



DETERMINANTS OF INCOME SECURITY AMONG PENSIONABLE RETIRED PERSONS IN KENYA

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Abstract

Retirees' income security constitutes a key concern for nations aiming to secure their ageing populations. Kenya has a growing retirement sector with about 252,000 retired civil servants who are on pension and a significant number of private sector retirees who receive a gratuity at retirement. Though formally retired workers may receive a pension, studies consistently report low pensions uptake and inadequate incomes for those retired as well as an increasing national and societal burden. This paper explores the key determinants of income security among 978 retired persons who were receiving dues on their retirement savings. Guided by the life cycle and third age theory, the study investigated whether retirees' socio-economic attributes, pre-retirement financial status, retirees' benefit package, retirees' utilization of retirement savings and investments and pre-retirement preparation correlated with income security. A mixed-method study design was used combining survey and case study approaches. Cluster, purposive and random sampling methods were employed to select retirees under the four categories of retirement schemes in Kenya across 18 selected counties of Kenya. Hypotheses were tested using the Chi square test of significance and comparison of means (*t*-test) specifically to illustrate the relationship between socio-economic indicators, pre-retirement factors and income security at retirement. Logistic regression procedure was employed to isolate the significant factors that predict income security in retirement. The binary logistic regression analysis confirm that retirees with higher education had 26% higher chances of enjoying income security, those who earned higher pre-retirement salary had 25% higher chances of having a secure income at retirement, those knowledgeable about pensions had 35% higher chances of being income secure while those who had planned for their retirement had 14% higher chances of achieving income security. The study recommends crafting of a robust retirement planning package, financial and health plans for retirees' income security and sustainable livelihoods.

Key words: Retirement, Pensions, Income security

Introduction

Income security refers to the level of earnings (absolute and relative to needs), assurance of receipt, expectation of income adequacy now and improvement or deterioration in the future, both during a person's working life and in old age or disability retirement (Were, 2009). Income security is about actual, perceived and expected income and is expressed as a long-term status rather than a temporary one. Among retired populations, income security may well mean a retirees' assurance of an adequate and steady income after cessation of gainful employment whether within an active or inactive retirement life.

Although retirement is marked by the age when one stops working, it may also herald a change and a beginning of a different kind of work engagement in place of a pursued career. According to Kakwani & Son (2006), over the course of life, a number of social and economic contingencies are likely to occur, which become more pronounced later in life. Such include exiting the labour force, illness and injuries, disability or dependence all of which exert a demand on financial reserves and affect nearly all retirees. However, the fact is that most people will retire from active work and thereafter seek to remain productive and 'engaged' through alternative work either through self-employment or entry into the informal sector.

Traditionally, in most of Africa, risks associated with cessation of gainful engagement or work and challenges encountered in old-age were shared by family and community members. However, change and modernization render these arrangements impractical while the traditional cushions have weakened. Rapid modernization and urbanization inevitably severs the traditional support ties that protected older people and their families. Hence, social and economic risks associated with old age and retirement in Kenya are increasingly experienced and borne by individuals and at times their immediate families resulting to increased impoverishment and insecurity (Were, 2009). Thus, availability of formal financial resources to respond to the increasing old age risks, especially for a nation that has primarily an agricultural economy is warranted.

Globally, risks associated with retirement are cushioned by the pension system defined as a standard contract between employers and retired employees, for a fixed amount of money paid on a regular or one-time basis to a retiree following sequestration from service. According to Anotlin, Pugh & Stewart (2008) arguments regarding retirement financial status have focused more on the type of retirement plan necessary for the achievement of income security in later life. In this regard, retirement planning is essentially aimed at ensuring that retirees save, invest or utilize their savings (often received at the point of retirement) in a sustainable manner and to protect them from old age poverty (Sanlam, 2013; Antolin et.al 2008).

Kenya has about 2-3 million retired persons who have exited from the formal employment both in the public and private sectors (Were, 2009; Wanga, 2013). Statistics show a gradual increase in the number of public and private sector workers who are saving for retirement. By the end of 2014, for example, the pension industry was estimated to be worth well over Kshs. 633.5 billion and remains the main financial reserve for retired persons and those yet to retire (RBA, 2014). There are also indications that membership in savings schemes where workers save for retirement is gradually increasing. Four types of retirement saving schemes namely the Civil Service Pension Scheme, the National Social Security Fund, the Occupational and Individual schemes continue to increase their savings base (RBA, 2014). By 2013, about 252,000 civil service retirees were on a pension and a significant number of private sector retirees received a pension or gratuity at retirement (Wanga, 2013). However, pension coverage in Kenya remains low at only 15% and income security status of retirees remains largely un-established (RBA, 2014).

Retirement heralds a phase in life where productivity is greatly reduced and opportunities for income diversification are greatly decreased (Kakwani & Son, 2006). Upon retirement, most people cease to receive a regular salary and begin to rely on savings accumulated while in employment entering the de-cummulation stage. This has several implications. For instance, lack of a regular income may mean that financial obligations can no longer be met or that one's lifestyle has to change in line with reduced income. Whatever the case, retirement for most retirees often presents a gloomy financial prospect. For many, a regular income is no longer guaranteed. In view of this, a number of approaches attempt to explain income security at retirement relative to working life financial status. The variety of pension calculators available show that one does not need an income equivalent to earned salary during working life to be considered financial secure at retirement. Other estimations of income adequacy at retirement inextricably link the income earned during working life to savings pattern. For instance, the Sanlam Benchmark survey conducted in 2013 shows that a person will require to have saved 2 times their annual salary after working for 10 years, 4 times their annual salary after working for 20 years and 7 times their annual salary after working for 30 years in order to achieve a sustainable retirement income (Sanlam, 2013). Unfortunately, this is hardly achieved and in many instances, people retire without any concrete plan to support their retirement life. Williamson & Smeeding (2004) further posit that retirees are exposed to grim life reality as a result of their mistakes during their working life. This is tied to the multiple realities that confront retired persons most of which consistently make financial demands on them. It is thus imperative to investigate financial experiences of retirees given that all over the world they are largely marginalized, impoverished and often face an uncertain future. This paper draws from empirical data gathered in a study supported by the Retirement Benefits Authority and conducted in 2014/2015 to document the financial realities of retirees receiving pensions in Kenya.

Conceptualizing Income Security in Retirement: The Life Cycle and the Third Age Approach

Life cycle theorists argue that human beings move through a static set of phases that are outside their control.

The model posits the life moves through a fixed sequence of irreversible stages which are cyclical in nature and may repeat themselves from one generation to the next (Settersten, 2003). The underlying thesis in the life cycle approach is that individuals spend their first phase of life preparing for a professional career. They then begin to earn a wage which is initially insufficient for their needs. In the second phase of life, employees earn to accumulate wealth which they save for later use at retirement. Upon retirement, which is the third phase of life, individuals spend their accumulated savings to sponsor their consumption for the rest of their life. Hence, the individual's capacity to support their retirement period is incumbent upon their earlier saving culture.

On the other hand, the Third Age theory generally states that old age can be a 'golden age', full of self-realization, personal growth and the fulfillment of lifetime ambitions that could not be attended to during one's working life. The 'third age' is achieved if older people have access to higher disposable incomes and consumer culture in retirement. The 'third age' denotes a period in life that occurs after middle age but before the final stage, and is conceptualized as a time of continued involvement and growth in areas of life beyond employment and family (Hooyman & Kiyak, 2011). Hence, it is possible to achieve productivity in later life in areas previously un-nurtured and be able to lead a fulfilled life. The theory further implies that the vitality of older people must be built around the skills and wisdom through both paid and unpaid work for the benefit of older people and society.

There are obvious questions on how this contribution is defined and measured. For instance, volunteering by older people may be highly regarded as opposed to paid work because the former is seen to have common good than the latter. Proponents of the third age theory maintain that changes in work, retirement, and productivity will require new skills and knowledge that planners may consider such as need for pre-retirement counseling, learning opportunities, career development, retraining and creating opportunities for volunteering. The two theories bear relevance to the quality of life that an individual lives after retirement and demonstrate that retirement is a 'normal change' whereby new roles and means of living become operational. The applicability of the theories to this study lies in the notion that income security at retirement is inextricably tied to choices made prior to retirement and to the extent of financial preparation one made in their working life.

Hence, income security in old age is paramount to the quality of life of retired persons. As the conceptual model (Figure 1) shows, income security is a multiplex of factors emanating from work life such as saving for retirement to investments and utilization of pension benefits. In addition, the intersection of retirement and personal factors determine the outcome of income security which subsequently determines the quality of life. It may thus be hypothesized that actual amounts of retirement savings as well as having other supplemental incomes may play a critical role in shaping how individuals secure their retirement life. Family as well as individual factors may also determine a person's financial standing (after retirement). In addition, family responsibilities may actually hamper proper use of benefits leading to insecurity. Skills and business acumen or ability to utilize their savings to generate future earnings and a secure life also play a part. Finally, the presence of a retirement plan and knowledge on how to maximize the use of money (financial literacy) may also determine how successful one is in their choice of investment made using their savings. Drawing from the foregoing, the illustration that follows shows the key dimensions relating to income security in retirement.

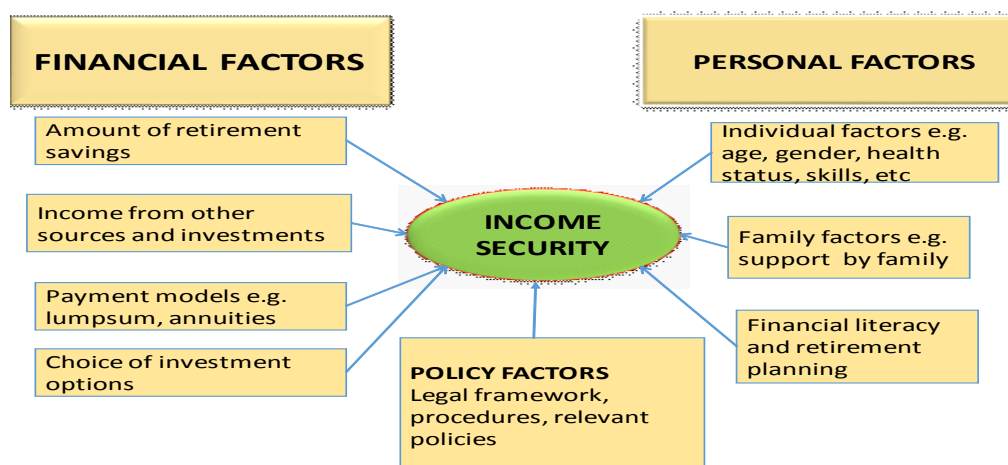


Figure 1: The Conceptual Framework for the Analysis of Factors Influencing Financial Security in Retirement

In order to develop a systematic point of discussion, this paper hypothesizes that:

- i. Retirees' socio-economic attributes are correlated with income security;
- ii. Pre-retirement financial status is related to retirees' income security;
- iii. There is a relationship between retirees' benefit package and income security;
- iv. Utilization of retirement savings and investments correlate with income security at retirement; and
- v. Pre-retirement preparation is related to income security at retirement.

Methodology

The study employed a mixed-methods approach. Qualitative and quantitative approaches were used to arrive at a comprehensive understanding of the factors affecting retirement and income status among retirees. The target population for this study comprised the retired persons in Kenya from the four main types of pension schemes namely: NSSF, Occupational, Civil Service, and voluntary/individual schemes. In addition, key informants were picked for study from among the administrators, pension personnel, trustees, custodians, and sponsors of pension funds.

Study Area

The study was of a national scale and was carried out in 18 of the 47 counties of Kenya namely Nairobi City, Murangá, Machakos, Nakuru, Kiambu, Mombasa, Transzoia, Kisumu, Uasin Gichu, Kisii, Kirinyaga, Nyeri, Kakamega, Bungoma, Tharaka Nithi, Kajiado, Busia and Embu. These counties also represented the former 8 administrative regions of Kenya and were essentially selected due to their variability in terms of economic activities, natural resource endowment as well as ethnic group composition.

Sampling Procedure and Size

Out of the 47 counties of Kenya, the 18 counties were purposively selected for study. Nairobi City County, in particular, was selected due to the fact that it is the headquarters of all retirement schemes, pension funds and fund administrators. The 978 respondents (retirees) were selected from a sampling frame provided by the four categories of schemes namely the National Social Security Fund (NSSF), the Civil Service Pension scheme, the Occupational and the Individual schemes. Cluster sampling was utilized to select 5% representative sample based on the number of retirees under each of the four schemes and across the selected counties. The sample size of 978 was distributed across the 18 counties as follows: Nairobi (27.1%), Muranga (10%), Machakos (8.7%), Nakuru (7.8%), Kiambu (7.7%), Mombasa (5.5%), Trans Nzoia (5%), Kisumu (4.4%), Uasin Gishu (4.4%), Kisii (4.1%), Kirinyaga (3.4%), Nyeri (3.4%), Kakamega (3.3%), Bungoma (1.3%), Tharaka Nithi (1.1%), Kajiado (1%), Busia (0.8%), and Embu (0.5%).

Key informants of the study and those who took part in the Focus Group Discussions were purposely picked from among the retirees, fund administrators, pension personnel, trustees, custodians, and sponsors of pension funds while ensuring that factors such as gender, age and all counties under study were considered.

Data Collection Procedure

Data was mainly collected using a structured questionnaire administered to the 978 retirees from the four categories of retirement schemes. In addition, key informant interviews were conducted with the pension scheme managers and administrators (4 in each of the 18 counties across the 4 scheme types). Ten (10) Focus group discussions were held with retirees in groups of 6-10 in 10 selected counties. FGDs were also held with fund administrators representing various retirement schemes in Nairobi City County.

Data analysis

Data analysis employed measures of central tendency and dispersion mainly the mean, mode and median while the main outputs were reported in form of percentages and frequencies tables and graphs where applicable. Cross-tabulation and correlation coefficient were used as measures of comparison and to examine prevailing relationships between socio-economic, pre-retirement experiences and income security. The hypotheses were tested using the Chi square test of significance, comparison of means (*t*-test) and logistic regression. Logistic regression procedure

was also used to isolate the significant factors that determine income security in retirement. Qualitative data was analyzed descriptively by themes, classification, comparison and interpretation, and presented using the triangulation method.

Results and Discussion

The determination of factors of income security at retirement required, firstly, an exploration of key characteristics of respondents especially those hinging on spending patterns, aspirations and perspectives of income security. The main characteristics analyzed include age, gender, education level, marital and employment status. Table 1 summarizes these characteristics for the 978 participants of the study.

Table 1: Background and demographic characteristics of the respondents

| Variable* | | Number | Percent |
|--------------------------------|------------------------------------|--------|---------|
| Scheme type | | | |
| Occupational | | 246 | 25.2% |
| Civil Service pension | | 387 | 39.6% |
| NSSF | | 315 | 32.2% |
| Individual | | 30 | 3.1% |
| N | | 978 | 100% |
| Gender | | | |
| Male | | 658 | 67% |
| Female | | 320 | 33% |
| N | | 978 | 100% |
| Educational Level | | | |
| None | | 19 | 2% |
| Primary | | 121 | 12.5% |
| Secondary | | 304 | 31.3% |
| College | | 413 | 42.5% |
| University | | 114 | 11.7% |
| N | | 978 | 100% |
| Marital Status | | | |
| Married | | 795 | 81% |
| Single | | 27 | 2.8% |
| Separated | | 19 | 2% |
| Divorced | | 18 | 1.8% |
| Widowed | | 12 | 12% |
| N=978 | | 978 | 100% |
| Age Category (in years) | | | |
| 40- 55 | | 49 | 4.9% |
| 56-65 | | 575 | 58.9% |
| 66-75 | | 309 | 31.4% |
| 76-85 | | 38 | 3.8% |
| Over 85 | | 7 | 0.7% |
| n | | 978 | 100% |
| Retirees status | Employment | | |
| | Retired and not working | 370 | 40.3 |
| | Retired and re-employed | 79 | 8.6 |
| | R e t i r e d / s e l f - employed | 469 | 51.1 |
| Total | | 918 | 100 |

As shown in Table 1, the retirees under study were drawn mainly from the Civil Service scheme and the NSSF (39% and 32% respectively). A third (67%) were male and a large majority (81%) were married. The retirees were fairly educated with at least 85% having obtained secondary education and above. Though mandatory retirement age in Kenya is currently pegged at 60 years, a number of retirees who had taken early retirement were included in the study. By and large, most were in the age cluster of between 56-65 years with a small proportion of 3.8% being of age 85 and above.

The mean for age of retirees was 67 years. The findings reveal that a majority of retirees do not totally disengage

from gainful activities and that at least 51% were self-employed with 8.6% having sought re-employment after formal retirement. Though 'active' retirement emerges from studies as a desirable (Hooyman & Kiyak (2011), this study established that re-employment for most retirees is often driven by necessity to earn a living and escape old age poverty rather than a desire to remain active or to obscure feelings of idleness.

Retirees' Understanding of Income Security

Income security is often conceptualized differently and may well depend on one's economic status, lifestyle, culture or even behavior (Holzmann, 2009). For retired persons, a definition of income security may relate to their active life experience, the nature of their past employment, financial demands at retirement and their retirement lifestyle. In order to underscore the meaning of income security which was at the core of the investigation, the study enquired on the retirees' understanding of the concept. From the findings, there was a tendency among the retirees to link income security with ability to meet daily needs and maintain a particular standard of living. There was general consensus that ability to meet basic life sustaining needs during retirement and a guarantee of some form of income during retirement were strong indicators of income security. Focus group discussions with retirees revealed that most retirees would not expect to have an income equivalent to their former salary but that at least 60% of net replacement ratio of the income earned before retirement would be sufficient to maintain pre-retirement standard of living.

The definitions of income security provided by the respondents are comparable to documented studies. According to Purcell et.al (2012), a replacement ratio of 65% is considered adequate for retirement though some exemptions are made for very high and very low earners. Oyuke (2010) observe that 70-90% of income replacement ratio is sufficient while ILO attest that the minimum IRR should be 40% (International Labour Organization, 2014). Bearing this background, a likert scale was used to establish if retirees felt income secure. The study established that 61% of respondents experienced income security in retirement compared to 39% who reported not being secure as shown in Figure 2.

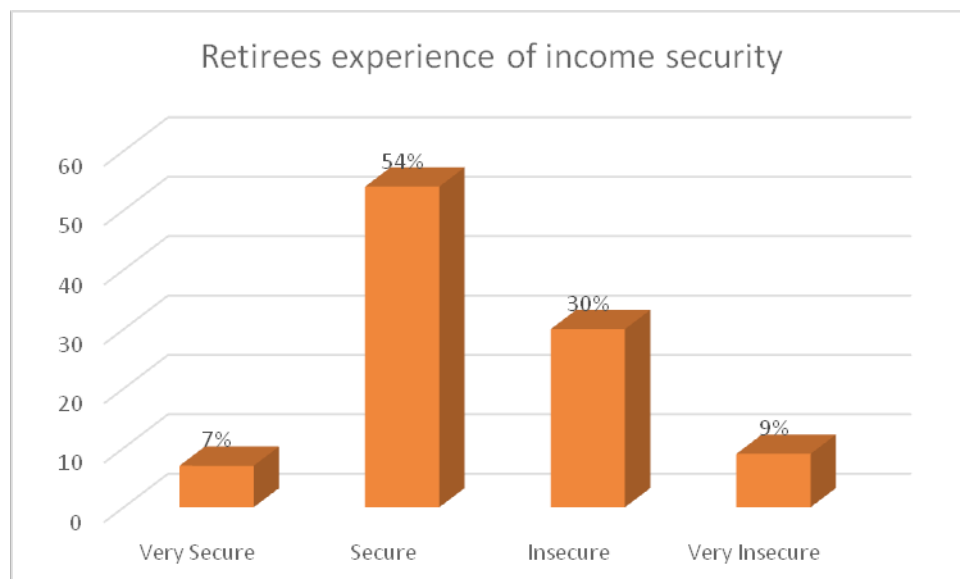


Figure 2: Experience of income security at retirement

To clarify on the retirees' subjective status of income security, those who reported being secure were further asked to give reasons for their status. Majority (80%) indicated that they were income secure because they had been able to meet their everyday expenditures, supplement rental income with their pension and assist their kin to pursue different aspirations. However, for about 20% of retirees, their insecurity was pegged to collapse of business, high cost of living, and multiple financial responsibilities pertaining to the many dependents under their care which constrained their resources. Retirees also indicated largely depending on children or family members often to offset emergency financial needs essentially because either the pension they received was meager and other sources of income inadequate or because of poor health and associated high cost of healthcare. This essentially demonstrates that retirees still do revert to the traditional cushioning mechanisms for older persons in times of crises and financial difficulties.

Relationship Between Retirees’ Individual Factors and Income Security

The study tested if there was any relationship between age, marital status and level of education as presented in Table 1 of retirees and their perceived income security. The Chi square tests were applied to these nominal and ordinal level variables. The output table 2 shows that save for level of education and employment status at retirement, all other socio-demographic indicators were not significantly related to income security.

Table 2: Chi square output for selected retirees’ factors and income security

| Variable | Test | Value | df | Asymp. Sig. (2-sided) |
|-------------------|--------------------|----------------------|-----|-----------------------|
| Age cluster | Pearson Chi-Square | 144.363 ^a | 117 | .044 |
| Marital status | Pearson Chi-Square | 15.338 ^a | 12 | .223 |
| Sex | Pearson Chi-Square | 2.669 ^a | 3 | .446 |
| Education | Pearson Chi-Square | 118.514 | 12 | .001* |
| Employment status | Pearson Chi-Square | 38.718 | 6 | .001* |

These results attest to the close relationship existing between education and quality of life among older person established in other studies (Ondigi & Mugenda, 2013, Maina & Mugenda, 2013). In the context of retirement, a good level of education enables proper planning, savings accumulation, programmed utilization of savings as well as the ability to use savings to generate incomes (RBA 2014). During retirement, well-educated individuals are likely to acquire alternative gainful engagements compared to other segments of the population. Likewise, in this study, persons who were re-employed or gainfully employed after retirement were found to be more likely to report being income secure than those who had no other income apart from pension.

Retirees’ Pre-retirement Earnings, Total Retirement Benefits Received and Income Security

Past research shows an intricate connection between retirees’ financial status and past earnings (Rusconi, 2008; RBA report, 2012 and RBA, 2014). To establish if retirees’ earnings prior to retirement was important in determining their post retirement income security, the monthly salary at the point of retirement was compared against reported income security. The Univariate analysis of last salary earned prior to retirement showed that 45.9% of retirees were earning less than Kshs. 20,000 per month with 7.1% earning less than Kshs. 5,000. There was 11.2% who earned above Kshs. 100,000 with the modal earnings being in the cluster 20,001-30,000 as shown in Figure 3.

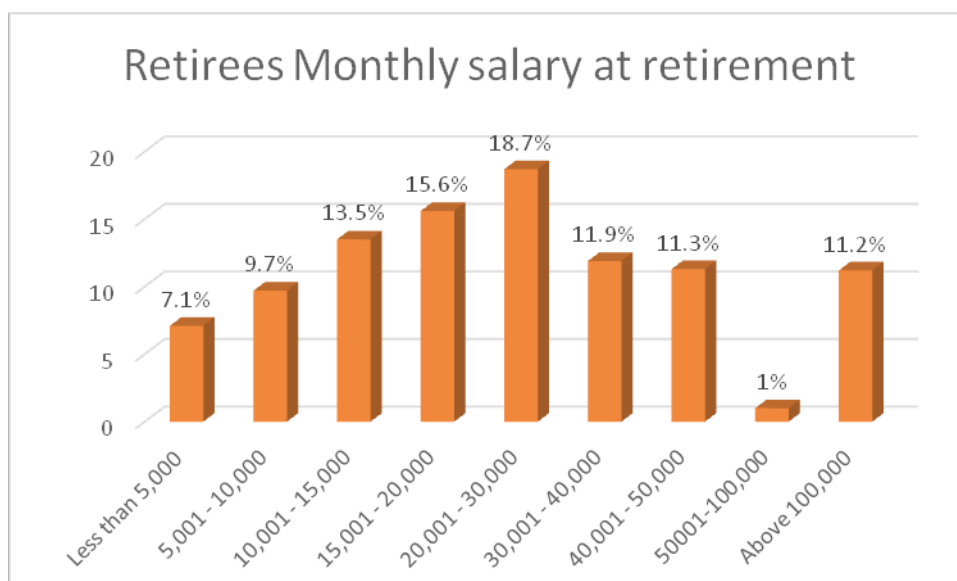


Figure 3: Pre-retirement monthly salary

Comparing earnings prior to retirement and income security using the Spearman rank correlation test revealed a significant but weak relationship between monthly salary at retirement and income security pre-retirement where $r=0.3$ ($p<0.0001$). These findings may be a pointer that those who earned higher salaries prior to retirement have a chance at sustaining their livelihood post-retirement. It may mean that they are in a better position to establish viable investments prior and post retirement and may enjoy a more secure retirement owing to their commensurate higher pension/retirement benefits. However, the weak relationship in this case implies that there are other overriding factors that determine income security at retirement save for income previously earned or savings accumulated.

The determination of the role of benefits received at retirement in contributing to income security involved carrying out a t-test to compare means of actual pension/benefits within the groups of income security and income insecurity. Table 3 shows that the means of the two groups were statistically different at $p<0.001$ significance level.

Table 3: T-test- comparing income security by mode of payment

| Income Security | N | Mean Pension received (KShs.) | p-value |
|-----------------|-----|-------------------------------|-----------|
| Insecure | 377 | 503,624.00 | <.0001*** |
| Secure | 549 | 1,011,429.00 | |

The relationship established in the case of income security and retirees' benefits/savings is indicative that higher amounts of pension translate into the likelihood of a more secure retirement and that retirees are able to convert their savings into long-term financial security either through further savings or investments.

Retirees Utilization of Retirement Benefits and Income Security

An investigation into the utilization of retirement benefits established that retirees used their benefits in a variety of ways as indicted in Table 4. The table shows that most retirees spent their benefits on family maintenance (31%). The other major expenditure established was the financing of a business and school fees obligations both of which accounted for 17% of the respondents. Surprisingly, expenditure on medical cost was the lowest observed in the study with only 5% reporting spending their retirement savings on it.

Table 4: Retirees utilization of retirement benefits

| | Number of mentions | Percent |
|-----------------------|--------------------|---------|
| Household Maintenance | 321 | 31 |
| Retirement house | 199 | 14 |
| Bought land | 152 | 9.5 |
| Started a business | 255 | 17.5 |
| Fixed saving | 85 | 5.5 |
| Financed schooling | 238 | 17.5 |
| Medical costs | 79 | 5 |
| Total | 1329* | 100 |

Though health needs are pressing for retirees, focus group discussions conducted by the study confirmed that the meager cash that most of them received as pension was mainly spent on basic needs such as shelter, food and education of dependents. The implication of these results is that retirees are often unable to meet their health needs and therefore do not age gracefully (Coea et.al, 2011; Kowal et. al., 2010). The Chi-square test results obtained from comparing levels of income security and expenditure of retirement savings was not significant. This might indicate that income security at retirement does not vary by expenditure patterns. However, from FGDs conducted with retirees in this study, there were indications that retirees who were receiving a life pension 'felt' more secure financially irrespective of the amount due to its guaranteed nature than those who had received a lump-sum benefit.

Viability of Investing Pension in Business Ventures

Often, retiring individuals express the need to initiate businesses as a way of obtaining income and remaining duly engaged after cessation of employment. This study endeavoured to establish whether or not there was any relationship between investments made by retirees and self-reported income security at retirement. Out of the 978 retirees interviewed, 355 (35%) invested their pension in businesses such as farming, food and restaurant, regular grocery shops, educational institutions, hardware stores, transportation, *posho* mill, and real estate. Further analysis showed that 64% of the businesses started were still operational though this was not a guarantee that they were profitable enough to offer income security. On the other hand, 36% had already been closed down for a variety of reasons including business failure, lack of entrepreneur skills, low start-up capital, stiff competition and low returns as a result of high cost of living. In order to establish if business investments made played a role in determining income security, retirees were asked to indicate the sources of their security.

Figure 4 shows that 29% did not attribute their success to pension but rather to other income (which included business investment) while 54% believed their pension as well as other incomes contributed to their income security. These findings are an indication that most retirees reporting experiencing income security attributed it not only to savings they received or were receiving but also to the efforts they had undertaken to secure their retirement.

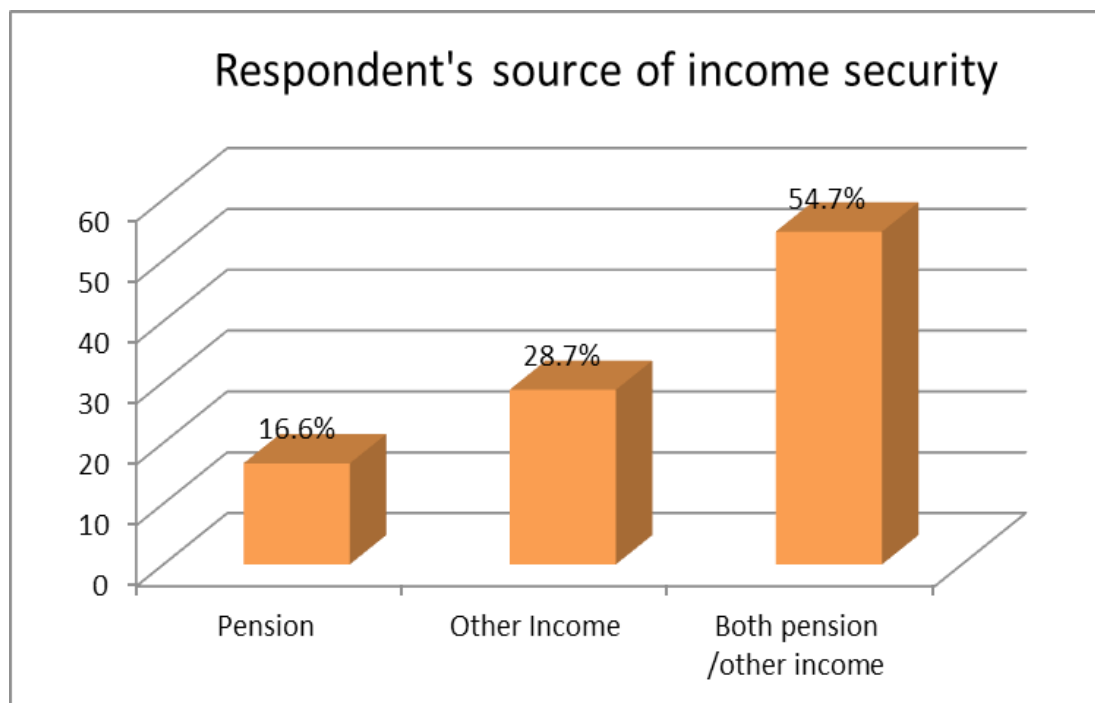


Figure 4: Sources Attributed to Income Security by Retirees

Multivariate Analysis of Factors in Income Security in Retirement

In order to isolate the key determinants of income security in retirement, multivariate analysis using factors that had emerged as significant in influencing income security was employed. The binary logistic model was used to isolate the key factors explaining income security and to provide in a summative way the odds ratio statistic showing the strength of each factor in predicting income security. The model fit statistics (Likelihood Ratio and Wald Chi-square tests) was first done showing that the logit model was statistically significant at p-value of 0.05. The key variables for the model were level of education, marital status, salary at retirement, number of years in retirement, knowledge of pension entitlement, retirement planning and payment mode. Table 5 summarizes the output of the eight predictors of income security with education and marital status as the control variables.

Table 5: Logit model of income security on a number of variables

| Variables | Parameter Estimate | Standard Error | Wald χ^2 | DF | p-value | Odds Ratio | 95% Confidence Limits | |
|-----------------------------|--------------------|----------------|----------------|-----------|----------------|------------|-----------------------|-------|
| Intercept | 1.4864 | 0.6295 | 5.5749 | 1 | 0.0182** | - | - | - |
| Education level | 0.2285 | 0.1089 | 4.4033 | 1 | 0.0359** | 1.257 | 1.015 | 1.556 |
| Marital status | 0.00698 | 0.0606 | 0.0133 | 1 | 0.9082 | 1.007 | 0.894 | 1.134 |
| Salary at retirement | 0.2235 | 0.0485 | 21.2714 | 1 | <.0001*** | 1.25 | 1.137 | 1.375 |
| Length retirement (in year) | 0.00496 | 0.013 | 0.1446 | 1 | 0.7037 | 1.005 | 0.98 | 1.031 |
| Knew Pension entitlement | -0.8545 | 0.2074 | 16.9781 | 1 | <.0001*** | 1.350 | 0.565 | 2.529 |
| Retirement planning | -1.1436 | 0.1708 | 44.8057 | 1 | <.0001*** | 1.138 | 0.245 | 3.386 |
| Payment mode | 0.0811 | 0.0902 | 0.809 | 1 | 0.3684 | 1.085 | 0.909 | 1.294 |
| | | | <u>Chi-sq.</u> | <u>DF</u> | <u>p-value</u> | | | |
| | Likelihood Ratio | | 145.375 | 7 | <.0001*** | | | |
| | Wald | | 111.608 | 7 | <.0001*** | | | |

*** $p < 0.001$; ** $p < 0.05$; * $p < 0.1$

The binary logistic regression analysis results indicate that education, salary at retirement, knowledge of pension entitlement and retirement planning were significantly related to income security. Specifically, those retirees with higher education had 26% higher chances of enjoying income security. Salary at retirement was significantly related to income security with those earning higher salary having 25% higher chances of having a secure income at retirement. Those who had knowledge of their pension entitlement had 35% higher chances of being income secure while those who had planned for their retirement had 14% higher chances of achieving income security. Marital status, number of years in retirement and mode of payment of retirement benefits did not show any significant relationship with income security in retirement.

Further interpretation of these results is that education and salary remuneration are closely related and may imply that those earning higher salaries are more likely to want to establish their pension entitlement and to plan for its utilization. It may also reflect on their concern about their income security and their ability to make higher contributions to pension and therefore higher pensions at retirement. Well salaried individuals are also more likely to make viable investments than low salaried employees which guarantees them a more secure retirement.

Conclusions

Income security is closely related to socio-economic wellbeing. This paper has established that education level, pre-retirement factors such as income earned prior to retirement, retirement package received, savings and investments made for retirement play a part in determining income security of retirees. There is also evidence that planning for retirement and knowledge of the details of retirement benefits determine income security at retirement. These findings reveal that pre-retirement financial status and decisions result to financial outcomes at retirement proving a need for introducing interventions for income security early and ahead of retirement. Notably, majority of retirees spent their savings on purchasing basic needs and education implying a need for retirement planning to focus on how retirees can maximize returns of their savings to ensure support of their daily living. In view of this reality, the following recommendations for both action and policy are made:

- i. Most retirees often leave work with an aim to invest their savings in business enterprises, there is need to conduct systematic business training for those exiting the workforce prior to retirement in order to maximize the potential of their business ventures to deliver income security after cessation of employment;
- ii. There is need for robust and comprehensive retirement planning coupled with financial literacy given that later life income security is predicted by pre-retirement financial decisions. This paper recommends that retirement planning training be pegged to retiree's own chosen exit path and future undertakings in order to respond directly to expected challenges in each potential future pursuit; and
- iii. Finally, since retirees exiting from lowly paid work are also more likely to experience challenges of income security, there is need for planners of retirement policy to initiate products that respond to the different categories of workers. If well and early planned within a person's career, such a benefit could be more beneficial at retirement.

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