PERFORMANCE SUSTAINABILITY STRATEGY OF PENSION FUND MANAGERS IN THE EMERGING MARKET: A SURVEY OPINION PERSPECTIVE

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How to cite this paper: Afolabi, A. A. (2023). Performance sustainability strategy of pension fund managers in the emerging market: A survey opinion perspective. *Business Performance Review, 1*(1), pp. … https://doi.org/10.22495/…

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Received: 22.01.2023
Accepted:

JEL Classification: M40
DOI:

Abstract

The paper examines the performance sustainability of pension fund managers in a developing country such as Nigeria context using survey questionnaires in the collection of data with descriptive statistics and independent samples t-test in the analysis of the data. The opinion of the respondents to the survey questions provides evidence of the existence of several barriers hindering the performance sustainability strategy of pension fund managers these include: a lack of sufficient skills, inadequate innovation, and a lack of adequate processes, etc. However, the respondents also believed that governance and operation, planning, and management are key indicators that sustain the performance of pension fund managers. The study suggests that pension fund managers should develop skills, processes, and innovative solutions to overcome the performance barrier of pension fund managers.

Keywords: Governance, Operation, Planning, Management, Survey Questionnaire

Authors' individual contribution: The Author is responsible for all the contributions to the paper according to CRediT (Contributor Roles Taxonomy) standards.

Declaration of conflicting interests: The Author declares that there is no conflict of interest.

1. INTRODUCTION

In an open and consultative manner, the National Pension Commission (PenCom) oversees and monitors the Nigerian pension business. Specifically, it engages in various regulatory and supervisory operations including surveillance, enforcement of rules and guidelines, monitoring of compliance, oversight of pension investments and maintenance of pension data and records. PenCom undertakes strict regulatory and supervisory controls on the pension industry to ensure a stable and sustainable pension industry (PenCom, 2019). The total membership of the Nigerian pension scheme increased by 5.67% to 8 949 536 on December 31, 2019, from 8 469 257 as of December 31, 2018. In addition, the Retirement Saving Account (RSA) scheme accounted for the bulk of the total pension scheme membership accounting for 99.35 percent with 8 891 236 members, while the balance of 0.65 percent of members represents the number of members of the approved existing scheme (AES) and the closed pension fund administrators (CPFAs) with 40 951 and 17 349 members respectively (Gimi & Mohammed, 2023).

A number of factors can be attributed to the rising number of participants in the pension scheme. First is the fact that the level of compliance with the provisions of the Pension Act by private sector players has improved as a result of the drive by the Commission to strengthen pension coverage and compliance, including the use of recovery agents. In addition, pension fund managers have adopted several effective marketing strategies. Another important factor is the implementation of

the Public Procurement Act 2007 which mandates all bidders for federal government contracts to provide evidence of compliance with the provisions of the act. This has had a positive impact on driving membership (PenCom, 2019).

It is projected that the RSA registration numbers will continue to rise as a result of the potential expansion of coverage with the newly introduced Micro Pension Plan (PenCom, 2019). It has been reported that following its launch in March 2019, registration for the Micro Pension Plan has grown rapidly to 39,686 as of December 31, 2019. This highlights the huge potential the scheme holds.

As of December 31, 2019, the CPFAs and AES have 17,349 and 40,951 members, respectively. While AES scheme membership stayed constant at 40,951 between 2018 and 2019, CPFA membership fell by 4.27 percent to 17,349 in 2019, from a figure of 18,122 in 2018. This stagnation/ drop in growth can be attributed to the implementation of the provision of Sections 50(1) and 51 of the Public Procurement Act 2007 which mandate the closure of the schemes to new members (PenCom, 2019).

The world population is aging, and economic stress is putting increasing strain on pension fund systems, causing worry in industrialized countries such as the United Kingdom (UK) and the United States of America (USA) (Anantharaman & Chuk, 2023). It was accepted that the situation needs some means of lowering high pension fund running costs without sacrificing retirement service quality. Pensioners and beneficiaries are primarily concerned with the efficient management of their pension funds such that they grow, deliver optimal returns and contribute significantly to the streams of cashflow that will accrue to them upon retirement (Alda, 2018). Studies have shown that global pension funds have grown substantially in the last two decades and particularly in the developed economies, pension funds contribute significantly to economic growth and the development of the society decades (Alda, 2018).

According to Wanger (2021), several factors including expected returns, asset allocation, cash flow, fund manager selection, and cost can be used in analysing global pension fund designs. According to Investments and Price (2023) in the Organization for Economic Cooperation and Development (OECD) countries, pension fund assets have grown to €15.6 trillion in 2011. Furthermore, Erzurumlu and Ucardag (2021) reported that the size of the pension fund assets in the OECD countries has grown at the rate of 10% per annum up to $32.2 trillion, between the financial crisis of 2008 and the end of 2019. This may be a pointer to the level of impact that investment in pension fund assets is having on the economies of OECD countries.

Several studies have been done on the performance of pension funds in industrialized countries. Otero-González et al. (2021) evaluated the performance of pension funds in relation to active management and value investment in the Eurozone. Li and Cowton (2023) explored the de-risking technique of the defined benefit pension scheme (DBS) as a determinant of pension buy-ins in the UK. Further, Clark (2022) analyzed the challenges of the UK pension policy in terms of performance governance, which has hampered innovation. In Spain, Fernández et al. (2023) examined investor reactions to several metrics of pension plan performance. However, the complexities of a DBS prompted the 2004 pension fund revisions. In Nigeria, the most recent legislation enacted to promote and develop the pension fund industry is the Pension Reforms Act of 2004, as revised in 2014 (PenCom, 2019). The legislation regulates both the public and private pension funds in Nigeria and it is a defined contribution scheme (DCS), under the regulatory oversight of the PenCom. The value of the investment of contributors under the DCSs is determined by the total contribution of a member and the contribution investment performance of the funds. While the DBSs guarantee a certain income based on the scheme's rules.

The role of the commission broadly includes the development, supervision and regulation of the pension industry in Nigeria. However, the management of pension funds under the Pension Reforms Act is the responsibility of Pension Fund Administrators (PFA), which are investment companies (PenCom, 2019).

Against this backdrop, this study investigated the sustainability approach of organizations categorized as pension fund managers in Nigeria. The goal is to determine if the PRA was able to deal with and address the many challenges posed by the former DBS. As a result, the following research topics have been developed:

RQ1: Is the performance approach for the defined contributory pension scheme that was implemented in 2004 still viable today?

RQ2: Are pension fund managers performing well when considering the major drivers of gauging performance in a business as a key indicator?

RQ3: What is the impediment to pension managers' performance?

The link between private pension flow, performance, and cost in an emerging economy like Tukey was evaluated by Erzurumlu and Ucardag (2021). Wang et al. (2023) investigated the persistence of the performance of Hong Kong pension fund managers. In Chile, a study compared the pension fund system's risk-adjusted return to the Chilean gross domestic product (GDP) (Miglino et al., 2023). Ifenna and Arinze (2020) investigated the relationship between pension fund administrators and financial transparency in Nigerian retirement savings. This study was motivated by the challenges faced by both the private and public sector in pension fund administration especially the DBS being used in the public sector with annual retirement benefits predetermined.

This study focuses on the Nigerian pension fund industry among other sub-Saharan African countries because of the rapidly expanding population of retirees, the rising numbers of registered pension fund contributors from the private and public sectors, pension fund managers, and the less-than-satisfactory improvements in pension fund assets. This study focuses primarily on the performance sustainability of pension fund managers and is based on primary data collected via survey questionnaires. It is therefore clearly distinct from a study of the financial performance adequacy of pension fund managers in Nigeria which undertakes an empirical analysis of pension fund performance.

Furthermore, pension fund managers' performance sustainability approach provides more data on the techniques that pension fund managers can employ to perform effectively. As a result,

the finding is stronger when compared to pension fund managers' financial performance adequacy.

The paper is divided into five portions, beginning with the background. Section 2 includes a study of related literature as well as the development of hypotheses. The approach for this investigation is presented in Section 3. Section 4 gave the empirical outcomes of the data analysis and a discussion of them. Section 5 of the article closes with policy implications.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This Section provides the view of the different authors on the performance sustainability strategy of pension funds and the development of each hypothesis for this study.

2.1. Performance sustainability strategy of pension fund managers

The importance of pension funds as a driver of long-term savings has been established, and this has made them popular as an investment vehicle. Further, to a large extent, profitability determines the future income that beneficiaries receive from their funds. An important question, therefore, is whether there is a means of determining and selecting pension fund managers that will enhance the prospect of enhanced returns among competing fund managers (Otero-González, 2021). Several studies have been conducted to assess the impact of management approach and style on pension funds. For example, active management is a significant source of performance for pension funds (Otero-González, 2021). Several studies on the determinants of pension fund performance have been conducted. These studies include the gender of managers, experience (Kempf et al., 2017), tenure (Clare et al., 2016), superior investment skills due to the level of specialization (Alda et al., 2017), expenses (Broeders et al., 2019), regulatory impact (Papík & Papíková, 2021), and the effect of active management and value investment strategies.

Across jurisdictions, government regulatory intervention in the pension systems occurs frequently. For instance, in Germany, a minimum return guarantee scheme was implemented (Papík & Papíková, 2021), pension vesting and lock-in regulations to add protection to pensions in Canada (Messacar, 2018), the balancing of the commercial viability and social-political stability of private pension provision in the UK (Tuytens, 2019). However, in the USA, public pension funds act on regulatory incentives to invest in risky assets in order to report higher funding (Andonov et al., 2017). In Turkey, Erzurumlu and Ucardag (2021) discovered that when rules exist, they give compensation that improves market efficiency. Investors prioritize cost over performance, and they allocate assets based on return when there is appropriate risk compensation. The authors stated that investors in pension funds with lower expected returns and no specific fee reduction clause could utilize a cost-cutting method. A couple of studies, including Ifenna and Arinze (2020), explore the administration of pension funds and financial transparency of retirement savings funds in developing countries such as Nigeria.

H1: Governance and operation are not likely to promote the performance of pension managers.

Ambachtsheer et al. (1998) identified three drivers of pension fund performance fund size, the proportion of assets passively managed, and the quality of the fund's organizational design. They created eleven organizational performance drivers, which include the following: governing fiduciaries have good mechanisms for understanding and communicating with plan stakeholders, governing fiduciaries do a good job of balancing over control and under control, the fund has an effective process for selecting, developing, and terminating its governing fiduciaries, governing fiduciaries and related committees use their time efficiently, and there is a high level of trust, there is a clear allocation of responsibilities and accountability for fund decisions between governing fiduciaries and the pension investment team, describe the company vision of where we should be in the future, describe our fund's strategic positioning, describe company resource plan, developing company asset mix required considerable effort on the part of individuals and the governing trusted advisors (Akomea-Frimpong et al., 2022).

Furthermore, Investments and Prices (2023) stated that most OECD countries implemented internal and external governance mechanisms, as well as investment control, to ensure good pension fund management and avoid political interference; this structure and mechanism follow OECD standards for good pension fund investment management.

In their study of a sample of UK equity pension funds, Alda et al. (2017) found that management expertise is a significant factor in analyzing the level of performance among pension fund managers. They reported that the performance of some managers seemed to validate the theory that some managers demonstrate superior skills over others. They also observed that managers tend to record better performance when they run single funds, perhaps because it allows them to focus on specific tasks. It was also reported that the performance of fund managers performance is influenced by market conditions.

H2: Planning and Management are unlikely to enhance the performance of pension fund managers.

Jonsdottir et al. (2022) argued that there are challenges with the pension system in developed countries particularly in the USA at the national level the overall saving rate has been very low for some time, and lack of a national retirement policy, lack of legislation and economic framework if these institutions are available it will proper shaping the pension legislation and regulation due to the pension law frequently change. VanDijk (2020) posited that climate risk is one of the financial risks facing investors in the pension funds industry; the author used Dutch Pension Funds as a case study, the author indicates there are major four categories of approaches in mitigating the climate risks this include diversification, exclusion, best-in-class, and engagement.

H3: Barriers hindering pension fund managers are not likely to improve the performance of pension managers.

3. RESEARCH METHODOLOGY

3.1. Research design

The method of data collection of the study is a primary source of data collection which is a survey questionnaire. There is a need for the survey questionnaire in order to reveal the opinion of the stakeholders in pension fund management.

3.2. The survey questionnaire on performance sustainability strategy

The primary data which is a survey questionnaire was designed to measure the performance and barriers hindering the performance of the pension fund managers.

The study's population consists of PenCom regulatory body officers, pension fund operators who are PFAs and Pension Fund Custodians (PFCs), pension fund contributors who are public and private sector employees, pensioners, and members of non-governmental organizations (NGO) and civil society organizations. The study's population is made up of selected firms that include financial and non-financial firms from various sectors of the listed firms. The sampling method used was snowballing, which also includes responders-driven (a non-parametric sampling method) for survey question administration. The justification for using this method is to select the sampling from existing study subjects that will be recruited for the future subject among their acquaintances; thus, the sample grows like a rolling snowball; this method of sampling builds up enough data gathered through survey questionnaires and interview that is useful for this research as a result of a large population. The survey questionnaire was distributed to the respondents in a total of 1,500 copies. However, 2,000 260 copies were returned, resulting in an 84% response rate.

4. RESULTS

4.1. .....

Below are the findings from the analysis of data through the survey questionnaire; as it indicates the reliability test of performance indicators, characteristics of the respondents, descriptive statistics, and percentages of frequency from each item or statement from the instrument (survey questionnaire) and the results of descriptive statistics, percentage of frequency, and independent samples t-test analysis on the key driver to measure the performance of pension fund managers.

Table 1. Shows the result of the analysis on the reliability test of performance indicators of pension fund managers

Variable	*Section*	*Cronbach's alpha*	*No of item*
Governance and operation	B: Q9–Q14	0.86	6
Planning and management	C: Q15–Q18	0.98	4
Barriers hindering pension managers	D: Q19–Q26	0.81	8

Table 2. Provides the characteristics of respondents from the survey questionnaire (Part 1)

Characteristic features	*Frequency*	*Percentages*
Sex		
Male	1187	94.2
Female	73	5.8
Job title		
National Pension Commission (Regulator)	119	9.4
pension fund managers	171	13.6
pension fund custodian	160	12.7
Private sector employee	299	23.7
Public sector employee	326	25.9
Pensioner	144	11.4
NGOs, civil society organisation	41	3.3
Total	**1260**	**100**
Job years of experience		
1–5 years	47	3.7
6–10 years	33	2.6
11–15 years	502	39.8
16–20 years	589	46.7
21–25 years	52	4.1
31–35 years	37	2.9
Total	**1260**	**100**
Knowledge of pension fund		
Low	2	0.5
Medium	129	9.9
High	1,129	89.6
Total	**1260**	**100**
Geo-political zone		
South-West	401	31.8
South-South	102	8.1
South-East	206	14.5
North-Central	263	20.9
North-West	183	14.5
North-East	105	8.3
Total	**1260**	**100**

Table 2. Provides the characteristics of respondents from the survey questionnaire (Part 2)

Characteristic features	*Frequency*	*Percentages*
Education		
Diploma/certificate	10	0.8
Bachelor degree	742	58.9
Master degree	506	40.2
Doctorate	2	0.2
Total	**1260**	**100**
Type of industry		
Financial	901	71.5
Non-financial	359	28.5
Total	**1260**	**100**
Sectorial		
Manufacturing companies	331	26.3
Non-manufacturing companies	929	73.7
Total	**1260**	**100**

Table 3. Showing the descriptive statistics and percentage of frequency of governance and operation as performance indicators for pension fund managers.

Statements	*N*	*Code*	*Mean value*	*Std. dev.*	*% of freq.*	*Decision*
The pension fund manager governing fiduciaries has a good mechanism to understand and communicate with stakeholders.	1,260	*Gov._Fid9B*	4.30	0.72	39.4% 45.2%	497 A 569 SA
Governing fiduciaries of the pension fund manager do a good job of balancing over control and under control of your pension firm.	1,260	*Control_10B*	4.43	0.50	57.1% 42.9%	719 A 541 SA
Pension funds have an effective process of selecting, developing, and terminating their governing fiduciaries.	1,260	*Eff._Pro11B*	4.43	0.50	56.6% 43.4%	713 A 547 SA
The pension fund managers governing fiduciaries and related committees use their time effectively (focused and do not waste time).	1,260	*Time_Pro12B*	4.41	0.51	57.1% 42.1%	719 A 531 SA
There is a high level of trust between your firm governing fiduciaries and the pension investment team and PFCs.	1,260	*Trust_13B*	4.40	0.53	55.7% 42.1%	702 A 531 SA
There is a clear allocation of responsibilities and accountabilities for pension fund decisions between the pension fund manager governing fiduciaries' pension investment team and PFCs.	1,260	*Resp._Acct.B14*	4.07	0.89	54.6% 31.9%	688 A 402 SA

Note: A — Agree, SA — Strongly agree.

Table 3 shows the descriptive analysis and percentage of frequency of opinion of the respondents on governance and operation as performance indicators for pension fund managers. The results revealed that the respondents agreed respectively on all the statements related to governance and operation as indicators for the performance of pension fund managers. This finding indicates that operation and governance improve the performance of pension managers.

Table 4. Indicates the descriptive statistics and percentage of frequency on planning and management as performance indicators for pension fund managers

Statements	*N*	*Code*	*Mean value*	*Std. dev.*	*% of freq.*	*Decision*
The pension fund managers can describe the vision of where their firm should be in the future.	1,260	*Vision_15C*	4.15	0.90	50.6% 38%	638 A 479 SA
Your organization has provided fund strategic positioning for better value to stakeholders.	1,260	*Strategic_16C*	4.57	0.96	8.6% 80.1%	108 A 1,009 SA
The pension manager has a resource plan that can be obtainable and optimally utilize the required human, financial, and information technology resources.	1,260	*Resource_17C*	4.17	0.91	48.6% 40.1%	612 A 505 SA
In our firm, there is the development of a pension assets mix and considerable effort on the part of management and the governing fiduciaries, to showcase case their best.	1,260	*Assets_Mix18C*	4.16	0.90	50.3% 38.31%	634 A 483 SA

Note: A — Agree, SA — Strongly agree.

Table 4 shows the descriptive analysis and percentage of frequency of opinion of the respondents on planning and management as performance indicators for pension fund managers.

The results indicate that the respondents agreed respectively on all the statements related to the planning and management as indicators for the performance of pension fund managers. This finding suggests that planning and management are key indicators that enhance pension fund managers.

Table 5. Illustrates the descriptive statistics and percentage of frequency of barrier hindering performance of pension fund managers

Statements	*N*	*Code*	*Mean value*	*Std. dev.*	*% of freq.*	*Decision*
Lack of adequate resources hinders pension fund managers to excel.	1,260	*Lack_Reso19D*	3.11	1.19	40.5% 8.5%	510 A 107 SA
Pension fund managers lack sufficient skills.	1,260	*Lack_Skill20D*	3.22	1.31	28.8% 20.2%	363 A 254 SA
There are inadequate technological resources in your organization.	1,260	*Lack_Tech21*	2.71	1.12	11% 48.2%	139 D 607 SD
Conflicting beliefs hindering pension fund managers to perform.	1,260	*Conflict_Hinder23D*	2.62	0.86	56.2% 2.5%	708 D 32 SD

Note: A — Agree, SA — Strongly agree, D — Disagree, SD — Strongly disagree.

In Table 5 the descriptive statistics and percentage of frequency indicate a mix of results from the opinion of the respondents such that the statement on lack of adequate resources hinders pension fund managers to excel revealed that only 48.4% of the respondents agreed and strongly agreed while other respondents are either undecided or disagree. However the percentages of the agreed and strongly agreed are more than the other categories. This result suggests that there are barriers hindering the performance of pension managers. The same result shows for the statement on pension fund managers lack sufficient skills with 49% of 48.4% of the respondents agreeing and strongly agreeing while other respondents are either undecided or disagree. However, the percentages of the agreed and strongly agreed are more than the other categories. This result from the opinion of the respondents implied that lack of sufficient skills is a barrier hindering the performance of pension fund managers.

However, the statement that there are inadequate technological resources in your organization provides the finding that 59.2% of the respondents disagree there are inadequate technological resources for the pension fund managers to perform. This result indicates that inadequate technology is one of the barriers. In addition, 81.2% of respondents disagree strongly that the issue of conflict belief may also hinder the performance of pension managers therefore this indicates that conflict of interest hinders the performance of pension funds managers. Also, the statement that there are difficulties in the marketing of their product for pension managers shows that 54.1% of the respondents agree and strongly agree that pension fund managers are finding it difficult to market their products thus this finding shows that there are difficulties in the marketing of their product for pension managers

Furthermore, the following statement that lack of adequate innovation hinders pension fund managers to perform provides that 76.5% of the respondents believed that lack of adequate innovation hinders pension fund managers to perform, this finding suggests that there is a need for pension funds regulatory agency to enforce the use of more digital innovation for pension funds managers. Lastly, pension fund managers face a lack of adequate processes which include structure, communication, and inaction show that 51.1% of the respondents indicate that there are lack of adequate processes include structure, communication, and inaction on the part of pension fund managers therefore this finding implied that pension fund managers need to put more effort in ensuring that there is need for them to structure, communicate and allowed other pension funds stakeholders to know more about their activities.

4.2. Results of independent samples t-test analysis

This subsection provides the findings of each key driver of measurement organization performance; using the survey questionnaire adapted from Ambachtsheer et al. (1998). The main key drivers of performance measurement are governance operation, planning, and management; it also includes the barrier that hinders this key driver of performance. Independent sample t-test is used in the analysis of the data that is separated into two groups which are the regulator of the pension fund and operators of pension funds, and contributors of pension fund'. This consists of the private employee, public employee, pensioner, NGO, and civil society organization. Independent sample t-test shows whether there is a significant difference in the mean score between regulators with operators group and contributors group using Sig. 2-tailed.

If the value in the Sig. 2-tailed is equal to or less than 0.05 which indicates that there is a significant difference in the mean scores of the statement or variable for regulators with operators' group and contributors' group. If the value is above 0.05 there is no significant difference in the mean scores of the statement or variable for regulators with operators group and contributors group.

Table 6. Indicate results of independent samples t-test analysis on governance and operation statements (Part 1)

Statement	*Variable code*	*Group*	*N*	*Mean*	*SEM*	*SD*	*Mean diff.*	*t-test*	*Sig. (2-tailed)*
The pension fund manager governing fiduciaries has a good mechanism to understand and communicate with stakeholders.	*Gov_Fid9B*	Regulator with operators/ contributors	451 809	4.33 4.28	0.22 0.29	0.47 0.82	0.04	1.04	0.30
Governing fiduciaries of the pension fund manager do a good job of balancing over control and under control of your pension firm.	*Control_10B*	Regulator with operators/ contributors	451 809	4.27 4.51	0.02 0.12	0.44 0.50	-0.24	-8.91	0.000
Pension funds have an effective process of selecting, developing, and terminating their governing fiduciaries	*Eff_Pro11*	Regulator with operators/ contributors	451 809	4.29 4.52	0.02 0.02	0.45 0.50	-0.23	-8.35	0.000

Table 6. Indicate results of independent samples t-test analysis on governance and operation statements (Part 2)

Statement	Variable code	Group	N	Mean	SEM	SD	Mean diff.	t-test	Sig. (2-tailed)
The pension fund managers governing fiduciaries and related committees use their time effectively (focused and do not waste time).	*Time_12B*	Regulator with operators/ contributors	451 809	4.24 4.51	0.02 0.02	0.43 0.56	-0.27	-9.79	0.000
There is a high level of trust between your firm governing fiduciaries and the pension investment team and PFCs.	*Trust_13B*	Regulator with operators/ contributors	451 809	4.24 4.48	0.02 0.02	0.42 0.56	-0.25	-8.72	0.00
There is a clear allocation of responsibilities and accountabilities for pension fund decisions between the pension fund manager governing fiduciaries' pension investment team and PFCs.	*Resp_Acc14B*	Regulator with operators/ contributors	451 809	4.26 4.00	0.02 0.02	0.47 81.04	0.29	6.90	0.000

Note: If the value in the Sig. 2-tailed is equal to or less than 0.05 which indicates that there is a significant difference in the mean scores of the statement or variable for regulators with operators group and contributors group. If the value is above 0.05 there is no significant difference in the mean scores of the statement or variable for regulators with operators group and contributors group.
SD — Standard deviation, SEM — Standard error of the mean.

Table 6 provides the results of independent samples t-test analysis on governance and operation statements for the following sub-statements such as pension fund manager governing fiduciaries have a good mechanism to understand and communicate with stakeholders denoted by code *Gov_Fid9B* show that there is no significant value between the mean score this statement or variable among the regulatory with operators of pension fund group and the contributors of pension fund group. This finding suggests that there is a perception that pension fund managers' management has a good mechanism to understand and communicate with stakeholders. However, other sub-statements on governance and operation statements in Table 13 which include governing fiduciaries of the pension fund manager do a good job of balancing over control and under control of your pension firm (*Control_10B*), pension funds have an effective process of selecting, developing and terminating its governing fiduciaries (*Eff_Pro11*), pension fund managers governing fiduciaries and related committees use their time effectively (focused and do not waste time) (*Time_12B*) there is a high level of trust between your firm governing fiduciaries and the pension investment team and PFCs (*Trust_13B*) there is a clear allocation of responsibilities and accountabilities for pension fund decision between the pension fund manager governing fiduciaries and pension investment team and PFCs (*Resp_Acc14B*). The findings from the independent samples t-test analysis indicate that all the above statements or variables from the survey questionnaire show a significant difference in the mean score of the above statements or variables mentioned above for the regulatory with operators of pension fund group and the contributors of pension fund group. This implies that contributors and operations of pension funds agreed that governance and operation statements provide efficient and effective strategies for pension fund managers to sustain their performance.

Table 7. Indicate results of independent samples t-test analysis on planning and management statements

Statement	Variable code	Group	N	Mean	SEM	SD	Mean diff.	t-test	Sig. (2-tailed)
The pension fund managers can describe the vision of where their firm shouldbe in the future.	*Vision_15C*	Regulator with operators/ contributors	451 809	4.21 4.12	0.02 0.04	0.44 1.07	0.10	2.23	0.000
Your organization has provided fund strategic positioning for better value to stakeholders.	*Strategic_16C*	Regulator with operators/ contributors	451 809	4.92 4.38	4.92 4.38	0.32 1.13	0.54	12.69	0.000
The pension manager has a resource plan that can be obtainable and optimally utilize the required human, financial, and information technology resources.	*Resource_17*	Regulator with operators/ contributors	451 809	4.27 4.12	0.02 0.04	0.47 1.07	0.15	3.51	0.000
In our firm, there is the development of a pension assets mix and considerable effort on the part of management and the governing fiduciaries, this showcases their best.	*Asset_Mix18C*	Regulator with operators/ contributors	451 809	4.22 4.12	0.02 0.04	0.45 1.07	0.11	2.44	0.000

Note: If the value in the Sig. 2-tailed is equal to or less than 0.05 which indicates that there is a significant difference in the mean scores of the statement or variable for regulators with operators group and contributors group. If the value is above 0.05 there is no significant difference in the mean scores of the statement or variable for regulators with operator group and contributors group.
SD — Standard deviation, SEM — Standard error of the mean.

Table 7 illustrates the results of independent samples t-test analysis on planning and management statements for the following sub-statements such as pension fund managers can describe the vision of where their firm should be in the future (*Vision_15C*), your organization has provided fund strategic positioning for better value to stakeholders (*Strategic_16C*), pension manager has resource plan that can be obtainable and optimally utilize the required human, financial and information technology resources (*Resource_17*), there is the development of pension assets mix and

considerable effort on the part of management and the governing fiduciaries, this showcases their best (*Asset_Mix18C*). The finding indicates that all the above statements or variables from the survey questionnaire have a significant difference in the mean score of the above statements or variables mentioned above for the regulatory with operators of the pension fund group and the contributors of the pension fund group. This implied that statements are significant as a result of significant differences in the mean value between the regulatory operators of the pension fund group and the contributors of the pension fund group on the planning and management sub-statement. This finding also indicates that planning and management strategies can enhance pension fund managers to sustain their performance.

Table 8. Indicate results of independent samples t-test analysis on barrier-hindering performance statements

Statement	*Variable code*	*Group*	*N*	*Mean*	*SEM*	*SD*	*Mean diff.*	*t-test*	*Sig. (2-tailed)*
Lack of adequate resources hinders pension fund managers to excel.	*Lack_Resource19D*	Regulator with operators/ contributors	451 809	3.24 3.04	0.06 0.04	1.17 1.19	0.20	2.85	0.043
Pension fund managers lack sufficient skills.	*Lack_Skill20D*	Regulator with operators/ contributors	451 809	3.24 3.22	0.06 0.05	1.18 1.38	0.22	0.29	0.769
There are inadequate technological resources in your organization.	*Lack_Tech21D*	Regulator with operators/ contributors	451 809	3.18 3.22	0.06 0.03	1.18 0.99	0.73	11.09	0.000
Conflicting beliefs hindering pension fund managers to perform.	*Conflict_Hinder22D*	Regulator with operators/ contributors	451 809	3.21 2.29	0.04 0.02	0.95 0.60	0.93	18.77	0.000
There are difficulties in marketing their product to pension managers.	*Lack_Mkt23D*	Regulator with operators/ contributors	451 809	3.59 3.29	0.05 0.04	0.99 1.24	0.30	4.64	0.000
Lack of adequate innovation hinders pension fund managers to perform.	*Lack_Innovation24D*	Regulator with operators/ contributors	451 809	3.65 3.60	0.04 0.04	0.77 1.11	0.04	0.78	0.44
Government and political interference are barriers to the performance of pension fund managers.	*Pol_Interf25D*	Regulator with operators/ contributors	451 809	3.31 4.00	0.06 0.04	1.23 1.21	-0.68	-9.21	0.000
Pension fund managers face a lack of adequate processes which include structure, communication, and inaction.	*Lackade_Process26D*	Regulator with operators/ contributors	451 809	3.23 3.28	0.05 0.04	1.16 1.36	-0.05	-0.72	0.470

Note: If the value in the Sig. 2-tailed is equal to or less than 0.05 which indicates that there is a significant difference in the mean scores of the statement or variable for regulators with operators group and contributors group. If the value is above 0.05 there is no significant difference in the mean scores of the statement or variable for regulators with operator group and contributors group.
SD — Standard deviation, SEM — Standard error of the mean.

Table 8 provides evidence for independent samples t-test analysis on barrier hindering the performance of pension fund managers; there is an indication that the following statements or variables which include: pension fund managers' lack of sufficient skills (*Lack_Skill20D*), lack of adequate innovation hinders pension fund managers to perform (*Lack_Innovation24D*) and pension fund managers face lack of adequate process which include structure, communicate and inaction (*Lackade_Process26D*) that there is no significant difference between the regulatory with operators of pension fund group and the contributors of pension fund group in their respective mean score of each above variables or statement. These findings indicate that show that regulations with operators of pension fund groups and the contributors of pension fund groups are barriers that hinder pension fund managers to sustain their performance.

However other statements include: lack of adequate resources hinders pension fund managers to excel (*Lack_Resource19D*), pension fund managers lack sufficient skills (*Lack_Sufftt skills20*) there are inadequate technological resources in your organization (*Lack_Tech21D*), conflicting beliefs hindering pension fund managers to perform (*Conflict_Hinder22D*), there are difficulties in the marketing of their product for pension managers (*Lack_Mkt23D*) and government and political interference are a barrier to performance of pension fund managers (*Pol_Interf25D*); all above statements show significant value difference in the mean scores for each of the group that is regulatory with operators of pension fund group and the contributors of pension fund group. These results suggest that other barriers mentioned above can also contribute to hindering the sustainability of pension fund managers.

5. CONCLUSION

This paper examines the performance sustainability of pension fund managers in a developing country context such as Nigeria as follows. In Tables 6, 7 and 8, there is evidence from the Tables that the key indicators of measuring performance such as governance, operation, planning, and management showed that the respondents agreed that these performance indicators promoted the performance sustainability strategy of pension funds managers these findings are consistent with Ambachtsheer et al. (1998). In Tables 6 and 7 independent samples t-test indicated that there is no significant difference between the opinions of regulators and operators of the pension fund group and the contributors of the pension fund group. This result suggested that each of the groups such as the regulatory agency of pension funds; National Pension Funds Commission, operators of pension funds, and contributors agreed that governance, operation, planning, and management promote the sustainability strategy of the performance of pension funds managers.

However, in Table 8 the perception from the respondents showed that barriers are hindering the performance sustainability strategy of performance of pension funds managers. These findings illustrate the present condition of pension fund managers. The limitation of this study is the lack of enough data to be used; the results from the analysis of data through the survey questionnaire were opinions or perceptions from the stakeholders of pension funds in Nigeria.

From the perception of respondents in this study there is a need for the regulatory agency of pension funds to ensure that the key indicators of measuring performance sustainability strategies such as governance, operation, planning, and management should be part of their evaluation in assessing and monitoring pension funds managers. The management of each pension fund manager should provide solutions to barriers that hinder the performance sustainability strategy of the pension fund managers so that there will be an improvement in their performance.

The findings from this study through the survey question administered to the stakeholders are based on the opinions or perceptions from stakeholders across the six geo-political zones as South-West, South-South, South-East, North-Central, North-West, and North-East in Nigeria.

We recommend that future research in the field should focus on the determinants of the choice of pension fund managers by pension fund contributors. This will help to determine the desirable factors that pension contributors take into consideration when selecting pension fund managers. In addition, future research efforts should be directed at assessing the impact of pension fund regulation on the performance of pension fund managers. The suggested research areas will enhance our understanding of the long-term performance sustainability of pension fund managers in Nigeria.

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