An Empirical Assessment of Pension Fund Sustainability and Determinants in Nigeria

By

Benjamin Evbuomwan Oseghale (Ph.D)
Department of Business Administration,
Faculty of Social and Management Sciences
Achievers University Owo, Ondo State, Nigeria.
oseghale.be@achievers.edu.ng +2348027468040
&
Judith Oghogho Amadasun (Ph.D)
Department of Human Resource Management
University of Benin, Benin City, Edo State, Nigeria
judith.amadasun@uniben.edu **+2348137344714**

Abstract

The sustainability of Nigeria's contributory pension scheme has become a central policy concern, particularly in the face of persistent governance lapses, non-remittance of pension deductions, weak regulatory enforcement, restrictive investment practices, and inconsistencies in the disbursement of retirement benefits. This study empirically evaluates the relative influence of governance, regulation, investment strategy, risk management, and contributor motivation on pension fund sustainability in Nigeria. Drawing on a structured empirical review of forty-one peer-reviewed studies published between 2004 and 2023, the research synthesizes quantitative and qualitative evidence to assess the strength, direction, and consistency of relationships among the core determinants. Findings show that governance and risk management exert the strongest influences on sustainability, followed by regulatory frameworks and investment strategy, while motivation contributes indirectly through trust, compliance, and satisfaction. The study proposes the Integrated Determinants of Pension Fund Sustainability (IDPFS Theory), which demonstrates how institutional, financial, and behavioural mechanisms collectively shape long-term viability. Policy recommendations emphasise enhanced governance transparency, autonomous and consistent regulatory enforcement, diversified investment portfolios, strengthened

internal controls, and improved service delivery to maintain contributor confidence.

Key Words: Governance, Regulation, Investment Strategy, Risk management, and Contributor Motivation

Introduction

Nigeria's pension system has undergone extensive reforms, most notably with the introduction of the Contributory Pension Scheme (CPS) under the Pension Reform Act (PRA) 2004 and its amendment in 2014. These reforms were designed to address challenges inherent in the former Defined Benefit system, including unfunded liabilities, corruption, administrative inefficiencies, and delayed benefit payments. Despite significant improvements, the CPS continues to face issues such as non-remittance of pension deductions, weak regulatory supervision, misappropriation of funds, limited investment diversification, and irregular pension payments. These factors threaten the long-term sustainability of the scheme and erode public trust in the system's capacity to guarantee retirement income security.

Pension sustainability refers to the ability of a pension system to meet current and future obligations without imposing excessive economic or social burdens (Mollenkamp, 2021). Achieving sustainability requires a coordinated approach encompassing institutional governance, regulatory compliance, financial management, risk control, and behavioural elements such as motivation and trust. This study evaluates empirical evidence on the extent to which these determinants shape pension sustainability in Nigeria, with the aim of offering a coherent analytical model for future reform.

Research Objectives

The study aims to empirically assess the determinants of pension fund sustainability in Nigeria. Specifically, it seeks to examine how governance, regulation, investment strategy, risk management, and contributor motivation influence sustainability.

Research Hypotheses

In order to access the study, five hypotheses were formulated which are as follows:

H_{O1}: Governance positively affects pension sustainability.

H_{O2}: Regulation positively affects pension sustainability.

H_{O3}: Investment strategy significantly influences pension sustainability.

H_{O4}: Risk management positively affects pension sustainability.

H_{O5}: Contributor motivation significantly influences pension sustainability

Literature Review

Governance and Sustainability

Governance consistently emerges as one of the strongest predictors of pension sustainability. Alamdin et al., 2019 show that transparent governance practices, competent boards, and effective oversight improve pension fund performance. Adekunle et al. (2019) confirm that governance significantly predicts CPS sustainability in Lagos State. Conversely, Unachukwu et al. (2020) and Chukwuemeka et al. (2019) reveal that poor governance erodes compliance, reduces efficiency, and compromises sustainability. Stewart and Yermo (2008) also emphasise governance failures across global pension systems and advocate for balanced board representation, improved trustee expertise, and strong ethical codes. Additional studies support this pattern. Ekpe (2016) finds that adherence to governance principles strengthens contributor trust, while Mpinga and Westerman (2018) highlight the centrality of trustee boards in Tanzanian pension governance. Other Nigerian studies (Okoye & Richard, 2013) report that governance positively shapes performance and reduces systemic failures in the pension sector.

Regulation and Sustainability

Regulatory enforcement is crucial for pension sustainability. Ezugwu et al. (2009) show that penalties and strict enforcement enhance compliance. Nweke and Ogar (2020) find that weak regulation reduces fund sustainability, while Egunjobi et al. (2020) identify inadequate supervision and irregular contributions as significant threats. Ezenwa and Obiagwu (2020) call for reforms to address supervisory gaps and fraud. Other empirical studies reinforce the importance of regulation. Odo et al. (2019) reveal widespread non-compliance driven by economic downturns and supervisory lapses. Ilodibe and Okonkwo (2020) confirm improved transparency

under the CPS but highlight persistent issues with non-remitting employers. Akpusugh and Iyortsuun (2013) further show that governance quality and regulation jointly shape fund adequacy and administrative efficiency.

Investment Strategy and Sustainability

Evidence on investment strategy presents a mixed but largely positive pattern. Dunmade and Fashagba (2019) argue that effective investment management enhances long-term sustainability, whereas Gunu and Tsado (2012) show that pension fund investments contribute to capital market development. Dostal (2010) and Bakare (2022) caution that restrictive guidelines and over-dependence on government securities limit returns. Other studies show contrasting outcomes. Adekunle et al. (2019) report a negative relationship between investment strategy and sustainability due to limited diversification and low-risk preferences. However, Nwawolo and Nwogwugwu (2019) find that contributors' participation in investment decisions improves retirees' living standards. Akingunola et al. (2022) demonstrate that investment in equities enhances financial depth, while Bakare (2022) finds that corporate and government securities improve market capitalisation.

Risk Management and Sustainability

Risk management consistently displays a strong positive effect on pension sustainability. Ijeoma and Nwufo (2015) link weak risk controls to delays, mismanagement, and inefficiencies. Jimoh and Khadijah (2021) find that internal controls significantly enhance fund safety and performance. Onakeke and Falope (2020) confirm positive effects of risk-based supervision, while Kesinro (2018) shows that risk perceptions influence contributor behaviour. Shimawua (2020) further highlights corruption and poor sanctions as sources of pension crises. Studies across Nigeria (Adekunle et al. 2019; Jimoh & Khadijah, 2021) consistently demonstrate risk management as a central driver of sustainability.

Motivation and Sustainability

Contributor motivation plays an indirect but critical role. Eze and Anikeze (2018) show that the CPS improves morale and retention, while Akhiojemi et al.(2018) report that delayed benefits undermine trust and reduce engagement. Fiiwe (2020) highlights improved welfare packages as contributors to better satisfaction. Other

studies emphasise the role of service quality, timely payments, and transparent communication (Akinnusi et al., 2020) in shaping compliance, trust, and long-term participation.

Theoretical Framework

The study draws on five reviewed theories related to the subject matter to espouse the theoretical perspectives. The Agency theory (Alchian & Demsetz, 1972) explains the role of governance in reducing information asymmetry between contributors and fund managers, ensuring accountability and transparency. Institutional theory (DiMaggio & Powell, 1983) contextualises compliance with regulatory frameworks such as PRA 2014, describing how institutional norms and rules shape organisational behaviour. Modern portfolio theory (Markowitz, 1952) underpins investment strategy by emphasising diversification and risk-return optimisation in pension asset allocation. Risk management theory (**Bernoulli,** 1738; **Markowitz,** 1952 & **Simon,** 1947) highlights the importance of identifying, assessing, and mitigating operational, financial, and systemic risks in securing long-term fund viability. Expectancy theory (Vroom, 1964) addresses the behavioural component of pension sustainability, demonstrating how perceptions of fairness, transparency, and expected benefits shape contributor satisfaction, trust, and compliance. Together, these theories support a multi-dimensional understanding of pension sustainability, integrating institutional, financial, and behavioural factors.

Methodology

The study relied on a structured empirical review of forty-one peer-reviewed studies conducted between 2004 and 2023. Inclusion criteria focused on studies addressing pension sustainability or its determinants in Nigeria and comparable contexts. The study employed **synthesised thematic analysis** to systematically integrate findings from the forty-one selected peer-reviewed studies. Each study was first reviewed to extract relevant data on pension fund sustainability determinants, including governance, regulation, investment strategies, risk management, and contributor behaviour. Themes were then identified by grouping recurring concepts, patterns, and statistical relationships across studies, allowing for a comparative assessment of both direct and indirect effects on pension sustainability. The synthesis involved evaluating the **strength,**

consistency, and contextual relevance of findings, highlighting areas of agreement and divergence. This approach enabled the construction of an **integrated understanding of institutional, financial, and behavioural determinants,** providing a coherent framework for theory development and policy recommendations. The approach enabled an integrated assessment of institutional, financial, and behavioural determinants.

Empirical Findings

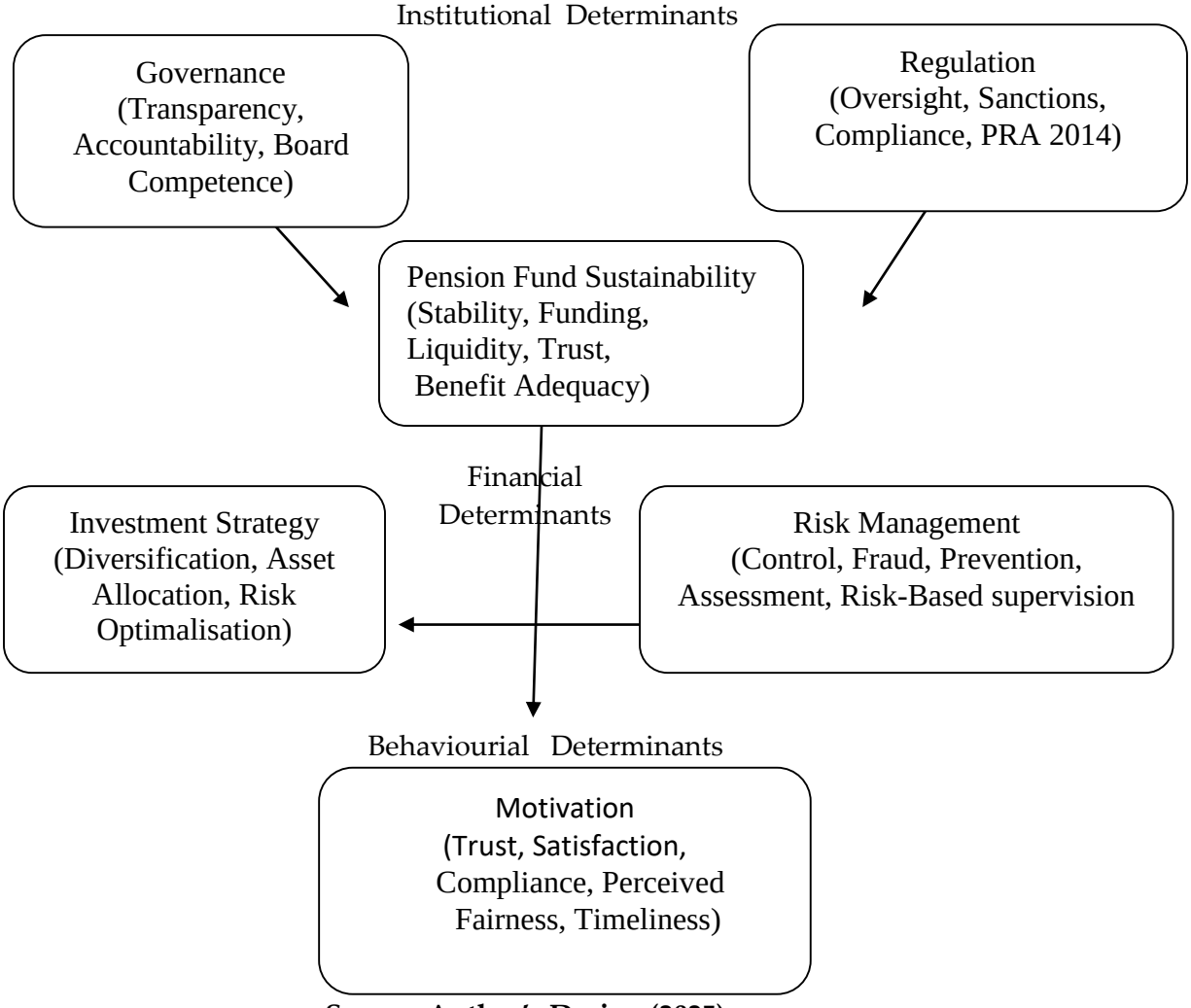
Governance was the strongest determinant, with over eighty-five percent of studies reporting significant positive effects. Key contributors to sustainability included transparency, board competence, stakeholder involvement, and strong oversight. Regulation showed a strong but enforcement-dependent effect. While seventy-two percent of studies confirmed positive associations, many noted challenges relating to compliance, supervision, and legal loopholes. Investment strategy produced mixed results. Sixty percent of studies showed positive effects when portfolios were diversified; however, forty percent reported limited influence due to constrained guidelines and risk aversion. Risk management demonstrated consistent direct effects on sustainability. Eighty percent of studies identified internal controls, sanctions, risk assessment, and anti-fraud measures as essential pillars of pension stability. Motivation exerted an indirect but meaningful effect through trust, compliance, satisfaction, and engagement. Sixty-five percent of studies linked morale and perceptions of fairness to long-term system viability.

Discussion of Findings

The results show that pension sustainability in Nigeria is shaped by a constellation of institutional, financial, and behavioural determinants. Governance and risk management constitute the foundation of pension stability, ensuring that funds are protected, efficiently managed, and transparently administered. Regulation is indispensable, but its effectiveness depends on consistent enforcement and institutional autonomy. Investment strategy remains constrained by regulatory guidelines and a strong preference for low-risk assets, calling for more innovative diversification. Motivation influences sustainability indirectly by shaping trust, satisfaction, and willingness to comply behavioural factors that are essential for the long-term credibility of the system.

The empirical evidence confirms that pension fund sustainability in Nigeria is influenced by governance, regulation, investment strategy, risk management, and contributor motivation. Governance and risk management exert the strongest effects, followed by regulation and investment strategy, while motivation reinforces sustainability by sustaining trust and compliance. Together, the empirical evidence forms a coherent basis for the IDPFS Theory

Integrated Determinants of Pension Fund Sustainability (IDPFS Theory)



Source: Author's Design (2025)

The diagram above depicts that pension sustainability in Nigeria is shaped by a collection of institutional, financial, and behavioural determinants.

Institutional Determinants

Institutional determinants, comprising governance and regulation, are central to ensuring sustainability. Governance encapsulates transparency, accountability, and board competence, which collectively strengthen fund management, reduce misappropriation, and enhance operational efficiency. Regulation refers to the enforcement of legal frameworks such as the Pension Reform Act (PRA 2014), emphasizing compliance monitoring, oversight, and application of sanctions to safeguard contributors' rights. These institutional factors directly influence fund stability, liquidity, and benefit adequacy, forming the foundation for a resilient and sustainable pension system.

Financial Determinants

Financial determinants, including investment strategy and risk management, directly affect the growth and security of pension funds. Investment strategy involves effective diversification, asset allocation, and return optimization to ensure the sustainability of fund resources while minimizing exposure to financial risks. Risk management incorporates internal controls, fraud prevention measures, risk assessment, and risk-based supervision, all aimed at mitigating operational vulnerabilities. Collectively, these mechanisms ensure financial stability, maintain benefit delivery, and support long-term fund viability.

Behavioural Determinants

Contributor motivation serves as a behavioural mechanism that indirectly reinforces pension fund sustainability. Motivated contributors are more likely to comply with contribution requirements, maintain trust in fund administrators, and engage positively with the pension system. Motivation is influenced by perceived fairness, timely benefit payments, transparency in fund management, and overall satisfaction with pension services. By fostering trust and compliance, motivation indirectly enhances sustainability, complementing the direct effects of institutional and financial mechanisms.

The IDPFS framework emphasizes the synergistic interaction between institutional, financial, and behavioural mechanisms. Institutional and financial determinants directly affect pension fund outcomes, including stability, funding adequacy, liquidity, and long-term viability. Behavioural determinants, through trust and compliance, amplify these effects indirectly. The integration of these mechanisms illustrates that sustainable pension fund management requires a multi-dimensional approach that balances governance, regulatory oversight, prudent financial management, and contributor engagement.

Conclusion

This study examined the institutional, financial, and behavioural determinants of pension fund sustainability in Nigeria through a structured empirical review of forty-one peer-reviewed studies published between 2004 and 2023. The findings show that governance and risk management exert the most consistent and substantial influence on pension stability, while regulation and investment strategy contribute meaningfully but are moderated by enforcement capacity and diversification constraints. Contributor motivation, though indirect in its effect, remains essential for sustaining trust, compliance, and long-term participation in the Contributory Pension Scheme. The study integrates these determinants into the Integrated Determinants of Pension Fund Sustainability (IDPFS Theory), which demonstrates that sustainable pension systems emerge from the interaction of institutional oversight, prudent financial management, and positive contributor behaviour. Overall, the evidence indicates that strengthening governance transparency, enhancing regulatory autonomy, improving investment diversification, fortifying internal controls, and promoting contributor confidence are critical to securing the long-term viability of Nigeria's pension system

Recommendations

1. There is need to strengthen governance within PFAs and regulatory agencies through transparent reporting, robust audits, and ethical board appointments to enhance accountability and decision-making.
2. Regulatory oversight should be reinforced by granting greater autonomy to PenCom, enforcing sanctions consistently, and updating the Pension Reform Act to close loopholes and streamline compliance.

3. Investment guidelines should allow prudent diversification into alternative asset classes, while continuous training for fund managers improves portfolio allocation and performance. 4. Standardised risk management practices, including internal controls, stress-testing, and fraud prevention mechanisms, are essential to safeguard pension funds.

5. Contributor motivation should be enhanced through timely information on contributions and benefits, improved customer service, and expanded digital platforms to strengthen transparency and public confidence.