



## Analysis of Retirement Happiness in Nigeria

MICHAEL AMAEGBERI, WISDOM SELEKEKEME KROKEYI  
Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria

**Abstract.** The study examines the relationship between factors that influences happiness of retirees in Bayelsa state, using a sample of 338 public sector retirees. The factors examined which in this paper are considered wealth are freedom (time wealth) and health (physical wealth). The Logistic and the Probit regression were employed in analyzing the data. It was found that health (physical wealth) had a positive and significant impact on retiree happiness, while freedom (time wealth) had a positive and insignificant impact on retiree happiness. Also, health (physical wealth) and freedom (time wealth) had a significant complementary effect on retiree happiness. The result also showed that early or timely payment of retiree benefits, the age at which retirees retire from active service, and the level at retirement had a significant impact on retiree happiness. Based on the findings, the paper recommends that retirement at early age with a good health contributes to retirement happiness of retirees in Nigeria. In addition, government policy on early employment and retirement with good health is recommended. Government should also formulate policy towards checking of age declarations presented at entry stage of employment in order to control faulty ages to secure job.

**Keywords:** Retirees, Retirees happiness, Wealth, Bayelsa state.

### 1. Introduction

An examination of what constitute happiness has become necessary due to increasing worries and or fears of retirees who are approaches the retirement ages. For instance, the subject matter of retirement and retirees' fear has become public discourse. Though retirement ages differ from country to country, in Africa, Nigeria in particular, employment in the public sector is subject to a mandatory

retirement age of 60 years or 35 years of service. In most cases, employees are found reducing ages in order to remain in a particular job. Reasons behind this action are not known as individual preferences differ. Are retirees happy at retirement? What are some factors that bring about happiness to retirees? These are questions unanswered. While individual preferences differ as to what makes a retiree happier, happiness at retirement could be a function of several factors, including wealth. Wealth is not restricted to just money, but consists of many other components such as health, relationships, finances, and time. These could be broken down into four categories which are: Money (Financial Wealth); Status (Social Wealth); Freedom (Time Wealth) and Health (Physical Wealth). This study is interested in interrogating Freedom (Time Wealth) and Health (Physical Wealth) as components of happiness in Nigeria. The study is focuses on retirement happiness of retirees in Bayelsa State.

Bayelsa State has eight (8) local government areas. These local government areas have Seven Thousand, Fifty-Six (7,056) total population of pensioners as at June 2021. It is a composition of mainstream, head of services/permanent secretaries and post primary. The 7,056 pensioners are made up of: Brass LGA - 398; Ekeremor LGA - 446; Kolokuma/Opokuma LGA - 809; Nembe LGA - 659; Ogbia LGA - 1201; Sagbama LGA - 752; Southern Ijaw LGA - 1489; and Yenagoa LGA - 1302 respectively.

### 1.1 Statement of the Problem

Report has it that three-quarters (70%) of employees say that being financially secure would make them happy in retirement, according to a report from the National Association of Pension Funds (NAPF). Financial security was voted above all other essential ingredients for happiness in retirement, including

good health (69%), being able to travel (48%) and being surrounded by family and friends (45%). While this report is important and appreciated, there are other factors that could influence the happiness of retirees which are yet to be established. This study, therefore, seeks to examine the relationship between wealth accumulation and happiness of retirees in Bayelsa State, with specific objectives to: (1) examine the relationship between physical wealth and retirement happiness in Bayelsa State; and (2) determine the relationship between time wealth and retirement happiness in Bayelsa State.

## 1.2 Theoretical Framework

This study hinges on the “The Meaningful Life: Objective List Theory” as it relates closely to this work.

The objective list theory (Nussbaum, 1992; Sen., 1985). This theory posit that a happy person does not view happiness based on pleasure versus pain, or wanting versus attaining. Rather, it gives emphasis on things that hold more value on things that have more meaning. Things such as health and wellness, good relationships, strong faith, charity and altruism, career accomplishments, and personal dreams coming true. Objective list theory says that a happy person is not one who simply acts happy or does not experience pain (Hedonism) nor someone who gets what they want all the time (desire theory). Instead, a happy person can be one who is poor, ill, and even lonely, but if they have a purpose of a greater good, then they can, in fact, be happy and have a happy life.

## 2. Empirical Literature

Abramowska-Kmon and Latkowski (2021) examined the impact of retirement on happiness and loneliness in Poland-Evidence from panel data. The paper examined the impact of retirement on people’s subjective quality of life, as expressed by their levels of happiness and loneliness, in Poland. They analysed five waves of the Social Diagnosis panel survey conducted between 2007 and 2015. The study employed fixed effects ordered logit models and fixed effect logistic models for the panel data. They found that the respondents’ happiness levels did not change after they retired, and that the introduction of interactions between retirement and employment did not alter these findings. However, the results of the loneliness model showed that the probability of being lonely increased among males after retirement. Second, the outcomes of interactions between retirement and employment suggested that not

working after retirement increased the likelihood of being lonely among men, whereas engaging in bridge employment decreased the chances of being lonely among men. These findings may indicate that combining retirement with employment may be a source of social interaction, which can provide protection against loneliness, and which may, in turn, be positively related to other factors (i.e., subjective quality of life, health status, and mortality). While the study is appreciated, they focused on retirement on happiness and loneliness which is quite different from our study that concentrated on wealth and happiness of retirees in Bayelsa State.

Thuku (2013) assessed how pre-retirement preparation influences retirement happiness in Kenya, with a view to making appropriate recommendations to improve the quality of life during retirement. The study was conducted in Nyeri County, Kenya using randomly selected retirees. Data was collected using questionnaire and analyzed using the Statistical Package for Social Sciences (SPSS). The study found that; age, gender, marital status, parents’ socioeconomic status, availability of retirement information, monthly income, retirement planning and the availability of reliable social support systems significantly influenced retirement happiness. The study recommended that all employees be provided with retirement planning information and counselling on how to cope with post-retirement social, physiological and financial challenges. This study is appreciate, however, it is different from our study in many dimensions. One, the variables used, the location of study and the period of study. Our study was conducted in Bayelsa State, Nigeria and focused on four variables such as; financial wealth, social wealth, physical wealth and freedom wealth on retirement happiness of retirees in Bayelsa State.

Calvo, Haverstick and Sass (2009) explored the factors that affect an individual’s happiness while transitioning into retirement. Using longitudinal data from the Health and Retirement Study, the study explored what shapes the change in happiness between the last wave of full employment and the first wave of full retirement. Results suggest that what matters is not the type of transition (gradual retirement or cold turkey), but whether people perceive the transition as chosen or forced. Again we have benefitted from the study, however, it has a divergent perspective from our study that concentrated on four variables that attracts happiness at ones retirement life which includes; financial wealth, social wealth, physical wealth and freedom wealth on retirement happiness.

Kesavayuth, Rosenman and Zikos (2016) investigated how two sources of individual heterogeneity—personality and gender—impact the well-being effects of retirement. Using data on older men and women from the British Household Panel Survey and its continuation, Understanding Society. They estimated the causal effect of retirement on satisfaction with overall life and domains of life in the presence of personality characteristics. They found that retirement increases leisure satisfaction of both males and females but not necessarily life satisfaction and income satisfaction. They further showed that certain personality characteristics affect the well-being of female retirees, while for males, personality does not seem to matter in how they cope with retirement. This study is also different from our work in terms of choices of variables used and direction of the study.

### 3. Methodology

#### 3.1 The Study Area

This study was carried out in Bayelsa State. According to the National Population Commission's 2006 report, the population of the state is put at 1,704,515, which is made up of 874,083 males and 830,432 females clustered in eight local government areas (Annual Abstract of Statistics, 2012).

#### 3.2 The population of the Study

The population of the study is retirees in Bayelsa State. It comprises retirees in ministries, Departments, Agencies and other government-owned institutions across the state. As of the time of carrying out the study, the population of retirees (pensioners) was 7,056 (Bayelsa State Pension Board, 2021).

#### 3.3 Sample and Sampling Technique

A sample of 400 retirees were selected for the study. 50 retirees were randomly selected from each of the eight local government areas in the state, therefore, making a total sample of 400 respondents. A structured questionnaire was used as the instrument for data collection. The designed instrument includes multiple-choice closed- and open-ended questions.

#### 3.4 Model Specification

The Logistic Regression model was employed to examine the effect of physical (health) wealth and freedom (time) wealth respectively on retirement

happiness. The functional form of the model is presented as follows:

$$\text{Logit}(\text{Rethapines}_i) = h(\text{Timewealth}, \text{Healthwealth}, \text{Retbenefit}, \text{Marstatus}, \text{Gender}, \text{Retage}, \text{Level}) \quad (4)$$

where  $\text{Rethapines}_i$  is the likelihood of a retiree in the  $i^{\text{th}}$  household being happy at retirement, and  $p_i/(1 - \text{Rethapines}_i)$  is the odds ratio (OR) for a retiree being happy at retirement. *Timewealth* is the time (freedom) wealth of a retiree, and *Healthwealth* is the health (physical) wealth of a retiree. *Retbenefit* represents the payment of retirement benefits, *Retage* is the age at retirement, *Marstatus* represents the marital status of a retiree, *Gender* is the gender of a retiree in the  $i^{\text{th}}$  household and *Level* is the level at retirement. *Timewealth*, *Healthwealth*, *Retbenefit*, *Marstatus* and *Level* are expected to have a direct relationship with *Rethapines*, while *Gender* and *Retage* could have a direct or inverse relationship with the dependent variable.

In order to capture the complementarity or otherwise of time (freedom) wealth and health (physical) wealth – that is, if time (freedom) wealth and health (physical) wealth have complementary (substitution) effects on the retirement happiness of retirees, we interact the two wealth variables and re-specify equation (4) as:

$$\text{Logit}(\text{Rethapines}_i) = \gamma_0 + \gamma_1 \text{Timewealth} + \gamma_2 \text{Healthwealth} + \gamma_3 \text{Timewealth} * \text{Healthwealth} + \gamma_4 \text{Retbenefit} + \gamma_5 \text{Marstatus} + \gamma_6 \text{Gender} + \gamma_7 \text{Retage} + \gamma_8 \text{Level} + e_{3i} \quad (5)$$

Where *Finwealth \* Socwealth* is the interaction term of time (freedom) wealth and health (physical) wealth, while  $e_{3i}$  represents the error term. Other variables remained as defined earlier.

The signs and significance of the interaction variable coefficient will determine if time (freedom) wealth and health (physical) wealth are complementarity or substitutes. If the coefficient for time wealth is positive, for example, and the coefficient for the interaction term is negative, then, it means that time (freedom) wealth and health (physical) wealth have a substitution effect on retirement happiness. On the contrary, if the coefficient for time wealth is negative and the interaction term is positive or if both are positive, then, it implies that time (freedom) wealth and health (physical) wealth have a complementary effect on retirement happiness.

A Probit Regression model will also be estimated to ensure the robustness of the results. The Probit Regression model is as follows:

$$\begin{aligned}
 \text{Probit}(\text{Rethapines}_i) = & a_0 + a_1\text{Timewealth} + \\
 & a_2\text{Healthwealth} + a_3\text{Timewealth} * \\
 & \text{Healthwealth} + a_4 \text{Retbenefit} + a_5\text{Marstatus} + \\
 & a_6\text{Gender} + a_7\text{Retage} + a_8\text{Level} + e_{4i}
 \end{aligned}
 \tag{6}$$

Where  $\text{Prob}(\text{Rethapines}_i)$  is the probability of a retiree in the  $i^{\text{th}}$  household being happy at retirement.  $a_i$  ( $i = 1, 2, 3, \dots, 4$ ) are the regression parameters to be estimated, while  $e_{4i}$  represents the error term. The variables are the same as in equation (5) above.

The logit models would be estimated using the covariance-formula estimator. It is based on the maximum likelihood theory. This Estimation Technique is efficient and appropriate as long as the

distribution of retirement happiness can be approximated, using a theoretical model such as a density function  $f(x, \theta)$ . An advantage of the Maximum likelihood estimators is that it is mostly asymptotically unbiased and normally distributed with variances as provided by the Cramer-Rao bound (Jędrzejczak & Kubacki, 2013). On the other hand, the Probit models will be estimated, using the quasi-maximum likelihood estimator (QLME) introduced by Papke & Wooldridge (2008). The estimator is based on the assumption of a normal distribution of the errors and is also considered to be homoscedastic and may otherwise be inconsistent.

#### 4. Results and Discussion

##### 4.1 Demographics of Respondents

A total of 400 questionnaires were distributed but 338 were retrieved and recorded and analyzed. We begin the analysis with the demographic characteristics of the respondents. Table 1 reports the demographic characteristics of the respondents.

**Table 1:** Descriptive profiles of the respondents

	Frequency	%
<b>Area of residence</b>		
Rural	123	36.39
Semi-rural	169	50.00
Urban	46	13.61
<b>Total</b>	<b>338</b>	<b>100.00</b>
<b>Gender</b>		
Male	236	69.82
Female	102	30.18
<b>Total</b>	<b>338</b>	<b>100.00</b>
<b>Age</b>		
Below 30 years	1	0.30
40 to 49 years	5	1.48
50 to 59 years	21	6.21
60 to 69 years	133	39.35
70 years and above	178	52.66
<b>Total</b>	<b>338</b>	<b>100.00</b>
<b>Marital status</b>		
Single	5	1.48
Married	235	69.53
Divorced	55	16.27
Widowed	43	12.72
<b>Total</b>	<b>338</b>	<b>100.00</b>

**Source:** Author's computation

123 or 36.39% of the respondents reside in rural areas, and 169 or 50% of the respondents reside in semi-rural areas. Those whose areas of residence are urban are 46, representing 13.61% of the total respondents. Therefore, the majority of the respondents reside in semi-rural areas. As regard the gender of the respondents, 236 or 69.82% are males, while 102 or 30.18% are females. This indicates that the majority of the respondents were males. Of the age respondents, 1 or 0.30% respondents were between the ages of 30 to 39 years, while those between the ages of 40 to

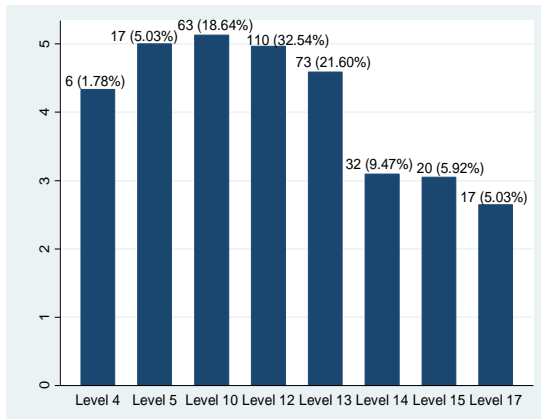
49 years were 5 or 1.48%. 21 or 6.21% of the respondents were between the ages of 50 to 59 years, and those between 60 to 69 years were 133 or 39.35%. Those who are 70 years and above are 178, representing 52.66% of the total respondents. This means the majority of the respondents are above the age of 70 years and above. 5 or 1.48% of the respondents were single, while 235 or 69.53% were married. Those who were divorced were 55 or 16.27%, and 43 or 12.72% of the respondents were widowed. This also means that majority of the respondents were married at the time of carrying out this study.

Other characteristics of the respondents were also examined and presented in Figure 1. The analysis showed that 6 or 1.78% of the retirees retired at level 4, 17 or 5.03% of the retirees retired at level 5, while 63 or 18.64% of the retirees retired at level 10. Those who retired at level 12 are 110 or 32.54%, and 73 or 21.60% of the retirees retired at level 13. Also, 32 retirees or 9.47% of the retirees retired at level 14, 20 of the retirees or 5.92% of the retirees retired at level 15, while those who retired at level 17 were 17 or 5.03% of the total respondents. Thus, based on the respondents' level at retirement, the majority of the retirees retired at level 12.

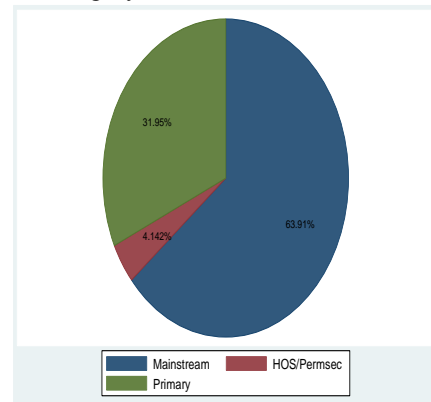
For the category of retirees, 63.91 of the sampled retirees were in the mainstream, while those that were in the primary sector were 31.95%. The retirees who were HOS/permanent secretaries were 4.14% of the total respondents. This reveals that the majority of the retirees were in the mainstream.

Figure 1(a): Other characteristics of the respondents

(a) Level at retirement

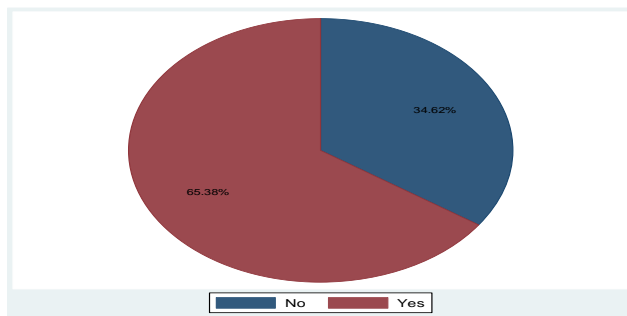


(b) category of retiree

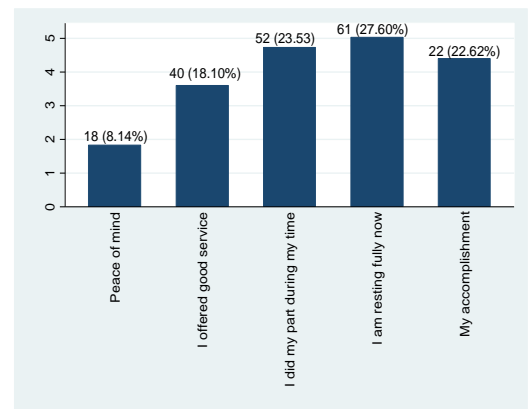


(c) Happy as a retiree?

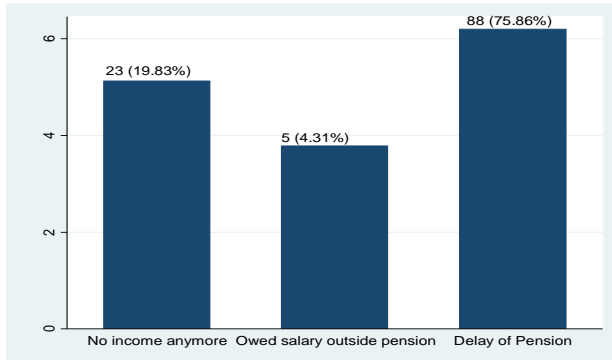
Figure 1(b): Other characteristics of the respondents



(d) Reasons for being happy

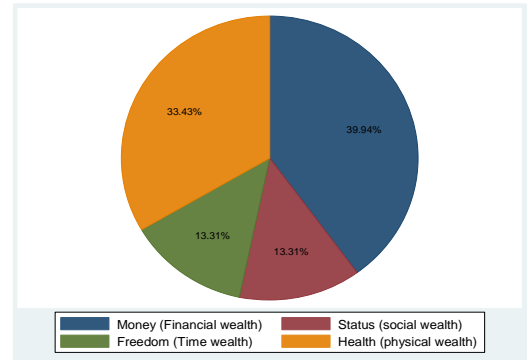


(d) Reasons for not being happy



Source: Plot by the author

(f) What it means to be wealthy (most preferred wealth)



Concerning the happiness of the retirees, the analysis shows that 65.38% of the respondents were happy as retirees, while 34.62% of the retirees were not happy. This is an indication that the majority of the retirees were happy as retirees.

An examination of the reasons for being happy for those that were happy as retirees showed that 18 or 8.14% were happy because of peace of mind, while 40 or 18.10% of the retirees said that they were happy because they offered good services at their time of service. Those who said they were happy because they did their part during their time at service were 62, representing 23.53% of the total respondents. 61 or 27.60% of the retirees said that they were happy because they are resting fully now, while 22 or 22.62% of the retirees were happy because of their accomplishments. This means that majority of the retirees were happy because they are resting fully now.

For those who were not happy as retirees, 23 or 19.83% said they were not happy because there is no income anymore, while 5 retirees, representing 4.31% of the total respondents said they were not happy because they were owed salaries outside the pension. For retirees who said that they were not happy because of delay in payment of pension were 88 or 75.86%. This showed that most of the retirees who were not happy as retired were because of delay in payment of pension gratuity.

Concerning the views of retirees on what it means to be wealthy, it was found that 33.43% of the retirees see wealth as health (physical wealth), while 39.94% of the retirees viewed wealth as money (financial wealth). Retirees who defined wealth from the perspective of freedom (time wealth) were 13.31%, and those who viewed wealth from the perspective of status (social wealth) were also 13.31%. This means that the majority of retirees viewed wealth from the perspective of money (financial wealth).

#### 4.2 Impact of Health (Physical Wealth) and Freedom (Time Wealth) on Retiree Happiness

The impact of health (physical wealth) and freedom (time wealth) on retiree happiness were examined, using the Logistic Regression model. Also, to ensure the robustness of the findings, a Probit model was estimated. Table 4.3 presents the regression estimates. Column (1) presents the odds ratios of the logistic regression with the z-values and p-values in parenthesis. Column (2), on the other hand, reports the coefficients of the Probit regression with the z-values and p-values in parenthesis.

**Table 4.2:** Estimates of the impact of health (physical wealth) and freedom (time wealth) on retiree happiness in Bayelsa state

Retiree Happiness	(1) <b>Logistic Regression</b>	(2) <b>Probit Regression</b>
Health (physical wealth)	0.5886 (z = 3.15) (p = 0.000)	0.3264 (z = 3.14) (p = 0.000)
Freedom (time wealth)	0.9612 (z = 0.10) (p = 0.917)	0.0277 (z = 0.12) (p = 0.905)
Payment of retirement benefits	0.5789 (z = 2.13) (p = 0.033)	0.3408 (z = 2.16) (p = 0.031)
Financial Wealth* Social Wealth	1.6132 (z = 2.89) (p = 0.000)	0.2919 (z = 2.88) (p = 0.000)
Marital Status	0.9202 (z = 2.50) (p = 0.004)	0.0489 (z = 2.48) (p = 0.007)
Gender	1.1151 (z = 0.42) (p = 0.676)	0.0693 (z = 0.44) (p = 0.662)
Age at retirement	0.6140 (z = 3.52) (p = 0.001)	0.3162 (z = 1.61) (p = 0.108)
Level at retirement	1.1743 (z = 3.92) (p = 0.000)	0.0988 (z = 3.94) (p = 0.000)
Constant	2.0989 (z = 1.13) (p = 0.260)	0.4699 (z = 1.17) (p = 0.243)
	<b>Logistic Regression</b>	<b>Probit regression</b>
Pseudo R2	0.6270	0.6262
LR chi2(11)	51.76	51.41
Prob > chi2	0.000	0.0000
_hat	0.29 (z = 0.37) (p = 0.712)	0.15 (z = 0.20) (p = 0.841)
_hatsq	0.60 (z = 0.98) (p = 0.327)	1.14 (z = 1.17) (p = 0.241)
Probit model goodness-of-fit test		
Pearson chi2(2301)	174.44 (p = 0.0839)	174.60 (p = 0.0826)

**Source:** Author’s computation

Health (physical wealth) showed a positive and significant coefficient of 0.5886 in column (1). This means that an increase in health (physical wealth) brings about a 0.59% increase in retiree happiness. Also, in column (2), the result showed a positive coefficient of 0.33% with z-value and p-value of 3.14 and 0.000. Therefore, confirming the result in column (1).

Freedom (time wealth) also showed a positive coefficient of 0.9612 with an insignificant z-value and p-value of 0.10 and 0.917 in column (1). Thus, any additional Freedom (time wealth) acquired results in an insignificant increase in retiree happiness. A similar result also showed up in column (2). Freedom (time wealth) has a 0.03% positive and insignificant impact on retiree happiness.

The interaction coefficient of freedom (time wealth) and health (physical wealth) is 1.6132 with a z-value of 2.89 and a p-value of 0.000 in column (1). Since the coefficients for both health (physical wealth), and the interaction term are positive, then, health (physical wealth) and freedom (time wealth) have a

complementary effect on retirement happiness. Health (physical wealth) and freedom (time wealth) jointly lead to a 1.61% additional significant increase in retiree happiness in column (1). The result in column (2) is similar to column (1), therefore, supporting the result in column (1).

The coefficient for payment of retirement benefits is 0.5789 in column (1) with a significant z-value and p-value. This means that early or timely payment of retiree benefits brings about 0.58% additional happiness at the retirement of retirees. The result is similar in column (2), also showing the positive and significant impact of payment of retirement benefits on retiree happiness.

Both in columns (1) and (2), the coefficient of marital status is positive and significant. This means that marital status has a positive and significant impact on retiree happiness in columns (1) and (2).

Gender showed a coefficient of 1.1151 with an insignificant z-value of 0.42 in column (1). Also, in column (2), the coefficient of gender is positive

(0.0693) with a z-value of 0.44. This means that the gender of the retiree has a positive and insignificant impact on retiree happiness.

Also, age at retirement showed a coefficient of 0.6140 with a z-value of 3.52 in column (1). Therefore, any additional year at the retirement age leads to 0.61% additional happiness for the retirement of retirees. A similar result also showed up in column (2) with a positive coefficient of 0.3162, but, with an insignificant z-value of 1.61.

The level of retirement showed a coefficient of 1.1743 with a z-value of 3.92 in column (1). This means that the level at retirement has a positive and significant impact on retiree happiness. The coefficient is also positive and significant in column (2), therefore, supporting the result in column (1).

The Pseudo R<sup>2</sup> shown in column (1) shows that the variables in the model account for about 62.70% change in retiree happiness. The likelihood chi-square value of 51.76 (p = 0.000) points out that the variables jointly significantly affect retiree happiness. Also, the p-value for hatsq is 0.327. The non-significant hatsq means good regression model adequacy. Also, the insignificant Hosmer-Lemeshow goodness of fit test confirms the overall goodness of fit of the regression model.

### 4.3 Policy Implications of the Findings

The findings show that Health (physical wealth) had a positive and significant impact on retiree happiness. This implies that good health makes retirees happy in retirement. Working out their physical health would not in any way bring about happiness at retirement. Freedom (time wealth) had a positive and insignificant impact on retiree happiness. This implies that workers do not consider the working age or the time at service as enslavement. Lack of freedom of time to spend, and how they want, when and with whom they wish to spend with did not significantly affect their happiness at retirement. However, health (physical wealth) and freedom (time wealth) significantly jointly affect the retirement happiness of retirees.

It was also found that early or timely payment of retiree benefits and the level of retirement had a significant impact on retiree happiness. This finding implies that at retirement, retirees are happy when retiree benefits are paid early or timely and if they are given the rightful level at work (the due promotion before retirement). The age at which retirees retire from active service is also a significant deterrent of retirement happiness at retirement.

## 5. Conclusion and Recommendations

The study examined the relationship between wealth accumulation and happiness of retirees in Bayelsa state. Based on the findings, the study concludes that wealth accumulation significantly determined the happiness of retirees in Bayelsa state. Physical wealth positively and significantly affect the retirement happiness of retirees in Bayelsa state. Time wealth also affects retirement happiness of retirees, but the effect is insignificant. Health (physical wealth) and freedom (time wealth) also significantly jointly affect the retirement happiness of retirees. Other variables such as early or timely payment of retiree benefits, the level at retirement, and the age at which retirees retire from active service also play a significant role in the happiness of retirees in Bayelsa state.

It is recommended that government policy on early employment and retirement with good health be initiated and sustained. It, therefore, means that government should formulate policy to checkmate age declarations presented at entry stage of employment in order to control faulty ages to secure job. Retirees, when retired in good health and freedom could contribute significantly to national economy in different perspectives. Hence, the need for a public policy to engage employees at early age, retire and still contribute to economic growth and development in Nigeria.

## References

- Abramowska-Kmon, A and Latkowski, W. (2021). The impact of retirement on happiness and loneliness in Poland-Evidence from Panel Data: *International Journal of Environmental Research and Public Health*; 18(18).
- Annual Abstract of Statistics (2012).
- Bayelsa State Pension Board (2021)
- Calvo, E, Haverstick, K and Sass, S.A. (2009). Gradual retirement, sense of control and retirees' happiness: Research on Aging; 31(1):112-135.
- Diener, Ed., Weiting, Ng., James, K.H., and Raksha, A. (2010). Wealth and happiness across the world: material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling: *Journal of Personality and Social Psychology*; 99(1) : 55-61.
- Jędrzejczak, A. & Kubacki, J. (2013), Estimation of income inequality and the poverty rate in Poland, by region and family type. *Statistics*

- in Transition New Series, Autumn*, 214(3), 359 – 378.
- Kesavayuth, D, Rosenman, R. and Zikos, V. (2016). Retirement, personality and well-being: *Economic Inquiry*; 54(2).
- Martin E.P. Seligman and Ed Royzman (2003). *Authentic Happiness*. New York: Free Press.
- Nussbaum, M. (1992). Human functioning and social justice: In defense of Aristotelian essentialism. *Political Theory*, 20, 202 – 246.
- Papke, L. E. & Wooldridge, J. M. (2008), Panel data methods for fractional response variables with an application to test pass rates. *Journal of Econometrics*, 145(1-2), 121 – 133
- Sen, A. (1985). *Commodities and Capabilities*: Amsterdam; North-Holland.
- Thuku, W. Pauline (2013). Influence of retirement preparation on happiness in retirement: A Case of Nyeri County, Kenya: *International Journal of Educational Research*; 1(3):1-20