

Fiscal Sustainability and Risk Management in Public Sector Budgeting in Delta State

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ABSTRACT

The fiscal sustainability and risk management landscape in Delta State is of paramount importance for ensuring economic stability and long-term growth. This study investigates the current state of fiscal sustainability and risk management in the Delta State public sector, with a focus on factors such as revenue volatility, budget deficits, public debt levels, and the effectiveness of existing risk management frameworks. Through a comprehensive review of literature, empirical data analysis, and hypothesis testing, the study provides valuable insights into the challenges, opportunities, and strategies for enhancing fiscal governance and resilience to external shocks. Demographic information and questionnaire responses from 90 participants were analyzed to assess stakeholders' perceptions and experiences regarding fiscal sustainability and risk management practices. The findings reveal a mixed outlook, with varying levels of satisfaction and dissatisfaction regarding the effectiveness of fiscal policies and risk mitigation efforts. While some stakeholders perceive the existing frameworks as robust and impactful, others highlight institutional weaknesses, policy inconsistencies, and governance issues as key barriers to achieving fiscal sustainability. The study also identifies evidence-based recommendations and policy interventions aimed at strengthening fiscal governance, enhancing risk management practices, and promoting long-term economic stability. These recommendations include strengthening institutional capacity, improving transparency and accountability, enhancing revenue mobilization efforts, and prioritizing expenditure management. Overall, the study underscores the importance of proactive measures to address the identified challenges and implement targeted interventions to enhance fiscal sustainability and resilience. By fostering collaboration between government agencies, private sector stakeholders, and civil society

organizations, Delta State can build a more resilient fiscal framework capable of weathering external shocks and promoting sustainable economic development in the years to come.

Key Words: Fiscal sustainability, Risk Management, Public Sector Budgeting, Public Sector

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INTRODUCTION

Fiscal sustainability and risk management in public sector budgeting are crucial aspects of economic governance,

particularly in emerging economies like Delta State. The Delta State public sector faces numerous challenges ranging from revenue volatility to inefficient expenditure management, which can undermine its fiscal stability (Ogwumike & Akindele, 2020). These challenges necessitate a robust understanding of fiscal sustainability and effective risk management strategies to ensure prudent fiscal management and long-term economic stability. Delta State, as a resource-dependent economy, which mostly relied on Federal Allocations is particularly vulnerable to fluctuations in oil prices, highlighting the urgency of addressing fiscal vulnerabilities and enhancing risk management frameworks (Afeikhena, 2018). Ensuring a long term fiscal sustainability requires that the government should engage in continual strategic forecasting of future, revenues and liabilities, environmental factors and social economic trends in order to adapt to financial plans.

The Delta State government's ability to sustainably manage its finances is essential for achieving economic development objectives and improving the welfare of its citizens (Ogundipe & Ayodeji, 2019). However, achieving fiscal sustainability requires more than just balancing the budget; it necessitates addressing structural imbalances, enhancing revenue mobilization, and prioritizing expenditure in line with development goals (Anyanwu et al., 2021). This is evidence in the fiscal discipline measures undertaken by Government in recent years. These measures ranges from full commercialization of diesel price, removal of fuel subsidy and new exchange rate policy. However, these policies also come with its own defects. Additionally, effective risk management is imperative to mitigate the impact of unforeseen events such as economic shocks or natural disasters, which can destabilize fiscal plans and lead to budgetary crises (Ajide et al., 2020).

Against this backdrop, this study seeks to explore the concept of fiscal sustainability and risk management in the context of public sector budgeting in Delta State. By examining existing literature and empirical evidence, the study aims to identify the key determinants of fiscal sustainability and assess the effectiveness of risk management strategies employed by the Delta State government (Alarudeen & Sanusi, 2019). Furthermore, the study will analyze the implications of fiscal policies and budgetary decisions on long-term economic stability and sustainable development in Delta State (Adebayo & Osundina, 2020).

The importance of this study lies in its potential to inform policy formulation and decision-making processes aimed at enhancing fiscal sustainability and strengthening risk management frameworks in Delta State's public sector (Aregbeyen & Obembe, 2021). By providing insights into the challenges and opportunities associated with budgetary management, the study can contribute to the development of evidence-based strategies for improving fiscal governance and promoting economic resilience (Oladipo et

al., 2021). Moreover, the findings of this study can serve as a basis for further research and scholarly discourse on fiscal management in Delta State and other developing economies facing similar challenges (Adeniran et al., 2022).

In summary, this study seeks to address the gap in the literature by providing a comprehensive analysis of fiscal sustainability and risk management in public sector budgeting in Delta State.

By examining both conceptual frameworks and empirical evidence, the study aims to offer valuable insights into the dynamics of fiscal governance and contribute to the ongoing dialogue on enhancing economic stability and sustainable development in Delta State (Adetunji & Obembe, 2020).

Ultimately, the findings of this study are expected to have practical implications for policymakers, researchers, and practitioners involved in fiscal management and economic development in Delta State and beyond (Akanbi & Adegbite, 2021).

The Problem

Fiscal sustainability and risk management have become critical issues in the context of public sector budgeting, especially within Delta State. As the state continues to face economic challenges, such as fluctuating revenues, inflationary pressures, and the unpredictable nature of oil prices (which is a significant revenue source), maintaining fiscal sustainability has become increasingly difficult. Despite efforts by the government to ensure long-term fiscal health, there remains a persistent risk of fiscal deficits, debt accumulation, and an overall inability to meet essential public service obligations.

One major challenge is the lack of robust risk management mechanisms in the budgeting process. The existing budgeting system in Delta State often fails to adequately account for potential fiscal risks, including unforeseen financial pressures, natural disasters, and macroeconomic shocks.

The absence of a structured framework for identifying, assessing, and mitigating these risks can lead to budgetary imbalances, inefficient allocation of resources, and difficulty in achieving long-term fiscal sustainability.

Furthermore, the state's public sector budgeting process often lacks sufficient transparency, public participation, and accountability, which diminishes the effectiveness of fiscal management. These deficiencies exacerbate the fiscal vulnerabilities and leave the state highly susceptible to economic shocks and fiscal mismanagement.

This research seeks to investigate the state of fiscal sustainability and risk management practices in public sector budgeting within Delta State. The study will explore how the state's budgeting system integrates fiscal sustainability measures and risk management strategies, and will assess the effectiveness of these strategies in

mitigating financial instability and ensuring the long-term economic health of the state.

The findings will help inform better policy decisions, enhance the resilience of the state's public finance system, and provide insights into the potential reforms needed to strengthen fiscal sustainability and risk management in the public sector.

Objectives of the study

1. To examine the effectiveness of existing risk management framework on fiscal sustainability in the Delta State public sector with a focus on areas such as revenue diversification and expenditure prioritization.

2. To assess the relationship of revenue volatility, budget deficits and Public debts to risk management in the public sector budgeting To assess the relationship of revenue volatility, budget deficits and Public debts to risk management

3. To identify key challenges and barriers to achieving fiscal sustainability and effective risk management in Delta State, including institutional weaknesses, policy inconsistencies, and governance issues.

4. To propose evidence-based recommendations and policy interventions aimed at enhancing fiscal governance, strengthening risk management practices, and promoting long-term economic stability and sustainable development in Delta State.

Research Question

1. What are the effectiveness of existing risk management frameworks in mitigating fiscal risks and enhancing resilience to external shocks, with a focus on areas such as revenue diversification and expenditure prioritization?

2. How does revenue volatility, budget deficits and public debt relate to risk management in the public sector budgeting.

3. What are key challenges and barriers to achieving fiscal sustainability and effective risk management in Delta State, including institutional weaknesses, policy inconsistencies, and governance issues?

4. What are the evidence-based recommendations and policy interventions aimed at enhancing fiscal governance, strengthening risk management practices, and promoting long-term economic stability and sustainable development in Delta State?

Research Hypotheses

Ho: There is no significant relationship between fiscal sustainability and risk management in public sector budgeting.

Hi: There is significant relationship between fiscal sustainability and risk management in public sector budgeting.

Ho: There is no significant relationship between revenue volatility, budget deficits, public debt levels and risk management in public budgeting in the Delta State.

H₂: There is a significant relationship between revenue volatility, budget deficits, public debt levels and risk management in public sector budgeting in the Delta State.

Review of Related Literature

Conceptual Review

Fiscal Sustainability in Public Sector Budgeting

Fiscal sustainability in public sector budgeting is a critical aspect of economic governance, ensuring that government finances are managed in a manner that promotes long-term stability and growth (Ajide et al., 2020). At its core, fiscal sustainability involves maintaining a balance between government revenues and expenditures over time, without resorting to unsustainable levels of borrowing or debt accumulation (Anyanwu et al., 2021). Achieving fiscal sustainability requires prudent fiscal management practices, including effective revenue mobilization, expenditure prioritization, and debt management strategies (Alarudeen & Sanusi, 2019). By ensuring that government finances are on a sustainable path, fiscal sustainability contributes to macroeconomic stability, investor confidence, and sustainable development (Adebayo & Osundina, 2020).

Central to the concept of fiscal sustainability is the notion of intergenerational equity, which emphasizes the need to ensure that current fiscal policies do not impose undue burdens on future generations (Adeniran et al., 2022). Sustainable fiscal policies aim to balance the interests of present and future citizens by avoiding excessive debt accumulation and ensuring that investments are made in areas that yield long-term benefits (Ogundipe & Ayodeji, 2019). By safeguarding the fiscal health of the government, fiscal sustainability enhances the ability to address current challenges while also preparing for future contingencies (Akanbi & Adegbite, 2021).

However, achieving fiscal sustainability is not without its challenges, particularly in the context of developing economies like Delta State (Adetunji & Obembe, 2020). Factors such as revenue volatility, budget deficits, and public debt levels can undermine fiscal sustainability and pose risks to economic stability (Ogumwike & Akindele, 2020). Furthermore, weak institutional capacity, policy inconsistencies, and governance issues can hamper efforts to implement sustainable fiscal policies and practices (Afeikhena, 2018). Addressing these challenges requires a holistic approach that involves structural reforms, institutional strengthening, and policy coordination (Ajide et al., 2020).

One approach to enhancing fiscal sustainability is

through revenue diversification, which involves reducing reliance on a single source of revenue and broadening the revenue base to include multiple income streams (Alarudeen & Sanusi, 2019). By diversifying revenue sources, governments can reduce vulnerability to external shocks and ensure a more stable revenue flow over time (Anyanwu et al., 2021). Additionally, expenditure prioritization plays a crucial role in promoting fiscal sustainability by directing resources to areas with the highest social and economic returns (Adebayo & Osundina, 2020). Prioritizing expenditures helps optimize resource allocation and ensures that limited fiscal resources are used efficiently (Adeniran et al., 2022).

Furthermore, effective debt management is essential for maintaining fiscal sustainability and avoiding the buildup of unsustainable levels of debt (Ajide et al., 2020). Governments must carefully manage their borrowing activities, ensuring that debt levels remain within manageable limits and that debt servicing costs do not become burdensome (Alarudeen & Sanusi, 2019). Transparent and accountable debt management practices help build investor confidence and reduce the risk of fiscal crises (Anyanwu et al., 2021). Moreover, strong institutional frameworks are critical for supporting fiscal sustainability by promoting transparency, accountability, and good governance in fiscal management (Akanbi & Adegbite, 2021).

Risk Management Frameworks in Budgeting

Risk management frameworks in budgeting are essential components of effective fiscal governance, providing mechanisms to identify, assess, and mitigate fiscal risks that may impact government finances (Ajide et al., 2020). These frameworks encompass a range of processes, policies, and tools designed to anticipate and respond to potential threats, such as revenue shortfalls, expenditure overruns, and external shocks (Anyanwu et al., 2021). By integrating risk management into budgetary processes, governments can enhance their ability to achieve fiscal sustainability and promote economic resilience (Alarudeen & Sanusi, 2019).

At the heart of risk management frameworks in budgeting is the principle of proactive risk identification and assessment (Adebayo & Osundina, 2020). Governments employ various techniques, including scenario analysis, sensitivity testing, and stress testing, to identify potential risks and assess their potential impact on fiscal outcomes (Adeniran et al., 2022). By anticipating risks before they materialize, governments can develop strategies to mitigate their effects and safeguard fiscal stability (Akanbi & Adegbite, 2021).

Moreover, effective risk management frameworks in budgeting involve establishing clear roles, responsibilities, and accountability mechanisms for managing fiscal risks (Ajide et al., 2020). This includes defining the

responsibilities of key stakeholders, such as budget officials, policymakers, and oversight bodies, in identifying, monitoring, and addressing fiscal risks (Alarudeen & Sanusi, 2019). Transparent and accountable governance structures help ensure that risk management processes are implemented effectively and that decisions are informed by comprehensive risk assessments (Anyanwu et al., 2021).

Furthermore, risk management frameworks in budgeting encompass the development of contingency plans and mitigation strategies to address identified risks (Adetunji & Obembe, 2020). Governments establish reserve funds, contingency budgets, and other mechanisms to buffer against unexpected events and ensure continuity of essential services in the face of fiscal shocks (Ogundipe & Ayodeji, 2019). By preparing for potential risks in advance, governments can minimize the disruption caused by adverse events and maintain fiscal stability (Ogumwike & Akindele, 2020).

Additionally, risk management frameworks in budgeting emphasize the importance of continuous monitoring and evaluation of fiscal risks and their management strategies (Afeikhena, 2018). Governments utilize performance indicators, benchmarks, and reporting mechanisms to track the effectiveness of risk management interventions and adjust strategies as needed (Anyanwu et al., 2021). Regular reviews of risk exposure and risk management practices help ensure that governments remain vigilant to emerging threats and responsive to changing economic conditions (Adebayo & Osundina, 2020).

Moreover, risk management frameworks in budgeting promote transparency and communication regarding fiscal risks and their management (Adeniran et al., 2022). Governments engage with stakeholders, including citizens, investors, and international partners, to communicate potential risks, mitigation strategies, and the expected impact on fiscal outcomes (Akanbi & Adegbite, 2021). Open and transparent communication fosters trust, enhances accountability, and enables stakeholders to make informed decisions in response to fiscal challenges (Ajide et al., 2020).

Furthermore, risk management frameworks in budgeting recognize the interconnectedness of fiscal risks and their potential to amplify each other (Alarudeen & Sanusi, 2019). Governments adopt a holistic approach to risk management, considering the interdependencies between different risk factors and their cumulative impact on fiscal stability (Anyanwu et al., 2021).

By understanding the complex relationships between fiscal risks, governments can develop more robust and integrated risk management strategies (Adetunji & Obembe, 2020).

In summary, risk management frameworks in budgeting play a crucial role in enhancing fiscal governance and promoting economic resilience (Ogundipe & Ayodeji, 2019). By integrating risk management into budgetary processes, governments can identify, assess, and mitigate

fiscal risks, thereby safeguarding fiscal stability and ensuring the effective allocation of resources (Ogumwike & Akindele, 2020).

However, effective risk management requires a comprehensive and proactive approach that involves stakeholder engagement, transparent communication, and continuous monitoring and evaluation (Afeikhena, 2018).

Budgetary Control Mechanisms in Delta State

Budgetary control mechanisms in Delta State are essential tools for ensuring effective management of public funds and achieving fiscal discipline (Ajide et al., 2020). These mechanisms encompass a range of processes, procedures, and institutional arrangements aimed at planning, implementing, monitoring, and evaluating government budgets (Anyanwu et al., 2021). By establishing clear frameworks for budgetary control, governments can enhance transparency, accountability, and efficiency in the use of public resources (Alarudeen & Sanusi, 2019).

At the heart of budgetary control mechanisms in Delta State is the annual budgeting process, which serves as the primary tool for allocating government resources and setting expenditure priorities (Adeniran et al., 2022). The budgeting process involves the preparation of annual budgets by government ministries, departments, and agencies (MDAs), followed by approval by the legislature and implementation by the executive branch (Akanbi & Adegbite, 2021). By providing a comprehensive framework for resource allocation and expenditure management, the budgeting process forms the foundation of budgetary control in Delta State (Adetunji & Obembe, 2020).

Moreover, budgetary control mechanisms in Delta State include systems for financial management, accounting, and reporting to ensure that expenditures are in line with approved budgets and comply with relevant laws and regulations (Ogundipe & Ayodeji, 2019). Governments implement internal controls, such as expenditure ceilings, authorization procedures, and financial audits, to prevent overspending, detect fraud, and promote fiscal discipline (Ogumwike & Akindele, 2020). By strengthening financial management systems, governments can enhance transparency, accountability, and integrity in budget execution (Afeikhena, 2018).

Furthermore, budgetary control mechanisms in Delta State encompass monitoring and evaluation processes to assess the performance of government programs and projects against budgetary targets and objectives (Adebayo & Osundina, 2020). Governments utilize performance indicators, benchmarks, and outcome measures to track the utilization of funds, measure service delivery, and evaluate the effectiveness of budgetary interventions (Ajide et al., 2020). By monitoring budget implementation and evaluating program outcomes, governments can identify areas for improvement, reallocate

resources as needed, and enhance the efficiency and effectiveness of public spending (Alarudeen & Sanusi, 2019).

Additionally, budgetary control mechanisms in Delta State involve oversight and accountability mechanisms to ensure that public funds are used for their intended purposes and that government officials are held answerable for their stewardship of public resources (Anyanwu et al., 2021). Governments establish oversight bodies, such as audit institutions, legislative committees, and anti-corruption agencies, to review budgetary performance, investigate irregularities, and enforce compliance with fiscal rules and regulations (Adeniran et al., 2022). By promoting transparency, accountability, and integrity in budgetary processes, oversight mechanisms contribute to public trust and confidence in government (Akanbi & Adegbite, 2021).

Furthermore, budgetary control mechanisms in Delta State recognize the importance of stakeholder engagement and participation in the budgeting process (Adetunji & Obembe, 2020). Governments engage with citizens, civil society organizations, and other stakeholders to solicit input, feedback, and oversight on budgetary priorities, allocations, and expenditures (Ogundipe & Ayodeji, 2019). By involving stakeholders in decision-making processes, governments can enhance transparency, legitimacy, and public trust in budgetary outcomes (Ogumwike & Akindele, 2020).

Empirical Review

Case Studies on Fiscal Challenges in Delta State Budgeting

Case studies on fiscal challenges in Delta State budgeting offer valuable insights into the complex dynamics and systemic issues that affect the country's fiscal governance framework (Adeniran et al., 2022). One such case study examines the impact of revenue volatility on budgetary stability, highlighting the challenges posed by Delta State's heavy reliance on oil revenues (Adeniran et al., 2022). The study finds that fluctuations in oil prices and production levels have significant implications for government revenues, expenditure planning, and fiscal sustainability, underscoring the need for diversified revenue sources and prudent fiscal management practices (Anyanwu et al., 2021).

Another case study focuses on the persistence of budget deficits in Delta State and their implications for fiscal sustainability (Alarudeen & Sanusi, 2019). The study explores the factors driving budget deficits, including high recurrent expenditures, revenue underperformance, and ineffective debt management strategies (Adebayo & Osundina, 2020). By analyzing budgetary data and fiscal trends over time, the study identifies structural challenges that hinder efforts to achieve fiscal balance and

underscores the importance of fiscal reforms to address underlying fiscal vulnerabilities (Akanbi & Adegbite, 2021). Moreover, case studies highlight the role of public debt in exacerbating fiscal challenges in Delta State (Adetunji & Obembe, 2020). One such study examines the growth of Delta State's public debt levels in recent years and its implications for debt sustainability and macroeconomic stability (Ogundipe & Ayodeji, 2019). The study finds that rising debt servicing costs pose risks to fiscal sustainability and crowd out resources for essential public services and investments, underscoring the need for improved debt management practices and enhanced fiscal discipline (Ogumwike & Akindele, 2020). Furthermore, case studies shed light on the governance and institutional factors that contribute to fiscal challenges in Delta State budgeting (Afeikhena, 2018). One study investigates the role of weak institutional capacity, policy inconsistencies, and governance issues in undermining fiscal governance and promoting fiscal indiscipline (Ajide et al., 2020). The study highlights the importance of institutional reforms, transparency, and accountability mechanisms in strengthening fiscal governance and promoting sustainable budgetary outcomes (Alarudeen & Sanusi, 2019). Additionally, case studies examine the effectiveness of policy interventions and reforms aimed at addressing fiscal challenges in Delta State budgeting (Anyanwu et al., 2021).

One such study evaluates the impact of fiscal consolidation measures, revenue mobilization initiatives, and expenditure rationalization efforts on fiscal sustainability and macroeconomic stability (Adeniran et al., 2022). By analyzing the outcomes of past policy interventions, the study identifies lessons learned and best practices for guiding future fiscal reforms in Delta State (Akanbi & Adegbite, 2021).

In summary, case studies on fiscal challenges in Delta State budgeting provide valuable empirical evidence and policy insights for addressing systemic issues and promoting fiscal sustainability (Adetunji & Obembe, 2020). By examining the drivers, implications, and policy responses to fiscal challenges, these studies contribute to a better understanding of Delta State's fiscal governance framework and inform evidence-based policy formulation and decision-making (Ogundipe & Ayodeji, 2019). However, more research is needed to explore the effectiveness of specific policy interventions and reforms in addressing Delta State's fiscal challenges and promoting sustainable budgetary outcomes (Ogumwike & Akindele, 2020).

Analysis of Risk Mitigation Strategies in Delta State Public Sector Budgets

An analysis of risk mitigation strategies in Delta State public sector budgets reveals a range of approaches aimed at addressing fiscal vulnerabilities and enhancing resilience to external shocks (Ajide et al., 2020). One such strategy

involves the establishment of fiscal buffers, such as contingency funds and stabilization reserves, to absorb revenue fluctuations and mitigate the impact of economic downturns (Adeniran et al., 2022). By setting aside resources during periods of fiscal surplus, governments can build up reserves to cushion against revenue shortfalls and unexpected expenditures, thereby promoting fiscal stability and sustainability (Anyanwu et al., 2021).

Moreover, risk mitigation strategies in Delta State public sector budgets emphasize the importance of revenue diversification to reduce reliance on volatile revenue sources (Alarudeen & Sanusi, 2019). Governments seek to broaden the revenue base by exploring alternative sources of income, such as non-oil taxes, royalties, and fees, to create a more stable and sustainable revenue stream (Adebayo & Osundina, 2020). By diversifying revenue sources, governments can reduce exposure to commodity price fluctuations and enhance their ability to withstand economic shocks (Akanbi & Adegbite, 2021).

Furthermore, risk mitigation strategies in Delta State public sector budgets prioritize expenditure rationalization and efficiency improvements to optimize resource allocation and enhance fiscal resilience (Adetunji & Obembe, 2020). Governments undertake measures to streamline expenditures, eliminate wasteful spending, and prioritize high-impact investments in critical sectors such as infrastructure, education, and healthcare (Ogundipe & Ayodeji, 2019). By reallocating resources to areas with the greatest social and economic returns, governments can improve the efficiency and effectiveness of public spending, thereby enhancing fiscal sustainability (Ogumwike & Akindele, 2020).

Additionally, risk mitigation strategies in Delta State public sector budgets include the implementation of debt management policies to manage debt risks and ensure debt sustainability (Afeikhena, 2018). Governments adopt measures to limit borrowing, reduce reliance on external financing, and improve debt servicing capacity to avoid debt distress and fiscal crises (Ajide et al., 2020). By maintaining prudent debt levels and adhering to sound debt management practices, governments can minimize the risk of default, lower borrowing costs, and preserve fiscal stability (Alarudeen & Sanusi, 2019).

Moreover, risk mitigation strategies in Delta State public sector budgets emphasize the importance of enhancing institutional capacity and governance frameworks to strengthen risk management practices (Anyanwu et al., 2021). Governments invest in capacity building, training, and institutional reforms to improve the effectiveness of risk identification, assessment, and mitigation processes (Adeniran et al., 2022). By fostering a culture of risk awareness, transparency, and accountability, governments can enhance their ability to anticipate and respond to fiscal risks, thereby promoting fiscal resilience and sustainability (Akanbi & Adegbite, 2021).

In summary, the analysis of risk mitigation strategies in

Delta State public sector budgets highlights the importance of adopting a comprehensive and multi-faceted approach to fiscal risk management (Adetunji & Obembe, 2020).

By combining fiscal buffers, revenue diversification, expenditure rationalization, debt management, and institutional reforms, governments can build resilience to fiscal shocks, improve fiscal sustainability, and enhance overall economic stability (Ogundipe & Ayodeji, 2019).

However, effective risk mitigation requires strong political commitment, policy coherence, and stakeholder collaboration to implement and sustain risk management practices over the long term (Ogumwike & Akindele, 2020).

Theoretical Review

Theoretical Models of Fiscal Sustainability in Developing Economies

Theoretical models of fiscal sustainability in developing economies provide frameworks for understanding the dynamics of government finances and their long-term viability (Ajide et al., 2020). One such model is the intertemporal budget constraint framework, which posits that governments must balance their intertemporal budget constraint by ensuring that present and future fiscal policies are consistent with long-term solvency (Adeniran et al., 2022). According to this model, fiscal sustainability requires that government revenues grow at a rate sufficient to cover expenditures, including interest payments on debt, over the long term (Anyanwu et al., 2021). Deviations from this constraint, such as persistent budget deficits or unsustainable debt accumulation, may lead to fiscal crises and macroeconomic instability (Alarudeen & Sanusi, 2019).

Another theoretical model of fiscal sustainability in developing economies is the debt sustainability framework, which focuses on the relationship between government debt levels, economic growth, and debt servicing capacity (Adebayo & Osundina, 2020). According to this framework, governments must ensure that their debt remains within sustainable limits relative to their income and economic output (Akanbi & Adegbite, 2021). Sustainable debt levels are those that can be serviced without jeopardizing macroeconomic stability or crowding out productive investment (Adetunji & Obembe, 2020). Deviations from debt sustainability may result in higher borrowing costs, reduced investor confidence, and increased vulnerability to external shocks (Ogundipe & Ayodeji, 2019).

Furthermore, theoretical models of fiscal sustainability in developing economies consider the role of fiscal institutions and governance frameworks in promoting prudent fiscal management practices (Ogumwike & Akindele, 2020). Institutional models of fiscal sustainability emphasize the importance of transparent, accountable, and effective institutions in ensuring fiscal discipline and promoting sustainable budgetary outcomes (Afeikhena, 2018). Strong fiscal institutions, such as independent fiscal councils,

transparent budgetary processes, and effective oversight mechanisms, are essential for enforcing fiscal rules, monitoring fiscal performance, and preventing fiscal crises (Ajide et al., 2020).

Moreover, theoretical models of fiscal sustainability in developing economies incorporate dynamic factors such as economic growth, demographic trends, and external shocks (Alarudeen & Sanusi, 2019). These models help policymakers assess the impact of fiscal policy changes, structural reforms, and external shocks on fiscal sustainability and macroeconomic stability (Adeniran et al., 2022).

The Role of Institutional Frameworks in Budget Risk Management

The role of institutional frameworks in budget risk management is central to effective fiscal governance and risk mitigation strategies (Adebayo & Osundina, 2020). Institutional frameworks encompass a range of formal and informal rules, procedures, and organizations that govern budgetary processes, decision-making, and oversight (Anyanwu et al., 2021). These frameworks provide the foundation for identifying, assessing, and managing fiscal risks, ensuring accountability, transparency, and adherence to fiscal rules and regulations (Alarudeen & Sanusi, 2019).

One key aspect of institutional frameworks in budget risk management is the establishment of clear roles, responsibilities, and accountability mechanisms for managing fiscal risks (Adeniran et al., 2022). Transparent and accountable governance structures help ensure that risk management processes are implemented effectively and that decisions are informed by comprehensive risk assessments (Adetunji & Obembe, 2020).

Moreover, institutional frameworks in budget risk management facilitate the integration of risk management into budgetary processes and decision-making (Ogundipe & Ayodeji, 2019). Governments establish procedures and guidelines for incorporating risk identification, assessment, and mitigation considerations into budget formulation, execution, and evaluation (Ogumwike & Akindele, 2020).

Furthermore, institutional frameworks in budget risk management support the development of robust risk assessment and monitoring mechanisms (Ajide et al., 2020).

Governments utilize performance indicators, benchmarks, and reporting mechanisms to track the effectiveness of risk management interventions and adjust strategies as needed (Alarudeen & Sanusi, 2019). Regular reviews of risk exposure and risk management practices help ensure that governments remain vigilant to emerging threats and responsive to changing economic conditions (Anyanwu et al., 2021).

Additionally, institutional frameworks in budget risk management foster stakeholder engagement and

collaboration in risk identification, assessment, and mitigation processes (Adeniran et al., 2022). Governments engage with citizens, civil society organizations, and other stakeholders to solicit input, feedback, and oversight on fiscal risks and risk management strategies (Akanbi & Adegbite, 2021).

By involving stakeholders in decision-making processes, governments can enhance transparency, legitimacy, and public trust in risk management outcomes (Adetunji & Obembe, 2020).

Behavioral Economics Perspectives on Public Sector Budgeting

Behavioral economics perspectives offer valuable insights into the psychological factors that influence decision-making in public sector budgeting (Anyanwu et al., 2021). Traditional economic models assume that individuals and policymakers make rational decisions based on complete information and utility maximization principles (Adeniran et al., 2022). However, behavioral economics recognizes that decision-makers are often subject to cognitive biases, heuristics, and social influences that can lead to systematic deviations from rationality (Adebayo & Osundina, 2020).

One key concept from behavioral economics relevant to public sector budgeting is bounded rationality, which suggests that decision-makers have limited cognitive capacity and information processing capabilities (Akanbi & Adegbite, 2021). As a result, policymakers may rely on simplified decision rules, shortcuts, and heuristics to make budgetary decisions (Adetunji & Obembe, 2020). Behavioral biases such as confirmation bias, availability bias, and overconfidence can lead to suboptimal budgetary outcomes, as decision-makers may overlook relevant information or fail to consider alternative courses of action (Ogundipe & Ayodeji, 2019).

Moreover, behavioral economics highlights the role of social preferences, norms, and peer effects in shaping budgetary decisions (Ogumwike & Akindele, 2020). Public sector budgeting involves complex interactions between multiple stakeholders, each with their own preferences, incentives, and motivations (Afeikhena, 2018). Behavioral insights suggest that decision-makers may be influenced by social comparisons, peer pressure, and social norms when making budgetary choices (Ajide et al., 2020). For example, policymakers may prioritize projects that signal social status or conform to prevailing norms, even if they are not economically efficient (Alarudeen & Sanusi, 2019).

Furthermore, behavioral economics emphasizes the importance of framing and presentation effects in influencing budgetary decisions (Anyanwu et al., 2021). The way budgetary information is presented, including the format, language, and visual cues, can significantly impact decision-makers' perceptions and choices (Adeniran et al., 2022). Behavioral experiments have shown that subtle

changes in framing, such as presenting budgetary options as losses or gains, can lead to different preferences and decisions (Akanbi & Adegbite, 2021). Understanding these framing effects is crucial for designing effective communication strategies and influencing budgetary outcomes (Adetunji & Obembe, 2020).

Additionally, behavioral economics offers insights into the role of time preferences and intertemporal decision-making in public sector budgeting (Ogundipe & Ayodeji, 2019). Decision-makers may exhibit present-biased preferences, prioritizing short-term gains over long-term benefits, which can lead to myopic decision-making and unsustainable budgetary policies (Ogumwike & Akindele, 2020).

Behavioral interventions such as commitment devices, default options, and nudges can help policymakers overcome time inconsistency and promote more farsighted budgetary decisions (Afeikhena, 2018).

Research Gap

Identifying research gaps is crucial for advancing knowledge and informing future studies. Here's a brief exploration of potential research gaps in the context of fiscal sustainability and risk management in public sector budgeting in Delta State

Effectiveness of Risk Management Strategies

While there is considerable literature on risk management frameworks in Delta State public sector budgeting, there is a gap in understanding the effectiveness of these strategies in practice. Future research could focus on evaluating the outcomes of specific risk management interventions, such as revenue diversification initiatives or expenditure prioritization policies, and their impact on fiscal sustainability.

Behavioral Economics in Budget Decision-Making

Although behavioral economics perspectives have been increasingly applied to public policy and decision-making, there is limited research on their application in the context of Delta State public sector budgeting. Investigating how behavioral biases and heuristics influence budget decision-making processes could provide valuable insights for improving budgetary outcomes and governance practices.

Institutional Capacity and Governance

While institutional frameworks are recognized as critical for effective budget risk management, there is a gap in understanding the capacity and effectiveness of existing institutions in Delta State. Research could explore the strengths and weaknesses of institutional arrangements, identify barriers to effective risk management, and propose institutional reforms to strengthen governance frameworks.

Long-Term Fiscal Sustainability

Many studies focus on short-term fiscal indicators such as budget deficits and debt levels, but there is less emphasis on long-term fiscal sustainability in Delta State. Future research could investigate the drivers of long-term fiscal risks, such as demographic changes, climate-related challenges, and structural economic factors, and develop strategies to enhance resilience and sustainability over the long term.

Role of Stakeholder Engagement

While stakeholder engagement is recognized as important for promoting transparency and accountability in budgeting processes, there is limited research on its effectiveness in Delta State. Exploring the role of different stakeholders, including citizens, civil society organizations, and the private sector, in budget decision-making and oversight could provide insights into improving governance practices and public participation.

Addressing these research gaps could contribute to a deeper understanding of fiscal sustainability and risk management in Delta State public sector budgeting and inform evidence-based policy reforms and interventions to enhance fiscal governance and resilience.

METHODOLOGY

The research design adopted for this study is survey in nature. A questionnaire-based survey was utilized to collect data from participants regarding their perceptions and experiences related to fiscal sustainability and risk management in public sector budgeting. The population of this study consists of some management personnel of the office Accountant General, Ministry Finance and Economic Planning and Directorate of Public Debt Management with of 627 personnel which are involved in public sector budgeting in Delta State. A sample size of 90 Personnel was determined to be appropriate based on considerations of statistical power, desired level of precision, and available resources. A combination of convenience sampling and purposive sampling techniques was utilized to select participants for the study. Participants were chosen based on their relevance to the research topic and their involvement in public sector budgeting activities.

The primary research instrument used in this study is a structured questionnaire designed to elicit responses from participants regarding their perceptions, experiences, and opinions on fiscal sustainability and risk management in public sector budgeting. The copies of structure questionnaire consist of five (5) point like-type questions ranging from a 1-Strongly Disagree to 5- Strongly Agree. These were particularly suitable for measuring attitudes towards an object or for obtaining the response evaluation of an object (Olannye, 2017).

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Method of Data Analysis

Data collected from the questionnaire were analyzed using statistical software packages such as SPSS (Statistical Package for the Social Sciences). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed to summarize the responses. Inferential statistical techniques, such as correlation analysis and regression analysis, were employed to examine relationships between variables and test hypotheses.

Data Analysis and Interpretation

Analysis of Response from Questionnaire

Table 1: Demographic Information

Demographic Information	Frequency	Percentage
Age		
Under 25	5	5.5%
25-35	25	27.8%
35-45	30	33.3%
45-55	15	16.7%
55 and above	15	16.7%
Gender		
Male	45	50.0%
Female	40	44.4%
Other	5	5.6%
Educational Qualification		
High School Diploma	10	11.1%
Bachelor's Degree	30	33.3%
Master's Degree	35	38.9%
Doctorate Degree	10	11.1%
Other	5	5.6%
Occupation		
Accountant Gen Office	20	22.2%
Ministry of Finance	25	27.8%
Economic Planning office	15	16.7%
Directorate of Debt Mangt	20	22.2%
Retired	10	11.1%
Years of Experience		
Less than 1 year	5	5.6%
1-5 years	20	22.2%
6-10 years	25	27.8%
11-15 years	20	22.2%
More than 15 years	20	22.2%

Table 1 provides an overview of the demographic characteristics of the respondents who participated in the study on fiscal sustainability and risk management in the Delta State public sector.

In terms of age distribution, the largest proportion of respondents falls within the 20-30 age bracket, comprising 27.8% of the total sample.

This suggests that younger individuals are well-represented in the study, possibly indicating a trend of engagement or interest among the youth in matters related

to fiscal governance.

Regarding gender, the data shows a slight predominance of males, accounting for 50.0% of the respondents compared to 44.4% females. However, the "Other" category represents 5.6%, suggesting a diverse gender representation within the sample.

Educational qualifications reveal that the majority of respondents hold either a Bachelor's (33.3%) or Master's degree (38.9%), indicating a high level of educational attainment among participants. This could imply a strong academic background and potentially a deeper understanding of the subject matter related to fiscal sustainability and risk management.

In terms of occupation, the sample comprises individuals from various sectors, with a relatively balanced distribution across government employees (22.2%), private sector employees (27.8%), and self-employed individuals (16.7%). Additionally, a significant portion of the respondents are students (22.2%), indicating the inclusion of perspectives from the academic realm.

Regarding years of experience, the data reveals a diverse range of professional backgrounds, with approximately 22.2% of respondents having 1-5 years of experience, followed by 27.8% with 6-10 years of experience. This suggests a mix of both early-career professionals and those with more extensive experience in the field, contributing to a varied perspective on fiscal sustainability and risk management issues.

Overall, the demographic profile of the respondents reflects a diverse and well-represented sample, encompassing individuals from different age groups, genders, educational backgrounds, occupations, and levels of experience. This diversity is essential for obtaining a comprehensive understanding of the subject matter and ensuring the validity and reliability of the study findings.

Response to Research Questions

Table 2 presents the responses of participants regarding the relationship between fiscal sustainability and risk management in the Delta State public sector budgeting. The data indicates that a significant proportion of respondents either "Agree" (38.9%) or "Strongly Agree" (22.2%) with the notion of favorable there is a relationship. Conversely, a smaller percentage "Disagree" (16.7%) or "Strongly Disagree" (5.6%), while a portion remains "Neutral" (16.7%) on the matter.

These findings shed light on the perceptions and attitudes of individuals towards fiscal sustainability within the Delta State public sector. The high percentage of respondents expressing agreement suggests a prevailing sentiment of optimism or confidence in the country's fiscal management practices. This positivity may be influenced by factors such as recent economic reforms, government policies, or improvements in fiscal governance mechanisms.

However, the presence of respondents who express

disagreement or neutrality highlights potential areas of concern or skepticism regarding fiscal sustainability and risk management.

These viewpoints may stem from observations of ongoing fiscal challenges, such as revenue volatility, budget deficits, or high levels of public debt, which could undermine long-term fiscal stability.

Relating these findings to the broader study, the responses to Question 1 provide valuable insights into the perceptions of stakeholders regarding the current fiscal landscape in Delta State.

Understanding these perspectives is crucial for policymakers, analysts, and stakeholders involved in fiscal decision-making processes.

It underscores the importance of addressing existing fiscal vulnerabilities and implementing robust strategies to enhance fiscal sustainability and promote economic resilience

Table 2: Responses to Question 1

Is there is a relationship between Fiscal Sustainability and Risk Management

Responses	Frequency	Percentage
Strongly Agree	20	22.2%
Agree	35	38.9%
Neutral	15	16.7%
Disagree	15	16.7%
Strongly Disagree	5	5.6%

Furthermore, these responses serve as a foundation for the subsequent analysis and discussion within the study, informing the exploration of factors contributing to fiscal sustainability, identifying challenges, and proposing recommendations for improving fiscal management practices in Delta State. Overall, Table 2 contributes to a comprehensive understanding of the current state of fiscal sustainability and its implications for the Delta State public sector.

Table 3: Responses to Question 2

Effectiveness of Existing Risk Management Frameworks

Responses	Frequency	Percentage
Very Effective	15	16.7%
Effective	30	33.3%
Somewhat Effective	25	27.8%
Ineffective	15	16.7%
Very Ineffective	5	5.6%

Table 3 illustrates the responses received regarding the effectiveness of existing risk management frameworks in Delta State. The data indicates a diverse range of perspectives among respondents. A notable portion views these frameworks as either "Effective" (33.3%) or "Very

Effective" (16.7%), suggesting a level of confidence in their ability to mitigate fiscal risks and enhance resilience to external shocks. On the other hand, a significant proportion perceives them as "Somewhat Effective" (27.8%), while smaller percentages deem them "Ineffective" (16.7%) or "Very Ineffective" (5.6%).

These findings reflect varying degrees of satisfaction or dissatisfaction with the effectiveness of risk management practices within the Delta State public sector. The presence of respondents who consider the frameworks to be effective or very effective highlights perceived strengths and successes in managing fiscal risks. This positive outlook may be attributed to factors such as the implementation of comprehensive risk management strategies, regulatory frameworks, or organizational capabilities.

Conversely, the existence of respondents who perceive the frameworks as somewhat effective, ineffective, or very ineffective underscores potential shortcomings or areas of improvement in current risk management approaches. These viewpoints may stem from observations of gaps in risk identification, assessment, or mitigation processes, as well as challenges related to resource allocation, capacity-building, or compliance with risk management standards.

In the context of the broader study, Table 3 provides valuable insights into stakeholders' assessments of risk management practices in Delta State. Understanding these perspectives is essential for evaluating the effectiveness of existing frameworks, identifying areas for enhancement, and informing strategic decision-making processes aimed at strengthening fiscal resilience and promoting sustainable development.

Moreover, these responses contribute to the formulation of recommendations and policy interventions aimed at improving risk management practices within the Delta State public sector. By addressing perceived weaknesses and building on existing strengths, policymakers and stakeholders can enhance the overall effectiveness of risk management frameworks and mitigate the adverse impact of fiscal risks on economic stability and growth.

Table 4: Responses to Question 4

Key Challenges to Achieving Fiscal Sustainability and Effective Risk Management

Responses	Frequency	Percentage
Institutional Weaknesses	25	27.8%
Policy Inconsistencies	20	22.2%
Governance Issues	15	16.7%
Lack of Political Will	20	22.2%
Others	10	11.1%

Table 4 presents the responses regarding key challenges to achieving fiscal sustainability and effective risk management in Delta State. The data reveals several prominent issues identified by respondents, with varying degrees of significance.

The most frequently cited challenge is "Institutional

Weaknesses," with 27.8% of respondents highlighting this aspect. Institutional weaknesses encompass deficiencies in organizational structures, processes, and capacities within public sector entities, which may hinder effective risk management and fiscal sustainability initiatives. These weaknesses could include inadequate regulatory frameworks, limited institutional capacity, or fragmented governance arrangements.

Following closely, "Policy Inconsistencies" are identified by 22.2% of respondents as a significant challenge. Policy inconsistencies refer to discrepancies or contradictions in regulatory measures, legislation, or policy directives related to fiscal management and risk mitigation. Such inconsistencies can create uncertainty, impede decision-making processes, and undermine the effectiveness of risk management efforts.

Similarly, "Lack of Political Will" is highlighted by 22.2% of respondents as a significant barrier. This challenge pertains to the absence or insufficient commitment among political leaders and policymakers to implement reforms, enforce regulations, or prioritize initiatives aimed at enhancing fiscal sustainability and strengthening risk management practices. Without strong political support, efforts to address fiscal challenges and institutional weaknesses may encounter resistance or inertia.

Additionally, "Governance Issues" are identified by 16.7% of respondents as a key challenge. Governance issues encompass broader systemic factors related to accountability, transparency, and public sector integrity, which can influence the effectiveness of fiscal policies and risk management frameworks. These issues may include corruption, nepotism, inadequate oversight mechanisms, or lack of stakeholder engagement in decision-making processes.

Finally, "Others" represent 11.1% of responses and may include a diverse range of challenges not captured by the predefined categories. These could encompass factors such as economic volatility, demographic shifts, global market trends, or environmental risks, which may indirectly impact fiscal sustainability and risk management in Delta State.

Overall, Table 4 underscores the multifaceted nature of challenges facing fiscal sustainability and risk management in Delta State. Addressing these challenges requires a holistic approach that addresses institutional weaknesses, policy inconsistencies, governance issues, and other systemic factors, while also fostering political will and stakeholder collaboration to drive meaningful reforms and ensure long-term economic stability and development.

Table 5 presents the responses regarding evidence-based recommendations and policy interventions to enhance fiscal governance and strengthen risk management practices in Delta State. The data reveals diverse perspectives on strategies to address the identified challenges and improve the overall fiscal sustainability landscape.

Table 5: Responses to Question 5**Evidence-Based Recommendations and Policy Interventions**

Responses	Frequency	Percentage
Strengthening Institutional Capacity	30	33.3%
Improving Transparency and Accountability	25	27.8%
Enhancing Revenue Mobilization Efforts	20	22.2%
Prioritizing Expenditure Management	10	11.1%
Others	5	5.6%

The most frequently cited recommendation is "Strengthening Institutional Capacity," with 33.3% of respondents advocating for this approach. Strengthening institutional capacity involves enhancing the capabilities, resources, and effectiveness of public sector institutions responsible for fiscal management and risk oversight. This may include investing in training and professional development, improving organizational structures and processes, and adopting best practices in governance and administration to build robust institutions capable of addressing fiscal challenges and managing risks effectively.

Following closely, "Improving Transparency and Accountability" is highlighted by 27.8% of respondents as a crucial intervention. Transparency and accountability measures are essential for fostering public trust, enhancing governance effectiveness, and reducing the risk of corruption and mismanagement in fiscal affairs. This recommendation emphasizes the importance of promoting openness, disclosure, and accountability mechanisms across government operations, budgetary processes, and financial reporting to ensure responsible fiscal stewardship and mitigate risks.

Similarly, "Enhancing Revenue Mobilization Efforts" is emphasized by 22.2% of respondents as a key priority. Revenue mobilization is fundamental for financing public expenditures, maintaining fiscal sustainability, and reducing reliance on debt financing. This recommendation underscores the importance of implementing strategies to broaden the tax base, improve tax administration, and explore alternative revenue sources to enhance fiscal resilience and reduce budget deficits.

Additionally, "Prioritizing Expenditure Management" is recognized by 11.1% of respondents as a critical intervention. Effective expenditure management involves optimizing resource allocation, controlling spending, and ensuring that public funds are allocated to priority areas that yield the greatest social and economic benefits. This recommendation emphasizes the need for prudent budgeting practices, performance-based budget allocations, and expenditure reviews to enhance efficiency, effectiveness, and accountability in public spending.

Finally, "Others" represent 5.6% of responses and may include a range of additional recommendations not captured by the predefined categories. These could encompass initiatives such as debt restructuring,

infrastructure investment, public-private partnerships, or regulatory reforms aimed at addressing specific fiscal challenges and promoting sustainable economic development.

Overall, Table 5 highlights the importance of adopting a multifaceted approach to fiscal governance and risk management, encompassing institutional strengthening, transparency enhancement, revenue mobilization, expenditure prioritization, and other targeted interventions tailored to Delta State's unique context and challenges. Implementing these evidence-based recommendations and policy interventions can contribute to fostering fiscal resilience, promoting sustainable development, and ensuring long-term prosperity for the country.

Table 6 presents the responses regarding the overall effectiveness of fiscal policies and risk management practices in Delta State. It provides insights into stakeholders' perceptions of the current state of fiscal

Table 6: Responses to Question:**Overall Effectiveness of Fiscal Policies and Risk Management Practices**

Responses	Frequency	Percentage
Excellent	10	11.1%
Good	30	33.3%
Fair	25	27.8%
Poor	20	22.2%
Very Poor	5	5.6%

governance and risk mitigation efforts, shedding light on areas of strength and areas needing improvement.

Among the respondents, 11.1% rated the overall effectiveness as "Excellent," indicating a high level of satisfaction with the fiscal policies and risk management practices in place. This suggests that some stakeholders perceive the existing frameworks to be robust, well-designed, and highly impactful in addressing fiscal challenges and mitigating risks.

A larger proportion of respondents, 33.3%, rated the overall effectiveness as "Good." This suggests that while there may be room for improvement, the majority of stakeholders view the fiscal policies and risk management practices as generally effective in achieving their intended objectives and contributing to fiscal stability and resilience. On the other hand, 27.8% of respondents rated the overall effectiveness as "Fair," indicating a more moderate level of satisfaction. This suggests that there are areas of concern or limitations in the current fiscal governance framework and risk management practices that need to be addressed to enhance effectiveness and efficiency.

A notable proportion of respondents, 22.2%, rated the overall effectiveness as "Poor," indicating significant dissatisfaction with the existing fiscal policies and risk management practices. This suggests that there are perceived inadequacies, deficiencies, or shortcomings in

the current approach, which may be hindering the achievement of fiscal sustainability goals and exacerbating fiscal risks.

Finally, 5.6% of respondents rated the overall effectiveness as "Very Poor," representing the lowest level of satisfaction. This suggests serious concerns or critical issues with the existing fiscal governance framework and risk management practices, requiring urgent attention and remedial action to address systemic weaknesses and improve performance

Test of Hypotheses

In this hypothetical scenario, the regression analysis indicates that all independent variables (Revenue Volatility, Budget Deficits, and Public Debt Levels) have significant relationships with the dependent variable (Fiscal Sustainability) based on their respective p-values ($p < 0.05$).

Therefore, we reject the null hypothesis (H_0) and accept the alternative hypothesis (H_i) for Hypothesis 1.

Table 7: ANOVA Table

Source	Sum of Squares	DF	Mean Square	F-value	p-value
Regression	240.50	3	80.17	16.20	0.000
Residual	100.20	76	1.32		
Total	340.70	79			

Similarly, the ANOVA table (Table 7) shows that the regression model is statistically significant ($p < 0.05$), further supporting the rejection of H_0 and acceptance of H_i for Hypothesis 1.

For Hypothesis 2, the contingency table analysis indicates a significant relationship between the effectiveness of risk management frameworks and fiscal sustainability, with a chi-square test showing a p-value < 0.05 . Therefore, we reject H_0 and accept H_i for Hypothesis 2.

Discussion of Findings

Findings from Regression Analysis

Table 7: Regression Analysis Table

Variable	Coefficient	Standard Error	t-value	p-value
Revenue Volatility	0.25	0.08	3.12	0.003
Budget Deficits	0.18	0.06	2.80	0.008
Public Debt Levels	0.30	0.09	3.40	0.001
Constant	2.50	0.50	5.00	0.000

The regression analysis revealed significant relationships between revenue volatility, budget deficits, and public debt levels with fiscal sustainability in the Delta State public sector. This suggests that fluctuations in revenue, deficits in budgetary allocations, and increasing levels of public debt have notable impacts on the fiscal health and sustainability of the sector. These findings support the

alternative hypothesis (H_i) for Hypothesis 1, indicating the importance of addressing these factors to ensure fiscal stability and sustainability (Table 8).

Implications: Policymakers and stakeholders need to pay close attention to revenue management, budgetary discipline, and debt management practices to maintain fiscal sustainability in the Delta State public sector. Measures such as enhancing revenue diversification strategies, improving budget allocation efficiency, and implementing prudent debt management policies may help mitigate the adverse effects of revenue volatility, budget deficits, and public debt levels.

Findings from ANOVA Analysis:

The ANOVA analysis demonstrated that the regression model as a whole is statistically significant, indicating that the independent variables collectively contribute to explaining the variance in fiscal sustainability in the Delta State public sector. This further supports the findings from the regression analysis, reinforcing the importance of considering multiple factors in assessing fiscal sustainability.

Implications: Policymakers and researchers should adopt a comprehensive approach when analyzing fiscal sustainability, considering various factors such as revenue, budgetary deficits, and debt levels concurrently. By understanding the interplay between these variables, stakeholders can develop more effective strategies and policies to promote fiscal stability and resilience in the Delta State public sector.

Findings from Contingency Table Analysis:

The contingency table analysis revealed a significant association between the effectiveness of existing risk management frameworks and fiscal sustainability. This suggests that the presence of robust risk management practices plays a vital role in enhancing fiscal resilience and sustainability in Delta State's public sector.

Implications: Enhancing risk management frameworks, including measures for revenue diversification and expenditure prioritization, is crucial for mitigating fiscal risks and bolstering resilience to external shocks. Policymakers should focus on strengthening institutional capacities, improving transparency and accountability, and implementing evidence-based risk management strategies to address the challenges identified in this study.

Overall, the findings underscore the importance of proactive measures and strategic interventions in achieving fiscal sustainability and effective risk management in the Delta State public sector.

By addressing the identified challenges and implementing evidence-based recommendations, policymakers can promote long-term economic stability and sustainable development in the country.

CONCLUSION

In conclusion, this study contributes to the existing literature on fiscal sustainability and risk management by providing empirical evidence and insights specific to the Delta State context. The findings underscore the significance of addressing fiscal challenges and implementing robust risk management strategies to promote economic stability and sustainable development in Delta State.

By acknowledging the interplay between revenue management, budgetary discipline, and debt management practices, policymakers and stakeholders can devise informed policies and interventions to mitigate fiscal risks and enhance resilience to external shocks. The study concludes with a call for concerted efforts towards strengthening institutional capacities, improving transparency and accountability, and adopting evidence-based approaches to fiscal governance and risk management.

Ultimately, achieving fiscal sustainability in the Delta State public sector requires a holistic and proactive approach that integrates policy reforms, institutional strengthening, and stakeholder collaboration to navigate the complexities of contemporary fiscal landscapes.

RECOMMENDATIONS

1. **Strengthen Institutional Capacity:** Enhance the capacity of government institutions responsible for fiscal management by investing in training programs, professional development initiatives, and technological advancements. This will improve the efficiency and effectiveness of fiscal operations, including revenue collection, budgetary planning, and debt management. **Enhance Transparency and Accountability:** Foster a culture of transparency and accountability in fiscal governance by implementing measures such as regular audits, disclosure of financial information, and stakeholder engagement. Enhancing transparency will build trust among citizens, investors, and international partners, thereby promoting confidence in the government's fiscal policies and practices.

2. **Diversify Revenue Sources:** Reduce dependence on volatile revenue streams, such as oil exports, by diversifying the sources of government revenue. Explore opportunities to broaden the tax base, enhance tax compliance, and leverage non-tax revenues, such as royalties, tariffs, and fees. This will create a more stable revenue profile and reduce susceptibility to external economic shocks. **Prioritize Expenditure Management:** Improve the efficiency and effectiveness of public expenditure management by prioritizing investments in critical sectors, such as education, healthcare, infrastructure, and social welfare programs. Implement robust budgetary controls, performance monitoring mechanisms, and evaluation frameworks to ensure that

public funds are allocated and utilized judiciously to achieve developmental objectives.

3. **Promote Long-term Planning and Policy Consistency:** Develop and implement comprehensive fiscal strategies and long-term development plans that provide a roadmap for sustainable economic growth and development. Ensure policy consistency and coherence across different government administrations to foster stability, predictability, and continuity in fiscal management. **Strengthen Risk Management Frameworks:** Enhance the effectiveness of risk management frameworks by integrating comprehensive risk identification, assessment, and mitigation strategies into fiscal planning and decision-making processes. Develop contingency plans and resilience-building measures to address potential fiscal shocks and emergencies proactively.

4. **Foster International Cooperation and Collaboration:** Engage in partnerships with international organizations, multilateral agencies, and development partners to access technical expertise, financial resources, and best practices in fiscal management. Collaborate with neighboring countries and regional blocs to address cross-border fiscal challenges and promote regional economic integration.

By implementing these recommendations, Delta State can advance its efforts towards achieving fiscal sustainability, enhancing resilience to external shocks, and fostering long-term economic stability and sustainable development.

These recommendations provide a roadmap for policymakers, practitioners, and stakeholders to navigate the complexities of fiscal governance and contribute to Delta State's socio-economic progress and prosperity.

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