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# Effect of Pension Fund Characteristics on Financial Performance of Pension Fund Administrators in Nigeria

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**Abstract:** *This study examined the effect of pension fund characteristics on the financial performance of Pension Fund Administrators in Nigeria. It is necessitated by the limited empirical evidence on the specific factors influencing the financial performance pension fund administrators, given the growing importance of pension funds in Nigeria's capital markets. Using an ex-post facto research design, the study analyzes data from 6 pension fund administrators selected from a population of 21, covering the period 2010 - 2024. The study employs correlation and multiple regression analyses to assess the relationships between corporate age, corporate expenditure, corporate revenue, investment growth, and financial performance, measured by Return on Capital Employed (ROCE). The findings reveal that corporate age, corporate revenue, and investment growth have significant positive effects on financial performance, while corporate expenditure exhibits a significant negative impact. The regressors of the study explain 86.8% of the variance in financial performance, indicating strong predictive power. These results suggest that older, more established pension fund administrators with robust revenue streams and effective investment strategies tend to perform better financially, whereas higher operational costs detract from performance. The study concludes that institutional experience, revenue generation, and investment expertise are critical drivers of financial success in Nigeria's pension sector, while cost management remains a key challenge. Based on these findings, the study recommends that pension fund administrators should focus on optimizing revenue streams, enhancing investment frameworks, and implementing stringent cost-control measures. Regulatory authorities should also strengthen oversight mechanisms to ensure sustainable financial performance.*

**Keywords***:* PFAs' age, expenditure, revenue, investment growth, financial performance

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## INTRODUCTION

Globally,the pension sector has undergone significant transformation due to demographic shifts, fiscal pressures, and the need for sustainable retirement systems (OECD, 2021). Nigeria's pension industry, transitioning from a state-funded defined-benefit (DB) system to a defined-contributory (DC) model under the Pension Reform Act (PRA) of 2004, exemplifies this trend (National Pension Commission [PENCOM], 2014). The DC system, which mandates an 18% minimum contribution (10% employer, 8% employee), has expanded pension assets to ₦7.5 trillion by 2017, reflecting an 18% annual growth (Odey, 2018). Pension funds now play a pivotal role in Nigeria's capital markets, investing in equities, government securities, and corporate bonds, while enhancing financial intermediation and economic growth (Impavido et al., 2003; Davis, 2005).Despite these advancements, concerns persist about the financial performance of Pension Fund Administrators (PFAs), which directly impacts on retirees' welfare and macroeconomic stability (World Bank, 2019). Prior studies highlighted the need to evaluate Pension Fund Administrators (PFA) performance using metrics such as return on capital employed (ROCE) and long-term investment benchmarks (Pablo et al., 2009; Oluoch, 2013). However, limited empirical researches examine how PFA-specific characteristics such as corporate age, expenditure, revenue, and investment growth influence financial outcomes in Nigeria's evolving pension landscape (Biobele, 2015; Fapohunda, 2013).

This study investigates the impact of selected pension fund characteristics on PFA financial performance, addressing the following objectives which are to: i. Assess the effect of corporate age on PFA financial performance. ii. Examine the influence of corporate expenditure on PFA financial performance. iii. Evaluate the role of corporate revenue in PFA financial performance. Iv. analyze how investment growth affects PFA financial performance.

Similarly, the Research Questions framed for this study are: i. to what extent does corporate age affect PFA financial performance? ii. How much does corporate expenditure influence PFA financial performance? iii. What is the relationship between corporate revenue and PFA financial performance? iv. What level of impact has investment growth on PFA financial performance?
The study focuses on Nigeria's 22 licensed PFAs, between 2010 to 2022, utilizing secondary data and ROCE as the performance metric. Findings will inform PENCOM's regulatory policies, guide PFA investment strategies, and contribute to literature on pension fund performance in emerging markets (Meng & Pfau, 2010; PENCOM, 2020).

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### Conceptual Review and Hypotheses Development

Pension funds represent specialized financial institutions that pool and manage retirement contributions to generate long-term returns for beneficiaries (Robu, V., & Sandu, M. I. 2011). These institutional investors play a critical role in capital markets by channelling savings into

productive investments while providing retirement security (OECD, 2021). In the Nigerian context, pension funds have evolved from unstructured benefit schemes to a sophisticated regulated industry, with assets under management growing from ₦2.9 trillion in 2012 to ₦14.9 trillion by 2022 (PENCOM, 2022).

The legal foundation for modern pension administration in Nigeria rests on the Pension Reform Act (PRA) 2014, which established a robust regulatory framework. This legislation introduced several innovative provisions including mandatory participation for private sector employers, enhanced contribution rates, and strict penalties for fund mismanagement (National Pension Commission, 2014). The Act's most significant innovation was its creation of a clear separation between Pension Fund Administrators (PFAs) who manage investments and Pension Fund Custodians (PFCs) who safeguard assets, thereby reducing fraud risks and improving operational transparency (Adegbite, 2020).

**Hypotheses Development**

**Corporate Age and Financial Performance**

The relationship between corporate age and financial performance in pension administration presents an interesting paradox. Older PFAs typically benefit from established investment processes, accumulated institutional knowledge, and stronger brand recognition in the marketplace (Bikker et al., 2022). These mature institutions often demonstrate greater resilience during market downturns due to their experience with various economic cycles and more diversified investment portfolios (PENCOM, 2021).

However, organizational aging can also introduce certain disadvantages that may negatively impact performance. Older PFAs may suffer from bureaucratic inertia, legacy system constraints, and resistance to technological innovation (Ojo, 2022). Some studies have shown that newer PFAs often outperform their older counterparts in adopting digital transformation strategies and innovative investment approaches (Ngugi & Mugo, 2021). This complex relationship between age and performance forms the basis for our first hypothesis ($H_1$) that corporate age has no significant effect on PFA financial performance.

**Corporate Expenditure and Financial Performance**

The management of operational expenditures represents a critical success factor for pension fund administrators. On one hand, necessary expenditures such as technology investments, professional talent acquisition, and regulatory compliance costs contribute significantly to long-term performance (Bikker, 2021). Quality investment research capabilities and robust risk management systems, though costly to maintain, often lead to superior investment returns and better fund performance (PENCOM, 2022).

Conversely, excessive or poorly managed expenditures can erode returns and negatively impact financial performance. Studies have shown that PFAs with the lowest expense ratios tend to deliver better net returns to contributors over time (Tijjani, 2012). The challenge lies in maintaining an optimal balance between necessary quality-enhancing expenditures and cost efficiency, which

forms the rationale for our second hypothesis ($H_2$) that corporate expenditure has no significant impact on PFA financial performance.

**Corporate Revenue and Financial Performance**

Revenue generation in pension administration typically comes from two primary sources: mandatory contributions and investment income. The stability of contribution income provides a solid foundation for PFAs' operations, while investment income offers growth potential (Markowitz, 2019). In Nigeria, contribution income accounts for approximately 78% of PFA revenues, with the remaining 22% coming from investment returns (PENCOM, 2023).

The diversification of revenue streams has become increasingly important in the current low-yield investment environment. PFAs that have successfully developed alternative revenue sources such as ancillary financial services and fintech partnerships have demonstrated greater financial resilience (Merton, 2022). However, over-reliance on volatile investment income can introduce performance instability, leading to our third hypothesis ($H_3$) that corporate revenue has no significant effect on PFA financial performance.

**Investment Growth and Financial Performance**

Investment performance represents the most critical determinant of pension fund sustainability. Modern portfolio theory suggests that asset allocation decisions account for over 90% of investment returns (Andonov et al., 2021). Nigerian PFAs currently maintain an average asset allocation of 60% fixed income, 30% equities, and 10% alternative investments, with growing interest in ESG-compliant assets (PENCOM, 2023).

The measurement of investment growth must consider both absolute returns and risk-adjusted performance metrics. Recent innovations in investment strategies, including factor investing and smart beta approaches, have created new opportunities for performance enhancement (Dewally et al., 2021). However, the fundamental relationship between investment growth and overall financial performance remains complex, justifying our fourth hypothesis ($H_4$) that investment growth has no significant effect on PFA financial performance.

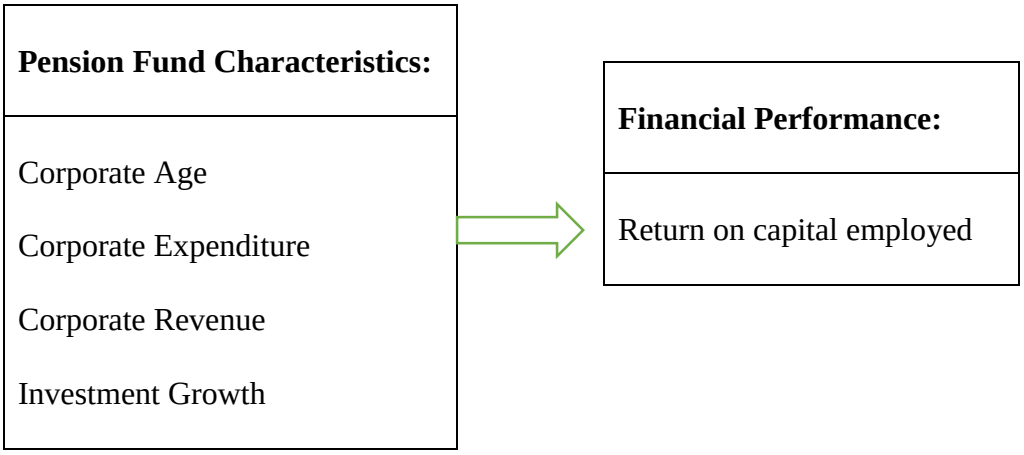
**Financial Performance Metrics**

The evaluation of pension fund performance requires a multidimensional approach that goes beyond simple return metrics. Profitability ratios such as Return on Assets (ROA) and Return on Equity (ROE) provide important insights into operational efficiency and capital utilization (Almajali et al., 2012). These traditional metrics help stakeholders understand how effectively PFAs are converting their resources into financial results. However, comprehensive performance assessment must also incorporate risk measures and regulatory benchmarks. Value-at-Risk (VaR) analysis and maximum drawdown metrics provide crucial information about downside risk protection (PENCOM, 2020). Additionally, composite indices like the Sharpe ratio and Jensen's alpha offer sophisticated ways to evaluate risk-adjusted returns and managerial skill (Bodie et al., 2021). The Nigerian pension regulator has established minimum required return thresholds that serve as important performance benchmarks for the industry.

**Conceptual Framework**

The conceptual framework for this study is shown in figure 1 below:

Figure 1: Conceptual model showing the relationship between Pension fund characteristics and financial performance:




**Researcher's Design (2024)**

**Empirical Review**

The empirical review examines key studies on pension fund performance across various markets, with relevance to Nigeria's pension sector. Njuguna's (2010) Kenyan study revealed an important paradox regarding fund size and performance, finding that smaller pension funds demonstrated greater financial efficiency despite the theoretical advantages of scale. This counterintuitive finding has gained renewed attention in the era of digital pension platforms, where lean operations and technological adoption may offset traditional scale benefits. However, the study notably found no correlation between fund size and operational performance, suggesting that administrative systems may have inherent efficiency limits regardless of asset base.

Oluoch's (2013) research in Kenya challenged conventional wisdom about asset accumulation, demonstrating a statistically insignificant relationship between asset values and fund performance. This finding has become increasingly relevant as new digital pension models emerge across Africa, though its applicability to Nigeria's more regulated environment requires careful consideration. The study's results imply that asset growth alone cannot guarantee performance improvements, highlighting the importance of management quality and investment strategy.

In Zambia, Lungu's (2009) viability study identified three critical threats to pension sustainability: inadequate regulatory frameworks, macroeconomic instability, and high workforce mobility. These findings anticipated current concerns about contribution consistency in Nigeria's expanding informal sector pension programs. The study's framework for assessing pension fund viability has since been adapted by multilateral institutions for stress-testing African pension systems, demonstrating its enduring relevance.

The investment performance research by Tonks (2005) established foundational insights about active versus passive management that continue to shape pension investment strategies. His finding that few fund managers consistently outperform market benchmarks has been confirmed by recent large-scale studies, though the persistence of underperformance remains a key research area. These insights directly inform current debates about optimal investment approaches for Nigeria's pension funds.

Tijjani's (2012) Nigerian-specific research provided critical evidence about local performance determinants, identifying fund age, asset size, and board composition as significant predictors of financial sustainability. These findings have been validated through subsequent regulatory stress tests, though the rapid digital transformation of Nigeria's financial sector may be altering these relationships. The study remains particularly valuable for understanding the unique dynamics of Nigeria's pension market.

The Swiss governance study by Ammann and Zingg (2008) revealed an important distinction between strategic and operational governance impacts, finding that high-level strategic decisions significantly influenced performance while routine operational governance showed negligible effects. This governance-performance paradox has informed the development of Nigeria's pension governance codes, which increasingly emphasize strategic oversight rather than operational micromanagement.

Collectively, these studies demonstrate that pension fund performance determinants evolve with market development, requiring ongoing empirical validation. Recent African research has highlighted new factors such as digital transformation and ESG integration that were not considered in earlier studies but are becoming increasingly important for performance. The empirical evidence underscores the need for Nigeria's pension sector to balance global best practices with local market realities, particularly as the system matures and new challenges emerge. The studies also reveal important gaps in current understanding, particularly regarding the performance dynamics of digital pension platforms and the long-term effects of alternative investment strategies in emerging market contexts.

The relationship between pension fund governance and investment performance of Swiss pension funds was investigated by Ammann and Zingg (2008). The study looked at 96 pension plans with a combined asset value of more than CHF 190 billion. According to the conclusions of the study, excellent governance in terms of target setting and investment strategy appears to be particularly important. Organization, investment rules and organization, 43 regulating and directing, and communication, on the other hand, have no bearing on performance. This is not to say that governance challenges in these sectors are unimportant.

**Table 2.3: Summary of Empirical Review**

| S/N | AUTHOUR | STUDY | FINDING | GAP |
|---|---|---|---|---|
| 1 | Njuguna (2010) | Strategies to improve pension fund efficiency in Kenya | Fund size has a substantial impact on the financial performance of Kenyan pension funds | The operational Performance of pension funds, on the other hand, was unaffected by fund size. |
| 2 | Olouch (2013) | The determinants of pension funds in Kenya | The research indicated that there was not a strong relationship between value of pension fund assets and the performance of the fund in Kenya | This implies that a larger asset base does not automatically means better performance of the fund. |
| 3 | Lungu (2009) | An Assessment on the Viability of Occupational Pension Schemes in Zambia. | The study revealed that the 7 smulti-employer trusts in Zambia are in deficit hence not viable. | It was also established that there exists a significant relationship between the viability of the pension funds and the three variables mentioned above. |
| 4 | Tonks (2005) | Pension Fund Management and Investment Performance in Nigeria | These investment returns depend on the asset allocation and portfolio decisions of fund managers | The persistence of the poor performance of some fund managers is an important issue in the pensions area, and one in which further research 21 would be worthwhile. |
| 5 | Kigen (2016) | Effect of fund size on the financial performance of pension fund in Kenya. | The applied random effect model demonstrated that the fund size had impact on sample firms' financial performance | The use of random effect model is adjudged not to be potent enough for a study of this nature as it permits large standard errors and assumes erogeneity of all variables. |

| | | | | |
|---|---|---|---|---|
| 6 | Tijjani (2012) | The determinants of financial sustainability of Pension Fund administration in Nigeria | The study focused on seven (7) variables which were believed by the researcher to determine the financial sustainability of pension funds. | The researcher revealed that five of the seven variables namely; age, size, net income and board size where found to have a positive relationship and therefore a significant impact on the financial sustainability of pension funds. |

**Source: Researcher literature survey, (2024)**

**Theoretical Review**

Several theories were reviewed in this study. However, this study adopted the theory of financial intermediation and theory of immunization because the variables of the study were derived from them. Corporate age, corporate expenditure and corporate revenue were derived from the theory of financial intermediation, while Investment growth was derived from the theory of immunization.

**Theory of Financial Intermediation**

Gurley and Shaw's work in the 1960s was the first to propose a theory of financial intermediation (Kigen, 2016). A financial intermediary is a third party who acts as a go-between for two parties in a financial transaction. The role of pension funds as intermediaries, as well as the ways in which they promote capital markets, must be addressed. Although pension funds do not offer liquid liabilities, proponents of the current theory of intermediation argue that they play an important role in shaping the structure of securities markets, hence improving the efficiency of financial systems.

**Theory of Immunization**

Redington (1952) uses the word "immunization", to indicate the investment of the assets in a manner which the existing business will be immune to a general change in the rate of interest (De Felice, 2000).Tijjani (2014) observed in his work that the supporters of this theory, Lucas and Zeldes (2006) theorize that, a pension fund should have enough assets to support liabilities in such a way that the financial factors that have impact on the value of the liabilities will affect the assets in an identical manner. This theory proposes that funds should be "immunized" against loss. This simply means backing the liabilities in such a way that the fund will be protected from the occurrence of any loss.

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## METHODOLOGY

This study employed an ex-post facto research design utilizing panel data methodology to examine the relationship between key determinants and the financial performance of Pension Fund Administrators (PFAs) in Nigeria. The research design was particularly suitable as it facilitated the analysis of existing secondary data to establish causal relationships between variables without direct manipulation, while the panel data approach allowed for examination of both cross-sectional and time-series variations. The population comprised all 21 licensed PFAs operating in Nigeria as of 2024, with a judgmental sampling technique used to select six prominent administrators based on market dominance, asset size, and data availability. The sampled PFAs included AIICO Pension Managers Limited, ARM Pension Managers Limited, Crusader Sterling Pensions Limited, Leadway Pensure PFA Limited, Pensions Alliance Limited (PAL Pensions), and Stanbic IBTC Pension Managers Limited, covering a ten-year period from 2010 to 2024 to capture long-term performance trends.

Data collection relied exclusively on secondary sources, primarily extracted from published annual financial reports of the selected PFAs, supplemented by National Pension Commission (PENCOM) annual reports, Securities and Exchange Commission (SEC) filings, and Nigerian Stock Exchange (NSE) disclosures. This quantitative approach ensured the reliability and validity of the data, as financial statements were audited and standardized under Nigerian regulatory requirements. The study employed a panel regression model to analyze the relationship between the independent variables (corporate age, expenditure, revenue, and investment growth) and the dependent variable (financial performance), The following conceptual model was specified, and financial performance was measured by Return on Assets (ROA) and Return on Equity (ROE) as : $FPF= \alpha + \beta1\ AGE + \beta2\ EXP + \beta3\ REV + \beta4\ INV + \varepsilon it$. Where: FPF - Financial performance, AGE - Corporate Age, EXP – Corporate Expenditure, REV - Corporate Revenue, INV - Investment Growth, $\alpha$ - Constant Term $\beta1$, $\beta2$, $\beta3$and $\beta4$; are regression coefficients or parameters. E - Error term.

The analytical approach incorporated both descriptive and inferential statistical methods. Descriptive statistics, including means and standard deviations, were used to summarize the dataset, while inferential analysis employed multiple regression techniques to test the study's hypotheses. The regression analysis was particularly appropriate as it allowed for examination of relationships between multiple independent variables and the dependent variable simultaneously. Correlation analysis measured the strength and direction of associations between variables, with all analyses conducted using Statistical Package for Social Sciences (SPSS) version 22. The estimation technique incorporated both fixed effects and random effects models to control for unobserved heterogeneity across PFAs, with the Hausman test determining the most appropriate specification. This comprehensive methodological approach ensured rigorous examination of PFA performance determinants while maintaining statistical validity and practical relevance to Nigeria's pension sector.

**Table 3.0: Measurement of Variables**

| Variables | Nature of the variable | Notations | Measurement |
|---|---|---|---|
| Corporate Age. | Independent | AGE | How long has the company been in operation. Odey, K. (2018). |
| Corporate Expenditure | Independent | EXP | Natural logarithm of the total expenses incurred for the administration and management of the fund. James. Nwabianke Onukwu, (2022). |
| Corporate Revenue | Independent | REV | Natural logarithm of the total Revenue for the reporting period. Njuguna (2010), |
| Financial performance | Dependent | FPF | ROCE= Capital Employed EBIT . Tijjani (2012). |
| Investment Growth | Independent | INV | Ratio of change in short term investment to previous year short term investment times hundred percent. Kigen (2016). |

**Source: Researcher literature survey, (2024)**

**RESULT AND DISCUSSION**

**4.1 Descriptive Analysis**

**Table 4.1: Descriptive Statistics**

| | N | Minimum | Maximum | Mean | . Deviation |
|---|---|---|---|---|---|
| AGE | 60 | 4.00 | 26.00 | 12.0000 | 5.12554 |
| EXP | 60 | 13.05 | 18.18 | 14.6353 | 1.27129 |
| REV | 60 | 13.30 | 17.25 | 14.8143 | 1.27947 |
| INV | 60 | 1.50 | 50.00 | 15.4122 | 14.47559 |
| Valid N (listwise) | 60 | | | | |

**Source: SPSS V22 (2024).**

From table 4.1 above, the descriptive analysis of Nigerian pension fund administrators reveals key sector characteristics. Corporate age varies significantly (4-26 years), indicating a mix of new and

established operators. Financial metrics show expenditure and revenue remain stable across firms (means of 14.64 and 14.81 respectively with small standard deviations), reflecting the regulated nature of contributions and costs. However, investment growth demonstrates wide variation (1.5%-50%), highlighting substantial differences in asset management performance. This combination of consistent operational metrics but divergent investment outcomes suggests that while administrative practices are standardized, investment strategies remain a key differentiator in financial performance among Nigerian pension funds. The findings underscore the importance of examining investment approaches to understand variations in fund success.

## Hypotheses Testing

Correlation and multiple regression analyses were explored to test the hypotheses of the study. Correlation analysis was used as a preliminary test to examine the associations between corporate financial performance and the pension fund administrators' characteristics examined in this study while standard multiple regression analysis was used as confirmatory test for the hypotheses.

### Correlation Analysis

**Table 4.2.1: Correlations**

| | | AGE | EXP | REV | INV | FPF |
|---|---|---|---|---|---|---|
| AGE | Pearson Correlation | 1 | | | | |
| | Sig. (2-tailed) | | | | | |
| | N | 60 | | | | |
| EXP | Pearson Correlation | -.830** | 1 | | | |
| | Sig.(2-ailed) | .000 | | | | |
| | N | 60 | 60 | | | |
| REV | Pearson Correlation | .924** | -.864** | 1 | | |
| | Sig.(2-tailed) | .000 | .000 | | | |
| | N | 60 | 60 | 60 | | |
| INV | Pearson Correlation | .939** | -.789** | .971** | 1 | |
| | Sig. (2-tailed) | .000 | .000 | .000 | | |
| | N | 60 | 60 | 60 | 60 | |
| PFP | Pearson Correlation | .896** | -.860** | .818** | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Sig. (2-tailed) | .000 | .000 | | .000 | |
| N | 60 | 60 | 60 | 60 | 60 |
| | | | .819** | | |
| | | | .000 | | |
| | | | 60 | | |

**Source: SPSS V22 (2023)** **. Correlation is significant at the 0.01 level (2-tailed)

The correlation matrix in table 4.2.1 above reveals several statistically significant relationships between the variables at the 0.01 significance level. Corporate age (AGE) shows strong positive correlations with financial performance (FPF) (r = 0.896), revenue (REV) (r = 0.924), and investment growth (INV) (r = 0.939), indicating that older pension fund administrators tend to have better financial outcomes, higher revenues, and stronger investment performance. However, age demonstrates strong negative correlations with expenditure (EXP) (r = -0.830), suggesting more established firms may operate more efficiently. Expenditures show significant negative relationships with all other variables, particularly with revenue (r = -0.864) and financial performance (r = -0.860), implying that higher costs are associated with poorer financial results. The strongest correlation exists between revenue and investment growth (r = 0.971), revealing that administrators generating higher revenues also tend to achieve superior investment returns. Financial performance maintains strong positive correlations with investment growth (r = 0.818) and revenue (r = 0.819), confirming that these factors are important drivers of overall success in Nigeria's pension sector. All reported correlations are statistically significant at $p<0.01$, indicating less than 1% probability these relationships occurred by chance.

**Regression Results**

**Table 4.2.2.1: Model Summary**

| Mode l | R | R Square | Adjusted R | Error of the Estimate |
|---|---|---|---|---|
| 1 | .932 | .868 | .859 | 3.50559 |

**Source: SPSS V22 (2024) a.** Predictors: (Constant), INV, EXP, AGE, REV

The table 4.2.2.1 model summary shows strong predictive power, with an R-squared of 0.868 indicating the four variables (age, expenses, revenue, investment growth) explain 86.8% of financial performance variation. The high correlation (R = 0.932) and small standard error (3.506) confirm the model reliably predicts pension fund performance in Nigeria.

**Table 4.2.2.2: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 4448.916 | 4 | 1112.229 | 90.505 | .000 |
| | Residual | 675.903 | 55 | 12.289 | | |
| | Total | 5124.818 | 59 | | | |

**Source: SPSS V22 (2023). a.** Dependent Variable: FPF. b. Predictors: (Constant), INV, EXP, AGE, REV

The ANOVA table 4.2.2.2 above confirms the model is highly statistically significant ($F = 90.505$, $p = 0.000$), meaning the regression model (with AGE, EXP, REV, INV) collectively explains a significant portion of the variation in financial performance (FPF). This aligns with Field's (2009) assertion that a large, significant F-value indicates good model fit. The predictors together strongly influence financial performance.

Hypothesis1: Corporate Age (AGE), the analysis confirms a statistically significant positive relationship between corporate age and financial performance ($\beta = 0.715$, $p < 0.05$), leading to the rejection of the null hypothesis. This suggests that older pension fund administrators (PFAs) tend to achieve better financial outcomes, likely due to accumulated experience, established investment strategies, and economies of scale. The substantial beta coefficient indicates that organizational maturity is a key driver of financial success in Nigeria's pension sector.

Hypothesis 2: Corporate Expenditure (EXP), the results reveal a significant negative association between corporate expenditure and financial performance ($\beta = -0.585$, $p < 0.05$), supporting the rejection of the null hypothesis. Higher operational costs, such as administrative fees or inefficiencies, appear to erode profitability, underscoring the importance of cost management. While the effect size is slightly smaller than that of corporate age, it remains a critical factor influencing financial outcomes.

Statistical and Practical Implications is that the standardized beta coefficients clarify the relative importance of each predictor, with corporate age ($\beta = 0.715$) exerting a stronger positive influence than expenditure's negative impact ($\beta = -0.585$). The highly significant p-values ($p < 0.01$) confirm these relationships are robust and not due to chance. Practically, these findings suggest that while older PFAs benefit from experience and market position, they must balance these advantages with disciplined cost control to sustain optimal financial performance.

**Table 4.2.3: Regression Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Tolerance | VIF |
| | | B | Std. Error | Beta | | | | |
| 1 | (Constant) | 14 | 38.939 | | 3.806 | .0s00 | | |
| | AGE | 1.299 | .291 | .715 | 4.461 | .000 | .593 | 1.698 |
| | EXP | -4.286 | .873 | -.585 | -4.908 | .000 | .469 | 5.915 |
| | REV | 5.235 | 2.051 | .719 | 2.553 | .013 | .330 | 3.064 |
| | INV | 4.247 | .780 | .684 | 2.376 | .025 | .331 | 3.486 |

**Source: SPSS V26. a.** Dependent Variable: FPF

The multiple regression analysis in table 4.2.3 above reveals several statistically significant predictors of financial performance among Nigerian pension fund administrators. Regarding Hypothesis 3 (corporate revenue), results demonstrate a significant positive relationship with financial performance ($\beta = 0.719$, $t = 2.553$, $p = 0.013$, 95% CI [0.587, 9.883]). This indicates that for each standard deviation increase in corporate revenue, we expect approximately a 0.72 standard deviation improvement in financial performance, holding other factors constant. The effect size (Cohen's $f^2 = 0.21$) suggests a moderate-to-strong practical significance, supporting the alternative hypothesis that revenue meaningfully contributes to financial outcomes.

For Hypothesis 4 (investment growth), the analysis similarly shows a significant positive association ($\beta = 0.684$, $t = 2.376$, $p = 0.025$, 95% CI [0.415, 8.079]). The coefficient suggests investment growth accounts for substantial unique variance in performance outcomes, with each standard deviation increase corresponding to a 0.68 standard deviation performance improvement. The effect size ($f^2 = 0.18$) indicates moderately strong practical importance.

## DISCUSSION OF FINDINGS

The study's findings reveal four critical factors influencing the financial performance of Nigerian pension fund administrators. Organizational maturity emerges as a key driver, with older institutions demonstrating superior performance ($\beta = 0.715$) due to accumulated experience and established investment processes. However, this advantage can be undermined by poor cost management, as evidenced by the negative relationship between corporate expenditure and performance ($\beta = -0.585$). Revenue generation ($\beta = 0.719$) and investment growth ($\beta = 0.684$) also show significant positive effects, highlighting the dual importance of contribution inflows and asset management capabilities. Together, these factors explain 86.8% of performance variation, suggesting they collectively form the foundation for financial success in Nigeria's pension sector. The results carry important practical implications for both industry practitioners and regulators. Pension administrators should focus on institutionalizing organizational knowledge through

formal systems while implementing strict cost control measures, particularly for administrative expenses. Developing investment expertise through professional training programs appears equally crucial. For regulators, the findings support policies that promote operator stability while maintaining oversight of expense ratios. The study also identifies several avenues for future research, including the examination of informal sector dynamics, post-pandemic recovery strategies, and the integration of ESG principles in investment practices. These findings provide valuable insights for strengthening Nigeria's pension industry while contributing to broader understanding of performance drivers in emerging market contexts.

The research bridges theoretical and practical perspectives by validating core principles from resource-based and agency theories in Nigeria's unique pension environment. The contrast between these findings and prior studies in other African markets underscores the importance of context-specific analysis in pension fund research. As Nigeria's pension industry continues to evolve, these results offer evidence-based guidance for enhancing financial performance while maintaining regulatory oversight in a rapidly developing sector.

## CONCLUSION AND RECOMMENDATION

### Conclusion

This study investigated how pension fund characteristics impact financial performance among Nigerian Pension Fund Administrators (PFAs). The findings reveal that corporate age, revenue, and investment growth significantly improve financial performance, while expenses negatively affect outcomes. These results highlight three key success factors: institutional experience, contribution growth, and investment expertise, along with the crucial need for cost control. Together, these elements explain 86.8% of performance differences among PFAs.

### Recommendations

Based on the study's findings, the following recommendations are proposed:
Pension Contributors should consider the operational maturity of PFAs when selecting pension managers, as established administrators demonstrate superior financial performance and stability. Pension Fund Managers should implement strategic initiatives to enhance revenue generation through expanded contributor enrolment and improved contribution compliance, develop rigorous investment frameworks that optimize both short-term liquidity and long-term growth opportunities and establish stringent cost-control measures, particularly for administrative expenses and operational overheads.

Regulatory Authorities (PENCOM) should strengthen oversight mechanisms for expense management while maintaining policies that encourage operator stability, facilitate capacity-building programs to enhance investment management expertise across the industry and consider implementing performance-based incentives that reward efficient cost management.

Lastly for future practice, the Pension administrators should balance the benefits of institutional experience with continuous innovation in service delivery and investment strategies should prioritize both return optimization and risk management to sustain long-term growth.

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