

**ANALYSIS OF PENSIONS AND POST RETIREMENT REENTRY INTO  
EMPLOYMENT AMONG THE ELDERLY PUBLIC SERVANTS IN UGANDA**

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**ABSTRACT**

For purposes of policy, empirical studies on post retirement reentry into employment are emerging triggered by the increasing life expectancy of people in the world, a condition that imposes financial burden on pension funds. Rising life expectancy extends the years of claiming pension benefits from the government, a burden that would be reduced by reentry for prolonged labor supply. This study analyses the predictors of post retirement reentry into the public service by the elderly workers in Uganda. To achieve this objective, secondary data on retirees (60+) obtained from the Pension Department of the Ministry of Public Service is used in the analysis. Reentry being the dependent variable, is binary measured as either retired at, or continued work post the mandatory age 60; leading to the use of the probit regression technique during the analysis. Results reveal first: apart from the pension benefits; salary, age at entry, and tenure (years served) show high likelihood of reentry into the public service. Second, reentry is more likely among the male, the 'not married', and the traditional civil servants compared to their counterpart female, married, and teaching categories. Since the predictors of reentry are linked to pensions (qualifications for claiming retirement benefits), rising the mandatory retirement age commensurate with the rising life expectancy will help keep elderly, experienced, and the still-healthy workers more productive on job, and the burden on pension funds will likely reduce.

**Key Words:** Pensions, Post retirement reentry into employment, Public service pension scheme.

**1.INTRODUCTION**

Pensions are the accumulated deferred payments derived from the several years of on-job tenure given to the retiree for their financial welfare post retirement. All firms have a mandatory age regulation beyond which employees are expected to retire. However, due to some reasons, some amendment are made about the mandatory age regulation for workers to stay on job. Post retirement reentry into employment brings more skills<sup>1</sup>, experience, and professional contacts to the firm<sup>2</sup>. It also reduces the firm's costs of training the newly recruited young individuals, and it reduces labor shortages<sup>3</sup>. With the world's rising average life expectancy, and Uganda in particular<sup>4</sup>, each passing year makes the elderly individuals comparatively looking healthier, strong, able-bodied, better educated, and more computer literate than their counter parts in the past decades. In terms of these basic characteristics, they look very much like younger workers<sup>2</sup>. As a result, institutions are finding it hard to let go of the older workers reaching retirement age. The rise in life expectancy has implications for a country's pension finances since it implies longer post retirement time for claiming pension benefits given a constant retirement age.

In Uganda, the average life expectancy at birth has risen from 48 in the past 2 decades to the current 54 years, and post retirement average life expectancy is 17 years<sup>4</sup>, yet the mandatory retirement age has remained constant for over 30 years. There is need for a matching retirement policy, since this implies that in reality, the retired are having more years post retirement age which imposes a bigger fiscal burden on government. Understanding determinants of post retirement reentry into the public service is expected to help in designing prudent policies related to old-age labor supply in the country.

Under the defined-benefit pension schemes, the retirement benefits often vary with the worker's tenure. The more years of benefit claiming translates into a larger difference in present value of pension wealth between early and normal retirement<sup>5</sup>. Interest rate in the economy exacerbates existing retirement income insecurity but working longer later in life helps mitigate such financial challenges<sup>6</sup>.

The Public Service Pension Scheme (PSPS) was established on January, 1st, 1946 and is currently a state run, non-contributory, defined pay-as-you-go, retirement benefit scheme financed directly by tax revenues from the consolidated fund. According to the Pensions Act (Cap 281, Laws of Uganda), the public servants' mandatory retirement age is 60 years. The public service pension scheme is not universal. Membership is limited to those employees in the traditional civil service, armed personnel, and teaching service. They are employees in police, prison, health sector, and public employees in the judiciary. The scheme has a generous full pension based on gross salary with an accrual factor of 2.4% multiplied by the number of years in service capped at 89% of final salary. It also promises a commuted pension equivalent to one-third of the full pension to new retirees. The pensions are indexed to wages<sup>7</sup>. With regard to survivors' pension, the payable pension is 100% of the pension entitlement of the deceased public officer. The guaranteed period for the survivors' pension is 15 years. The scheme also provides an array of other gratuities such as contract, death, short-term and marriage gratuities<sup>8</sup>. The payments to beneficiaries include a one-off lump sum given upon retirement and a pension based on the prevailing salary of civil servants in similar positions as the retiree's final position paid monthly. Civil servants who opt out of the service before the attainment of retirement age forfeit the benefits<sup>9</sup>. Key pension rules in the public service pension scheme are: the mandatory age at exit and tenure (minimum years of experience).

The previous studies on determinants of post retirement reentry into the labor supply have mixed findings: for example, the study<sup>10</sup> using data from the English Longitudinal Study of Ageing amongst retired men in England and find the hazard of un-retirement highest when an individual is in their mid-late 60s, and un-retirement is more likely amongst individuals with a higher level of educational attainment, who have a spouse in the labor market and are in better health. Further investigation on the nature of un-retirement jobs show that they tend to be more part time and provide a non-trivial source of income. In Denmark, a study<sup>11</sup> using the Danish administrative register data find higher probability of being in paid work post (normal) retirement age amongst: Males who own their own home, have made higher pension contributions during their lifetime, and are better educated compared to a study<sup>12</sup> in Sweden find un-retirement more common amongst: the higher educated, early retirees, males and individuals with a spouse in the labor

force. In Poland, a study<sup>13</sup> finds both occupational prestige of the last job before retirement and educational attainment are strong predictors of being in paid work after retirement. While using the detailed longitudinal data on a nationally representative sample of American households from the University of Michigan's Health and Retirement Study, the study<sup>14</sup> links retirement reversals to a number of traits including gender roles, the influence of coordinated retirements, and health concerns. Through the survival analysis, he finds that the relative importance of retirees' health insurance sources was similar to that of other purely financial measures such as pensions and total wealth. While another study<sup>15</sup> that used a hazard model approach find that those who nonetheless returned to work were more likely to have found themselves not enjoying retirement as much as they had expected than they were to have received unfortunate news about their financial circumstances. The pre-retirement expectations are a primary predictor of reentry after retirement while other financial changes at the time of retirement are not significant indicators. For the most part of literature, men are more likely than women to resume labor force activity after a first retirement<sup>15,16</sup>. Though one study<sup>17</sup> finds age at retirement unrelated to the probability of return to work, another<sup>16</sup> finds the present chronological age to be strongly and negatively related to the probability of returning to work post-retirement due to health effects. Because of the effect of multicollinearity between income and education, income is found unrelated to the likelihood of engagement in post-retirement work<sup>17</sup>. To sum up, the previous studies help to provide the key variables and the methodology to use in investigating the drivers of post retirement reentry into the public service in Uganda.

## 2. METHODS

To address the study objective, secondary data on retirees obtained from a dataset from the Pension Department of the Ministry of Public Service, Uganda; comprising of individuals (60+) is used in the analysis. These retirees must have retired at, or above the statutory mandatory age. According to the public service code of conduct, employees with exemplary skills, and performance achievement shall be reemployed on demand, on contractual arrangement<sup>18</sup>, after age 60. The study's dependent variable is 'Reentry=return to work in the public service after retirement'. Guided by one methodology<sup>19</sup>, heterogeneity of these elderly workers is captured using personal characteristics including gender, marital status, and age at entry into employment, and age at exit. Other variables captured include: monthly pension benefits at retirement, income level-measured by salary scale at age 60, and years served. From the dataset, a sample of 6841 retirees is used in the analysis.

### 2.1 Variable measurement

Because the dataset has more individuals who did not reenter the public service, the dependent variable 'Reentry' is binary measured as 1='reentry', else 0='did not return'. Independent variables are 'Retirement monthly benefits' which are transformed into logarithm to avoid too much outliers. Years served in employment as computed from the difference between age at recruitment and age at exit. Because the public service has a legal requirement of 10 minimum years of service, we use this as a benchmark for creating categories for employees' years served (0-9; 10-19; 20-29; 30-39). Likewise, following one previous study<sup>19</sup>, we categorize age at entry as <25; 26-35; 36-45; and 46-55. Salary scale is evaluated independently. An employee

either belongs to one scale or not. Gender is binary coded with 1=female, and 0=male. Marital status is coded 0=married and 1= 'not married', occupation is coded 1 for traditional civil servants and 0 for teachers. We are interested in knowing how a set of covariates affects the likelihood of reentry into the public service.

**2.2 Estimation strategy**

Given an individual’s current position (age), he is expected to be terminated from the public service. Following continuity’s postulation of aging theory<sup>20</sup> that the features of an individuals’ past orientation will influence work activity in later life, as the individual seeks to establish a style of life in retirement that holds continuity with their past; this paper models the likelihood of an individual’s post retirement reentry into the public service as a function of age (at entry), and other past and current associations including pension benefits as shown in equation 2.1. Analysis of the predictors is done using probit regressions. The relevant variables are obtained by building probit through the “backward elimination,” technique<sup>21</sup>. This involves placing all the suspected predictors of reentry into the model, and step-by-step deleting the predictor with the least statistical significance, until all the remaining predictors make a noteworthy contribution to the prediction of the outcome. Stata12 command *probit regression (variables) pr (0.05)* is used for model selection.

$$\begin{aligned}
 Prob\_Reentry &= \alpha_1 Pension + \alpha_2 YearsServed + \alpha_3 AgeEntry + \alpha_4 Gender \\
 &+ \alpha_5 Occupation + \alpha_6 SalaryScale + \alpha_7 MaritalStatus \\
 &+ e \dots \dots \dots (2.1)
 \end{aligned}$$

What equation 2.1 says is that the likelihood of reentering the public service after retirement is predicted by any of the variables on the right hand side, and the coefficients  $\alpha_i$  show the marginal effect (magnitude and direction) of the explanatory variables. Following the past literature, the priori for the sign of the coefficients is as summarized in the table 2.1

**Table 2.1: Hypotheses to be tested**

Variable explaining reentry	Parameter	Expected sign
Pension benefits	$\alpha_1$	Positive <sup>14</sup>
Service years	$\alpha_2$	
Age at entry	$\alpha_3$	Positive <sup>15</sup>
Gender	$\alpha_4$	Negative <sup>15,17</sup>
Occupation	$\alpha_5$	Positive
Income=Salary Scale	$\alpha_6$	Negative <sup>14</sup>
Marital status	$\alpha_7$	Negative <sup>2</sup>

**3. FINDINGS**

Two regression models are done to eliminate the existing multicollinearity between the two variables ‘entry age’ and ‘service years’. In the first regression (model 1), entry age is eliminated while in the second regression (model 2), service years is eliminated.

From the regression results in table 2.2, unlike pension benefits, age at entry and service years (tenure) significantly predict reentry after retirement into the public service in Uganda, more so, for the female than male, ‘not-married’ than married, and the traditional civil servants than the teachers. This result agrees with one previous study<sup>15</sup> in the USA. Concurring with the postulations of the continuity theory of aging<sup>21</sup>, the post retirement reentry of the elderly public servants in Uganda is explained by their past experiences and predispositions. Since the average lifespan in Uganda has risen in the past few decades<sup>4</sup>, the healthy elderly individuals prudently accept further reengagement to remain socially relevant, and economically productive.

**Table 2.2: Predictors of reentry by the elderly into the public service in Uganda**

Regressions variable	Model 1 Marginal effect	Model 2 Marginal effect
Entry Age		0.010(0.001)***
Service Years	0.011(0.001)***	-
Pension	-0.003 (0.005)	-0.014(0.005)
salary scale: S	-	-0.304(0.188)**
U1	-0.021(0.002)***	-0.021(0.002)**
U2	-0.024(0.026)***	-0.016(0.003)**
U3	-0.026(0.03)***	-0.011(0.006)
U4	-0.054(0.013)***	-0.008(0.008)
U5	-0.053(0.13)***	-0.002(0.008)
U6	-0.025(0.003)***	-0.006(0.010)
U7	-0.059(0.019)***	-0.002(0.007)
U8	-0.024(0.003)***	-
Occupation	0.052(0.005)***	0.046(0.004)**
Marital status	0.043(0.005)***	0.041(0.004)**
Served years<9	0.822(0.136)***	-0.0208(0.002)**
10-19	0.4428(0.149)***	-0.048(0.005)**
20-29	0.153(0.065)***	-0.042(0.003)**
30-39	0.018(0.005)***	-0.103(0.016)**
Age at	-0.972(0.022)***	0.026(0.04)

entry<25		
26-35	-0.653(0.092)***	0.006(0.036)
36-45	-0.42(0.006)***	-0.004(0.0267)
46-55	-0.033(0.004)***	-0.023(0.004)**
Number of observations	6841	6841
LR chi square	chi2(20)= 800.13	LRchi2(20=794.28
prob>chi2	Prob>chi2=0.000	Prob>chi2=0.000
R2	0.2824	0.2803

Source: Author's computations, 2019

Table 2.3 shows the determinants of the likelihood of reentering the public service (by occupation- teachers, and traditional civil servants) after age 60. Regression models 1 and 2 exclude service years (tenure), while models 3 and 4 exclude entry age. Given the sign and magnitude of the categorical marginal effects, reentry is more effectively explained among the civil servants than teachers. Accordingly, the variables; age at entry, pension benefits, those in upper salary scale (commissioners and permanent secretary), clearly explain reentry among the traditional civil servants; and more so, for the 'not married category-including the divorced, separated, never married, and the widowers and widows. Also, those who spent less than 9 years of service into the public service exhibit a more likelihood of reentering after retirement. For teachers, most of the explanatory variables are not statistically significant. This could be attributed to a low sample representation from the dataset.

**Table 2.3: Comparative analysis of the predictors of reentry of the elderly by occupation, in the public service in Uganda**

	Model 1	Model 2	Model 3	Model 4
variable	Teachers	Civil Servants	Teachers	Civil servants
Entry Age	0.00068(0.0005)**	0.027(0.002)**	-	-
Service Years	-	-	0.001(0.0003)**	0.028(0.0028)**
Pension	0.00016(0.0008)	0.039(0.016)**	0.00085(0.0011)	-0.009(0.016)
salary scale: S	-	0.45(0.21)**	-	-
U1	-0.0009(0.0007)	-0.064(0.214)**	-0.0011(0.0006)	-

				0.082(0.007)***
U2	-0.0005(0.0007)	-0.053(0.010)**	-0.006(0.0009)	- 0.074(0.006)***
U3	-	-0.07(0.016)	-	- 0.088(0.011)***
U4	-0.0006(0.0008)	-0.02(0.021)	-0.0011(0.009)	- 0.0105(0.018)** *
U5	-0.0004(0.0004)	0.0004(0.0020)	-0.0019(0.001)	-0.136 (0.030)***
U6	0.0002(0.0008)	0.010(0.024)	-0.001(0.0007)	-0.080(0.09)***
U7	-0.001(0.01)	0.011(0.0019)	- 0.0026(0.001)* *	- 0.114(0.023)***
U8	-	-	-	- 0.083(0.010)***
Marital status	0.011(0.005)**	0.071(0.010)**	0.0026(0.0016) **	0.077(0.011)***
Served years: <9	-	0.067(0.005)**	-	0.877(0.077)***
10-19	-	0.193(0.020)**	-	0.561(0.155)***
20-29	-0.013(0.005)**	-0.113(0.008)**	- 0.038(0.0015)* *	0.2827(0.108)** *
30-39	-0.016(0.009)**	-0.191(0.033)**	0.0016(0.0007) **	0.048(0.017)***
Age at entry: <25	-0.0158(0.239)	0.048(0.11)	-	- 0.941(0.037)***
26-35	-0.074(0.085)**	0.0237(0.095)	0.011(0.0048)* *	- 0.823(0.067)***
36-45	-	-0.006(0.074)	0.999(0.0002)*	-

			*	0.130(0.015)***
46-55	-	-0.078(0.019)**	-	- 0.130(0.018)***
Number of observations	3545	3296	3545	3296
LR chisquare	chi2(13)=148.5	ch2(19)=436.77	chi2(13)=151.06	chi2(19)=441.1
Prob>chi2	Prob>chi=0.000	Prob>chi=0.000	Prob>chi2=0.000	Prob>chi2=0.000
Pseudo R2	0.2761	0.2155	0.2785	0.2177

Source: Author's computations, 2019

In all, concurring with the postulations of continuity theory of aging, this chapter finds past experience and work habits of retirees (salary, pension benefits, age at entry, gender, occupation) contributing to their return into the public service.

#### 4. CONCLUSION

This study set out to investigate the predictors of post retirement reentry into the public service in Uganda. Using the pension scheme variables (monthly pension benefits, salary, and age) as retirees previous life predispositions; which is the postulation of the continuity theory<sup>20</sup>, probit regression result indicate the higher likelihood of reentering the public service from the factors: salary, age at entry, and tenure. This is so common for the traditional civil servants than teachers. The previously highly paid employees (resulting into higher pensions) have higher likelihood of reentering the public service (expected to be more educated) thus concurs with literature<sup>10</sup>. Such highly educated, and experienced employees are hard to replace, thus, they earn quasi rent through post retirement contracts. However, due to data limitations, this study could not tell their actual level of training. In all, since the predictors of reentry are linked to pensions (qualifications for claiming retirement benefits), rising the mandatory retirement age commensurate with the rising life expectancy will keep elderly workers more productive in the economy and the burden on pension funds will likely reduce (to be tested in future empirical study).

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accuracy, completeness, or usefulness of the contents of this report. Reference herein to any other related author does not necessarily constitute or imply endorsement, recommendation or favor to them.

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