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REGULATORY STRUCTURE, PENSION REFORM AND RETIREES' WELFARE UNDER THE CONTRIBUTORY PENSION SCHEME IN NIGERIA: A FACTOR ANALYSIS APPROACH

[1]Lawal, O. I., [2]Saheed Z. S, PhD & [3]Ahmed, Y. O.
[1&2]Departmentof Economics
[3]Department of Accounting
Faculty of Arts and Social Sciences, Nigerian Defence Academy, Kaduna

Corresponding Author: Saheed, Zakaree S.
Faculty of Arts and Social Sciences, Nigerian Defence Academy, P.M.B 2109, Kaduna, Kaduna State, Nigeria
Tel: +234 8039370901. Email: zakss_1@yahoo.co.uk

Abstract

Social policy experts have long been divided about the optimal features of old-age security, and more recently about the strengths and weaknesses of various pension reforms as it affect the old workers. This paper examines the effects of pension reform and its regulatory structure on retirees' welfare under the contributory pension scheme in Nigeria. Data were collected through structured questionnaire administered to a sample of 50 experienced retirees on successive government reforms and regulatory structure from Ministry of Works. In analysing the data, the technique of factor analysis was used. The results show that both pension reform and regulatory structure have positive influences on retirees' welfare. Other factors that affect retirees' welfare are timely payment of pension income, health, consumption and savings. However these factors were only used as control variables in the study. The study, therefore, concludes that, holding other factors constant, pension reform and regulatory structures account for positive and significant impact on retirees'

welfare. Hence the study recommends that pension reforms in Nigeria should be subjected to periodic review and all institutions involved in pension administration, viz, Pension Commission (PENCOM), Pension Fund Administrators (PFAs) and Pension Fund Custodians (PFCs) should be compelled to take issues of compliance, monitoring and evaluation very serious as these will guarantee improvement in the welfare of the retirees.

Keywords: *Pension reform, Regulatory structure, Contributory Pension Scheme, Retirees' Welfare*

1.1 Introduction

Concern for retirees' welfare through the provision of pension systems dates back to colonial days in Nigeria where pension interventions have been carried out through regulatory and several government reforms. Prior to the establishment of Contributory Pension Scheme in Nigeria, there exists, three regulators in the pension industry, viz, Securities and Exchange Commission (SEC), The National Insurance Commission (NAICOM) and the Joint Tax Board (JTB). Dalang (2006) notes that SEC was the licensed pension manager while NAICOM remains the agency responsible for licensing and regulating insurance companies in Nigeria. The JTB was approved to monitor all private pension schemes backed up with enabling powers from schedule 3 of the personal income tax Decrees 104 of 1993.

With the coming of Pension Reform Act of 2004, all these regulatory institutions were collapsed and vested in one body known as National Pension Commission (PENCOM). The implication of this development is that regulation stands centralized, with PENCOM vested with the, responsibilities of overseeing and checking the activities of registered Pension Fund Administrators (PFAs) and Pension Fund Custodians (PFCs). There is no statistical evidence as yet to prove that the collapse from multiple regulations into one unit has led to improved welfare condition of its principal target, that is, the retirees.

Pension system, irrespective of nomenclature, operates to provide and guarantee an income that ensures nearly the same standards of living as in employment; it is an insurance against unpredictable life expectancy at retirement. Economic changes, such as increases in wages over the long period from employment to retirement, is enormous and unpredictable, the possibility of becoming disabled or even die, during career life cycle cannot be ruled out. These are in addition to problems of ageing society, increasing rate of unemployment, public budget deficits and low economic growth; all of these have compelled a rebalance in

revenue and expenditures of governments (Barnhad, 2007). As a direct consequence of pressures from stakeholders and the need for enduring and sustainable public pension systems, the current regime of Defined Contribution Pension policy came into being in 2004, hence, referred to as Pension Reforms Act, 2004. The reforms were designed to, among other things, stem the tide of corruption, poor supervision, administrative bottlenecks and lapses (Pension Act, 2004).

Pension Reforms have been as numerous as the number of government Nigeria had since independence. For instance, the first pension initiative immediately after colonial administration came under the banner of National Provident Fund (NPF), in 1961, which was then operated by both public and private sectors in Nigeria. It was abandoned by the public sector after over 17 billion naira was discovered in fraud (Pension Act, 2004). This was in addition to the fact that retirees were very miserable welfare wise under the NPF system. Though, the private sector carried on with it until early 1990s, when it collapsed due to corruption and lack of commitment to welfare.

Public outcry and protest by stakeholders necessitated further reforms. Prominent among previous reforms were the Civil Service Pension Scheme under Decree 102 of 1979, which also failed because its modus operandi and outcome does not differ from the NPF initiative, the local government pension scheme by military fiat of 1977, and the armed forces pension scheme under Decree 103 of 1979 with retroactive effect from April 1974. Others were pension rights of service Decree number 5 of 1985; and the police and other agencies pension Decree No.75 of 1993. All these reforms had one thing in common, that is, failure to guarantee workers welfare.

It is also on record that all the reforms failed because of similar problems of inability to pay retirees as when due, incomplete payment whenever it is eventually paid, inadequate whenever it is paid, poor record keeping, lack of uniformity among governmental agencies and brazen corruption. The aforementioned problems gave rise to inextricable need to abandon Defined Benefit Scheme (DBS) for Defined Contribution Scheme (DCS). However, the big question of whether or not the central problem of retirees' welfare has been addressed by the current pension reform remains to be seen.

The major performance indicator of the reforms, 2004 Act inclusive, remains the welfare of retirees, which appears to have been relegated to the background in view of the avalanche of complaints of untimely payments and non-payments that

have so far become the mantra of the scheme. The supervisory institution mandated to ensure the realization of the lofty objectives for which the Act was promulgated has not inspired the confidence of all and sundry.

Van Praag (1999) considers welfare as the evaluation assigned by individual to income or more generally, to the contribution to the wellbeing from those goods and services that can be bought with money. The implication is that whatever retirees can buy with money is affected by retirement administrative system in operation, manifested in health of retirees, timely payments of pension benefits, consumptions and saving profile of retirees.

Giving the foregoing, the main objective of this paper is to examine the impact of Regulatory Structure and Reforms on the welfare of retirees under the new contributory pension reforms; hence the study proposes the following statements of hypotheses:

$H0_1$: There is no significant relationship between regulatory structure and retirees' welfare.
$H0_2$: There is no significant relationship between pension reform and retirees' welfare.

2.1 Literature Review and Theoretical Framework

Nyong and Duze (2010) examined the Pension Reform Act (PRA) of 2004 and its significance on retirement planning in Nigeria. Their study used a sample of 3,000 serving teachers and teacher pensioners, and the results from their study revealed that the objectives of the scheme were yet to be achieved since retired persons still suffered trauma, pains, and even death before they received their pension packages in Nigeria. Evidence from this research indicates that retirees' welfare is reasonably threatened under the CPS arrangement while its sustainability was questioned. However, the study failed to explain precisely, the proportion of the sample that constituted the serving teachers and the proportion that constituted the teacher pensioners. Besides, there is the possibility of the responses from the respondents being dominated by the serving teachers rather than the teacher pensioners, thereby affecting the research objective of targeted teacher pensioners.

Okoye (2012) performed a qualitative, exploratory and descriptive analysis of secondary data to provide an insight into the subject matter of pension regulatory structure in Nigeria. The study found out that most retirees are not aware of the operations of the pension new reforms. Although the study used a secondary data, it failed to tell the sources from where the data were obtained as well the scope of

coverage of the data. Hence, the study could be said to be weak in methodology, and therefore may not be reliable in welfare policy formulation.

Odia and Okoye (2013) investigated the Nigerian Pension reforms and management by examine the influence of pension reforms on the welfare of theretired civil servants in Nigeria with particular reference to Cross River State. Data for the study were collected with the use of structured questionnaire. Data obtained were analyzed using simple percentage and Pearson Product Moment Correlation Coefficient. Results and findings revealed that there exists a significant relationship between pension reforms and the welfare of the Pensioners. The only limitation of this study is that it does not revealed whether the significant relationship between reforms and welfare is positive or negative.

Folorunso (2010) investigated the effects of pension reform on household savings in Nigeria using primary dataselected randomly from 182 households who have Retirement Savings Accounts (RSA) with Stanbic IBTCPension Managers Limited through a structured, open-ended questionnaire. Using the Life-CycleHypothesis, the result of the study shows that pension reform increased consumption and crowded out savings of workers. The study concluded that there is an inverse relationship between pension reform and households' savings in Nigeria, implying that since the introduction of the reform, households have been unable to save due to the effects of the reform on their disposable income. The findings are consistent with the Life-Cycle model prediction as the theoretical analysis shows that pension reform caused both income and wealth effect.

Lindbeck and Persson (2001) provided enlightening discussions on how to theorize a pension reform and its regulatory structures based on certain parameters that measures the performance of the reform. They identify three key dimensions within which any given pension reform system can be placed. Such a three dimensional space helps to visualize the idea that a pension reform and its regulator characteristics exist in a sort of continuum, where differences in practice are often just a matter of degree. In the dimensional model, four extreme spaces were constructed to provide main reference points for analysis. Thus, pension reform could be thought of a moving from the system's initial location towards any of the extremities. Based on the authors' graphical construct, three key dimensional parameters were developed to explain the nature and costs of a pension reform.

The ecological theory of administrative weakness is credited to Riggs (2008). The theory hinges on the assumption that the poor performances of the public institutions/structures could be attributed to exogenous interferences such as modernization and tradition. Such interferences create ecological constraints that

weaken administrative structures in the developing states. These constraints haveprevented the administrative institutions in the developing states from moving at par with their counterparts in the developed economies.

However, the contributory pension scheme in Nigeria is a product of Chile's type of pension scheme (Dostal, 2014). The administrative capacities of the two countries are different, and Nigerian government did not bother to tailor it to suit our environment. Due to weak institution occasioned by environmental constraints, the new pension scheme which commenced some few years back is facing some challenges. Part of it is how to get the informal sector involved in the pension scheme, again the economic recession coupled with obvious corruption in the system are threatening the existence of the scheme. Significantly, the weak administrative structure lacks the capacity to stymie the palpable problems experienced by retirees in the collection of their monthly pension as at when due (Anazodo, Ezenwile, Chidolue & Chidinma, 2014).This study adopted the ecological theory of administrative weakness.

3.1 Methodology and Model Specification

This section presents the research design and the population of the study from where a sample of senior and experienced retirees from Ministry of Works was obtained using a technique considered appropriate for the study. The modalities for data collection and analysis for the study was also explored under this heading. The population of this study comprises the retirees of the Federal Ministry of Works who have retired under the new pension scheme. However, in order to obtain relevant information on the performance of pension reforms and its regulatory structure, only the experience retirees and managers from the Ministry of Works were sampled. 50 respondents were randomly selected from these categories of retirees and the information they provided on pension regulatory structure and reforms were used as the basis of the analysis of this study. The responses in the questionnaires were also tested for reliability and the result of Cronbach Alpha is 75 per cent, which suggests that the questionnaire was reliable.

This study utilizes primary data. The research uses questionnaire to elicit vital information regarding Pension Reforms and its regulatory structure in Nigeria. Pension desk officers assisted in the administration of the questionnaire on the respondents. Descriptive statistics such as the mean, standard deviation, minimum and maximum were used to analyze the results of the study. In addition, Factor Analysis (FA) by means of Principal Component Analysis (PCA) was used to analyze the results of the study. This was done to enable the study ascertain the significance of the explanatory variables on retirees' welfare. Paired-sample t-test was also used to test the level of significance between retirees' welfare and regulatory structure on the one hand and retirees' welfare and pension reform on the other hand.

The study uses Factor Analysis technique to analyze the primary data. The choice of FA technique follows from the objective of the study, which is to examine the effect of regulatory structure and pension reform on retirees' welfare in Nigeria. Estimates from FA consists of factor loadings and measurement errors that tell how the unobserved factors account for the observed variables, on the one hand, and the parts of the model that are not accounted for by the p-underlying factors, on the other hand. The higher the value of the factor loading, the more a particular variable is said to 'load' on the corresponding factor.

The model that is used to test the hypotheses of the study is specified as follows:

$$\mathbf{WELF = \alpha + \beta_1 REGSTR + \beta_2 REFM + \beta_3 TIM + \beta_4 HEL + \beta_5 CE + \beta_6 SAV + \varepsilon} \quad (1)$$

Whereas:
WELF = total income of retirees as a measure of retirees welfare
α= intercept
REGSTR = regulatory structure (1 = satisfactory, 0 = not satisfactory)
REFM = reforms (1 = satisfactory, 0 = not satisfactory)
TIM = timely payment of retirees benefits
HEL = health of retirees
CE = consumption expenditure relative to retiree's income
SAV = savings as a percentage of retiree's income
β_i = factor loading parameters, (i = 1 , 2, …..6)
$\mathcal{E}$ = measurement error

4.1 Results and Discussions

This section presents empirical analysis of data, results and discussions. The results of data analysis are reported in the following subsections.

Descriptive Statistics

Descriptive statistics help to summarize the characteristic features of study data by measures of central tendencies such as the mean, standard deviation, minimum and maximum. The results of the descriptive analysis are reported in table 4.1 as follows.

Table 4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
REGSTR	50	1	1	.72	.452
REFM	50	1	1	.78	.418
TIM	50	0	0	.13	.032
HEL	50	2	2	2.18	.100
CE	50	1	1	.57	.028
SAV	50	0	0	.17	.034
Valid N (listwise)	50				

Source: SPSS Statistics 20 Output from study data

From table 4.1, the number of observations is 50. Regulatory Structure has a mean value of about 72% with a standard deviation of about 45%. This suggests that, on the average, 72% of the variation in welfare is due to regulatory structure with a high degree of confidence level of about 55%. The mean also fluctuate around minimum and maximum values of 1.0 and 1.0 respectively. Similarly, the mean value of Pension Reform is about 78% with a standard deviation of 0.418, implying that on the average, the variability in welfare as explained by reforms is as high as 78% with minimum and maximum values of 1.0 and 1.0 respectively.

The control variables used in the model have similar behavior. For example, Timeliness has a mean value of 0.1274 with a standard deviation of 0.0317. The mean has minimum and maximum values of 0.05 and 0.19 respectively. Similarly, the mean value of Health is 2.182 with a standard deviation of 0.1004. The mean has minimum and maximum values of 2.01 and 2.45 respectively.

Furthermore, consumption expenditure has a mean value of 0.566, which suggests that about 56.62 per cent of retirees' income is spent on consumption. The standard deviation value of welfare is 0.02818. The mean has minimum and maximum values of 0.52 and 0.62 respectively. Also, the mean value of savings is 0.167 with a standard deviation of 0.0343. This suggests that retirees save about 16.71 per cent of their income. The mean of savings has minimum and maximum values of 0.12 and 0.25 respectively.

Factor Analysis

The results of factor analysis by means of principal component analysis are reported in tables 4.2, 4.3, 4.4 and 4.5 as follows:

Table 4.2: Communalities

	Initial
REGSTR	1.000
REFM	1.000
TIM	1.000
HEL	1.000
CE	1.000

SAV	1.000

Extraction Method: Principal Component Analysis.

Source: SPSS Statistics 20 Output from study data

Table 4.2 shows how the extracted factors explained the variance in each of the original variables. From the table 4.2, initial communalities for all the factors are as high as 100%. This suggests that no variable or factor can be omitted from the model on account of low communality. In other word, the welfare of the retirees varied with variation in all of the factors.

Table 4.3: Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.315	55.249	55.249	3.032	50.537	50.537
2	1.396	23.262	78.511	1.678	27.975	78.511
3	.673	11.221	89.732			
4	.368	6.127	95.860			
5	.197	3.280	99.140			
6	.052	.860	100.000			

Extraction Method: Principal Component Analysis
Source: SPSS Statistics 20 Output from study data

The table 4.3 shows the factors with higher and lower variability. It helps in decision making on which factors to be retained and which of them have negligible impact in the model. From table 4.3, the percentage of variance column tells how much of the total variability (in all of the variables together) can be accounted for by each of these summary scales or factors. It shows that regulatory structures and reforms are the most determining factor of welfare of the retirees. Factor 1 (regulatory structure) accounts for 50.537% of the variability in retirees' welfare. Also, factor 2 (reforms) accounts for 27.98% of the variability in retirees' welfare. Similarly, factor 3 (timeliness) accounts for 18.201% of the variability in retirees' welfare. Also, factor 4 (health) accounts for 6.128% of the variability in retirees' welfare.

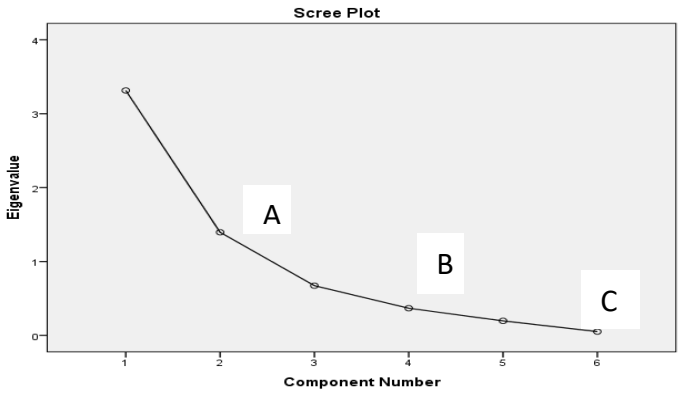

Fig 4.1 Scree Plot
Source: SPSS Statistics 20 Output from study data

Fig. 4.1displays the Eigenvalues associated the factors in descending order. The plot shows the component factors that explained most of the variability in the model. From the plot, the point from A to B is less elastic than from B to C and B to C less elastic than from C to D. But the curve starts to straighten after point B (i.e after factor 2). This suggests that two factors (regulatory structures and reforms) explained most of the variability in welfare. The remaining factors join together explained a very small proportion of the variability and are likely to be less important.

D

Test of Hypothesis
In order to test the hypotheses of the study, paired-sample t test was carried out. The results are reported in tables 4.3 and 4.4 as follows:

Table 4.3 presents paired-sample t test between retirees' welfare and regulatory structure

Table 4.5: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	WELF	1.56	50	.308	.037
	REGSTR	.72	50	.452	.055

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	WELF & REGSTR	50	.464	.000

Paired Samples Test

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	WELF – REGSTR	.844	.412	.050	.744	.944	16.876	49	.000

Source: SPSS Statistics 20 Output from study data

From table 4.3, the sig (2-tailed) value is 0.000 and the correlation value (0.464), which suggests that the relationship between regulatory structure and retirees' welfare is positive and statistically significant (p = 0.000) and at t-statistics of 16.876. This collaborates earlier finding by Ayegba, Isaiah, Odoh, (2013) which concludes that a well organized structure that will ensure prompt payment of retirees and pensioners is highly desirable.

ii. The Relationship between Pension Reform and Retirees' Welfare

Table 4.4: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	WELF	1.56	50	.308	.037
	REFM	.78	50	.418	.051

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	WELF & REFM	50	.774	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	WELF - REFM	.785	.265	.032	.721	.849	24.424	49	.000

Source: SPSS Statistics 20 Output from study data

From table 4.4, the sig (2-tailed) value is 0.000 and the correlation value (0.774), which suggests that the relationship between pension reform and retirees' welfare is positive and statistically significant at (p = 0.000) and t-statistic of 24.424. This is in tandem with the findings of Ahmed and Oyediran, (2013), where they concluded that the implementation of the new pension reforms significantly improves the welfare of the civil servant, nay, and retirees.

5.1 Conclusions and Recommendations

The objective of this paper is to examine the impact of pension reforms and regulatory structure on the welfare of retirees under the new contributory pension scheme. The study shows that the relationship between pension reforms and regulatory structure and welfare is positive and significant. The study, therefore, concludes that pension reforms and regulatory structure have positive impacts on the welfare of retirees. 72% of the variation in welfare is due to regulatory structure with a high degree of confidence level of about 55%. The variability in welfare as explained by reforms is as high as 78% with a confidence interval of 58%.

Given the strong relationship between reforms and welfare as manifested in this study, it is recommended that pension reforms in Nigeria should be subjected to periodic review. This is already evident in the Nigerian experience of CPS which came into being in 2004 but was reviewed in 2014 following the perceived failure of the initial pension scheme to address and fill the gap inherent in the old pension system.

Similarly, all institutions involved in pension administration, viz, PENCOM, PFAs and PFCs should be compelled to take issues of compliance, monitoring

and evaluation very seriously as these will go a long way in improving the efficiency and effectiveness of the scheme, thus, leading to improvement in the welfare of the retirees.

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