Analysis and Discussions

The data presented in Table 1 were collected from managers actively engaged in the day-to-day operations and decision-making processes of the public sector in Southwest Nigeria. These managers play a crucial role in shaping the resilience and sustainability of their respective organizations, as they are directly involved in implementing policies, managing resources, and responding to challenges. The response rate, as depicted in Table 1, reflects the level of engagement and participation among the targeted population, providing insight into the willingness of managers to contribute to the study. A high response rate indicates a strong level of interest and commitment from the managers, enhancing the reliability and validity of the data collected. Furthermore, the response rate offers valuable information about the representativeness of the sample and the generalizability of the findings to the broader population of public sector managers in Southwest Nigeria.

Table 1: Analysis of Response Rate from the Mnagers in the Public Sector

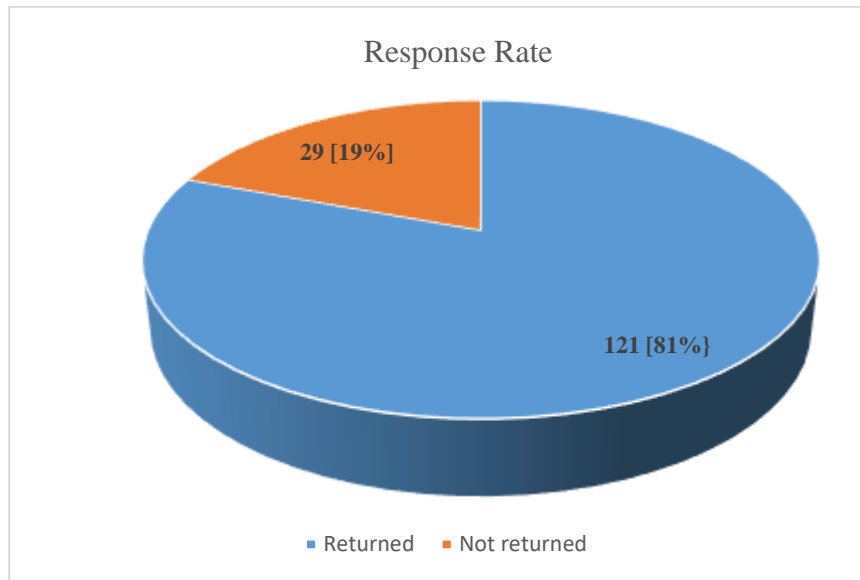| Questionnaire	Number of Respondents	Percentage [%]
Returned	121	81
Not returned	29	19
Total	150	100

Table 1 illustrates the analysis of the response rate from managers in the public sector in Southwest Nigeria. Out of the total 150 questionnaires distributed, 121 were returned, representing an impressive response rate of 81%. Conversely, 29 questionnaires were not returned, accounting for 19% of the total. This high response rate indicates a strong level of engagement and willingness among the managers to participate in the study, enhancing the reliability and validity of the data collected. The substantial number of returned questionnaires underscores the importance and relevance of the research topic, as well as the commitment of the managers to contribute their insights and perspectives on the integration of managerial resilience and sustainability in the public sector of Southwest Nigeria.

4.1 Data Analysis and Interpretation

The research data is structured into two primary sections. The initial section comprises demographic statistics, encompassing information such as respondents' location, highest level of education, years of experience, and professional affiliation, as depicted in Table 2. The subsequent section delves into inferential statistics, utilizing SEM_Partial Least Square analysis, which is elaborated upon in Table 3.

Table 2: Demographic Characterisitics of Managers in the Public Sector [n=121]

SN			Percentage
1	Gender	Male	43
		Female	57
		Total	**100%**
2	Highest Academic Qualification	Diploma/NCE/OND	10
		Bachelors' degree	52
		Postgraduate	31
		Others	7
		Total	**100%**

3	Working Experience	1-5years	11
		6 – 10years	44
		11- 15years	31
		16 years and above	14
		Total	**100**%

Table 2 presents the demographic characteristics of managers in the public sector, with 121 respondents included in the analysis. Regarding gender, the majority of respondents were female, constituting 57% of the total, while 43% were male. In terms of the highest academic qualification, the majority of managers held a bachelor's degree (52%), followed by postgraduate qualifications (31%), and diplomas/NCE/OND (10%). Additionally, 7% reported other qualifications. Concerning working experience, the largest proportion of respondents (44%) had 6-10 years of experience, followed by 31% with 11-15 years, 11% with 1-5 years, and 14% with 16 years and above. These demographic insights highlight the diverse educational backgrounds and professional experiences of managers in the public sector. Understanding these demographics is crucial for tailoring interventions and capacity-building initiatives aimed at enhancing managerial resilience and sustainability in the public sector of Southwest Nigeria, ensuring that they effectively address the specific needs and challenges faced by different segments of the managerial workforce.

Table 3: Descriptive Statistics on the Barriers and Enablers for Managers in the Public Sector

Factors	Percentage (%) of Respondents
Barriers	
Lack of Funding	YES: 65% and NO 35%
Bureaucratic Red Tape	YES: 42% and NO 58%
Insufficient Training	YES: 45% and NO 55%
Political Interference	YES: 67% and NO 33%
Enabling Strategies	
Enhanced Budget Allocation	YES: 73% and NO 27%
Streamlined Processes	YES: 76% and NO 24%
Investment in Capacity Building	YES: 80% and NO 20%
Stakeholder Engagement	YES: 82% and NO 18%

The findings depicted in Table 3 highlight several barriers and enabling strategies for enhancing resilience and sustainability within the public sector of Southwest Nigeria. The identified barriers, such as lack of funding, bureaucratic red tape, insufficient training, and political interference, resonate with existing literature on challenges faced by public sector organizations (Lawson et al., 2020; Bracci & Tallaki, 2021). Conversely, the enabling strategies, including enhanced budget allocation, streamlined processes, investment in capacity building, and stakeholder engagement, align with recommendations from scholars advocating for proactive measures to strengthen organizational resilience and sustainability (Zavala-Alcívar et al., 2020; Corrales-Estrada et al., 2021). The results corroborate with the works of various researchers who emphasize the

importance of addressing barriers and implementing enabling strategies to promote effective governance, service delivery, and sustainable development in the public sector (Lawson et al., 2020; Zavala-Alcívar et al., 2020). Therefore, it can be concluded that tackling identified barriers while implementing enabling strategies is crucial for enhancing resilience and sustainability within the public sector of Southwest Nigeria, ultimately contributing to improved organizational performance and societal well-being.

4.3 Test of Hypotheses

This study aimed to investigate the impact of managerial resilience on the sustainability of the public sector. To achieve this objective, a combination of structural and measurement models was employed. A unique methodology known as SMART_Partial Least Squares (PLS) version 4 was utilized for this investigation, chosen for its ability to effectively handle complex models, especially in situations where obtaining a large dataset might be challenging, as is often the case in company-specific studies like this. Despite limited data availability, PLS ensured reliable results, with a primary focus on predictive ability, which was essential for understanding how managerial resilience influences indicators of public sector sustainability, such as social, economic, and environmental sustainability, particularly in Southwest Nigeria. The analysis, including the impact of managerial resilience on public sector sustainability, is presented in Table 3 and Figure 2, while the path coefficients and structural model are depicted in Table 4 and Figures 2 and 3, respectively.
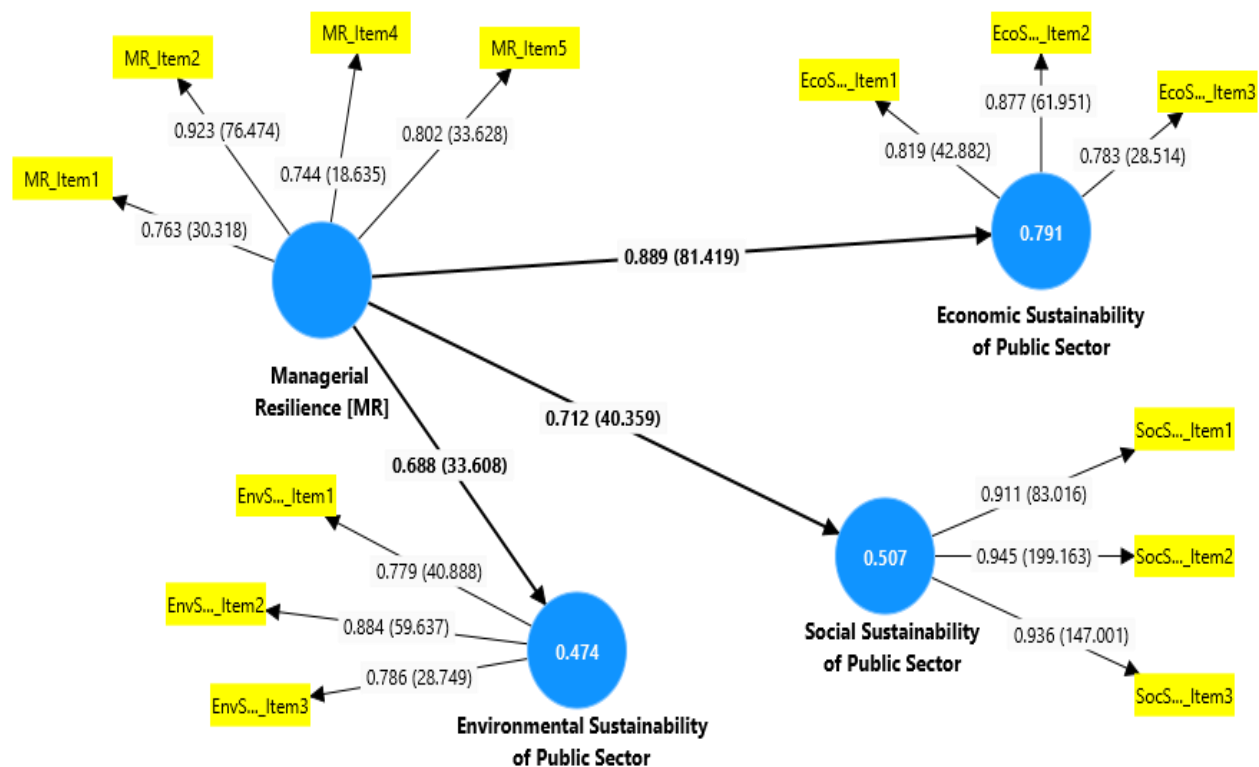
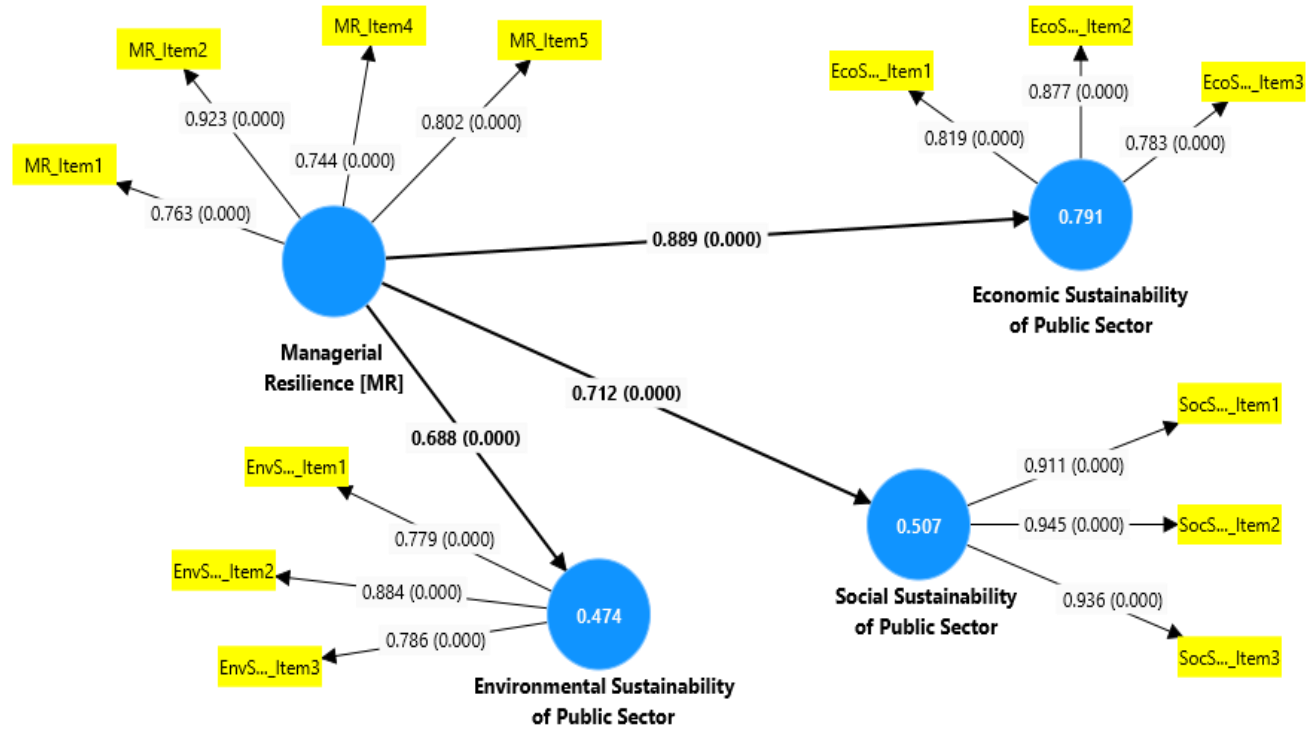**SEM Path Diagram (Version 4)**

Figure 2: Path Diagram and T-values

Figure 3: Path Diagram and P-values

Table 4: Path Coefficients of Technological Change and Performance of SMEs

SN	Variables	Co-efficient	R-Square	T value	Sig.	Decision
1	Managerial Resilience [MR] ➔ Social Sustainability of Public Sector	0.712	0.507	40.359	0.000	Significant
2	Managerial Resilience [MR] ➔ Economic Sustainability of Public Sector	0.889	0.791	81.419	0.000	Significant
3	Managerial Resilience [MR] ➔ Environmental Sustainability	0.688	0.474	33.608	0.000	Significant
4	**Managerial Resilience [MR] ➔ Sustainability of Public Sector**	**0.732**	**0.700**	**56.783**	**0.000**	**Significant**

Table 4 presents the path coefficients of technological change and the performance of SMEs, specifically focusing on the influence of managerial resilience on various dimensions of sustainability within the public sector. The path coefficients indicate the strength and direction of the relationship between managerial resilience and each dimension of sustainability, namely social, economic, and environmental sustainability, as well as overall sustainability of the public sector. The R-square values represent the proportion of variance in each dimension of sustainability

explained by managerial resilience. Additionally, the T values and significance levels (Sig.) indicate the statistical significance of the coefficients.

The findings reveal significant positive relationships between managerial resilience and all dimensions of sustainability within the public sector, as evidenced by the high path coefficients and statistically significant T values ($p < 0.05$). Specifically, the path coefficients for managerial resilience influencing social, economic, and environmental sustainability range from 0.688 to 0.889, with corresponding R-square values indicating substantial explanatory power ranging from 47.4% to 79.1%. Moreover, the path coefficient for the overall sustainability of the public sector is 0.732, with an R-square value of 70.0%. These results suggest that higher levels of managerial resilience are associated with greater social cohesion, economic stability, environmental stewardship, and overall sustainability in the public sector.

The findings of this study support the existing literature on the importance of managerial resilience in driving organizational sustainability. For example, research by Bracci and Tallaki (2021) emphasizes the role of resilient leadership in fostering sustainable organizational practices, while Cristiano et al. (2021) highlight the significance of managerial resilience in promoting environmental sustainability in healthcare organizations. Similarly, studies by Zutshi et al. (2021) and Aluko et al. (2024) underscore the positive impact of managerial resilience on economic and social sustainability, respectively. Therefore, the findings of this study resonate with previous research, further affirming the critical role of managerial resilience in advancing sustainability within the public sector.

Specifically, the study concludes that enhancing managerial resilience is crucial for promoting sustainability across various dimensions within the public sector. By investing in strategies to strengthen managerial resilience, such as leadership development programs, capacity-building initiatives, and organizational culture fostering adaptability and innovation, public sector managers can effectively navigate challenges and contribute to the long-term sustainability and prosperity of their organizations. These findings have significant implications for public sector managers, policymakers, and organizational leaders, emphasizing the importance of prioritizing resilience-building efforts to address complex societal challenges and achieve sustainable development goals.

5. Conclusion

This study has provided valuable insights into enhancing resilience and sustainability within the public sector of Southwest Nigeria. Through the identification of barriers and enabling strategies, it was revealed that challenges such as lack of funding, bureaucratic red tape, and political interference hinder organizational resilience, while strategies such as enhanced budget allocation and stakeholder engagement facilitate sustainability efforts. Furthermore, the assessment of managerial resilience's influence on social, economic, and environmental sustainability highlighted significant positive relationships, indicating that higher levels of managerial resilience contribute to greater social cohesion, economic stability, and environmental stewardship within the public sector. These findings underscore the importance of resilient leadership in navigating

challenges and promoting sustainable practices, emphasizing the need for public sector managers to prioritize resilience-building initiatives to address complex societal issues and foster long-term prosperity for Southwest Nigeria.

6. Recommendations and Policy Implications

Based on the findings of this study, several recommendations and policy implications emerge to enhance resilience and sustainability within the public sector of Southwest Nigeria. Firstly, policymakers should prioritize investment in capacity-building initiatives aimed at equipping public sector managers with the necessary skills and competencies to navigate challenges effectively. Leadership development programs focusing on resilience, adaptability, and innovation can empower managers to drive sustainable practices and foster organizational resilience. Additionally, there is a need for streamlined processes and reduced bureaucratic red tape to improve efficiency and resource allocation within public sector organizations. Embracing technology and digitalization can also enhance transparency, accountability, and service delivery, contributing to overall sustainability.

Furthermore, policymakers should formulate policies and strategies that promote stakeholder engagement and collaboration to address complex societal challenges. By involving diverse stakeholders, including government agencies, civil society organizations, and the private sector, in decision-making processes, policymakers can harness collective expertise and resources to develop comprehensive and sustainable solutions. Additionally, enhancing financial mechanisms and budget allocation processes to prioritize sustainability initiatives can ensure adequate resources are allocated to address pressing social, economic, and environmental issues. Moreover, there is a need for continuous monitoring and evaluation of resilience and sustainability efforts to track progress, identify gaps, and adjust strategies accordingly. Ultimately, these recommendations and policy implications can guide policymakers and organizational leaders in fostering a resilient and sustainable public sector in Southwest Nigeria, contributing to the well-being and prosperity of the region's communities.

7. Contributions to Knowledge and Suggestion for Further Studies

This study makes several contributions to the existing knowledge base on resilience and sustainability within the public sector, particularly in the context of Southwest Nigeria. By identifying barriers and enabling strategies for enhancing resilience and sustainability, assessing the influence of managerial resilience on various dimensions of sustainability, and providing recommendations for policymakers and organizational leaders, this research offers valuable insights into the factors shaping organizational effectiveness and societal well-being. Moving forward, further studies could explore the effectiveness of specific resilience-building interventions and sustainability initiatives within public sector organizations, examining their long-term impact on organizational performance and societal outcomes. Additionally, comparative studies across different regions or countries could provide valuable cross-cultural insights into the

determinants of resilience and sustainability within the public sector, informing global best practices and policy recommendations.

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