

## Systemic Challenges and Reform Pathways for Enhancing Pension Scheme Effectiveness: Empirical Evidence from Zambia's National Pension Scheme Authority

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### Abstract

The National Pension Scheme Authority (NAPSA) is Zambia's central statutory body mandated to provide income security against retirement, invalidity, and death. Despite notable institutional growth, NAPSA continues to grapple with persistent structural and operational challenges that constrain its ability to deliver effective pension services. This study assessed the principal challenges affecting pension payments and coverage, examined their influence on pension system effectiveness, and identified actionable strategies to enhance service delivery. Using a mixed-methods design, data were collected from 307 survey respondents and three key informant interviews with NAPSA directors. Quantitative findings revealed pervasive challenges, including administrative delays (65.2%), payment delays that diminish confidence (88.6%), inadequate technological systems (51.1%), difficulties enrolling eligible contributors (67.4%), and weaknesses in management and coordination (77.2%). These challenges had a statistically significant negative influence on pension system effectiveness, confirmed by the Kruskal-Wallis test ( $X^2 = 133.7, p = 0.0001$ ) and regression analysis (coefficients = 0.26–0.27,  $p = 0.001$ ). Respondents strongly supported reforms such as digital system upgrades, staff capacity enhancement, improved monitoring and evaluation, expanded public awareness, and strengthened stakeholder partnerships. Qualitative insights underscored compliance challenges, reliance on manual processes, investment limitations, and the urgency of digitized national identification systems. The study concludes that NAPSA's pension scheme effectiveness is compromised by systemic administrative and technological inefficiencies but can be substantially improved through targeted reforms centered on digital transformation, institutional strengthening, and inclusive coverage expansion.

## 1. Introduction

Pension schemes are widely recognised as fundamental pillars of social security systems, providing income protection to individuals in old age, disability, or upon the death of a breadwinner. The International Labour Organization (ILO), through Convention No. 102 of 1952, established minimum standards for social security, requiring ratifying countries to design schemes that guarantee basic income security and medical care (ILO, 1952). While the convention provides a global framework, the design and implementation of pension schemes vary across nations depending on economic capacity, political priorities, and social development trajectories.

In line with these global standards, Zambia has progressively developed its social security system. The National Pension Scheme Authority (NAPSA), established in 2000 under the National Pension Scheme Act No. 40 of 1996, replaced the Zambia National Provident Fund (ZNPF) and has become the cornerstone of Zambia's pension framework. NAPSA ensures that workers contribute to and benefit from structured retirement plans, balancing financial sustainability with the imperative of protecting workers' welfare (NAPSA, 2023).

Despite notable progress, challenges remain. Over 80% of Zambia's labour force is employed in the informal economy (Miti et al., 2023; Dawood, 2022). To address this, the government enacted Statutory Instrument No. 72 of 2019, extending social security coverage to informal and self-employed workers. NAPSA subsequently developed tailored benefit packages, initially targeting small-scale dairy farmers in Southern, Central, and Copperbelt Provinces, supported by collaborations with the ILO and the Finnish Institute for Health and Welfare (Miti et al., 2023). However, implementation hurdles persist, including inadequate human resources, infrastructure, and equipment.

Financial strain has also undermined pension delivery. By 2017, the University of Zambia had accumulated ZMW 1.28 billion in pension-related debt, rising to ZMW 1.43 billion in 2018, equivalent to 72.6% of the Ministry of Higher Education's annual budget (Yohane et al., 2021). The COVID-19 pandemic further exacerbated these difficulties, while the assumption that expanding formal sector employment would naturally increase social security coverage has proven flawed (Labour Institute of Zambia, 2015).

## 1.2 The Statement of the Problem

Despite reforms and expansion efforts, NAPSA continues to face significant challenges in delivering effective pension services. Persistent issues include low employer compliance, poor management, mistrust of institutions, and delays in registration and payout processes, which erode confidence in the scheme (Yohane et al., 2021). Governance and investment strategies have substantial fiscal implications, requiring improved analytical competencies and impact assessments (Siyumbano & Kaira, 2024).

At the macro level, Zambia's social protection programmes face persistent poverty and inequality, with over 65% of the population living in poverty (Zambia Statistics Agency, 2022). Political dynamics and competing priorities often hinder the expansion and institutionalisation of social protection programmes (Sachiwena & Seekings, 2024). Fraud, bribery, and corruption remain prevalent, with workers soliciting bribes from beneficiaries to expedite applications (Winkler et al., 2017).

Against this backdrop, NAPSA's role in extending coverage to informal workers and ensuring timely pension payments remains critical. However, the extent to which existing pension provisions effectively address these challenges is unclear. This study therefore aims to establish the key challenges NAPSA faces, assess their effect on pension scheme effectiveness, and propose strategies to enhance service delivery.

## 2. Literature Review

### 2.1 Key Challenges Pension Schemes Face

Globally, pension schemes struggle with fiscal sustainability, coverage expansion, and administrative inefficiencies. High-income countries face aging populations and rising costs, prompting reforms such as raising retirement ages and shifting to defined-contribution schemes (OECD, 2022; Barr, 2020). Middle-income countries grapple with expanding coverage to informal workers, often adopting multi-pillar systems and flexible contributions (World Bank, 2020; ILO, 2021). Low-income countries contend with very low coverage and weak institutional capacity, relying on non-contributory pensions and donor support (HelpAge International, 2023; UNU-WIDER, 2025). In Africa, including Zambia, challenges include limited infrastructure, weak governance, and political constraints (Miti et al., 2023).

#### Challenges on Effectiveness

Effectiveness is undermined by demographic pressures, financial volatility, and administrative weaknesses. In high-income contexts, reforms often reduce adequacy while aiming for sustainability (OECD, 2023). Middle-income countries face persistent inefficiencies and limited coverage despite structural reforms (Durán-Valverde & Pacheco, 2022). Low-income countries struggle with ghost pensioners, poor benefits, and fiscal constraints (UNU-WIDER, 2025). For Zambia, these global lessons resonate: poor liquidity, growing liabilities, and regional disparities threaten adequacy and sustainability (Yohane, Mwanza & Chowa, 2022).

#### Practical Strategies to Enhance Effectiveness

Strategies vary by income level but converge on improving sustainability and coverage. High-income countries emphasise investment diversification, NDC schemes, and raising retirement ages (OECD, 2022). Middle-income countries focus on flexible contributions, matching schemes, and multi-tiered systems (ILO, 2021). Low-income countries adopt universal non-contributory pensions, micro-pension plans, and community-based insurance (HelpAge International, 2023). For Zambia, adopting a multi-pillar approach, strengthening institutional capacity, and diversifying investments are critical to balancing adequacy with sustainability.

### 2.2 Research Gap

The analysis reveals a systemic implementation gap in pension systems, where policies and frameworks are not effectively translated into practice. Coverage expansion remains limited, especially among informal workers, while financial sustainability is constrained by weak investment strategies. Administrative inefficiencies, service delays, and governance shortcomings highlight institutional capacity gaps. Benefit levels are inadequate, and existing legal frameworks have not been fully operationalized to address labour market changes or encourage private pension participation. Low trust and weak stakeholder engagement further underscore deficiencies in communication, transparency, and accountability.

## 3 Methodology

The study adopted a mixed-methods design combining quantitative and qualitative techniques to generate a robust understanding of the challenges affecting NAPSA. A concurrent descriptive and exploratory approach allowed simultaneous collection of numerical data and in-depth perspectives from institutional actors. Using Yamane's formula:

$$n = \frac{N}{1 + N(e)^2}$$

With  $N = 1,392$  and  $e = 0.05$ , the formula yields a sample size of approximately 311, indicating that a sample of this size sufficient to represented the entire population accurately. The quantitative component involved administering structured questionnaires to 307 respondents drawn from a total population of 1,392 active employers, employees, and pension stakeholders. Simple random sampling ensured representativeness, and data were analysed using descriptive statistics, the Kruskal-Wallis test, and multiple linear regression to determine the relationship between system challenges and pension effectiveness.

The qualitative component consisted of three key informant interviews with senior NAPSA directors from the Strategy, Contributions and Benefits,

and Internal Audit divisions. These individuals were purposively selected based on their expertise and extensive institutional knowledge. Data were analysed thematically to uncover patterns, institutional constraints, and reform priorities. Ethical considerations were fully observed, including informed consent, confidentiality, and secure handling of information. This methodological approach ensured that the findings reflected both broad stakeholder experiences and expert-level institutional insights.

## 4 Results

### 4.1 Description of Respondents' Characteristics

A total of 307 respondents participated in the study, representing a diverse cross-section of individuals knowledgeable about or directly interacting with NAPSA.

#### Age Distribution

The majority were aged between 35-44 years (46.9%), followed by 25-34 years, with smaller proportions aged 45 and above (Figure 1).

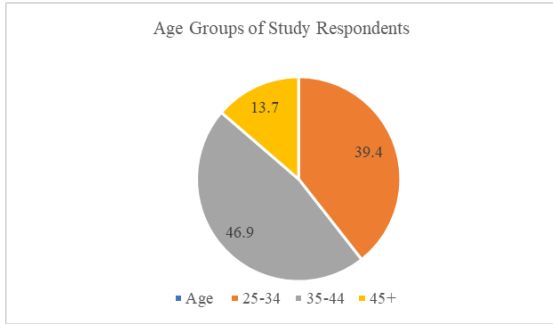


Figure 1: Age Groups of Study Respondents

#### Gender Composition

Respondents were predominantly male (72.3%), reflecting typical workforce patterns in Zambia's formal employment sectors (Figure 2).

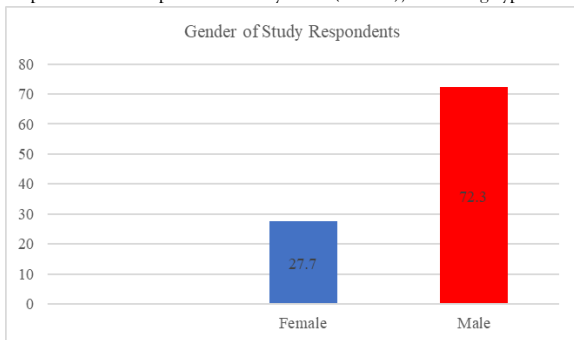


Figure 2: Gender of Study Respondents

#### Educational Attainment

Most respondents were well-educated, with 43.7% holding undergraduate degrees and 39.4% postgraduate qualifications. Smaller proportions had college or secondary-level education (Figure 3).

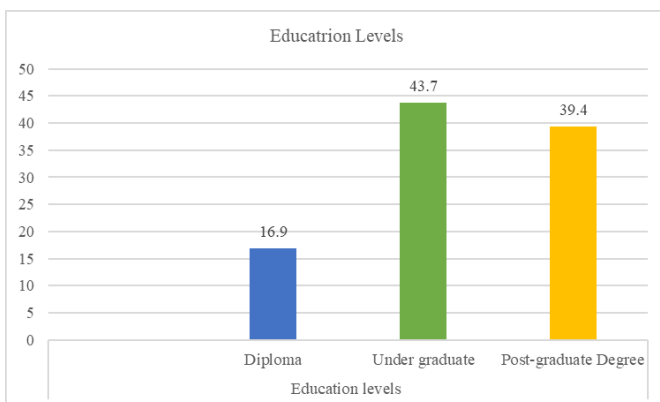


Figure 3: Education Levels of Study Respondents

#### Knowledge of NAPSA Services

Awareness was generally high: 42.4% reported strong knowledge of NAPSA's services, while 29% reported moderate awareness (Figure 4).

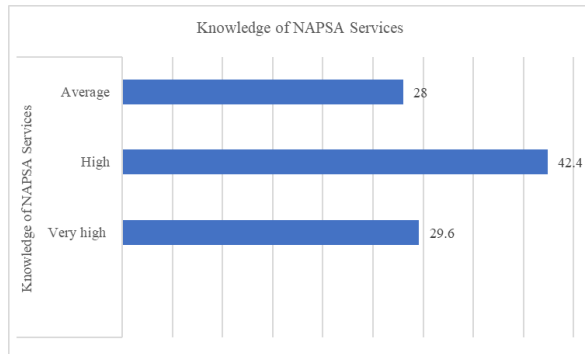


Figure 4: Knowledge of NAPSA Services by Study Respondents

#### 4.2 Key challenges NAPSA faces in managing pension payments and coverage

The study revealed several critical challenges undermining NAPSA's pension scheme effectiveness. Administrative delays were widely reported, with 65.2% of respondents indicating that slow processing of pension claims significantly affects service delivery. Payment delays were even more pronounced, with 88.6% noting that these erode beneficiary confidence and create dissatisfaction among retirees. Weak technological infrastructure was identified by 51.1% of respondents, who felt that NAPSA's systems are outdated and inadequate for modern pension operations. Coverage gaps were also evident, with 67.4% highlighting difficulties enrolling informal-sector workers. Finally, overall management weaknesses, including poor internal coordination and limited human resource capacity, were acknowledged by 77.2% of participants (Table 1).

Table 1: Key Challenges in Pension Management

Variable and Categories	Total Number of Respondents (N=307)				
	SD	D	N	A	SA
	n (%)	n (%)	n (%)	n (%)	n (%)
<b>Key Challenges in Pension Management</b>	19 (6.2)	48 (15.6)	53 (17.3)	139 (45.3)	48 (15.6)
NAPSA struggles to make pension payments on a timely basis.	42 (13.7)	79 (25.7)	44 (14.3)	106 (34.5)	36 (11.7)
Pension coverage does not meet the needs of beneficiaries.	7 (2.3)	84 (27.4)	80 (26.1)	107 (34.9)	29 (9.5)
Administrative problems delay pension processing.	43 (14.0)	28 (9.1)	36 (11.7)	171 (55.7)	29 (9.5)
NAPSA has difficulty enrolling all eligible individuals.	23 (7.5)	42 (13.7)	35 (11.4)	179 (58.3)	28 (9.1)
Poor technology infrastructure hinders pension management.	29 (9.5)	99 (32.3)	22 (7.2)	114 (37.1)	43 (14.0)
Management challenges weaken the pension scheme's effectiveness.	14 (4.6)	7 (2.3)	49 (16.0)	157 (51.1)	80 (26.1)
Payment delays reduce beneficiaries' confidence.	0 (0.0)	14 (4.6)	21 (6.8)	164 (53.4)	108 (35.2)
Challenges create regional disparities in pension coverage.	0 (0.0)	49 (16.0)	73 (23.8)	157 (51.1)	28 (9.1)
Recipients are dissatisfied with current pension management.	14 (4.6)	21 (6.8)	71 (23.1)	129 (42.0)	72 (23.5)
These challenges undermine the pension scheme's sustainability.	21 (6.8)	56 (18.2)	99 (32.3)	109 (35.5)	22 (7.2)

#### 4.3 Effect of the challenges on the pension scheme

Statistical analysis confirmed that these challenges have a measurable adverse effect on pension scheme performance. The Kruskal-Wallis test produced a value of  $X^2 = 133.7$  with a p-value of 0.0001, indicating significant variation in effectiveness based on the severity of operational challenges. Regression analysis reinforced this relationship, with coefficients ranging from 0.26 to 0.27 ( $p = 0.001$ ), confirming that administrative, technological, and operational constraints significantly reduce pension system effectiveness (Table 2).

Table 2: Strategies for implementing pension system solutions

Variable and Categories	Total Number of Respondents (N=307)				
	SD	D	N	A	SA
	n (%)	n (%)	n (%)	n (%)	n (%)
<b>Strategies for Implementing Pension System Solutions</b>	6 (2.0)	1(0.3)	20 (6.5)	129(42.0)	137 (44.6)
NAPSA should improve its technology.	0 (0.0)	0 (0.0)	14 (4.6)	163 (53.1)	130 (42.4)
Staff need more training.	0 (0.0)	0 (0.0)	21 (6.8)	151 (49.2)	135 (44.0)
Monitoring and evaluation should be strengthened.	7 (2.3)	0 (0.0)	35 (11.4)	164 (53.4)	101 (32.9)
Public awareness should be increased.	7 (2.3)	0 (0.0)	7 (2.3)	107 (34.9)	186 (60.6)
Stakeholder partnerships should be strengthened.	7 (2.3)	7 (2.3)	14 (4.6)	128 (41.7)	151 (49.2)
Technology efficiency should be enhanced.	7 (2.3)	0 (0.0)	21 (6.8)	158 (51.5)	121 (39.4)
Public awareness should boost participation and trust.	7 (2.3)	0 (0.0)	0 (0.0)	0 (0.0)	165 (53.8)
Staff skills need further improvement.	7 (2.3)	0 (0.0)	28 (9.1)	144 (46.9)	128 (41.7)
Communication should be more transparent.	0 (0.0)	0 (0.0)	14 (4.6)	136 (44.3)	157 (51.1)
Enrolment should be streamlined.	144.6	7 (2.3)	50 (16.3)	143 (46.6)	93 (30.3)

#### 4.4 Kruskal-Wallis Test on Factors Affecting Strategies Implementation

The Kruskal-Wallis test was conducted to examine differences in strategies for implementing pension system solutions across demographic and key study variables. Table 4 shows statistically significant differences by age ( $X^2 = 41.1$ ,  $p = 0.0001$ ), sex ( $X^2 = 7.1$ ,  $p = 0.0075$ ), and key challenges in pension management ( $X^2 = 133.7$ ,  $p = 0.0001$ ). Education levels and knowledge of NAPSA services did not show significant differences.

Table 3: Kruskal: Wallis Test on factors affecting implementation of strategies

Variables	Strategies for Implementing NAPSA Pension System Solutions N=307	
	X <sup>2</sup>	P
Age	41.1	0.0001
sex	7.1	0.0075
Education levels	0.1	0.9553
Knowledge of NAPSA Services	0.8	0.6740
Key Challenges in NAPSA's Pension Management	133.7	0.0001

#### 4.5 Multiple Linear Regression

To identify predictors of effective strategies implementation, multiple linear regression analysis was performed (see Table 4). Age and sex were significant predictors in both unadjusted and adjusted models, with age showing a negative relationship and sex a positive relationship with strategies implementation. Additionally, key challenges in pension management significantly predicted strategies implementation, suggesting that recognition of these challenges influences the adoption of solutions. Education level and knowledge of NAPSA services did not significantly predict strategies implementation.

Table 4: Multiple Regression Analysis

Variables	Unadjusted Model			Adjusted Model		
	Coef.	95% CI	P	Coef.	95% CI	P
Age	-0.10	-0.20, -0.0	0.038	-0.10	-0.19, -0.0	0.042
sex	0.26	0.13,0.0	0.001	0.26	0.12,0.0	0.001
Education levels	-0.01	-0.10,0.0	0.765			
Knowledge of NAPSA Services	-0.02	-0.11,0.0	0.556			
Key Challenges in NAPSA's	0.26	2.60,3.0	0.001	0.27	0.16,0.0	0.001

#### 4.6 Qualitative Component

The qualitative analysis, based on interviews with three NAPSA directors, revealed six overarching themes: mandate and purpose, challenges, interventions, human resource capacity, benefits and services, and recommendations. These insights provide institutional perspectives that complement the quantitative findings.

##### Pension Scheme Services

Directors consistently emphasised NAPSA's mandate to provide income security beyond working life. One director explained, "*The mandate of NAPSA is to provide income security beyond working life by collecting contributions, investing the money, and paying it out*" (Director 3). Another highlighted the broader social responsibility, noting that registration reduces government dependency: "Being registered also reduces the responsibilities of the government by decreasing the number of people dependent on support after retirement" (Director 1). In terms of services, NAPSA offers retirement pensions, survivors' benefits, invalidity benefits, and funeral grants. As one director put it, "*Social security is the benefit of being registered with NAPSA because it guarantees income when one can no longer work due to old age*" (Director 1).

##### Challenges Facing NAPSA

They identified two major challenges emerged: compliance and investment barriers. Coverage remains limited, with only 1.4 million registered members despite Zambia's large employed population. One director observed, "*Of a population of 20 million people, 50% are employed, but only 1.4 million are registered with NAPSA*" (Director 2). Employers' reluctance to remit contributions was also noted: "*There is a high rate of defaulters who collect contributions from employers but fail to remit them to NAPSA*" (Director 1). Efforts to include informal workers through the ECIS initiative have struggled, with one director explaining, "*Zambia, being a country where the majority of the population is employed in the informal sector, faces challenges with the failure of the ECIS initiative*" (Director 1).

Investment restrictions further limit NAPSA's capacity. As one director stated, "*The authority is only allowed to invest locally; no offshore investments can be made*" (Director 3). This constraint reduces potential returns and has stalled projects such as the Society Business Park. Fraud and verification difficulties were also linked to the absence of digital national IDs: "*Lack of digital national IDs has resulted in fraud issues because it hinders the ability to verify individuals' information*" (Director 2).

##### Interventions and Innovations

The respondents indicated that, to address coverage gaps, NAPSA introduced the ECIS initiative, though with mixed success. Supplementary contributions now allow voluntary participation, including by the diaspora. The ICARE system was highlighted as a positive innovation, enhancing transparency and communication between employers, employees, and NAPSA. As one director explained, "*The ICARE system enables employers and employees to access the same platform and receive SMS notifications when payments are made*" (Director 3).

##### Recommendations and Lasting Solutions

Directors recommended systemic reforms to strengthen NAPSA's operations. They stressed the importance of capturing and registering all workers to improve coverage. As one director stated, "*National development should focus on capturing all workers so that NAPSA can have comprehensive information*" (Director 1). Digitisation of national IDs was identified as critical for reducing fraud: "*National IDs must be digitized to reduce fraud*" (Director 3). Finally, expanding NAPSA's investment mandate to include offshore opportunities was proposed to diversify returns. As one director suggested, "*NAPSA should extend its investments beyond local borders by following the money*" (Director 2).

## 4.7 Discussion

### Key Challenges in Managing Pension Payments and Coverage

The findings reveal that NAPSA's pension management faces multifaceted challenges that affect both operational efficiency and beneficiary satisfaction. Administrative delays and inadequate technology infrastructure indicate systemic inefficiencies that hinder timely pension processing. The difficulty in enrolling all eligible individuals highlights a major coverage gap, undermining the social security safety net that NAPSA is meant to provide. Management weaknesses further exacerbate these problems, pointing to organisational and leadership issues. Regional disparities and widespread dissatisfaction among beneficiaries suggest that the pension scheme's reach and quality of service are uneven, potentially fostering inequality and distrust. Overall, these findings imply that NAPSA requires targeted interventions to address foundational weaknesses in order to restore confidence and improve pension delivery.

Recent evidence confirms that Zambia's National Pension Scheme Authority continues to face challenges such as administrative delays, weak technological infrastructure, low enrolment, and management inefficiencies. These issues mirror broader pension system difficulties in low- and middle-income countries, where institutional capacity and resource limitations hinder effective delivery. The NAPSA Strategic Plan (2022–2026) explicitly acknowledges these weaknesses, noting the need for reforms to improve responsiveness, ICT systems, and coverage, particularly among informal sector workers (NAPSA, 2022).

Studies also highlight barriers to pension participation in Zambia's informal economy. Mwanza (2023) documents that affordability, awareness, and trust remain critical obstacles for women and informal workers, limiting their ability to engage with contributory pension schemes. These findings align with continental patterns. Across Africa, pension systems struggle to extend coverage beyond formal employment. The ILO World Social Protection Report (2024–26) shows that fewer than 20% of older persons in Sub-Saharan Africa receive pensions, compared to a global average of 77.5% (ILO, 2024). Similarly, HelpAge International (2023) reports that over 80% of Africa's workforce remains outside contributory pension schemes, underscoring the scale of exclusion.

By contrast, high-income countries face different pension challenges. The ILO (2024) emphasises that fiscal sustainability and demographic ageing are the primary concerns in advanced economies, where pension systems are strained by shrinking workforces and rising longevity. Unlike Zambia's immediate administrative and coverage challenges, these nations grapple with long-term financial pressures tied to demographic shifts. Regionally, Zambia's pension challenges reflect broader African trends of institutional weakness, political will constraints, and infrastructure limitations. Yohane et al. (2022) document regional disparities and widespread dissatisfaction among pension beneficiaries, pointing to inadequacy and financial stress as persistent concerns. Together, these findings suggest that NAPSA's struggles are not isolated but part of a wider continental pattern requiring targeted reforms.

### Effects of Challenges on Pension Scheme

The statistical analyses demonstrate that the challenges identified are not isolated issues but have a direct and measurable effect on the pension scheme's overall effectiveness. The significant relationship between challenges and strategy implementation suggests that awareness of problems drives efforts to improve the system, but this may also indicate reactive rather than proactive management. Younger respondents perceive or engage with pension strategies differently, reflecting generational differences in expectations or familiarity with technology and reforms. The lack of significance of education and knowledge implies that these challenges and their effects are systemic, affecting all stakeholders similarly regardless of background. This underscores the need for systemic solutions that address core operational challenges to enhance effectiveness sustainably.

The relationship between operational challenges and pension scheme effectiveness is well established in Zambia's policy documents and international literature. The NAPSA Strategic Plan (2022–2026) identifies administrative delays, weak ICT systems, and low enrolment as barriers to effective pension delivery (NAPSA, 2022). These shortcomings reduce trust among contributors and limit participation, thereby undermining the scheme's overall effectiveness. At the regional level, UNU-WIDER (2025) highlights that only about one in five older persons in Sub-Saharan Africa receive pensions, compared to a global average of more than three-quarters. This stark gap reflects systemic weaknesses in coverage, particularly for informal sector workers who dominate the region's labour force.

Reform efforts in Africa often emerge reactively in response to crises of coverage or inefficiency. The Africa Pension Supervisors Association (2024) notes that pension reforms are frequently triggered by institutional breakdowns rather than proactive planning. Generational differences in pension engagement also play a role. Miti et al. (2020) show that younger Zambians exhibit distinct attitudes toward pensions, with variations in trust and participation compared to older cohorts. This suggests that pension reforms must account for demographic diversity to improve uptake and sustainability.

### Practical Strategies to Enhance Effectiveness

The strong support for practical strategies among respondents indicates a collective recognition of what needs to be done to improve NAPSA's pension scheme. The emphasis on upgrading technology and staff capacity reflects an understanding that modern, efficient systems and skilled personnel are key to overcoming current operational bottlenecks. Calls for better monitoring, public awareness, and stakeholder engagement highlight the importance of transparency, trust-building, and collaborative governance in pension management. Recommendations about digitisation and investment diversification reinforce the need for structural reforms that enable the scheme to be more resilient, secure, and financially sustainable.

These strategies align with recommendations across the pension literature for strengthening institutional capacity and governance. The NAPSA Strategic Plan (2022–2026) emphasises ICT modernisation, improved staff competencies, and stakeholder involvement to enhance service delivery and expand coverage. The ILO World Social Protection Report (2024) advocates flexible contribution schemes, public awareness campaigns, and improved infrastructure as critical for expanding pension coverage in low- and middle-income countries.

The emphasis on digitisation and investment diversification parallels reforms in higher-income contexts that seek to improve financial sustainability through innovation and prudent fund management. The OECD (2022) highlights how digital transformation and diversified investment strategies are central to maintaining pension sustainability in advanced economies. However, Zambia's focus on expanding coverage among informal workers and addressing administrative weaknesses reflects the specific challenges of its context. The recommendations also echo the multi-pillar pension model promoted by the World Bank (2008), which advocates combining public, private, and social assistance elements to balance adequacy, sustainability, and inclusivity.

### Theoretical Implications

The findings underscore the critical role of effective management, as highlighted by the Administrative Theory of Management. Challenges such as administrative delays, poor technology infrastructure, and difficulties in enrolment reflect deficiencies in core management functions, including planning, organising, coordinating, and controlling. Recent studies on contributory pension schemes in Nigeria emphasise that weak administrative boards and poor governance structures directly contribute to inefficiencies and service delivery problems (Morakinyo, Laosebikan & Ojokuku, 2025). Similarly, systematic reviews of retirement planning literature confirm that managerial lapses undermine organisational effectiveness and pension outcomes (Ingale & Paluri, 2023).

From a broader perspective, the findings align with Systems Theory, which views organisations as complex, interdependent systems. Contemporary organisational research demonstrates the relevance of Luhmann's systems-theoretical perspective in analysing pension institutions as networks of stakeholders whose interactions affect overall system performance (Besio & Tacke, 2024). NAPSA's pension scheme operates within a web of employers, government bodies, and informal sector workers, where coordination challenges and fraud risks highlight the interconnected nature of the system.

Additionally, the findings resonate with Etzioni's Theory of Mixed Scanning, which advocates comprehensive yet flexible planning processes. Recent Zambian case studies on retirement planning strategies among Food Reserve Agency employees show that adaptive planning and scanning multiple alternatives are critical for aligning pension reforms with available resources and societal contexts (Tembo & Phiri, 2025). Finally, the emphasis on communication, stakeholder engagement, and social inclusion reflects the principles of Advocacy and Transactive Planning Theories. Recent work on advocacy planning in South Africa highlights the necessity of dialogue between planners and beneficiaries to ensure equitable access to social protection programmes (Moloi, 2025).

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## 5 Conclusions and Recommendations

This study concludes that NAPSA's pension system is significantly constrained by systemic operational challenges, including administrative delays, payment inefficiencies, technological limitations, and difficulties in expanding coverage to the informal sector. These challenges have a measurable and statistically significant negative impact on pension scheme effectiveness. Nonetheless, the study also demonstrates that well-targeted reforms—particularly digital transformation, enhanced human resource capacity, strengthened governance mechanisms, and inclusive coverage strategies—can substantially improve service delivery, trust, and sustainability. Addressing these systemic constraints is critical to ensuring NAPSA can fulfil its mandate of providing secure, timely, and equitable pension benefits to Zambia's workforce.

### Recommendations

Several recommendations arise from the findings. First, administrative processes should be streamlined to reduce delays in claim processing and enhance service efficiency. Automation of workflows and improved internal coordination are essential for achieving this goal. Second, NAPSA should prioritize technological modernization, including the full digitization of member data, integration with national identification systems, and expansion of digital service platforms to facilitate real-time access for contributors. Third, the institution should invest in continuous staff training and develop a performance-driven culture to strengthen human resource capacity. Fourth, coverage expansion efforts should focus on flexible contribution models tailored to the informal sector and should leverage partnerships with cooperatives and grassroots organizations. Fifth, NAPSA should strengthen monitoring, evaluation, and governance systems to enhance transparency and accountability. Finally, policy reforms should allow for a more diversified investment portfolio and align the pension framework with Zambia's evolving labour market dynamics.

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### Declaration of Competing Interests

The authors declare that they are not aware of any competing financial interests or personal relationships that may have influenced the work described in this document.

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### Ethical considerations

The article followed all ethical standards appropriate for this kind of research.

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