

Analysis of The Impact of Pension Scheme of State-Owned Companies of China Railways

Isaac Newton Akowuah ^{1*} isaacnewton194@gmail.com

School of Management, Jiangsu University China, 301 Xuefu Rd, Jingkou Qu, Zhenjiang, Jiangsu Province, China.

Emmanuel Kwaku Manu¹

School of Management, Jiangsu University China, 301 Xuefu Rd, Jingkou Qu, Zhenjiang, Jiangsu Province, China

Theresa Puopelee²

School of finance, University for Development studies, Ghana WA.

Samuel Akowuah²

School of Management, Jiangsu University China, 301 Xuefu Rd, Jingkou Qu, Zhenjiang, Jiangsu Province, China

School of Management, Jiangsu university

ABSTRACT

The purpose of this study was to investigate the factors influencing supplementary pension contribution among employees of China Railway Group Company Limited. Simple random sampling technique was used. A structured questionnaire with close-ended questions was used to solicit data from 421 respondents. Hierarchical multiple linear regression was employed in the analysis of the data. The findings of the study revealed that certain factors such as tax policy and reward system had influences on employees' decisions to take additional pension schemes besides the mandatory pension schemes. A comfortable retired life of employees depends on the savings made during the days of active service. The study revealed that tax policy positively influenced supplementary pension contribution among employees. Reward system has been considered in many cases as having a positive effect on employee decisions. The findings of the study revealed that reward system positively and significantly influenced supplementary pension contribution among employees. In addition, both tax policy and reward system had influence on employee lifestyle.

Keywords : Government, Employees, Supplementary Pension, Tax Policy, Policymakers, Sampling Technique, Lifestyle, Old Age.

I. INTRODUCTION

Over the last fifteen years, China has made great strides in increasing its pension coverage for its population. Over 280 million urban workers were covered as at 2011 since the introduction of the contributory pension system in 1997. Greater lately,

china has curved up a pension scheme for rural employees and by means of the cease of 2012, the rural pension scheme had extended its coverage roughly to 460 million people. The adequacy and effectiveness of a contributory pension scheme for a middle-elegance economy like china rely on mass contribution. In many countries, the contributory

levels are far below 100% because the State is unable or unwilling to impose the mandate to contribute on all jobs, especially on poor and low-income earners and even those in self-employment and small firms. This research presents evidence, on why individuals choose whether to bundle savings for old age in a covered job and the causes of low contributory pension. The determinants of effective contributory pension plan include the earnings differential, lifestyle, conditions of work, promotions etc. Major factors will then be compared with the returns offered by pure savings in the financial market, banks and saving institutions, to determine the individual's willingness and motive for contributing. The study will also examine the standard designed to address noncontributory of pension by employees of China Railway *Group Company Limited. There are various pensions' schemes, employees may patronize, and that includes, Additional Voluntary Contributions (AVC), Personal Pensions/Private Pensions, Company Pension / Workplace Pension Scheme, Final Salary Pension Scheme, Money Purchase Pension Plan, Pension Release and Pensions Tax. Typically, many countries move through the antique pay-as-you-move device where cutting-edge workers' pension contributions and taxes are used to finance cutting-edge pensioners' blessings. Some other alternative is an obligatory fully funded component of the pension device in which each worker holds person accounts and pension blessings are based totally on the contributions to this account and the returns at the investments of these contributions, and the 1/3 approach is an intended fully funded issue, which refers to additional contributions each player could make to her or his man or woman account which will boom the future pension benefits.

The three-pillar system has been a specifically famous way of reforming pension systems in many nations in which the arena bank has an intensive presence. Those nations consist of many growing international locations and specifically transitional countries that were remodeling their economies from centrally

planned to market-orientated. Transitional nations had been significantly encouraged via recommendation and assistance from global (mainly financial) agencies throughout that technique. The toughest argument used to justify the need of assignment a contributory pension scheme and its reform has been an international fashion of getting older. Ijeoma, Oghoghomeh, and Charles (2013) discovered that the top-quality manner maximum antique people who have retired from energetic provider remedy the financial and different troubles is in general thru their pension bills and private savings and different investments. But it is however sadly observed that these monies are usually insufficient to them as and when they need it most, due to the low rate of contribution, even with government subsidy and how private insurers handle pension issues (Mulvey, Bauerfeind, Simsek, & Vural, 2011).

According to Lavigne and Vargas (2013), a pension is any plan, fund or scheme which affords retirement earnings. Holzmann, Orenstein, and Rutkowski (2003) viewed pension as an arrangement to provide people with an income when they are no longer earning a regular income from employment. Pension have to not be careworn with severance pay; the former is paid in regular instalments, whilst the latter is paid in a single lump sum (Basse, Etim, & Asinya, 2008). According to (Jaafar, Daly, & Mishra, 2018), the system for providing financial security for old age in China has been stressful, strenuous, and uncertain. However, recent redresses on the retirement saving account (RSA) under the pension reform Act (PRA) 2004 has been adopted to replace the prior inauspicious practices. Hence, this research, therefore, will examine the tremendous benefits of supplementary pension schemes towards retirement planning in China Railway Group Company Limited.

For most advanced international locations this trend has been a truth for a while now, while populace projections show that a majority of the growing

international locations (which include china and India because the most populous countries within the international) will face a similar trouble in a long time to come. This will necessarily put a huge stress on the prevailing public pension structures considering their design and the level of promised blessings. Further, a few countries used the argument of boosting economic markets and growing financial savings as a further gain from the pension reform. All of those and different elements contributed to the ever-increasing appeal of task a pension gadget reform as a manner of retaining the system for the generations to return and growing the general sustainability of public finances. Alternatively, there was a significant worry amongst humans that their future pension benefits could be substantially decrease than below the antique machine, and vice versa, and additionally that they might be exposed to the uncertainties of financial markets. This has resulted in a significant labour and employee agitations, resulting in fears opposition to reform proposals as well as in the clear split between pro-reform-oriented parties and various labour unions and those who oppose it.

There are two goals for this research. The first one is to determine what factors are significant for explaining employees' decisions to attempt a supplementary pension. The second goal is to analyze the relative importance of different factors in explaining the level of living conditions among employees who opted to contribute to a pension fund system. Further, this have a look at may be useful in predicting what other international locations would possibly undertake comparable pension reforms and the diploma to which employees might also recommend their pension structures. One of the most vital elements that motivate human beings to paintings specially in the public zone company is the task protection component which comes thru the fee of pension and gratuities to retired officials. However, Adeniji, Akinnusi, Falola, Ohunakin, and Research (2017) argued that trends of pension and perquisite

administration in most public sector organization left little to be desired by retirees who often face the problem of delay in payment of their entitlement as well as those who retire without sufficient financial benefits. These incidences create a lot of negative impact and psychological disturbances to these set of people during their lifetime as beneficiaries. In some previous studies, findings show that path dependency, local have an impact on, and implicit pension debt are the most vital explanatory elements for pension reform choice, in addition to the diploma of pension privatization. Finally, this study would seek to find the impact of demographic factors and explain their roles in an employee's decision to undertake a pension scheme which defies conventional wisdom.

Pension schemes are being implemented all over the globe and China is no exception. It is miles envisaged that the brand-new pension reforms will enhance pension benefits and boom the retirement profits safety of people each inside the formal and informal sectors. The scheme may also make certain progressed living requirements of the aged; financial autonomy and independence of retirees; elevated national savings and availability of lengthy-time period price range for financial improvement; and the promotion of boom and improvement of the capital, loan and insurance markets. Ultimately, all stakeholders might respect the benefits that the new pension scheme holds for them and their readiness to take part in the ongoing pension reforms especially how the private schemes are controlled. This study objectives at investigating how conscious and uncovered people are concerning pension contribution closer to their benefits inside the destiny. The final results of the take a look at can even tell stakeholders approximately the level of consciousness and insurance and the willingness to enrol on to be had schemes. Another significant aspect of this study is the relatively few academic researches into the subject of individual's willingness and factors that influence a person's ability to contribute to a pension scheme for their own benefits especially undertaking

supplementary pension schemes. The factors could be lack of information and orientation, working conditions, retiring age, unemployment, salary rates and other related working conditions. The study will explore possible factors that determine a person's decision to contribute to a pension plan, and the outcome will go into future reforms and policy decisions.

The impact of a contributory pension by workers automatically increases the national savings and it could be anything from negative to large positive depending on the reaction of private savers and of the rest of the government workers. If workers are obliged to pay contributions into funded accounts, the pension helps to maintain a middle-class standard of living, and retirement savings provides important supplemental income for unforeseen expenses. Whereas group pension plans also provide guaranteed, monthly income for life, which makes retirement security much more achievable. The findings of this study will aid an effective and efficient pension and gratuity payment in China. Pension administrators and employers will also find the study helpful in the discharge of their duties.

Saez, Schoefer and Seim (2019) revealed that payroll taxes affect both firm and employee lifestyle including savings and renting. Horváth and Siebertová (2019) investigated the employment Effects of Income Tax Reforms from the perspective of Slovakia and revealed that tax reforms affect employees behaviour. On the other hand, Bessho (2018) found out that child benefit, tax allowances encourage positive behavioral responses of employees. Ngwa et al. (2019) revealed that reward system positively influences employees' behavior and employee performance among selected manufacturing firms in the Litoral region of Cameroon. Korir and Kipkebut (2016) investigated the effect of reward management on employee's commitment in the universities in Nakuru county-Kenya. They revealed that good reward boost employee's commitment to

various work and policies within the organizational certain. Nigusie and Getachew (2019) also revealed that reward system influences employee creativity and behavior.

II. ECONOMETRIC METHOD

2.1 Hierarchical Multiple Linear Regression

Hierarchical Multiple Linear Regression is one of the multiple linear regression used to evaluate the contribution of predictor above and beyond the predictions were previously entered, as a means of statistical control and to check the validity extra (Lewis, 2007). Like the stepwise regression, hierarchical regression is a sequential process that involves the inclusion of predictor variables into the analysis in steps. Hierarchical regression is a popular method used to analyse the effect of predictor variables after controlling for other variables.

In this study, it is hypothesized that supplementary pension scheme (SPS) is the dependent variable, employee lifestyle (EL), which is a mediator variable and dependent variable as well while tax policy (TP) and reward system (RS) are the independent variables. Therefore, the general equation is hypothesized to reflect the relationship between motives for employee lifestyle, tax policy and reward system as:

$$EL = f(TP, RS) \quad (1)$$

Based on the preliminary check, we identified the hierarchical multiple linear regression as the most appropriate for the study. Therefore, we modelled the relationship from a classical linear regression model to reflect the hypothesized model in equation (1) to include control variables as:

$$Y = \alpha_0 + \beta_1 X' + \beta_2 Z' + \varepsilon \quad (2)$$

where Y is the dependent variable, α_0 is the intercept; β_1 and β_2 represent the coefficients of the independent variables and control variables ($\beta \neq 0$) respectively; X' represents the vector of independent variables, Z' represents the vector of control variables, and ε is the

error. At this point, we introduce the variables into the hypothesized model in equation (2).

$$EL = a_0 + \beta_1 TP + \beta_2 RW + \beta_3 Z + \varepsilon \tag{3}$$

where EL is the dependent variable, TP and RW represent the vector of independent variables, Z represents the control variables. By specifying equation (3), the actual model can be rewritten as:

$$EL = a_0 + \beta_1 TP + \beta_2 RW + \beta_3 AGE + \beta_4 GENDER + \beta_5 EXPERIENCE + \beta_6 POSITION + \varepsilon \tag{4}$$

where EL is the dependent variable, TP and RW represent the vector of independent variables, age, gender, years of experience and position represent the control variables. $\beta_3 - \beta_6$ represent coefficient of the control variables.

Similarly, the relationship between supplementary pension scheme, tax policy and reward system can be written as:

$$SPS = a_0 + \beta_1 TP + \beta_2 RW + \beta_3 AGE + \beta_4 GENDER + \beta_5 EXPERIENCE + \beta_6 POSITION + \varepsilon \tag{5}$$

where SPS is the dependent variable (supplementary pension scheme), TP and RW represent the vector of independent variables, age, gender, years of experience and position represent the control variables. $\beta_3 - \beta_6$ represent coefficient of the control variables.

The relationship between supplementary pension scheme and employee lifestyle can be written as:

$$SPS = a_0 + \beta_1 EL + \beta_2 AGE + \beta_3 GENDER + \beta_4 EXPERIENCE + \beta_5 POSITION + \varepsilon \tag{6}$$

where SPS is the dependent variable, EL represent the vector of independent variable, age, gender, years of experience and position represent the control variables. $\beta_2 - \beta_5$ represent coefficient of the control variables. Finally, the mediation role of employee lifestyle in the relationship between supplementary pension scheme and tax policy and reward system can be written as:

$$SPS = a_0 + \beta_1 TP + \beta_2 RW + \beta_3 EL + \beta_4 AGE + \beta_5 GENDER + \beta_6 EXPERIENCE + \beta_7 POSITION + \varepsilon \tag{7}$$

where SPS is the dependent variable (supplementary pension scheme); TP and RW represent the vector of independent variables; EL is the mediator variable; age, gender, years of experience and position represent the control variables. $\beta_4 - \beta_7$ represent coefficient of the control variables.

Data Analysis

This section contains the results, analysis of data and discussion. The analysis of data was based on the following research objectives including the factors that influence the patronage of supplementary pension schemes among employees of China Railway Group Company Limited, to assess the knowledge and understanding of employees on various existing supplementary pension schemes, to determine the measures put in place by the Company to enhance employees' patronage of supplementary pension contribution and also to investigate whether employees appreciate supplementary pension schemes initiated by the company to salary-related benefits or not.

Table 3. Data Description

Gender			
	Frequency	Percent (%)	Cumulative Percent (%)
Male	249	59.14	59.14
Female	172	40.86	100.00
Total	421	100.00	100.00

Source: Author's compilation

3.1 Reliability and Validity Analysis

The study conducted both validity and reliability test. The results indicated that all the constructs under consideration had Cronbach Alpha values of more than the 0.7 which is considered by many researchers as the accepted value. The Average Extracted

Variance (AVE) for the data were determined as part of assessing the reliability and validity concerns of the study. The AVE for all the constructs was above 0.5. Table 3.1 represents the Cronbach Alpha and AVE of both the independent and dependent variables. From the values in table 3 the data achieved construct reliability and validity convergent validity were attained. Convergent validity was achieved as the values of Cronbach Alpha far exceeded the values of

AVE. Discriminant validity was assessed and the results indicated that there were no redundant items, therefore, confirming that discriminant validity was attained. The results for the Confirmatory Factor Analysis (CFA) for all the variables (Table 3.1) and showed that each of the items for the survey analysis had a standardized factor loading greater than 0.60 and the t-values were all significant.

Table 3.1 Factor loadings, reliability and validity analysis

Constructs	Loadings	t	Eigenvalues	% of Variance	Cronbach alpha	CR	AVE
Supplementary pension	0.854		7.821	23.387	0.866	0.841	0.584
	0.833	36.580					
	0.842	35.114					
	0.871	37.580					
Tax policy	0.943		7.068	22.219	0.905	0.820	0.553
	0.876	37.645					
	0.881	37.613					
	0.846	36.303					
	0.823	31.211					
Lifestyle	0.835		6.008	18.703	0.817	0.787	0.543
	0.848	36.307					
	0.845	21.657					
	0.855	17.463					
Reward system	0.816		4.725	14.791	0.892	0.766	0.513
	0.791	32.194					
	0.862	37.580					
	0.842	35.114					

Note: KMO = 0.796; Accumulative % of variance explained= 79.10; AVE =Average Variance Extracted; CR= Composite Reliability

3.2 Correlation Test

According to the Table 3.2, all the variables correlate with each other. This gives the prior indication that there is a relationship among the variables. Thus, it provides the basic justification for investigating the relationships among the variables. In addition, none of the independent variables correlated highly with each. This seems to

suggests that there is no presence of potential multicollinearity among the in this study. However, the decision of absence of multicollinearity cannot be done based on correlation matrix alone. Collinearity statistics is needed to fully determine absence of multicollinearity. Table 3.3 shows collinearity statistics.

Table 3.2 Correlation Analysis

Construct	Age	Gender	Years of Experience	Position	SP	Lifestyle	Tax policy	Reward System
Age	1							
Gender	0.345**	1						
Years of Experience	0.423**	0.393**	1					
Position	0.583**	0.372**	0.299**	1				
SP	0.392**	0.229**	0.415**	0.325**	1			
Lifestyle	0.433**	0.388**	0.394**	0.301**	0.532**	1		
Tax policy	0.112*	0.283**	0.349**	0.209*	0.408**	0.378**	1	
Reward system	0.273**	0.199*	0.306**	0.310**	0.478**	0.393**	0.494**	1

Source: Author’s own compilation. **, * significance at 5 and 10% significant levels

3.3 Collinearity test

According to Table 3.3, the collinearity statistics shows that the Tolerance values are greater than 0.2 and the Variance Inflation Factor (VIF) values are less than 5 which further confirms that multicollinearity does not exist among the explanatory variables for this study.

Table 3.3 Collinearity Statistics

The dependent variable is supplementary pension scheme.

Variables	Collinearity Statistics	
	Tolerance	VIF
Age	.341	2.933
Gender	.736	1.358
Years of Experience	.791	1.264
Position	.914	1.094
Tax policy	.962	1.039
Reward system	.321	3.119
Lifestyle	.645	1.550

3.4 The fitness index of china’s pension scheme

By law, all employees of the company make contributory pension. Besides the public pillar, is the enterprise annuity known as the ‘enterprise supplementary pension insurance’ in China. It refers to a type of supplementary pension insurance scheme voluntarily established by an enterprise for its employees based upon the operation’s condition and social-economic development. The enterprise annuity falls under the preferential tax policies and conditions stipulated by state regulations, which are major components of the Chinese pension insurance system. The prerequisite for setting up such a scheme is that the enterprise and its employees must have already participated in the pension insurance system. The personal savings-based pension insurance is a component of China’s multilevel pension insurance system. It is a supplementary scheme. The employee’s participation is voluntary, and they can choose their own insurance administrative agencies. The study seeks discover how both supplementary pension schemes (the enterprise annuity and the personal savings-based) are patronized by the employer and the employees. The willingness of employees and the company to fully embrace these two schemes will result in the optimum pension scheme in company.

Table 3.4 Fitness Index

Name of Index	NFI	GFI	AGFI	TLI	CFI	RMSEA
Index value	.925	.948	.930	.960	.967	0.043

Source: Author’s compilation

The analysis revealed that data were fit since the fitness indices achieved the acceptable threshold as can be seen in Table 3.4. All the indices had values greater than 0.90 with Bentler-Bonett normed fit index (NFI) of a value of 0.925: goodness of fit index (GFI=0.948); comparative fit index (CFI=0.967); adjusted goodness of fit index (AGFI=.930) and Tucker-Lewis index (TLI=0.960). The model was further corroborated by the RMSEA fit statistic the obtained value of 0.043 which is below the desired 0.06 cutoff. The study aimed at establishing the factors which influence the ability of employees of China’s Railway Group Company Limited. Employee’s ability to contribute towards supplementary pension depends on factors such as government tax policy on extra investment taken employees, employee’s present lifestyle and the reward system of the employee organization.

III. RESULTS AND DISCUSSION

This section of the paper present hierarchical linear estimations based on the objectives. Effects of Tax Policy and Reward System on Supplementary Pension Scheme. In line with research hypothesis one, four steps hierarchical estimations are presented in Table 4 In the first step, estimation for only the control variables are presented. In the second step, both control variables and tax policy estimation are performed. Thirdly, both control variables and reward system are presented. Finally, the control variables and joint estimation of tax policy and reward system are estimated. The research hypotheses are listed below

H1a: Tax policy and reward scheme have a significant influence on supplementary pension scheme of China Railway Companies

H1b: Tax policy and reward scheme have a significant influence on the lifestyle of employees in China Railway Companies

H1c: Employee lifestyle significantly influence the supplementary pension scheme of China Railway Companies

H1d: Employee lifestyle mediates the relationship between tax policy and reward scheme and supplementary pension scheme of China Railway Companies

Table 4 Effects of Tax Policy and Reward System on Supplementary Pension Scheme

	Supplementary Pension Scheme							
	Std.		Std.		Std.		Std.	
	Coef.	Err.	Coef.	Err.	Coef.	Err.	Coef.	Err.
	Model 1		Model 2		Model 3		Model 4	
_cons	4.223***	0.246	3.059***	0.248	2.964***	0.270	3.044***	0.263
Age	0.144***	0.021	0.057***	0.020	0.084***	0.020	0.057***	0.020
Gender	0.101***	0.027	0.102***	0.025	0.094***	0.026	0.102***	0.025
Years of Experience	0.056***	0.008	0.035***	0.007	0.035***	0.008	0.035***	0.008
Position	0.108***	0.025	0.048**	0.024	0.070***	0.024	0.048**	0.024
Tax System			-0.288***	0.023			-0.262***	0.042
Reward System					0.342***	0.027	0.339***	0.049
F-test	30.340***		48.310***		41.16***		42.200***	
R ²	0.249		0.382		0.345		0.382	
Adj. R ²	0.241		0.374		0.336		0.373	
Obs	421		421		421		421	

***, **, * significant at 1%, 5% and 10% significant levels respectively.

The results in model 1 of Table 4 shows that variables such as age, gender, years of experience and position significantly influence supplementary pension scheme. Thus, these variables if not controlled for will lead to bias estimates. In model 2, the results show that tax system had significantly negative impacts on supplementary pension scheme indicating that stricter tax policy reduces the likelihood of the employees in China railway companies to seek for additional pension scheme. On the contrary, in model 3, the results show that reward system had significantly positive impacts on supplementary pension scheme indicating that extra reward increases the likelihood of the employees in China railway companies to seek for additional pension scheme. In terms of joint effects, the results in model 4 show that both tax policy and reward system had significantly impacted on supplementary pension scheme with tax policy having negative impacts while reward system had positive impacts on supplementary pension scheme. However, the marginal effects of reward system on supplementary pension scheme is stronger than the marginal impacts exerted by tax policy.

4.1 The Effects of Tax Policy and Reward System on Life style

In line with research hypothesis two, four steps hierarchical estimations are presented in Table 4.1. In the first step, estimation for only the control variables are presented. In the second step, both control variables and tax policy estimation are performed. Thirdly, both control variables and reward system are presented. Finally, the control variables and joint estimation of tax policy and reward system are estimated.

Table 4.1 The Effects of Tax Policy and Reward System on Life style

	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
	Model 1		Model 2		Model 3		Model 4	
_cons	2.738***	0.249	2.659***	0.277	2.666***	0.293	2.674***	0.293
Age	0.127***	0.041	0.123***	0.041	0.125***	0.041	0.123***	0.041
Gender	0.060***	0.021	0.055**	0.023	0.057**	0.022	0.054**	0.023
Years of Experience	0.145***	0.055	0.147***	0.055	0.150***	0.056	0.145**	0.057
Position	0.079***	0.028	0.079***	0.028	0.079***	0.028	0.078***	0.028
Tax System			-0.127***	0.026			-0.123***	0.047
Reward System					0.214***	0.029	0.168***	0.054
F-test	8.48***		7.32***		7.29***		6.4***	
R ²	0.085		0.086		0.085		0.086	
Adj. R ²	0.075		0.074		0.074		0.072	
Obs	421		421		421		421	

***, **, * significant at 1%, 5% and 10% significant levels respectively.

In model 1, the results show that employees’ lifestyle is influenced by factors such as age, years of experience, gender and position. Thus, controlling for these variables in the model increases statistical accuracy. In model 2 of Table 4.1, the results show that tax system had significant and negative influence on employees’ lifestyle indicating that stricter tax policy adversely affects the lifestyle of the employees in China railway companies. In model 3, the results show that reward system had significant and positive effects on employees’ lifestyle indicating that additional reward influence the lifestyles toward supplementary pension scheme. Similarly, the results in model 4 show that both tax policy and reward system had significant influence on employees’ lifestyle in China’s railway companies.

4.2 Effects of Lifestyle on supplementary pension scheme

In line with research hypothesis three, two steps hierarchical estimations are presented in Table 4.2. In the first step, estimation for only the control variables are presented. In the second step, both control variables and employee lifestyle estimation are performed.

Table 4.2 Effects of Lifestyle on supplementary pension scheme

	Coef.	Std. Err.	Coef.	Std. Err.
	Model 1		Model 2	
_cons	4.223***	0.246	0.804**	0.404
Age	0.144***	0.021	0.096***	0.031
Gender	0.110**	0.054	0.637***	0.081
Years of Experience	0.101***	0.027	0.073*	0.040
Position	0.056***	0.008	0.071***	0.014
Lifestyle			0.265***	0.060
F-test	30.340***		30.08***	
R ²	0.249		0.323	
Adj. R ²	0.241		0.312	
Obs	421		421	

***, **, * significant at 1%, 5% and 10% significant levels respectively.

The results in model 2 of Table 4.2 show that lie style of employees significantly and positively influence on supplementary pension scheme while controlling for other variables such as age, years of experience, position and gender of employees. Thus, improvement in lifestyles of employees will increase employees’ desire supplementary pension scheme in China’s supplementary scheme.

4. 3 Mediating Effects of Employee Lifestyle

In line with research hypothesis four, three steps hierarchical estimations are presented in Table 4.3a. In the first step, estimation for only the control variables are presented. Secondly, both control variables, tax policy and reward system are presented. Finally, the control variables and joint estimation of tax policy and reward system and the mediator variable (employee lifestyle) are estimated.

Table 4.3a Mediating Effects of Employee Lifestyle in the Relationship between Tax Policy, Reward System and Supplementary Pension Scheme

	Coef. Model 1	Std. Err.	Coef. Model 2	Std. Err.	Coef. Model 3	Std. Err.
Cons	4.223***	0.246	3.044***	0.263	0.563**	0.257
Age	0.144***	0.021	0.067***	0.020	0.063*	0.032
Gender	0.110**	0.054	0.077	0.051	0.586***	0.080
Years of Experience	0.101***	0.027	0.102***	0.025	0.086**	0.039
Position	0.056***	0.008	0.035***	0.008	0.059***	0.014
Tax System			-0.242***	0.042	-0.148**	0.067
Reward System			0.239***	0.049	0.181**	0.075
Lifestyle					0.269***	0.058
Obs	421		421		421	

***, **, * significant at 1%, 5% and 10% significant levels respectively.

In model 3, the results show that the coefficient of employee lifestyle is significant indicating that employee lifestyle mediates the relationship between tax policy, reward system and supplementary pension scheme. In addition, the coefficient is positive indicating that employee lifestyle strengthens the positive relationship between reward system and supplementary pension scheme but rather weakens the negative relationship between tax policy and supplementary pension scheme. According to Table 4.3a, the results showing total effects and indirect effects through employee lifestyle are significant.

Table 4.4 b Total and Indirect Effects

Supplementary Pension Scheme	Total Effects		Indirect Effects	
	Coef.	Std. Err.	Coef.	Std. Err.
	Model 1		Model 2	
Lifestyle	0.269***	0.058		
Age	0.064**	0.033	0.022***	0.007
Gender	0.619***	0.082	0.034*	0.019
Years of Experience	0.086**	0.039	0.030***	0.011
Position	0.069***	0.014	0.010***	0.004
Tax Policy	-0.346***	0.069	-0.035**	0.015
Reward System	0.388***	0.077	0.071***	0.017

IV. Policy Recommendation

Following the findings and conclusions drawn, the study makes these recommendations which can go along to improve employees' abilities towards undertaking supplementary pension schemes to enhance a secured retirement life.

Firstly, the researcher recommends that government and policymakers should formulate tax policies which will exempt taxes on employees' monies put into extra supplementary pension schemes. Tax policies should be geared towards reducing the burden of companies since high taxes on companies will translate to lower salaries for employees and will not encourage savings towards undertaking supplementary pension schemes.

Secondly, the study recommends that there should be more public education programs to sensitize employees on the need to undertake supplementary pensions since that is the surest way of securing a better life after retirement. Companies should make a deliberate effort to educate their employees on need to take on extra pension plans besides the mandatory pension in order to accumulate enough funds for their retirement. Last but not least, the study recommends

that employee associations get involved in seeking better ways of ensuring that their members undertake supplementary pension's schemes.

In conclusion, the Chinese central government has repeatedly emphasized its willingness to implement a functioning public pension system in urban areas and the basic elements of such a system have been established. Since the crucial re-design of the pension system in 1997 many decisive reforms have followed and further specified the framework and the direction for a national unified system. Over more recent years the government has continued to pursue the three-pillar model with its familiar experimental and incremental approach and at the same time adding new elements like the NSSF. In spite of this institutional progress, the scope of the system is still limited as its coverage rate among urban employees remains below 50 per cent. As discussed in the previous section, aspects like portability of pension entitlements as well as financing and administration issues need to be addressed in order to create a more sustainable and ultimately a truly national pension system. The rural population is continually left outside the "national" pension system, and so far, it seems likely that this majority of the population will

remain dependent on old-age provision through family support for many years to come.

V. REFERENCES

- [1]. Adeniji, A. A., Akinnusi, D. M., Falola, H. O., Ohunakin, F. J. I. J. o. A. B., & Research, E. (2017). Administration of Retirement in Nigeria: Periscoping the effect on Retirees. *15(15)*, 319-333.
- [2]. Bessho, S. I. (2018). Child Benefit, Tax Allowances and Behavioural Responses: The Case of Japanese Reform, 2010–2011. *The Japanese Economic Review*, *69(4)*, 478-501.
- [3]. Bassey, N., Etim, O., & Asinya, F. J. G. J. o. H. (2008). An overview of the Nigerian Pension Scheme from 1951-2004. *7(1&2)*, 61-70.
- [4]. Genkin, A., Lewis, D. D., & Madigan, D. (2007). Large-scale Bayesian logistic regression for text categorization. *Technometrics*, *49(3)*, 291-304.
- [5]. Horváth, M., & Siebertová, Z. (2019). Employment Effects of Income Tax Reforms: Lessons from Slovakia (No. 54).
- [6]. Korir, I., & Kipkebut, D. (2016). The Effect of Reward Management on Employees Commitment in the Universities in Nakuru County-Kenya. *Journal of Human Resource Management*, *4(4)*, 37-48.
- [7]. Ngwa, W. T., Adeleke, B. S., Agbaeze, E. K., Ghasi, N. C., & Imhanrenialena, B. O. (2019). Effect of Reward System on Employee Performance among Selected Manufacturing Firms in the Litoral Region of Cameroon. *Academy of Strategic Management Journal*.
- [8]. Nigusie, G. T., & Getachew, H. (2019). The Effect of Reward System On Employee Creativity. *Journal of Higher Education Service Science and Management (JoHESSM)*, *2(1)*.
- [9]. Saez, E., Schoefer, B., & Seim, D. (2019). Payroll taxes, firm behavior, and rent sharing: Evidence from a young workers' tax cut in Sweden. *American Economic Review*, *109(5)*, 1717-63.
- [10]. Ijeoma, N., Oghoghomeh, T., & Charles, A. J. M. (2013). Prospect of Pension Administration in Public Sector of Nigeria. *3(7)*, 381-387.
- [11]. Jaafar, R., Daly, K. J., & Mishra, A. V. (2018). Challenges facing Malaysia pension scheme in an era of ageing population. *Finance Research Letters*. doi: <https://doi.org/10.1016/j.frl.2018.10.017>
- [12]. Mulvey, J. M., Bauerfeind, T., Simsek, K. D., & Vural, M. T. (2011). Performance Enhancements for Defined Benefit Pension Plans Stochastic Optimization Methods in Finance and Energy (pp. 43-71): Springer.
- [13]. Lavigne, M., & Vargas, L. H. (2013). Social protection systems in Latin America and the Caribbean: Jamaica.
- [14]. Holzmann, R., Orenstein, M., & Rutkowski, M. (2003). Pension reform in Europe: process and progress: The World Bank.

Cite this article as :

Isaac Newton Akowuah, Emmanuel Kwaku Manu, Theresa Puopelee, Samuel Akowuah, "Analysis of The Impact of Pension Scheme of State-Owned Companies of China Railways", *International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET)*, Online ISSN : 2394-4099, Print ISSN : 2395-1990, Volume 7 Issue 3, pp. 622-628, May-June 2020. Available at doi : <https://doi.org/10.32628/IJSRSET2073129>
Journal URL : <http://ijsrset.com/IJSRSET2073129>