

**CONSUMPTION DURING RETIREMENT IN GHANA: A CASE STUDY  
OF PENSIONERS IN ACCRA**

**BY**

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**THIS THESIS IS SUBMITTED TO THE DEPARTMENT OF  
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**DECLARATION**

This is to certify that this thesis is the result of research undertaken by Mark Edem Kunawotor towards the award of the Master of Philosophy (MPHIL) degree in Economics in the Department of Economics, University of Ghana.

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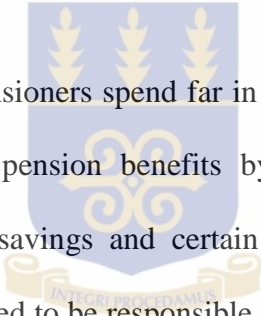
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## ABSTRACT

SSNIT pension benefit is the primary source of retirement income among formal sector workers and most recently informal sector workers in Ghana. It is also the most comprehensive form of social security among formal sector workers and pensioners in Ghana. But the SSNIT pension benefit is mostly meager and inadequate especially in financing consumption expenditure of pensioners and their dependants. This creates a consumption-pension income disparity which this study sorts to investigate. This study investigates the consumption-income disparity and the possible reasons, the sources of retirement income and the significance of the various income sources among pensioners in Ghana using White robust standard errors of OLS and Kendall's coefficients of concordance (W-test).



The results indicate that 82% of pensioners spend far in excess of their pension benefits and consumption expenditure exceeds pension benefits by 29% for the average pensioner. Inadequate pension or inadequate savings and certain socio-economic factors that affect consumption are the reasons identified to be responsible for the consumption-pension income disparity. The sources of retirement income apart from SSNIT pensions are income from post-retirement jobs, remittances from family and friends, rental income, personal savings/investments and provident funds. SSNIT pension benefit was identified to be the most important source of retirement income among pensioners in Ghana. Based on these findings, recommendations were made.

## DEDICATION

I dedicate this work to my lovely parents Mr. Fred Kunawotor and Miss Olivia Bamfo and to my siblings Linda and Priscilla Kunawotor.



## ACKNOWLEDGEMENT

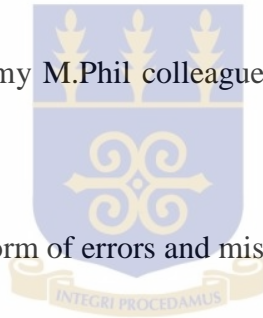
I give glory to God Almighty for his faithfulness and his sure promises towards my educational carrier. I thank my parents for their sacrifices financially, spiritually and all forms of encouragement during my Masters program. Special thanks to my supervisors Prof. Peter Quartey and Dr. L. Boakye-Yiadom for their useful comments and guidance.

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Finally, I appreciate the efforts of my M.Phil colleagues who in one way or the other have contributed to this work.

I accept full responsibility for any form of errors and misstatement in this work.



Mark Edem Kunawotor

June, 2013

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

Pensions play an important role in poverty alleviation of the elderly and these elderly are one of the most vulnerable groups in any society (Stewart and Yermo, 2009). Yet, according to the International Labour Organisation (ILO), only one in five workers is covered by adequate social security scheme. Also 85% of the world's population over 65 years have no retirement benefit at all (Holtzman and Hinz, 2001).

According to the 2010/2011 world social security report, the major risks faced when an individual reaches old age is poverty or income insecurity due to the loss of ability to earn income, whether partially or completely. This perhaps may have been the main reason for establishing the first pension schemes which started in the advanced countries and can now be found in many developing nations. Different pension schemes exist in countries with social security systems and these pension schemes are meant for different categories of people with specific objectives. Some of the specific objectives of a pension scheme include the prevention of poverty through the provision of basic income, the replacement of pre-retirement employment income in order to smooth consumption, and the supplementation of partial replacement income with additional income at retirement.

Barrientos (2006) asserts that social pensions are in place in most developed countries and exist in a good proportion in middle income countries, but only a handful of low income countries have them and this phenomenon is not far from expectation because developing countries are most often characterized by younger populations, high poverty incidence, and limited public resources. Furthermore, low income countries have other pressing needs such

as education and health and so it makes sense that the development of good pension schemes is less likely to become their policy priorities. Another difference between pension schemes of developed and developing countries worth mentioning is that, in developed countries social pensions are expected to raise beneficiaries above the poverty line, but in developing countries they only provide fixed-level income supplements that are often insufficient to lift beneficiaries and their households out of poverty and so only few individuals can enjoy retirement or can sustain consumption past the first decade of retirement (Ervin, Faulk and Smolira, 2009).

Consumption is one of the most important economic behaviours of many households including pensioners and it accounts for an increasingly large proportion of most nations' national income. Consumption although important, it is mostly determined by the income of individuals and households and the greater the level of disposable income, the higher the consumption expenditure *ceteris paribus*. Pensions or social security serve as the primary source of income for financing consumption during retirement and according to Diamond (1977), without social security, most of the elderly population will not be adequately prepared for retirement. Kotlikoff et al, (1982) regard social security or pensions as very instrumental in the consumption decisions of retirees and without it, most people will not be able to save enough for their retirement and will end up in abject poverty. Social security provides some form of insurance against one's unsuccessful career and it is very significant in providing financial security during old age (Diamond and Orszag, 2005).

An interesting phenomenon to be expected at retirement is the significant decline in consumption expenditure as compared to consumption expenditure incurred during one's working life. Prior studies conducted in several countries like the United States, Germany and the United Kingdom have proven this fact. Consumption expenditure declines sharply at the time of retirement for many U.S. households (Bernheim, Skinner, and Weinberg, 2001). This

is partly expected because there might be a decline in expenditure on clothing, transportation and food consumed away from home. There is an increase however, in food prepared and consumed at home.

Also Hamermesh (1984) and Mariger (1987) argue that the facts are not in dispute because many households spend far less after retirement than they did before. Banks, Blundell, and Tanner (1998) mentioned that this fall in consumption expenditure is too large to be explained in the life-cycle framework: “the only way to reconcile fully the fall in consumption with the life-cycle hypothesis is with the systematic arrival of unexpected adverse information.” Bernheim, Skinner, and Weinberg (2001) identified the “unexpected” information as the level of retirement wealth itself: “many retirees take stock of their finances only to discover that their resources are insufficient to maintain their accustomed standard of living.”

Dan (2004) identifies the following as the sources of income in retirement in the U.S; social security, pensions, individual retirement account, personal savings and investments, inheritances, income gained from working after retirement and home equity. Also according to Emily Brandon on U.S. News and World Report on May 15, 2010, income from job is the main source of income for working Americans but their income source changes when they retire. Some of these retirement income sources include retirement account withdrawals, monthly social security payments, and increasingly, a part-time job”. She identified the following as the 10 biggest sources of retirement income as a result of a Gallup survey of 1020 Americans; social security, retirement accounts, pensions, savings accounts and certificate of deposit (CDs), stocks and stocks mutual funds, home equity, part-time work, inheritance, annuities or insurance and finally rents and royalties.

Income from work after retirement has become an increasing part of retirement income sources and is of no surprise that they were identified in the works of Dan and Emily as cited

above. The 2010/2011 world social security report also made mention of Bolivia as a classic example of this phenomenon. The reports asserts that more than 50 percent of those aged 65 years or older still work, despite the universal pension system that exists and this demonstrates the low amounts of pension payments per person. This presupposes that majority of pensioners will have to find alternative sources of financing their consumption expenditure since their pension payments are inadequate. While some may re-enter the job market, others may depend on remittances or personal savings.

There is not much literature on sources of financing consumption during retirement in Africa apart from the mention of institutional pensions that exist in these countries and this perhaps as according to Barrientos (2006) is because, the development of pension schemes are not policy priority areas, let alone sources of financing consumption in retirement. That notwithstanding, according to Palacios and Pallares-Miralles (2000), in sub-Saharan Africa, less than 10% of the older populations have a contributory pension and the few individuals who benefit from these pensions most often receive meager amounts which are inadequate to maintain pre-retirement standard of living and hence the need for alternative means of finance. Petters and Asuquo (2008) indicated that most pensioners in Nigeria will need alternative sources of retirement income apart from the existing pension benefits. Also Ubangha and Akinyemi (2005) asserts in a survey conducted in Nigeria that 65% of teachers are willing to continue teaching even after retirement mainly due to expectations of meager pension payments.

There are many pension schemes in Ghana such as the Social Security and National Insurance Trust (SSNIT) pension scheme, the CAP 30 pension scheme, the Ghana Universities Staff Superannuation Scheme (GUSSS), the Ghana Armed Forces pension scheme and Provident Funds. The SSNIT monthly pension payment however, is the most comprehensive form and source of pensioners' income among formal sector and private

sector pensioners for financing consumption. But according to the 2011 SSNIT annual report, 88.4% of the pensioners earn a monthly pension of GH¢300 or less with a minimum pension payment of GH¢45.06 and an average pension of GH¢351.42. With the current high cost of living in Ghana and most pensioners being the breadwinners of their household with large number of dependants as according to Nelson-Cofie (2007), consumption expenditure is most likely to exceed monthly pension payments. The excess expenditure is perhaps financed with alternative sources of retirement income which this study sorts to identify.

## **1.2 Statement of the Problem**

The central implication that can be made of the life cycle model is that rational consumers smooth their consumption patterns over their lifetime to avoid unexpected changes in consumption caused by fluctuations in income during retirement and probably, the most important predictable change in one's income is that which can be associated with retirement (Aguila, Attansio and Meghir, 2008). This fluctuation in income during retirement is predominant in developing countries like Ghana where pension schemes are not too developed and retirement income unstable and unreliable. It is therefore of great interest to look at retirees consumption behaviour and consumption financing means.

A survey in the United States by Hamermesh (1984) indicates that the resources of pensioners are not enough to help them maintain their pre-retirement standard of living and pensioners try to respond to this income deficiency by reducing consumption as they get older. In addition consumption by pensioners in retirement exceeds by 14% the income that their financial, pension and social security wealth can provide. This implies that the savings of pensioners both private and through social security is not sufficient enough to enable them sustain consumption throughout the rest of their lives and this means that, they have to find alternative means of finance. A similar work by Kotlikoff et al, (1982) also indicates that in

the absence of social security and private pensions, consumption in retirement relative to consumption during one's working life will be about 40 percent less for the average person. Kotlikoff further mentioned that these pension benefits may only allow pensioners to sustain their pre-retirement consumption levels for few years but are not sufficient enough to sustain consumption for the rest of their retirement lives and one way pensioners can respond to this deficiency of income is to re-enter the job market.

If this precarious situation of insufficient social security and pension benefits and retirees having to find alternative source of income exists in an the advanced country like the U.S with a well- developed social security system, then it will be worth investigating in developing countries like Ghana to inform policy.

The fifth round of the Ghana Living Standards Survey (GLSS 5) indicates the annual per capita consumption expenditure in Ghana is GH¢644.00, implying an overall average expenditure of about GH¢2.00 per person per day. On the other hand, the average per capita income is almost GH¢400, implying that a Ghanaian lives on an average income of less than GH¢1.10 per day. This means that on the average, a Ghanaian spends (GH¢644) which is far more than he earns (GH¢400) annually. The question that emanate is whether spending in excess of earnings is applicable to pensioners in Ghana as well and the possible reasons for such.

Couple with the above, a dissertation by Kunawotor (2010) indicates that 89% of pensioners under the Social Security and National Insurance Trust (SSNIT) interviewed in the Kumasi Metropolis of Ghana spend far above their SSNIT pension benefits. Consumption expenditure exceeding pension benefits simply means that these pensioners possibly have alternative sources of retirement income apart from the regular SSNIT pension payments.

In addition, the few available studies in Ghana are mostly centered on history of social security by Kpessa (2011), the inefficiencies of pension administration and whether pension schemes are sustainable by Kumado and Gockel (2003) and several others mainly on how to save and invest for retirement. Much has not been done on consumption behaviour of pensioners and retirement income sources. Consequently, the following research questions need to be addressed.

1. What is the extent of consumption-income disparity among pensioners in Ghana and what are the reason(s) for such a phenomenon?
2. What are the sources of financing retirement consumption in Ghana?
3. Which source(s) of retirement income form(s) a significant part of retirees' consumption expenditure?
4. To what extent do retirees re-enter the job market in order to finance consumption?

### **1.3 Objectives of the study**

The main objective of this study is to investigate reasons responsible for consumption-income disparity and to find sources of retirement income in Ghana.

Specifically the study seeks to:

- Find out the extent of disparity between average consumption expenditure and pension benefits among pensioners and the reasons for such phenomenon.
- Ascertain the sources of financing consumption expenditure during retirement in Ghana.
- Determine which source(s) of finance form(s) a significant part of pensioners' consumption expenditure.

- Investigate the extent to which pensioners re-enter the job market to finance consumption expenditure.

#### **1.4 Justification of the study**

One of the main goals for the existence of a social security system is the maintenance of pre-retirement consumption. Studying the actual consumption pattern of the elderly therefore will allow the direct estimation of how well social security retirement benefits meet this goal. Also, examining consumption-income disparity will help us discover the alternative sources of financing consumption in retirement and which source(s) is most significant to pensioners. On the other hand, if there exists no alternative source of retirement income then it will help us know how much consumption would have to be reduced. Furthermore, it will add to literature since there is little relevant literature on sources of financing retirement consumption in Ghana.

#### **1.5 Organisation of the study**

The study is composed of six chapters: Chapter one presents the introduction of the study. Chapter two discusses the various pension schemes in Ghana. Chapter three reviews relevant literature. Chapter four discusses data and methodological issues, including the data source, the field procedures, model specifications and expected signs whiles, chapter five presents and discusses the main findings from the study. Finally chapter six presents the summary, conclusions and policy recommendations based on the results obtained from the study.

## **CHAPTER TWO**

### **PENSION SCHEMES IN GHANA**

#### **2.1 Introduction**

The SSNIT pension scheme and the CAP 30 pension scheme are currently the two mandatory pension schemes in Ghana. The main pension scheme is the SSNIT pension scheme and it covers both formal sector workers and informal sector workers. The CAP 30 which is also a mandatory pension scheme for the military and security services and few other civil servants like judges is phasing-out. There are several other pension schemes and these include the Ghana University Staff Superannuation Scheme, the Ghana Armed Forces Pension Scheme and provident funds. All these pension schemes and how social security started in Ghana are elaborated below.

#### **2.2 Evolution of Social Security Scheme in Ghana**

There was no identifiable universal pension or social security system in Ghana until independence in 1957. The available social security schemes prior to independence only provided some form of social protection to some categories of workers. A typical instance is in 1946, where the colonial government of the then Gold Coast introduced a non-contributory pension scheme to cover senior civil servants and by 1955, this pension scheme had been extended to cover certified teachers and was commonly referred to as “CAP 30”. Similarly, private superannuation scheme was operated to provide social security benefits to retired members of the academic staff of the then University College of the Gold Coast (University of Ghana). The private sector in those times especially the bigger foreign companies, operated various forms of provident funds which provided retirement benefits to their employees during retirement (Adjei, 1999).

A compulsory savings scheme was introduced in 1960 in an effort to make social security a national issue which will attempt to cover all working citizens and this was replaced by the Social Security Act No. 279 of 1965. But for workers under the CAP 30 scheme, this new Act covered all firms which employ five or more workers. This new nation-wide covered social security scheme operated as a form of provident fund where workers were paid lump sum in retirement and was to be converted into a form of pension scheme by 1970. Due to delay in conversion, a decree was issued which enabled all government sector workers (civil servants) employed on or after 1<sup>st</sup> January, 1972 to be automatically enrolled on the new social security scheme but not the CAP 30 scheme. Another form of decree was issued again in 1975 which enabled all CAP 30 contributors to opt to join the social security scheme or otherwise and those who did not comply by a stipulated time were enrolled on the new scheme. Several attempts to convert the social security from a provident fund to a pension fund yielded no results until 1991 when the social security law (P.N.D.C.L. 247) was passed and this resulted in the establishment of a Trustee called Social Security and National Insurance Trust (SSNIT, 2001).

### **2.3 The Old SSNIT Scheme**

The Social Security and National Insurance Trust (SSNIT) is a statutory public Trust charged with the administration of Ghana's National Pension Scheme. The Trust is currently the largest non-bank financial institution in Ghana (SSNIT, 2012). The main responsibility of SSNIT is to provide pension benefits to; contributors in old age, the invalid due to accidents or to support dependants of deceased contributors. Any organization with an identifiable employer-employee relationship is mandated to contribute on behalf of all the workers of that firm including the employer himself/herself but is not mandatory for those who are self-employed. The old social insurance scheme is mainly financed through membership

contributions of both employers and employees. The employer is mandated to contribute 12.5% of the monthly basic salary of an employee on behalf of the employee in addition to a deduction of 5% of the employees' basic salary. The minimum contribution on behalf of a member therefore, is 17.5% of his/her income. SSNIT anticipates that the total accumulated contributions of an individual member over his/her working life will fund about a third of the projected future benefit payments to that employee. The self-employed however if they so wish can contribute 17.5% of their monthly earnings to the scheme and are also entitled to benefits on retirement. SSNIT's pension benefits include a lump sum payment and monthly pensions based on a prescribed formula in the law governing the social insurance scheme. To qualify for the normal pensions, a SSNIT contributor must have contributed for a minimum period of 240 months (20 years) and have attained a pension age of 60 years. The benefits due in the normal pensions will be 50-80% of the average of the three best years' salary depending on how long an individual has contributed. Members who however, couldn't meet the minimum number of years receive a return of their contributions accumulated at a prescribed interest rate. There is also a voluntary retirement for those aged 55-59 years mainly due to redundancy or invalidity and this category of people receive reduced pensions. Pensions are reviewed annually based on the changes in the average wage of contributing members and other economic indicators (SSNIT, 2007). According to the SSNIT 2010 annual report, the old scheme officially came to an end on December 31, 2009.

#### **2.4 The New SSNIT Scheme**

There have been reforms in the pension schemes of many countries and Ghana is no exception. A new legislation to govern the administration of social security in Ghana was passed in 2008. The National Pensions Act 2008, Act 766 caters for the establishment of a

new contributory three-tier Pension scheme with a composite pension scheme which started operating in January 1, 2010. With the new scheme, the total contribution per individual is 18.5% of earnings instead of the 17.5% under the old scheme. An employer contributes 13% of the employees' basic salary as a deduction from the employees' salary and adds 5.5% from his funds. The 18.5% is the minimum contribution of the approved monthly equivalent of the national daily minimum wage.

The three-tier scheme as the name suggests is composed of three parts; two mandatory schemes and a voluntary scheme explained as follows:

The first tier basic national social security scheme, which incorporates an improved system of SSNIT benefits, is mandatory for all employees in both the private and public sectors. The main purpose is for the payment of only monthly pensions and related benefits such as survivors benefit. An amount 13.5% of the total contribution of 18.5% is transferred to the first tier mandatory basic national social security scheme and 2.5% of the 13.5% is transferred to the National Health Insurance Fund for the health insurance of its members. This scheme is managed by the main body of SSNIT.

The second tier occupational pension scheme is also mandatory for all employees but privately managed, and designed primarily to give contributors higher lump sum benefits than presently available under the SSNIT or Cap 30 pension schemes. 5% of the total contribution of 18.5% is remitted to the second tier mandatory occupational pension scheme which is managed by private fund managers.

The third tier is a voluntary provident fund and personal pension schemes with inherent elements of tax incentives to provide additional funds for workers who want to make voluntary contributions to enhance their pension benefits as well as workers in the informal sector.

The minimum age at which a person may join the social security scheme is 15 years and the maximum is 45 years. The current minimum contribution period is 180 months (15years) unlike the previous 20 years and the compulsory retirement age is still 60 years. Workers who were 55 years and above at the commencement of this Act are exempted from the new scheme and entitled to benefits as in the old scheme. An employer should send the total contribution of 18.5% of earnings of an employee who does not qualify under the new scheme to the second tier scheme. A member who meets the minimum qualification of 15 years contribution and attains 60 years or a voluntary retirement age of 55-59 years is entitled to a superannuation pension which comprises of monthly pension and a lump sum payment. A member of the social security scheme who becomes an invalid is entitled to invalidity pension if the member has contributed to the Fund for not less than twelve months within the last thirty-six months before the occurrence of the invalidity and a medical board certifies that the member is incapable of normal gainful employment because of the permanent physical or mental disability.

Where a member of the social security scheme has made less than fifteen years contribution to the Fund before the member retires either compulsorily or voluntarily, the member is entitled to a lump sum of money equal to the member's contribution as benefit and an interest of seventy-five percent at the prevailing government treasury bill rate on the lump sum.

By 31<sup>st</sup> December 2011, the Trust had a total registered membership of 1,390, 945. Out of this number 963,619 are active members and 112,522 are pensioners who received pension payments. The minimum pension paid per month was GH¢45.06 and the highest pension was GH¢6931.88 with an average pension of GH¢351.42 (SSNIT Annual Report, 2011).

One of the anticipated impacts of the new pension scheme is to improve the standard of living of pensioners and their dependant and make available funds for economic development. SSNIT Contributors can also use their future lump sum pension benefits to secure mortgages.

This means that workers can obtain their own houses before retirement by using their pension benefits as collateral.

## **2.5 The SSNIT Informal Sector Scheme**

The Social Security and National Insurance Trust (SSNIT) developed a separate social security scheme which is purposely tailored to meet the needs of Informal Sector workers in Ghana. This resulted after studies undertaken by the SSNIT research department and corroborated by a team from the World Bank to the effect that the SSNIT Pension Scheme is not suited to the Informal Sector due to the pattern of incomes in the sector, which is essentially unpredictable and irregular. A pilot survey also showed that workers in the informal sector are willing to sign unto a social security scheme, which can provide them with long-term and short-term financial benefits since most of them require financial support to boost their businesses and thereby increase their incomes.

The SSNIT Informal Sector Fund (SISF) as it is called, became operational in 2008 and is a voluntary contributory fully funded personal pension scheme and is designed principally for workers who operate in the informal sector of the economy of Ghana. Contribution rates are not fixed but based on members' preference and ability and these contributions can be made daily, weekly, monthly annually or seasonally. Members' contributions are separated equally into two different accounts. These accounts are the Occupational Scheme Account (50% of Contribution) and Retirement Account (50% of Contribution) after deduction of Life Insurance Premium. Whilst members are entitled to withdrawals from the occupational scheme account after five months of regular contributions, the retirement account however only pays benefits upon the occurrence of certain kinds of contingencies such as old age,

invalidity or death. A member can however use his/her retirement contributions as partial collateral to secure credit from approved financial institutions.

Membership of the SISF is open to all Ghanaian self-employed workers between the age of 15-59 years and also formal sector workers and Ghanaian workers living abroad. Each member of the scheme is entitled to benefits based exclusively on the accumulated savings in the member's individual account plus any interest accruing thereon. A member who has attained the retirement age of 60 years or above is entitled to the entire accrued benefits in the scheme as lump sum. A contributor who is not covered under the mandatory pension scheme or any other pension scheme is entitled to use a percentage of accrued benefits to purchase an annuity for life payable monthly or quarterly from a licensed Life Insurance company. The SSNIT Informal Sector Fund has a membership of 95,458 as at July, 2011 (SSNIT Informal Sector Fund, 2011)

## **2.6 The Civil Service Pension Scheme (CAP 30)**

A pension scheme was established for Ghanaians working in the public service in 1950 by the Pensions Ordinance Number 42, Chapter 30. The name of this new pension scheme was derived from its ordinance and is known as CAP 30. The main purpose of the CAP 30 is to enable civil servants to maintain their standard of living by providing adequate pensions and gratuities on retirement (Pensions Commission, 2004). Teachers were included in 1955 and by the year 1975, a decree was issued by the Supreme Military Council (SMCD 8) which extended social security to Public Officers and members of the Police. This Decree gave pensionable officers (officers due for pension) employed before 31 December, 1971 the choice to opt for either the civil service pension or social security. The Decree also sought to place all public sectors workers employed after 31<sup>st</sup> December 1971 under the social security

scheme. Laws have subsequently been passed to bring back the Police, Fire service and National Security and Intelligence staff under the CAP 30 scheme.

Essentially, the CAP 30 is a non-contributory occupational scheme restricted only to pensionable officers in the civil/public services. This pension scheme is a final salary defined benefit scheme that is based on the level of remuneration at the date of retirement and it covers some pensionable officers in the public sector. To qualify for benefits under CAP 30, one should have held a pensionable position as at December 31, 1971, done a minimum of ten years unblemished service and should not have had a break- in-service, except with the approval of the Head of Civil Service. The compulsory retirement age is 60 years while the voluntary retirement age is 45years. The scheme provides life benefits for pensioners and survivors and an allowance (ex-gratia) for qualified non-pensionable officers.

The CAP 30 Pension Scheme was established as non-contributory with defined benefits but it later became a contributory scheme by constitutional amendments to some categories of workers who are required to contribute 5% of their pre-tax salary, which is recycled into the Consolidated Fund. However, it is still a non-contributory plan for the security agencies, including the Police and the Prison Services as well as employees of the Judicial and Legal Services. The Scheme depends on the Consolidated Fund for payments of benefits. These are excerpts from the works of Kumado and Gockel (2003).

The scheme continued to operate as an unfunded scheme, paid out of general revenues, and by the close of 2008, it had about 39,500 active members and 101,000 retirees on its payroll (Government of Ghana, 2006).

## **2.7 The Ghana Armed Forces Pension scheme**

The Ghana Armed Forces Regulations have streamlined a specific pension scheme for the armed forces. Just like the CAP 30, the Ghana armed forces pension scheme is also non-

contributory and defined benefit scheme. It is fully funded from the coffers of the Consolidated Fund. Regular Commissioned Officers and other Ranks retire according to the provisions of Chapter 206 of the Armed Forces Regulations unto the scheme. The normal compulsory retirement age for an Officer holding a permanent commission is 50 years and he/she should have done 10 years of dedicated service. Other ranks must complete a minimum of 15 years of service to qualify for pension. Family pension are paid to families of officers and men who die while serving on full pay or whilst in receipt of retired pay or pension. Gratuities are payable to the estate of officers and men who die whilst serving on full pay. Civilian employees of the Armed Forces retire either on CAP 30 or on the SSNIT scheme. Officers who are appointed as Judge Advocates enjoy retirement conditions applicable to Judge of the Court of Appeal (Kumado and Gockel, 2003).

## **2.8 Ghana Universities Staff Superannuation Scheme (GUSSS)**

There is also the Ghana Universities Staff Superannuation Scheme (GUSSS) established and managed by public universities in Ghana and this scheme came into force in 1976. The

“University” means the University of Ghana, Legon, University of Science and Technology, Kumasi, the University of Cape Coast and any other institution of similar status which may be so established by Government. Membership of the Scheme consist of all existing members of GUSSS as at 1<sup>st</sup> January, 1976, University Teachers and Research Fellows and also University Administrative, Library and Professional staff of the status comparable with that of University Teachers. The Scheme is administered by Finance Officers under the control of a Management Board established by the various Universities and all expenses for administering the Scheme are borne by the Scheme.

Members of the scheme contribute 10 percent of their basic salary whilst the government (employer) contributes 12.5 percent of each member's basic salary to the scheme making a total of 22.5 percent. The compulsory retirement age is 60 and the minimum voluntary retirement age is 50 in which case a member should have contributed to the scheme for a minimum period of 15 years in order to qualify for full pension of a lump sum and monthly payments. Payment however is guaranteed for a period of 20 years and if a pensioner lives beyond the guaranteed period, pension will continue till death (GUSSS Constitution).

## **2.9 Provident Fund**

According to the National Pensions Regulatory Authority of Ghana (NPRA), Provident Fund means a fully funded, defined contribution scheme in which funds are managed privately and benefits paid as lump sum to the employee or to his dependants in case of death. The employee is also able to withdraw sums from the provident fund in times of emergency to provide for specific needs. "Provident Fund Scheme" means a Scheme governed by a trust to which a contributor or the contributor's employer or both contribute to a pension Scheme which provides benefits based on a defined contribution formula to provide for the payment of lump sum benefits to the members of the Scheme when they reach the retirement age, or any other prescribed event occurs in relation to them; or in the case of members who die before reaching that age or before the occurrence of such an event, provides for the payment of those benefits to the personal representatives or beneficiaries of the estates of those members.

As enumerated in the history of social security in Ghana, the pension scheme available after Ghana's independence was in a form of provident fund and it was aimed at broadening the scope of the Ghanaian pension system to establish a single pension structure for all categories

of workers. Many private firms and state-owned enterprises established a version of the provident fund known as End-of-Service Benefits (ESB) for their employees and it's financed mainly by employer-employee contributions as deductions from their salary. These funds were managed by banks, professional fund managers, insurance companies and stock brokers (Government of Ghana, 2006).

Mining and other companies, particularly, in the service sector set up provident funds to provide lump-sum cash benefits to their employees upon retirement. Private companies including Unilever Ghana Ltd, Guinness Ghana Ltd and Ghacem Ltd among others, created their own retirement income programs modeled on the national provident funds (Government of Ghana, 2006). Government Sub vented organizations such Okomfo Anokye Teaching Hospital (KATH) and the University of Ghana have separate provident funds for their staffs. The University allows every permanent member of staff who is not a member of the Ghana Universities Superannuation Scheme to join the Universities of Ghana Provident Fund Scheme subject to the rules governing its operations. These provident funds are purposely designed to cover contingencies like retirement, invalidity, survivors' payments broadly classified as primary contingencies; and sickness, maternity and emigration as subsidiary contingencies.

## **2.10 Concluding Remarks**

There are many pension schemes in Ghana as postulated by the on-going discussion but the predominant pension scheme is the SSNIT pension scheme. SSNIT pension scheme is the most comprehensive pension scheme in terms assets, number of contributors and number of pensioners. The effects of the new SSNIT scheme is yet to materialize since it began operation only quite recently in 2010. Current pensioners under SSNIT which are considered

for the purposes of this study are all products of the old SSNIT scheme which is detailed out in the next chapter.

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## **CHAPTER THREE**

### **LITERATURE REVIEW**

#### **3.1 Introduction**

This chapter entails a review of relevant literature comprising both theoretical and empirical literature on retirement consumption. The first section covers definitions and concepts of retirement and also a theoretical review that explains the various models of consumption including the life cycle model which is the underlying theory for this study. The second section reviews empirical literature on the consumption-income disparity, the importance of pensions and social security in consumption, factors affecting consumption in retirement, working after retirement and the sources of financing consumption during retirement.

#### **3.2 Definitions and objectives of social security and retirement**

The International Labour Organisation (ILO) defines social security as “the protection which society provides for its members, through a series of public measures, against the economic and social distress that otherwise would be caused by the stoppage or substantial reduction in earnings resulting from sickness, maternity, employment injury, unemployment, invalidity, old age and death; the provision of medical care; and the provision of subsidies for families with children” (Inductivo, 2002). Social security according to Kpessa (2011) is defined to include the institutions and societies designed to guarantee or protect individuals against the loss of income due to old age and other unforeseen contingencies such as workplace injury, unemployment, and death of a family’s breadwinner among others. The objectives of any social security system are among others, to replace loss or reduction in incomes, promote health through medical care, and to assist families financially in bringing up their children. These objectives are mainly achieved through the payment of pension or social security

benefits and this depend on the level of development of the social security institutions and for that matter the nation under consideration. Some forms of social security benefits are old-age pension, disability benefit, medical care benefit, death benefit, sickness allowance, maternity allowance, employment injury benefit, unemployment allowance and child care support.

Retirement provision is one form of social security. Retirement is a transition from one stage of life to another (Aguila, Attansio and Meghir, 2008). The Merriam-Webster Dictionary of the Britannica Online Encyclopedia defines retirement as the “withdrawal from one's position or occupation or from active working life”. Rowe (1994) defines retirement as partial or complete withdrawal from career work accompanied by a change in the sources and amount of income.

Rowe (1994) identifies the following as reasons why people retire from work; some people retire because they have accumulated enough wealth stored up in savings which can be relied on during retirement; others retire due to deterioration in health which is mostly associated with old age; some people also retire due to abrupt termination of employment contracts mostly due to mergers, downsizing or privatization; some also go on retirement purposely for leisure which is mostly in the advanced countries, whilst others do so to cater for their families. Finally, some people go on retirement due to age, especially when they hit the official retirement age. Retirement in Ghana is mainly due to reaching the official retirement age, disability or as a result of redundancy.

### **3.3 Concepts of retirement**

Retirement age however, is country specific and it may depend on the employment and pension legislation of that country. According to the Routledge Dictionary of Economics 2002, in developed countries, the retirement age is between 60 and 65, in socialist countries

60 for males and 55 for females, in developing countries between 50 and 60 years. These ages of retirement in the various countries often apply only to people who work in the formal sectors and whose activities can be formally monitored. Informal sector workers choose to retire when they deem fit and some others retire when it becomes physically unbearable for them to work. This point is reiterated by Rowe (1994) who said that, quite a number of jobs do not have a pre-determined retirement age and those who are self-employed can work as long as they want to. Early retirement by the self-employed especially in developing countries will be disastrous to them, except when they have enough personal savings or investment because they do not have any reliable source of pension benefit or unemployment social security benefit. Ghana recently (in 2008), introduced the informal sector pension scheme mainly for self-employed workers.

Retirement however in this study, is a period in one's life, in which one is disengaged from their formal work as a result of attaining a compulsory retirement age of 60 or voluntarily due to sickness, disability and hence inability to continue work. The voluntary retirement age however, is 55-59 years.

The 21st century is regarded as the century of aging. There are over 670 million people all over the world who are 60 years or older and this represents 10.4% of the world's population. This number is projected to be 2 billion representing 21.7% of the world's population by 2050. By the year 2015 more than 67% of the aged will live in developing countries and this will project to 1.6 billion people which will be almost 80% by 2050. Currently, 342 million people which account for over half of older people worldwide, lack income security and until the situation is remedied, more than 1.2 billion older people will be without access to secured incomes by 2050 (UNDESA 2007).

To be able to generate sufficient income which can sustain consumption expenditure during retirement, individuals have the option of either saving personally when working or to subscribe to an institutionalized body and make regular contributions until retirement when this deferred income will be given back (Schulz and Carrin, 1972). In recent times, the institutionalized body tasks with taking from workers and giving back to them in retirement constitutes the social security system. Individuals who can foresee the future and predict its uncertainty due to unavailable pensions do plan well by subscribing to this public and private social security schemes. But because of aging populations all over the globe and income insecurity in old age, most countries have made the social security/pension scheme a compulsory savings scheme, which employees and employers are bound to contribute to, when working especially in formal sectors of employment.

According to Diamond and Orszag (2005), these forms of social security has helped in providing retirees with the basic level of income that is protected against inflation, financial market fluctuations and the risk of outliving one's assets mainly because they are invested with accumulate interests.

A pension scheme is one form of social insurance. It is an arrangement to provide a member with income when he/she retires from gainful employment. The pension to be received can be a fixed amount depending on the amount of contributions and the length of time that those contributions have been paid. Most pension schemes also require that individuals contribute for a minimum period of time to qualify for regular pension benefits. Pensions, according to the Bureau of Labour Statistics (2001), have become increasingly structured based on defined contributions rather than the traditional structure of defined benefits. Defined benefit (DB) pensions are structured based on the earnings profile of a worker and the number of years of employment in an organization. A pensioner under the defined benefit pension scheme is paid a stipulated amount of pension until death and it is purposely to reward one's dedicated and

long years of service. Under a defined contribution (DC) pension on the other hand, an employer and employee contribute a fixed percentage of the employee's salary into a retirement account, and the amount of benefits to be received in retirement equal the amount in the account at the time of retirement. The value of these accounts is determined by the amount contributed, how the money is invested, and the length of time the money is left in the account, so there is no guarantee as to the value of these accounts at retirement (Quadagno & Hardy, 1996).

### **3.4 Theories of consumption**

There are many models that explain consumption behaviour. The most widely documented models include the Keynesian Absolute Income Hypothesis, the Deusenberry's Relative Income Hypothesis, the Fisher's Intertemporal Choice, the Friedman's Permanent Income Hypothesis, and the Life Cycle Model by Modigliani and Brumberg.

#### **3.4.1 The Absolute Income Hypothesis**

John Maynard Keynes was one of the first proponents who wrote on the theories of consumption. Keynes identified many factors such as wealth, interest rate, income, expectations and demographic factors to influence consumption but in his general theory of employment, interest and money, Keynes (1936) expressed consumption as a key component of aggregate demand and he mentioned that changes in consumption can have fluctuations in the economy. He identified current income or current disposable income to be the main determinant of consumption and this forms the basis of the absolute income hypothesis. Keynes specified a linear consumption function of the form:  $C_t = a + cY_t$  where "C<sub>t</sub>" is consumption expenditure, "Y<sub>t</sub>" is disposable income, "a" is autonomous consumption and "c"

is the marginal propensity to consume (MPC). The MPC denotes the change in consumption as a result of a unit change in income and it falls within the range of 0 and 1.

According to Keynes (1936, pp.96), “The fundamental psychological law, upon which we are entitled to depend with great confidence both a priori from our knowledge of human nature and from the detailed facts of experience, is that men are disposed, as a rule and on the average, to increase their consumption as their income increases, but not by as much as the increase in their income”. This law simply means that as the income of an individual increases, consumption also increases but the additional increment in consumption is less than the increase in income which implies that the marginal and average propensities to consume falls as income increases. He expects the rich to save a higher proportion of their income than the poor meaning that retirement income will be much higher for the rich who save more than the poor mainly as a result of his belief that savings was a form of luxury.

### **3.4.2 The Intertemporal Choice Model**

The Intertemporal Choice can be found in the theory of Interest postulated by Fisher (1930). This model stipulates how forward looking and rational consumers choose their consumption pattern between the present and future in order to maximize their lifetime satisfaction. The main implication of this theory is that the consumer can consume less of his income now and more in the future through savings of current income which can attract interest. If the consumer however wants to consume more now, he will have to borrow to spend which will attract interest payment and hence reducing future consumption. Fisher’s theory assumes that the individual consumer lives in two periods. Period one is regarded as the working life where individuals are working and saving part of their income for future consumption. The second period is where the individual is retired and supposed to rely solely on his savings. Fisher

specified an individual's utility function of the form  $U(C_1, C_2)$ . The individual's current income is  $Y_1$  and current consumption is  $C_1$  whilst his future income is  $Y_2$  and future consumption is  $C_2$ . The consumer is believed to face an inter-temporal budget constraint when making lifetime decisions of whether to consume more in period one or save more in period one which will have effect on period two's consumption.

The individual can either borrow or save at a positive interest rate denoted by  $r$ . Fisher postulated that due to the positive interest rate, consumption in any period can be greater or less than that period's income. If an individual consumes less in period one, he can save the rest at an interest rate and so future consumption will be more than future income. On the other hand, if the individual consumes more now, he will have to dis-save because he will use part of his future income to pay for period one's higher consumption. In relation to retirement, the theory implies that, rational consumers should consume less now if they want more income in retirement.

### **3.4.3 The Relative Income Hypothesis**

The relative income hypothesis was pioneered by James Duesenberry in 1949 in his book titled "Income, Saving and the theory of consumer behaviour". The word "relative" is crucial in the explanation of this hypothesis and means that an individual consumer compares his consumption to society's consumption. The hypothesis states that the satisfaction a consumer derives from a given consumption bundle is dependent on the relative size of the consumption in the society and not on the absolute size of that individual's consumption. "The strength of any individual's desire to increase his consumption expenditure is a function of the ratio of his expenditure to some weighted average of the expenditures of others with whom he comes into

contact” (Palley, 2005). Duesenberry formulated two hypotheses to explain the determinants of consumption; the cross-section and time-series versions.

The cross-sectional version implies that an individual’s level of consumption is not only dependent on his/her current income as postulated by Keynes but his/her income as compared to the incomes of those in society he/she identifies with. Thus households compare their income to the incomes of others in the same society to determine their consumption expenditure and the utility of that individual rises if his/her consumption rises relative to that of the average of society. Consumers behave like the “Joneses”.

The time series version of the relative income hypothesis explains that, households design their consumption pattern by comparing their current income to a series of past income levels. A household who previously attained a higher level of income than currently and hence a higher consumption level will design his/her consumption pattern to suit the higher income achieved before. This means that even if his income falls, his consumption level will not fall in that proportion but rather consumption will be matched with the previously attained higher level of income and consumption. This means that even if an individual’s income falls in retirement, since he has to maintain the higher level of pre-retirement consumption, he must seek alternative income sources to supplement his retirement income or pensions.

#### **3.4.4 The Permanent Income Hypothesis**

Friedman (1957) in the Permanent Income Hypothesis argued that the incomes of households fluctuate overtime and is not a constant amount and this income can be divided into two components; permanent income and transitory income. Permanent income is the kind of income individuals expect to earn with certainty over their lifetime and which they anticipate to carry on into the future. Transitory income on the other hand is the income that households do not expect, but rather earn with uncertainty and which may fluctuate over periods. It can be

referred to as the difference between current income and permanent income. A household's income therefore can be expressed as:  $Y = Y_P + Y_T$  where "Y" is total income of the household, "Y<sub>P</sub>" is permanent income and "Y<sub>T</sub>" is transitory income. Milton Friedman's form of consumption is also divided into permanent and transitory consumptions. Permanent consumption is dependent on permanent income and is certain over an individual's lifetime. Transitory consumption however is the kind that is uncertain. Friedman assumes that there is no relationship between permanent consumption and transitory consumption and also no relationship between transitory consumption and transitory income. These assumptions mean that a sudden increase in income due to fluctuations in transitory income will not contribute immediately to an individual's consumption (Branson, 1989). Consumption to Friedman is a function of permanent income. The permanent income hypothesis implies that households smooth their consumption over their lifetime based on permanent income, and fluctuations in transitory income do not affect permanent consumption. The marginal propensity to consume therefore is constant and equal to the average propensity to consume. This theory implies that consumption in retirement should not fall below pre-retirement consumption but at worst equal to it, since it does not depend on pensions or social security but rather on permanent income.

### **3.4.5 Life Cycle Model**

The Life Cycle Hypothesis was developed by Modigliani and Brumberg in 1954 and it is the mainstream theoretical framework used for studying consumption patterns of households. The premise of this model is that households in making choices of how much to consume in a given period consider their long-term resources or what Milton Friedman refers to as permanent income and not just their current income (Pistaferri, 2009). The life cycle model explains life time consumption patterns of households by dividing the life cycle into two

periods. The first period is the period when an individual is working, earning income and possibly saving part of the income. The second period is when one dis-saves due to young age or old age and when one is in retirement or not working. This can be classified into three stages; when in early ages and not working, in middle age when working and earning and the last stage is in old age when in retirement. The main assertion is that savings helps households to transfer part of period one's income to period two when income is low or non-existent. This means that an individual can smooth consumption in his lifetime by borrowing to consume in the early stage of life when one is young and with little or no income, save (make wealth) and settle his loans and debts in the period in which income is high and consume the income from savings in retirement.

The life cycle hypothesis has many similarities with the permanent income hypothesis and even some papers unify the two hypotheses into a framework known as the Life Cycle-Permanent Income Hypothesis (LCPIH) of consumption. The main difference however, between the two models is the planning horizon, which is assumed finite in the life cycle hypothesis, and infinite in the permanent income hypothesis. Thus the permanent income hypothesis assumes that households live forever hence infinite horizon whilst the permanent income hypothesis assumes that households live for a period of time hence a finite horizon. This is where the dominance of the life cycle is evident because no individual lives forever (Pistaferri, 2009).

The basic forward-looking life-cycle model states that consumption should remain smooth through the retirement transition, as the change in income at retirement should be predictable (Modigliani and Brumberg, 1954).

Though the life cycle model is the mainstream theory used for studying most consumption behaviours, it is not without limitations. Dan (2004) identified some limitations of the life cycle hypothesis in her studies which include the following: the life cycle model does not

explain why high income earners save little for future needs; many people find it difficult to meet current consumption demands and so cannot save enough for the future; information asymmetry makes households not well informed enough to make good financial decisions especially saving for retirement; also the finite horizon assumption of the life cycle hypothesis means that individuals will die with no income left or with zero wealth which is not observed in practice since most people have savings even at death; research by Carroll and Summers (1991) indicates that most households do not smooth out consumption over their lifetime as predicted by the model, but rather consumption follows their current income and so as income increases, consumption also increases, in proportion to the increased in income.

Although, there exist many limitations, the lifecycle model, according to Dan (2004), provides the clear picture of how to adequately plan for one's retirement. The model is the best blend of all the models of consumption and most widely used theoretical framework in the study of household consumption and financing decisions. The life cycle model anticipates that, an individual will retire with a well planned retirement package which can maintain pre-retirement standard of living.

### **3.5 A review of relevant empirical literature**

There is not much detailed literature on this study but the few available and relevant ones which are mostly based in the developed nations are discussed below.

There are three main studies that have shown that consumption exceeds pensions and these studies have cited possible reasons for this occurrence. These studies began with Hamermesh (1984). The main purpose of his study was to examine how wealth accumulation changes with age in order to test the theory of life-cycle utility maximization in which consumption is the choice variable. He used longitudinal data on consumption and wealth late in the life cycle in 1973-1975 in the United States. Hamermesh study indicated that on average, consumption

expenditure of about 500 whites who are married and of ages 62-69 early in retirement exceeds by 14% the income that their financial, pension and social security wealth can generate.

This result has two main implications which according to Hamermesh were hitherto undiscovered phenomena. The first implication is that the savings of pensioners both private savings and social security benefits are insufficient to sustain consumption throughout the rest of their lives. Secondly, Hamermesh explained that these pensioners adjust to this social security insufficiency by reducing consumption equivalent to amounts that will yield a net worth which can sustain their consumption levels for at least few years of retirement until other alternative means are found. Hamermesh however, only cited inadequate savings as reason why consumption outweighs pension savings.

Fisher and Marchand (2011) used the same Consumer Expenditure Survey (CEX) as used by Hamermesh but in a most recent study to examine retirement changes across the entire consumption distribution in the United States through the application of quantile regression techniques on data from the 1990-2007. The evidence indicated that the highest consumption deciles experienced the largest decrease in income and the largest increase in the consumption rate so that they were spending more than their income in retirement. The reason cited to be responsible for this outcome according to them would be consistent with either “inadequate savings” or “excessive consumption”.

The final study in this category is by Paulin and Duly (2002). This study revealed that, there are anticipated differences in the consumption expenditure patterns for pre-retirees and retirees and these differences are due to the following reasons; firstly there will be a decline in income in retirement as a result of the fact that income will differ in levels as well as in sources of receipt. In simple terms, the anticipated decline in income during retirement is as a result of a change in sources of receipt of income in retirement as compared to sources of

income in one's working life. The second reason Paulin and Duly cited, is the differences in demographic characteristics which they considered to be very essential in explaining consumption decisions of the elderly.

In summary, Hamermesh (1984) explains that on average, consumption of retirees exceed income from pensions and social security by 14%. This means that the pensioners did not have enough private and social security savings. He indicated that this excess consumption expenditure is financed by income from other sources other than social security, pensions and private savings. Though he did not say what the other sources are, he mentioned that this consumption-pensions disparity is due to inadequate savings. Fisher and Marchand (2011) agreed with Hamermesh and argued that consumption expenditure exceeds income in retirement but their reason for such occurrence is not only inadequate savings but could also be due to excessive consumption. Furthermore, Paulin and Duly (2011) added that the reason for this disparity is due to changes in sources of receipt of income due to retirement and essentially other demographic factors. This study will also try to investigate the consumption-income disparity in the Ghanaian context and find the possible reason(s) for its occurrence?

### **3.5.1 Importance of pensions and social security**

Kotlikoff et al (1982) did a study in the United States to examine the adequacy of savings for retirement. The main aim of the study was to investigate the contributions of social security savings and private pension savings to consumption in retirement and it covered the period 1969, 1971 and 1973. They used the Social Security Administration's Retirement History Survey data which was focused on retired married couples with a sample size of 1,964. The results indicated that, but for the presence of social security and private pensions, the average pensioner would have had consumption reduced by about 40% in retirement. They stated that very few individuals have issues with their retirement consumption due to the compulsory

nature of saving institutions, private pensions and social security systems which individuals are obliged to belong to. The success of social security institutions can be attributed to the fact that they have helped individuals achieve the predictions of the life cycle model by smoothening consumption patterns of these contributors. As a result, most pensioners are able to sustain a relatively larger proportion of their consumption in retirement.

Social Security is the predominant source of income among the aged according to Clark and Quinn (1999) and Crystal (1996). It has also been considered the “cornerstone of wealth” for most elderly households (Poterba et al, 1994). It has been reported that 18% of older adults in 1999 in the United States received all their incomes from Social Security and without these Social Security benefits, 40% of older adults would have been in poverty (Social Security Bulletin, 2000). Furthermore, according to Kaniki (2007), poverty rates which is currently 6% would have been about 30% in Mauritius for the aged with more than one young dependant had it not been for the existence of a universal pension. Thanks to the universal pensions which existed since 1950. Hamermesh (1984) contributed to this debate and stated categorically that, social security benefits are essential to maintain older persons' consumption and most households left on their own, cannot save adequately enough for their retirement and the role of social security is to offset this insufficiency. He was quick to suggest however that, this offset is only partial and is not enough to enable pensioners to maintain consumption for the rest of their lives.

In a summarized form, Social Security and pension benefits are very significant in maintaining the consumption of pensioners. They provide at least a base of income protection and without them most pensioners would be poor. These pensions and social security however are not enough to sustain consumption of pensioners throughout their retirement lives and may leave many pensioners below their pre-retirement standard of living. There is the need therefore to find other alternative sources of retirement income.

### 3.5.2 Sources of Retirement Income

Dan (2004) mentioned that, most people anticipate retiring at 60 years and above, but recent developments make people retire at younger ages like 50 years. Most people retire if they have accumulated enough resources sufficient to enable them keep up with their consumption pattern. Broadly, retirement income emanates from the coffers of governments, former employers, and personal savings or investments resources. Dan (2004) added that most retirees rely on the state-sponsored social security scheme, but its long term viability is questionable because of the current high number of retirees making the cost of sustaining the scheme very high. Another reason is due to the fact that most retirees currently have a longer life span and the need to support them until death. She identified the following categorically as sources of retirement income in the United States; social security, pensions, individual retirement account, personal savings and investments, inheritances (remittances), income gained from working after retirement and home equity. Brandon (2010) also mentioned the following as sources of retirement income in the U.S; social security, retirement accounts, pensions, savings accounts and certificate of deposits (CDs), stocks and stocks mutual funds, home equity, part-time work, inheritance, annuities or insurance and finally rents and royalties.

Dempsey (2005) indicated the following as the sources of income to retired immigrants in Canada; employment earnings, private pensions and provincial supplements (social assistance). The Employee Benefit Research Institute (EBRI) reports in 2007 identifies the following as the sources of income for retired (aged 65 and above) people in the United States in 2005: social security accounting for 40.1%, income from pensions and annuities (19.3%), income from assets (13.6%), and income from earnings (24.8%).

The identifiable sources of retirement income in Ghana prior to the survey for this study were SSNIT pension and lump sum payments and support from family and friends or remittances

which was mentioned in the work of Nelson-Cofie (2007). Support from family according to Nelson-Cofie (2007) however, cannot be relied upon to bridge the gap between one's pension income and retirement needs. Income from work after retirement was also mentioned as an identifiable source of retirement income in the work of Lawoe (2010) among retired teachers in the Northern part of Ghana.

### **3.5.3 Working after retirement**

One major source of retirement income that has consistently appeared in the literature is income from job after retirement. The report of Kim and Feldman (2000) indicates that while about half of workers have retired by age 60 in the U.S, only 11% of these retirees have fully withdrawn their services from the work force by that time. This means that about 89% of these retirees are engaged in some sort of full time or part time work. Quadagno and Hardy (1996) stated that one in every four retirees of age 60-65 years make a comeback to the work force after retirement and most of these jobs pay far lower than the pre-retirement jobs. This ratio has decreased to one in every five of the elderly of ages 65 and above (Clark and Quinn, 1999).

This debate is enriched by the argument of Dan (2004) who stated that, this trend of working after retirement will continue for the foreseeable future mainly due to the insufficiency of pension and social security benefits and the changing definition of retirement. Dan's point is buttressed by the survey conducted by the American Association of Retired Persons (AARP) in 1998, which showed eight in every ten workers saying they might continue working even after retirement mainly for financial reasons. Furthermore, a survey of workers nearing retirement in Germany showed that, 73% claim to be willing to work even beyond age 65 if

their financial situation could be improved by virtue of the post retirement work (Opaschowski, 2008).

In addition to this argument but based in Nigeria, a work by Petters and Asuquo (2008) stated that pensioners need to find alternative sources of income outside pension preferably income from post-retirement job, in order to avoid unpleasant and traumatic experience in retirement. Also a study conducted by Ubangha and Akinyemi (2005) on the relationship between attitude to retirement planning and retirement anxiety among teachers in four local government areas of Lagos metropolis in Nigeria indicated that 65% of the teachers are willing to continue teaching even after retirement. They mentioned further that, most workers only plan of meeting their current needs and demands and mostly end up in retirement without any personal savings and personal businesses which could have been used to supplement their meager pensions in order to have a descent retirement. Pensioners therefore are obliged to supplement this meager pension with income from post-retirement jobs. Honig and Reimers (1987) asserted that the only means for retirees with minimal pensions to maintain their standard of living above the poverty line is for them to re-enter the job market. Also one way that households can respond to the inability to sustain consumption expenditure in retirement is for the pensioner to re-enter the labour force (Kotlikoff et al, 1982).

The trace of working after retirement is also evident in Ghana. Lawoe (2010) identified income from part time work as a notable source of income in a survey conducted on retired second cycle teachers in the Tamale metropolis which is in the Northern part of Ghana. He mentioned that some retired teachers are engaged in several work related activities such as part time teaching, farming, trading, transport business and practicing vocational skills such as carpentry and dressmaking.

In summary, all these studies claim that post retirement job has become an important source of retirement income to pensioners because the state social security or pensions are mostly

insufficient to maintain pre-retirement consumption and to sustain consumption for the rest of their lives. Most pre-retirees also anticipate working even after retirement mainly for financial reasons.

#### **3.5.4 Reasons for the consumption-income disparity**

There are two reasons identified in the literature to be responsible for the consumption-income disparity in retirement. These are the insufficiency or inadequacy of private and social security savings and this reason is attributed to the findings of Hamermesh (1984) and Fisher and Marchand (2011). The second reason is excess consumption or demographic characteristics of the retiree. The excess consumption can however be linked to the demographic characteristics which are referred to as factors that influence consumption expenditure during retirement in the study. The second reason is attributed to the works of Paulin and Duly (2002) and Fisher and Marchand (2011).

There are many factors that affect the consumption expenditure of the elderly. These factors are broadly classified as sociological, demographic and economic characteristics. Prior studies refer to them as socio-demographic or socio-economic attributes. Lee (2001) identified age of the pensioner, race, area of residence, household type and income to have effect on consumption. Paulin and Duly (2002) also identified the following demographic characteristics to have an important effect on the consumption expenditure of the elderly and examining the roles of these characteristics is very essential. These characteristics include, marital status, race, educational background, area of settlement (urban or rural), residential occupancy status (rented or owner occupier) and income.

Previous studies have indicated that age is inversely related to all consumption expenditure categories such as utilities, rent, clothing, transportation, entertainment except food consumed

at home and healthcare. Example of such studies is work by Talbot (1990) and Lee (2001). These studies explain that, as pensioners advance in age, they spend more on food prepared at home and on healthcare. Expenditure on healthcare increases with age because of deterioration in physical functions. The negative relationship however between age and expenditure on food consumed away from home, clothing, transportation, and entertainment can be associated with declining interest in social activities and with declining physical abilities. These aged have no interest in new fashion and might have piles of clothing and so there will be no need to spend more on new clothes. Though there may be differences in relationship of the various consumption components with age, the aggregate of all consumption components (total consumption) has an inverse relationship with age.

Race is another factor identified to influence the consumption expenditure of the aged. Differences in culture and environment can affect the taste and preferences of the elderly and hence affecting consumption expenditure. A classic example is provided by Schwenk (1993) and Neal et al (1990) who stated that African Americans tend to have lower consumption levels than whites for all consumption expenditure categories. Race, however, will not have an effect on this study because only Ghanaians are involved in the sample for the study.

Area of residence may also affect consumption expenditure. Rural dwellers incur less consumption expenditure than urban settlers *ceteris paribus*. This is basically because of the high cost of living associated with living in the big cities especially in African countries where Ghana is no exception. Schwenk (1993) totally agrees with this fact. However, area of residence was identified to be insignificant factor affecting consumption expenditure in the study by Lee (2001).

Household type refers to the marital status of the pensioner. It will not be wrong to think that single pensioners will incur less consumption expenditure than their married counterparts. Studies by Lee (2001) suggest that pensioners who are single do allocate less money to food

consumed at home and more money to housing than pensioners who are married. Lee also mentioned that singles in general do spend less than married pensioners.

The educational level of the elderly can have significant effect on consumption. Lee (2001) mentioned that prior research has proposed a positive relationship between education and consumption expenditure on food consumed away from home, clothing, transportation and entertainment and a negative nexus between food consumed at home and utilities. Higher education is associated with higher consumption level because, retired educated individuals may have opportunities to be engaged in so many social activities than the less educated ones. Lee also mentioned that these educated retirees might have formed more outgoing and active lifestyle that will follow them even into retirement and with its associated higher consumption costs.

Finally income is the most important determinant of consumption among any set of households. Lee (2001) associated this income to wealth. He stated that wealth is a crucial factor for understanding the consumption pattern and well-being of the retirees because wealth appears to be the main source of retirement income. The wealth components are annual income flow, checking and savings accounts, stocks and bonds and property assets.

### **3.5 Concluding Remarks**

The theoretical and empirical literature review discussed in this chapter demonstrates that rational consumers wish to maintain a smooth consumption pattern over their lifetime as predicted by the life cycle model. In an attempt to smooth consumption during retirement, individuals ascribe to pension schemes during working years which provides pension benefits as a source of income in retirement. These social security or pension benefits are very instrumental in the consumption decisions of pensioners during retirement but they are mostly not sufficient to maintain pre-retirement consumption and also are often meager especially in

developing countries like Ghana. This makes consumption expenditure of most pensioners to exceed their pension benefits and hence the need to finance the excess consumption from alternative retirement income sources. Though a lot of alternative sources have been identified in the developed nations, there is not much mention of such in Africa and for that matter Ghana. This is the gap that this study sorts to fill by identifying alternative retirement income sources and their significance in consumption decisions of pensioners. Also one of the interesting sources identified in literature is work after retirement. This income source will be thoroughly investigated in the Ghanaian context.

## **CHAPTER FOUR**

### **METHODOLOGY**

This chapter outlines the methods used in the study. It provides an overview of how the survey was conducted and the methods with which the responses elicited were analyzed.

#### **4.1 Survey instrument and response elicitation format**

The survey was conducted using a well-structured questionnaire from which responses were elicited. The questionnaire is made up of four main sections: The first section involves information on background of respondents (age, sex, marital status, number of dependents and accommodation status). The second section is on economic attributes such as average consumption expenditure and pension benefits. The third section consists of questions about the sources of retirement income and the final section is on policy change.

#### **4.2 Sampling Design**

The respondents to the survey for this study comprise only SSNIT pensioners. This is because CAP 30 which is the other mandatory pension scheme aside the SSNIT pension scheme is being phased out and it is not available and accessible to all Ghanaians as discussed in chapter three. The SSNIT pension scheme however, is accessible to all Ghanaians employed in the formal and informal sector in Ghana. Also the SSNIT pension scheme is the most comprehensive pension scheme in Ghana.

The study focuses only on pensioners who worked in the formal sector because only pensioners who worked in the formal sector are entitled to monthly pension benefits aside the lump sum payments and this study requires that pensioners be on a regular stream of income to be able to compare average monthly consumption expenditure to monthly income.

Moreover, the SSNIT Informal Sector Fund (SISF) became operational only quite recently in 2008.

A SSNIT pensioner/retiree therefore, is a person who has contributed towards the SSNIT pension scheme during his/her working life and has attained a pensionable age of 60 years or retired voluntarily at age 55-59 years.

Also the survey was conducted in the Greater Accra Region of Ghana since the region has the highest number of pensioners compared to other regions. Also, the region was purposely selected because of its metropolitan nature, making it conducive for capturing the various types of pensioners from low class earners to high class earners.

A total of 404 questionnaires were administered to the respondents comprising both male and female pensioners. A scientific method of calculating sample size proposed by Evan Morris was used to determine the minimum required sample size.

$$n = Nz^2pq / (E^2 (N-1) + z^2pq)$$

Where,

n is the minimum required sample size

N is population size of pensioners in Accra which is 32,152

p and q are population proportions which are both 0.5.

z is value for confidence level of 95% which is 1.96

E is the margin of error which is 0.05

The computation equals to 380 respondents but with an anticipated non-response, the total questionnaire administered was 404. The questionnaires were administered randomly to respondents.

A pilot survey was conducted with few pensioners. The pre-test was very essential since it helped the research team to determine the average time needed to administer a questionnaire,

assess the ability of respondents to understand the questions posed in order to make adjustments where necessary. A more important reason for the pilot survey is that it was very useful in the determination of the alternative sources of retirement income to be included in the list.

### 4.3 Theoretical framework and estimation technique

#### 4.3.1 A Simple structural model

Feldstein (1974), in an attempt to assess the effect of social security on consumption adapted the specification of the consumption function used by Ando Modigliani (1963) and added the social security wealth variable. He used the Ordinary Least Square (OLS) estimation technique in his analysis. The starting point of the analysis is  $C = \beta_0 + \beta_1 Y_t + \beta_2 W_{t-1} \dots \dots \dots (1)$

Where

C is consumer expenditure

$Y_t$  is permanent income

$W_{t-1}$  is the stock of household wealth excluding social security wealth.

Equation 2 introduces the social security wealth variable SSW into the consumption function

$$C_t = \beta_0 + \beta_1 Y_t + \beta_2 W_{t-1} + \beta_3 SSW \dots \dots \dots (2)$$

Caglayan and Astar (2012) also, in an attempt to determine the factors that affect consumption expenditure for Turkish households used the quantile regression and specified the consumption function such as:

$$C = \beta_0 + \beta_1 \text{DISINC} + \beta_2 \text{HS} + \beta_3 \text{REG} + \beta_4 \text{GEN} + \beta_5 \text{EDU} + \beta_6 \text{SSC} + \beta_7 \text{HT} + \beta_8 \text{CPH} + \beta_9 \text{AGE} \\ + \beta_{10} \text{PS} + \beta_{11} \text{MS} + \mathcal{E} \dots\dots\dots (3)$$

Where;

C is consumption

DISINC is Disposable Income

HS is Household Size

REG is Region

GEN is Gender

EDU is Education of household head

SSC is Social Security coverage

HT is household type

CPH is the career position of the household head

AGE is the age of household head

PS is the property status

MS is marital status of household head

$\mathcal{E}$  is the error term

#### 4.4 Empirical model

This study in order to determine the factors that affect consumption expenditure of pensioners during retirement adopted the consumption function forms in (2) and (3). The consumption function is specified in equation (4).

$$C = \beta_0 + \beta_1 \text{PB} + \beta_2 \text{AGE} + \beta_3 \text{DEP} + \beta_4 \text{SEX} + \beta_5 \text{ACC} + \beta_6 \text{MAR} + \beta_7 \text{JOB} + \mathcal{E} \dots\dots (4)$$

Where;

PB represents Pension benefits from SSNIT (including lump sum converted into annuities and provident fund)

AGE represents age of the pensioner

DEP represents the number of dependants a pensioner has

SEX represents the sex of the pensioner

ACC represents the residential occupancy status of the pensioner

MAR represents the marital status of the pensioner

JOB represents the employment status of the pensioner

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$  and  $\beta_7$  are the coefficients of the factors that affect consumption

$\beta_0$  represents the constant

$\epsilon$  represents the error term

The Ordinary Least Square (OLS) estimation technique was used for the estimation. Since the data collected is cross sectional in nature, various regression diagnostics tests were performed such as Variance Inflation Factor (VIF) for multicollinearity, Ramsey regression specification-error test for omitted variable and Breusch-Pagan / Cook-Weisberg test for heteroscedasticity. The model does not suffer from multicollinearity and the presence of omitted variable problems. However, heteroscedasticity was found to be present and so this was corrected for with the use of White's Heteroscedasticity-corrected standard errors which is also known as robust standard errors.

Data collected from the pensioners were both qualitative and quantitative in nature and so the main test performed were White robust standard errors of OLS, Kendall's W test, charts, graphs and tables using statistical package such as Excel, SPSS and STATA.

#### **4.5 Methodology for the specific objectives**

In order to determine the consumption-income disparity, pensioners were asked to state their monthly consumption expenditure (including amount spent on dependents). They were also asked to state their monthly pension benefits from SSNIT (including lump sum from SSNIT). Consumption expenditure is expected to be larger than pension benefits for majority of the SSNIT pensioners. The main reason for this comparison was to establish the fact that, the pension benefits is inadequate and hence the need for alternative sources of retirement income.

With regards to the factors that affect the consumption expenditure of pensioners, White Heteroscedasticity-corrected standard errors (robust standard errors) was run. The form of the consumption function is as specified in equation (4). Brief explanations of the regressors used are explained at the end of this chapter.

With the second objective, which is to find alternative sources of retirement income, pensioners were asked to tick and state where applicable with the help of a list of possible sources from pre-testing the questionnaires, how they finance their consumption. Other sources apart from SSNIT pension benefit that made the list in the questionnaire include provident fund, personal savings/investment, remittances, rental income and income from post-retirement job.

The third objective is to determine which of the retirement income source(s) form(s) a significant part of pensioners' consumption expenditure. Pensioners were asked to rank the sources of retirement income including SSNIT pension benefit in order of importance according to how significantly they contribute towards financing their consumption expenditure and values were assigned to them. The scale ranges from 1-5 and has the following meanings.

- 1 ~ Most important
- 2 ~ More important
- 3 ~ Less important
- 4 ~ Least important
- 5 ~ Not important

The Kendall's coefficient of concordance (W-test) was used to test the extent of agreement among the pensioners. The Kendall's coefficient of concordance is a non-parametric test used when data is ranked in order of importance. It is used to investigate inter-rater agreement, which is, the extent to which raters agree on an issue. The Kendall's mean rank indicates the order of importance of the retirement income sources according to how significantly they contribute towards financing consumption expenditure. The higher the mean rank value, which is, a value closer to 5, the less important that income source is and the closer the mean value is to 1, the more important that income source is. The Kendall's W (%) however, indicates the percentage agreement among the respondents and the Kendall's asymptotic significance shows the level of significance of agreements. One challenge of using the Kendall's coefficient of concordance is that, there should be no missing observation in the data set. But since not all pensioners had all the various retirement income sources, only four (4) income sources were used for the Kendall's analysis. These income sources are income from post-retirement job, SSNIT pension benefit, remittances from family and friends and personal savings/investment. Rental income and provident funds were not included in this analysis because of the limited number of respondents in these categories.

The final objective is to investigate the extent to which pensioners re-enter the job market as a means of financing consumption expenditure. This is achieved partly by the Job segment of

the robust OLS regression and the Kendall's coefficient of concordance. A thorough descriptive analysis is also used for this analysis with a chart and a table.

#### **4.6 Definition of Variables**

The various variables as used in this study especially in the methodology are explained below. Some of them are explained purposely to suit this study.

**Average Consumption Expenditure (C):** This refers to the average amount of money a pensioner spends monthly on himself and his dependants (including the spouse). The consumption expenditure is composed of regularly occurring expenditures. It includes amount spent on food and drinking water, rent (optional), utilities (e.g. electricity, water, toilet bills etc.) clothing and footwear, healthcare, transportation, telephone bills or amount spent on phone credit and other basic expense specified by the pensioner such as dues, entertainment, donations, contributions at church and alms giving, etc.

**Age (AGE):** Age refers to how old the pensioner is in years. The age of the pensioner is an important factor most likely to affect the consumption expenditure of a pensioner. The older a pensioner is, the more likely it is that he/she might have spent a greater portion of his/her SSNIT lump sum payments if not converted into annuities where periodic payments are derived. This means that pensioners in their early years of retirement (below 65 years) may have higher retirement income and higher consumption expenditure than those who are older and may spend within their pension income so finding alternative sources of finance may not be necessary.

**Sex (SEX):** This refers to the gender of the pensioner whether male or female. It is expected that males will have higher consumption expenditure than females since in the Ghanaian setting males are considered the breadwinners of the household. It is also likely that most

males will have alternative sources of finance than females since the pension benefits might be inadequate to them.

**Number of Dependants (DEP):** The number of dependants refers to the number of people the pensioner caters for in terms of average daily consumption expenditure. The higher the number of dependents a pensioner has, the higher the consumption expenditure and the more inadequate the pension benefits becomes and hence the need to seek alternative sources of retirement income.

**Accommodation of Pensioner (ACC):** This refers to the housing tenure status of pensioners. That is, whether a pensioner is in a rented house, family house, own house or other forms of occupancy such as living with a friend, etc. This is because it is expected that those who pay rent will have higher consumption expenditure than those who own their houses or who do not pay rent.

**Marital status (MAR):** This refers to whether a pensioner is single, married, widowed, divorced or separated.

**Pension Benefits (PB):** Refers to SSNIT monthly payments to pensioners and lump sum payment convertible to annuities or perpetuities.

**Provident Fund:** This refers to lump sum payments made to pensioners by virtue of their previous jobs. Some companies create special funds for their employees aside the SSNIT mandatory payments they make, to serve as an incentive to those employees. These monies are given to the employees when they go on retirement. This is what the study refers to as Provident Fund. This amount could be saved in annuities and periodic amounts are received based on the agreement between the pensioner and the financial institution concerned. It could also be used for specific projects by the pensioner such as buildings, etc.

**Personal Savings/Investment in Securities:** This refers to amounts set aside in various financial institutions and in various forms by pensioners during their working life to serve as

a source of retirement income. The investment section refers to monies saved in securities such as shares and treasury bills and fixed deposits.

**Remittances:** Refers to monies that the pensioner receives (regularly/not regularly) from family and friends as a means of financing consumption expenditure.

**Income from post-retirement job (JOB):** This refers to income that the pensioner earns from post-retirement job currently engaged in either on part time or full time basis. It could also be income from farming or family business so long as it serves as a retirement income.

**Rental Income:** This refers to income from the renting of houses.

**Table 4.1 Classification of explanatory variables used in the OLS and their expected signs**

| <b>Variable</b>  | <b>Classification</b> | <b>Expected Sign</b> |
|--|-----------------------|----------------------|
| <b>PB:</b> Monthly pension benefit of pensioners   | Continuous            | +                    |
| <b>AGE:</b> Age of pensioners (1:55-59 years, 2: 60-64 years, 3: 65-69 years, 4: 70 and above years) | Categorical           | -                    |
| <b>DEP:</b> Number of dependants of a pensioner (1: None, 2: 1-3, 3: 4-6, 4: Above 6)                | Categorical           | +                    |
| <b>SEX:</b> The gender of the pensioner (1: Male, 0: Female)   | Dummy                 | +/-                  |
| <b>ACC:</b> Accommodation of pensioner (1: Rented House, 0: No Rent or Others)                       | Dummy                 | +/-                  |
| <b>MAR:</b> Marital status of pensioner (1: Married, 0: Single)                                      | Dummy                 | +/-                  |
| <b>JOB:</b> The employment status of pensioner (1: Working, 0: Not Working)                          | Dummy                 | +                    |

## CHAPTER FIVE

### ESTIMATION AND ANALYSIS OF RESULTS

#### 5.1 Introduction

This chapter deals with the analysis of various results. The first section presents and discusses the socio-economic variables as obtained from the survey. The second section discusses details of the outcomes of various objectives beginning with the disparity between consumption and income and the possible reasons for such disparity during retirement. It discusses further, the alternative sources of retirement income and the significance of these income sources in addition to SSNIT pension benefits. It concludes with a thorough analysis of the extent to which pensioners' re-enter the job market. The main tests used are the OLS White robust standard errors and Kendall's coefficient of (W test) of concordance.

#### 5.2 Analysis of socio-economic variables

The socio-economic variables analyzed here are; age, gender, number of dependants, marital status, residential occupancy status, pension benefits and average consumption expenditure. These are mostly the variables used for the regression equation.

**Table 5.1 The distribution of socio-economic variables**

| <u>SOCIO-ECONOMIC VARIABLE</u> | <u>FREQUENCY</u> | <u>PERCENTAGE (%)</u> |
|--------------------------------|------------------|-----------------------|
| <b>Age</b>                     |                  |                       |
| 55-59 years                    | 11               | 2.7                   |
| 60-64 years                    | 144              | 35.6                  |
| 65-69 years                    | 150              | 37.1                  |
| 70 and above                   | 99               | 24.5                  |
| <b>Gender</b>                  |                  |                       |
| Male                           | 247              | 61                    |
| Female                         | 157              | 39                    |
| <b>Marital status</b>          |                  |                       |
| Single                         | 27               | 6.7                   |
| Married                        | 267              | 66.1                  |
| Divorced                       | 8                | 2                     |
| Widowed                        | 89               | 22                    |
| Separated                      | 13               | 3.2                   |
| <b>Number of dependants</b>    |                  |                       |
| None                           | 80               | 19.8                  |
| 1-3                            | 193              | 47.8                  |
| 4-6                            | 108              | 26.7                  |
| Above 6                        | 23               | 5.7                   |
| <b>Accommodation status</b>    |                  |                       |
| Rented House                   | 87               | 21.5                  |
| Owner Occupier                 | 161              | 39.9                  |
| Family House                   | 143              | 35.4                  |
| Other                          | 13               | 3.2                   |

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*Source: Author's Survey, 2013*

### **5.2.1 Gender of respondents**

The population of pensioners in Ghana and even in Accra has a higher male to female ratio and it is evident in the sample used for the study. Of the total 404 respondents, 247 were males representing 61% and 157 were females representing 39%. This shows that the sample chosen is a fair representation of both males and females and thus reducing any gender bias in the result.

### **5.2.2 Age of respondent**

The age distribution of pensioners indicate that 37% are aged 65-69 years, 36% fall in the age group of 60-64 years, 24% are 70 years and above and 3% are 55-59 years of age.

### **5.2.3 Marital status of respondent**

The marital status of the respondents indicates that 66% of the pensioners are married, 22% are widowed, 7% are single, 3% are separated and 2% are divorced. A cross tabulation however shows that 86% of the males are still married whilst only 34% of the female pensioners are still married with about 44% of the total females being widowed and the rest single, separated or divorced.

### **5.2.4 Number of dependants**

Pensioners have dependants excluding spouse (s) that they cater for. The survey indicates that 47.8% of pensioners have 1-3 dependants, 26.7% have 4-6 dependants, 5.7% have more than 6 dependants and 19.8% have absolutely no dependants. The average number of dependants per pensioner is 2.2

### 5.2.5 Accommodation status of respondents

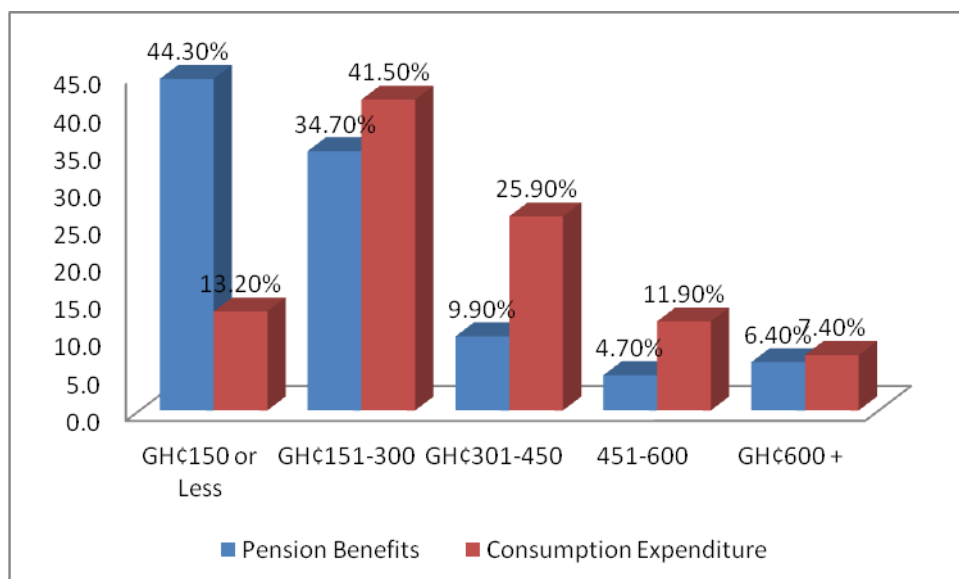
The survey reveals that 40% of pensioners have their own houses, 35% reside in family houses, 22% are in rented house and 3% have other forms of residence such as residing with a friend, staying in son-in-laws house and in mission homes.

### 5.3 Distribution of pension benefits and consumption expenditure

The survey revealed that 44.3% of pensioners earn pension benefits of GH¢150 or less whilst only 13.2% spend within this category. 34.7% earn between GH¢151-300 whilst 41.5% spend within this group. 9.9% earn between GH¢301-450 and 25.9% spend within this group. Only 4.7% of the pensioners earn between GH¢451-600 whilst 11.9% spend within this category. 6.4% of the respondents earn above GH¢600 and 7.4% spend within this group.

The distribution as depicted in Fig 5.1 below shows that, all the categories except the GH¢150 or less category had expenditure being higher than pension benefits. This means that majority of the pensioners spend far more than their pension benefits.

Fig 5.1 Distribution of pension benefits and consumption expenditure of pensioners



Source: Author's survey, 2013

#### **5.4 Composition of consumption expenditure**

Consumption expenditure is the summation of the amount spent on average in a month on: food and drinking water, rent for accommodation, utility which includes water and electricity, clothing and footwear, healthcare, transportation and others. Food accounts for majority of the consumption expenditure. It ranges from 50% to near 100% of consumption expenditure for pensioners. Expenditure on utility bills and transportation also accounts for quite a significant proportion of consumption expenditure but the expenses on transportation is higher for most pensioners who are still engaged in post-retirement job due to the fact that they have to commute to and fro their various work places. A number of pensioners who live in family houses do not pay for utilities because it's catered for by relatives. Rent payment is another significant component of consumption expenditure among some pensioners. 22% of pensioners find themselves paying rent for various forms of houses. Expenditure on clothing and footwear and on healthcare constitutes the least part of consumption expenditure. Most pensioners are on the National Health Insurance Scheme (NHIS) and so do not pay for healthcare except for some kinds of drugs which are not listed on the scheme and needs to be bought. However, few pensioners who are battling various forms of ailments pay huge sums on monthly basis just for drugs and periodic checkups.

#### **5.5 Disparity between consumption expenditure and pension benefits**

The minimum monthly pension benefit identified during the survey is GH¢100. The maximum amount of pension benefit among the respondents is GH¢1869. The minimum average monthly consumption expenditure is GH¢80 and maximum expenditure is GH¢1900. This is shown in Table 5.2.

Table 5.2 Descriptive statistics

|                                    | Minimum | Maximum | Mean   |
|------------------------------------|---------|---------|--------|
| <b>Average Monthly Consumption</b> | GH¢80   | GH¢1900 | GH¢348 |
| <b>Monthly Pension Benefit</b>     | GH¢100  | GH¢1869 | GH¢247 |

*Source: Author's Survey, 2013*

The result of the survey shows that 82% of the total 378 respondents that was used in the analysis had their average consumption expenditure (which includes amount spent on spouse and other dependants) greater than pension benefits. This pension benefit is a summation of SSNIT monthly pension and lump sum converted on monthly basis. Consumption expenditure being more than pension benefit for majority of the pensioners' means that these pensioners' have alternative sources of income apart from the pension benefits. It is important to state however, that, 86% of pensioners who spend more than their pensions earn GH¢300 or less, meaning that consumption being more than pension benefit is partly as a result of insufficient pension benefit.

The remaining 18% of pensioners spend exactly all their pension benefits in the month or spend within their pension limits. This result is consistent with the survey conducted in the Kumasi metropolis of Ghana which had 89% of pensioners spending more than their pension benefits.

Furthermore, the mean consumption expenditure as shown in table 5.2 is GH¢348 whilst the mean monthly pension benefit is GH¢247. This means that, average consumption expenditure exceeds average pension benefit by 29% which implies that, on average, a pensioner needs an additional 29% of alternative source of retirement income to supplement his/her monthly pension benefits. This amount exceeds by twice the results obtained by Hamermesh (1984) in the U.S where consumption exceeds pension by just 14%.

The main reason why this finding is important is that, it necessitates the need for an investigation into how and where pensioners get the alternative sources of retirement income. This is why the first objective of the study is to find out the extent of disparity between consumption expenditure and pension benefits which is evident in the above discussion.

In summary, 82% of pensioners spend more than their pension benefits and the remaining 18% spend less or within their pension limit. However, pensioners on average spend 29% more than their pension benefits can provide. This simply means that most pensioners have alternative sources of retirement income to supplement the pension benefit.

### **5.6 Reasons for the consumption-income disparity**

There are two main reasons identified in literature and mentioned in the review of literature to be responsible for the consumption-income disparity. These are inadequate pensions and private savings and demographic factors that affect consumption expenditure. These two reasons are also evident in this study. The first reason is discussed in this section and the second reason in the next section.

The average pension benefit as indicated in table 5.2 is GH¢247 and the average number of dependants per pensioner is 2.2. With most pensioners being married and having to cater for their spouses, especially the male pensioners, the total average household size is four (4) including the pensioner himself. Extrapolation gives us a daily income per-capita of approximately GH¢2.1 of a pensioner household. GH¢2.1 or approximately \$1 for a pensioner to live on a day is highly inadequate given the current high cost of living in Ghana.

Couple with this extrapolation, 44% of the pensioners' earn GH¢150 or less and most of these pensioners are frustrated as a result of the low pension as evident from the survey. In

simple words, the SSNIT pension benefit is highly inadequate and is in sync with the findings of Hamermesh (1984) and Fisher and Marchand (2011) who identified the consumption-income disparity to be associated with the insufficiency of private and pension savings.

## **5.7 Econometric analysis**

### **5.7.1 Factors that affect consumption expenditure of pensioners during retirement**

This section of the analysis investigates the factors which affect consumption expenditure among pensioners during retirement. These factors partly explain the consumption-income disparity among pensioners which is associated with the study of Paulin and Duly (2002) and Fisher and Marchand (2011). The technique proposed to be used for this analysis is the Ordinary Least Square estimation technique and since the data taken was also cross sectional in nature, some diagnosis tests were performed in order to avoid biased results. These tests include multicollinearity test, heteroscedasticity and test for omitted variables. According to Gujarati (2004, pg. 362), multicollinearity is a problem in a model when the Variance Inflation Factor (VIF) exceeds 10. This was not present among the regressors and shown in the appendix. Also Ramsey regression specification-error test for omitted variable shown in the appendix indicates the absence of omitted variables. Heteroscedasticity however was present when tested for using Breusch-Pagan / Cook-Weisberg test for heteroscedasticity.

Two remedial measures can be used to correct for the heteroscedasticity. If the variance of the errors is known then the method of Weighted Least Squares (WLS) or Generalized Least Square (GLS) can be used but since the variance of the errors are rarely known as according to Gujarati (2004, pg. 417) an alternative approach known as the White Heteroscedasticity-corrected standard errors (robust standard errors) was used. The White's heteroscedasticity-corrected standard errors are used to obtain unbiased and consistent estimates of the standard

errors so that asymptotically valid statistical inferences can be made. With this alternative, Hypothesis tests will also be valid.

**Table 5.3 Results of the OLS regression estimation**

Dependent Variable: Consumption Expenditure

| Independent Variables | Coefficient | Standard Error | t     | P>t   |
|-----------------------|-------------|----------------|-------|-------|
| Age                   | -28.60762   | 10.56493***    | -2.71 | 0.007 |
| Pension               | 0.678457    | 0.04096***     | 16.57 | 0.000 |
| Sex                   | -23.80046   | 22.75103       | -1.05 | 0.296 |
| Mar                   | 47.15511    | 23.27936**     | 2.03  | 0.044 |
| Job                   | 32.67616    | 17.40956*      | 1.18  | 0.061 |
| Acc                   | 23.96835    | 20.39103       | 1.88  | 0.241 |
| Dep                   | 42.08416    | 10.67536***    | 3.94  | 0.000 |
| constant              | 135.0072    | 45.13052       | 2.99  | 0.003 |

\*\*\* Significant at 1% \*\* Significant at 5%

\* significant at 10%

R-Squared = 0.5214 Adjusted R-Squared = 0.5124

Number of observations = 378

Table 5.3 shows the results from the OLS model which is not corrected for heteroscedasticity. Age, Pension Benefits, Marital status, job status and number of dependents were found to be significant at least at 10%. Sex and accommodation status were however found to be insignificant. It also has an  $R^2$  of approximately 0.5214 and an adjusted  $R^2$  of 0.5124

**Table 5.4 Results of the OLS regression estimation with White robust standard errors to correct for Heteroscedasticity**

Dependent Variable: Consumption Expenditure

| Independent Variables | Coefficient | Standard Error | t     | P>t   |
|-----------------------|-------------|----------------|-------|-------|
| Age                   | -28.60762   | 8.690563***    | -3.29 | 0.001 |
| Pension               | 0.678547    | 12.85857***    | 3.27  | 0.001 |
| Sex                   | -23.80046   | 23.27648       | -1.02 | 0.307 |
| Mar                   | 47.15511    | 21.30505**     | 2.21  | 0.027 |
| Job                   | 32.67616    | 18.97298*      | 1.72  | 0.086 |
| Acc                   | 23.96835    | 16.22502       | 1.48  | 0.140 |
| Dep                   | 42.08416    | 12.85857***    | 3.27  | 0.001 |
| _Cons                 | 135.0072    | 39.95265       | 3.38  | 0.001 |

\*\*\* Significant at 1%    \*\* Significant at 5%

\*Significant at 10%    R-Squared = 0.5214

Number of observations = 378

Table 5.4 shows the result of the OLS regression which has been corrected for heteroscedasticity. The major changes realized are; differences in the p values, t values, standard errors and the confidence intervals. There are no changes however in the coefficients and the  $R^2$ . The asterisk sign (\*) represents the level of significance of the various regressors. An asterisk of (\*\*\*), (\*\*) and (\*) means that a regressor is significant at 1%, 5% and 10% significant level respectively. The interpretations of the various factors affecting consumption expenditure in retirement are discussed below.

Pension Benefits (Pension) which is income from SSNIT is the most important factor affecting consumption expenditure. This is because economic theory states that income is the most important determinant of consumption for any individual or households. Pension benefit has a positive sign which is in agreement with the expected sign and is also highly significant at 1% significant level. This means that there is a direct relationship between consumption

expenditure and pension benefit which implies that a cedi increment in pension benefit will increase consumption expenditure of the pensioner by approximately GH¢ 0.7. Marginal propensity to consume (MPC) among pensioners appear to be very high which makes economic sense because most pensioners do not save at this age and so consume almost all of their pension benefits.

Age is statistically significant with a negative sign as expected. This sign was expected because as pensioners advance in age, it is expected that they incur less consumption expenditure, probably because of low pension stemming from the fact that they have spent a significant proportion if not all, of their SSNIT lump sum payments and provident funds and so relying solely on their Monthly pension benefits. Also they might be too weak to engage themselves in post-retirement job as an alternative means of financing consumption. The coefficient for age is approximately GH¢29 (negative). This implies that age and consumption expenditure are negatively related. This explanation is made clearer when the earliest age category of 60-64 years is dummied for as the base category and all other age groups being 0. This result shows that pensioners of ages 60-64 years spend approximately GH¢39 extra than all age groups in a month. This is probably because within that age group pensioners are in their early years of retirement and are still living on SSNIT lump sum payments aside the monthly pension benefits and are also energetic enough to engage in post-retirement jobs. This is in agreement with the findings of Lee (2001) who also discovered a negative nexus and statistically significant effect of age on total consumption of the retired elderly.

Sex is not a significant factor affecting the consumption expenditure of pensioners.

Marital Status (Mar) has a positive sign and is also statistically significant. This positive sign was expected because those who are married have an extra mouth to feed and hence higher

consumption expenditure. A coefficient of approximately GH¢47 means that, a pensioner who is married spends an extra GH¢47 than one who is single. Marital status was identified as a significant factor affecting consumption expenditure of pensioners. This is also in line with the findings of Lee (2001).

The next factor used in the estimation is whether one is working or not. Some pensioners are engaged in post-retirement jobs and this was identified to be statistically significant with a positive sign. The result implies that pensioners who work after retirement spend GH¢33 extra in a month than those who are not working. This is fairly justified on the grounds that the higher the income, the higher the consumption levels all other things being equal. Post-retirement job is therefore a significant factor affecting consumption expenditure of pensioners.

Accommodation status (Acc) which is the housing tenure status of the pensioner has the expected positive sign but is statistically insignificant.

The last but not the least independent variable to be discussed is the number of dependants (Dep). All other things being equal, economic theory states that, the larger the household size the higher the consumption expenditure. This is evident in the study with a positive sign as expected and it is also highly significant. The results revealed that pensioners' consumption expenditure increases by GH¢42 with an increase in number of dependants. Number of dependants or household size was found to be highly significant and so, it is an important factor affecting consumption expenditure of pensioners.

It must be mentioned that the value for  $R^2$  is approximately 0.52. This means that about 52% of the variation in the model is explained by the explanatory variables as listed above. This is quite high considering the fact that the data set is cross sectional in nature. According to (Gujarati, 2004 pg 260), an important empirical observation is that, in cross sectional data

involving several observations, one generally obtains low  $R^2$  because of the diversity of the cross sectional units. Therefore one should not be surprised or worried about finding low  $R^2$ 's in cross sectional regressions. What is relevant is that the model is correctly specified, that the regressors have the theoretically expected signs and the coefficients are statistically significant.

### **5.8 Sources of financing consumption during retirement**

One of the most important questions asked during the interview of pensioners was to state alternative sources of income in retirement. These sources of income do not include SSNIT monthly pension because it is a case study of SSNIT pensioners, meaning SSNIT monthly pension benefit is assumed to be a predominant part of the income source (s) and so all pensioners from whom responses were elicited have this as a first source of income but not necessarily the most important source.

Alternative sources of income identified are; (1) provident fund, (2) personal savings with banks and financial institutions and investment in treasury bills and fixed deposits, (3) remittances from family and friends, (4) income from post-retirement jobs, (5) rental income from renting of houses, and (6) pension income from CAP 30. All these income sources apart from provident funds and CAP 30 corroborate the findings of Dan (2004) in the U.S. The percentages of pensioners who subscribe to these income sources are shown in table 5.5.

**Table 5.5 Alternative sources of financing consumption during retirement**

| <b>Alternative sources of retirement income</b> | <b>Frequency</b> | <b>Percent</b> |
|---|------------------|----------------|
| Remittances from family and friends             | 323              | 80%            |
| Personal savings/Investments                    | 173              | 43%            |
| Income from post-retirement job                 | 152              | 38%            |
| Provident funds                                 | 35               | 9%             |
| Rental income                                   | 23               | 6%             |
| Income from CAP 30 pension scheme               | 1                | 0.2%           |

*Source: Author's survey, 2013*

No single pensioner has all these sources of income as a source of finance. It should be mentioned however that, some pensioners have as many as four (4) alternative sources of income aside SSNIT monthly pension and so the list in the table above is not mutually exclusive. Example is that, a pensioner apart from SSNIT monthly pension can also be receiving income from post retirement job and receiving remittances from family and friends at the same time.

An interesting revelation worth mentioning is that, 21 respondents representing 5% of the total pensioners have no alternative source of income. Also 122 respondents representing 30% of pensioners have remittances from family and friends as the only second source of retirement income aside SSNIT monthly pension benefit, of which to some, does not come on regular basis and cannot really be relied upon as a means of finance. This agrees with the findings of Nelson-Cofie (2007) who stated in a survey of Ghanaian pensioners that, 64% of pensioners confirmed that the support they received from their families was irregular. This means that SSNIT monthly pension benefit is their only source of regular retirement income and means of financing consumption expenditure. Two deductions can be made from the above phenomenon.

Firstly, it can be inferred that any policy change related to SSNIT monthly pension benefit will have significant impact on the lives of these pensioners since it is the sole source of financing consumption expenditure among these pensioners.

Secondly, it can be inferred that, the remaining 95% of pensioners have alternative source (s) of finance. One possible explanation that can be made to that effect is the fact that, the SSNIT monthly pension benefit may not be sufficient and hence the need for these alternative sources. That notwithstanding, this argument does not hold for pensioners who have high pension benefits and those who spend within their pension benefits because there will be no need for an alternative source if the pension benefit is enough.

## **5.9 Income Source(s) that form(s) significant part of pensioners' consumption expenditure**

### **5.9.1 Model 1: Ranks of sources of retirement income**

Pensioners were asked to rank the sources of income (including SSNIT monthly pension benefits) on a scale according to how significantly it contributes to financing their consumption expenditure during retirement. The scale ranges from 1-5 with (1) being Most important, (2) More important, (3) Less important, (4) Least important and the last one (5) being Not important. The outcome is summarized in table 5.6.

**Table 5.6 Ranking of pensioners sources of retirement income**

| Income Source                                |           | Most Important | More Important | Less Important | Least Important | Not Important | Total |
|--|-----------|----------------|----------------|----------------|-----------------|---------------|-------|
| <b>SSNIT Pensions Benefits</b>               | Frequency | 306            | 96             | 1              | 1               | 0             | 404   |
|  | Percent   | 75.7%          | 23.8%          | 0.2%           | 0.2%            | 0             | 100%  |
| <b>Income from Post Retirement Job</b>       | Frequency | 42             | 72             | 35             | 3               | 0             | 152   |
|  | Percent   | 27.6%          | 47.4%          | 23%            | 2%              | 0             | 100%  |
| <b>Remittances from Family &amp; Friends</b> | Frequency | 37             | 153            | 104            | 27              | 2             | 323   |
|  | Percent   | 11.5%          | 47.4%          | 32.2%          | 8.4%            | 0.6%          | 100%  |
| <b>Personal Savings / Investment</b>         | Frequency | 11             | 48             | 78             | 31              | 5             | 173   |
|  | Percent   | 6.4%           | 27.7%          | 45.1%          | 17.9%           | 2.9%          | 100%  |
| <b>Provident Fund</b>                        | Frequency | 0              | 1              | 9              | 17              | 8             | 35    |
|  | Percent   | 0              | 2.9%           | 25.7%          | 48.6%           | 22.9%         | 100%  |
| <b>Rental Income</b>                         | Frequency | 8              | 10             | 4              | 0               | 1             | 23    |
|  | Percent   | 34.8%          | 43.5%          | 17.4%          | 0               | 4.3%          | 100%  |

*Source: Author's Survey, 2013*

Quite a number of deductions can be made from table 5.6 just by mere observation. 75.7% of the pensioners consider SSNIT Pension as the most important source of income. 23.8% ranked it as more important and 0.2% says it is less important and 0.2% also says it is the least important. Interestingly, no respondent considered SSNIT pension benefit as unimportant.

27.6% and 47.4% of pensioners who earn income from post retirement jobs consider this source of income as most important and more important respectively. Also 23% and 2% consider income from post retirement job to be less important and least important respectively. No pensioner in this category considered this source as unimportant.

Another source of income worth noting is remittances from family and friends. 11.5% and 47.4% of pensioners ranked this source of income as most important and more important respectively in financing consumption expenditure. Also 32.2% and 8.4% considered remittances as less important and least important respectively. 0.6% of pensioners who have remittances from family and friends however considered this income source as not playing an important part in financing consumption expenditure.

Personal savings/Investment is also another source of income that had interesting findings. 6.4% and 27.7% consider this income source as most important and more important respectively. 45.1% and 17.9% ranked personal savings/investment as less and least important respectively. 2.9% ranked it as unimportant.

The next source of income is provident fund. 2.9% and 25.7% of respondents that fall in this category consider it as a more important and less important source of finance respectively. 48.6% and 22.9% ranked this income source as least important and unimportant respectively. No pensioner ranked provident fund as a most important source mainly because it is often meager and only few respondents have it as a source of retirement income.

The last but not the least source of income considered here is rental income. It must be noted however that, only few of the pensioners have this as a source of retirement income. 34.8% and 43.5% of the respondents who have this as an income source ranked it as most important and more important respectively. 17.4% and 4.3% considered this income source as less important and not important respectively. No pensioner ranked this as least important.

**Table 5.7 Interpretation of Rankings of Retirement Income**

| Source of Retirement Income         | Number of Observations | Minimum Rank | Maximum Rank | Mean Rank | Standard Deviation |
|-------------------------------------|------------------------|--------------|--------------|-----------|--------------------|
| SSNIT pension                       | 404                    | 1            | 4            | 1.25      | 0.456              |
| Rental Income                       | 23                     | 1            | 5            | 1.96      | 0.976              |
| Income from Post Retirement Job     | 152                    | 1            | 4            | 1.99      | 0.768              |
| Remittances from Family and Friends | 323                    | 1            | 5            | 2.39      | 0.821              |
| Personal Savings                    | 173                    | 1            | 5            | 2.83      | 0.896              |
| Provident Fund                      | 35                     | 2            | 5            | 3.91      | 0.781              |

*Source: Author's Survey, 2013*

Table 5.7 summarizes table 5.6 in an explanatory form. The minimum rank that any income source could obtain is 1 and the maximum rank is 5. As already elaborated above, 1: Most important, 2: More important, 3: Less important, 4: Least important and 5: Not important.

So an income source that has a mean rank closer to 1 is more important in terms of its significance to the pensioner in contributing to financing consumption expenditure than an income source that has a mean rank closer to 5.

Based on the above premise, SSNIT Pension benefit on average can be considered to be the most important source of retirement income to pensioners since it has the lowest mean rank of 1.25 and the least standard deviation as well. Rental income which is income from the hire of house (s) was ranked the second most important source of retirement income. This is because it has a mean rank of 1.96. The third most important source is income from job after retirement with a mean rank of 1.99. This is followed by remittances from family and friends

with a mean rank of 2.39. The next source of retirement income is personal savings/Investments which obtained a mean rank of 2.83. The least ranked income source is provident fund with a mean rank of 3.91 which is closer to 5. Table 5.7 shows this retirement income sources in order of importance from most important to not important.

The main challenge with this particular ranking is the fact that, not all pensioners could make every income category as shown by the number of observations and so there are a lot of missing values in the data set. It is only SSNIT pension that is all inclusive. No rank value was assign to pensioners who did not belong to a particular income source. Example; only 23 pensioners had rental income as a source of retirement income and 35 respondents had provident fund, so there are missing ranks of 381 and 369 for rental income and provident fund respectively.

The ranks cannot therefore be generalized to represent all pensioners since most pensioners do not identify with this income sources. The missing values in the data set made the use of the Kendall's W test of concordance virtually impossible and so no significant conclusions can be drawn.

### **5.9.2 Model 2: Kendall's Coefficient of Concordance (W Test) to determine income source(s) that forms a significant part of pensioner's consumption expenditure**

To be able to use the Kendall's W test of concordance, there should be no missing observations in the data set used. Four income sources were used to perform this test. These income sources are SSNIT pension benefit, income from post-retirement job (s), personal savings/investment and remittances from family and friends. The underlying criteria is that, a pensioner needs to be receiving income from post retirement job, remittances and have personal savings or investment and above all is a SSNIT pensioner. Only 150 respondents

met this criterion and are used for this analysis. These 150 respondents comprise of 60% males and 40% females.

The scale was categorized into 4 ranks from 1 to 4. The meanings assign to this ranks which are quite different from the one above are; 4: Most important, 3: More important, 2: Less Important and 1: Not important. The output of the distribution is presented in table 5.8.

**Table 5.8 Ranking of retirement income sources**

| Income Source                              |           | Most Important | More Important | Less Important | Not Important | Total |
|--|-----------|----------------|----------------|----------------|---------------|-------|
| <b>SSNIT Pension Benefit</b>               | Frequency | 98             | 51             | 1              | 0             | 150   |
|  | Percent   | 65%            | 34%            | 0.7%           | 0             | 100%  |
| <b>Income from Post Retirement Job</b>     | Frequency | 41             | 72             | 34             | 3             | 150   |
|  | Percent   | 27.3%          | 48%            | 22.7%          | 2%            | 100%  |
| <b>Remittances from Family and Friends</b> | Frequency | 5              | 24             | 81             | 40            | 150   |
|  | Percent   | 3.3%           | 16%            | 54%            | 26.7%         | 100%  |
| <b>Personal Savings/Investment</b>         | Frequency | 6              | 3              | 34             | 107           | 150   |
|  | Percent   | 4%             | 2%             | 22.7           | 71.3%         | 100%  |

*Source: Author's Survey, 2013*

From table 5.8, it can be observed that 65% of pensioners consider SSNIT pension benefit as the most important source of retirement income. 34% and 0.7% consider it to be more important and less important respectively. No pensioner however regarded it as unimportant. Similarly, 27.3% of pensioners regarded income from post retirement job as most important source of income. 48% and 22.7% consider it as more important and less important respectively. 2% think that it is not important source of income.

Remittances from family and friends is the next source of retirement income considered. Only 3.3% and 16% consider this source of income as most important and more important

respectively. A much higher percent of 54% and 26.7% consider it as less and not important respectively.

Finally, the last source of retirement income is personal savings/investment. Just like remittances, only 4% and 2% of the pensioners see this income source as most important and more important respectively. A bigger percent of 22.7% and 71.3% of pensioners however regard it as less and not important source of retirement income.

A cursory look at table 5.8 gives us an insight that SSNIT pension benefit was on average, ranked by pensioners as the most important source of retirement income in contributing to consumption expenditure. This is because it has the highest percentage of the ranks of most important and more important. This is followed by income from post-retirement job, remittances from family and friends and lastly, personal savings/investment in that order.

### 5.10 Outputs of Kendall's Test

The output of Kendall's coefficient of concordance is divided into three (3) sections. These sections are, 1: Descriptive statistics, 2: Ranks and 3: Test statistics. They are presented in the tables below.

**Table 5.9 Descriptive statistics**

| Sources of Income                          | Number of Observations | Mean | Standard Deviation | Minimum Rank | Maximum Rank |
|--|------------------------|------|--------------------|--------------|--------------|
| <b>SSNIT Pension Benefit</b>               | 150                    | 3.65 | 0.493              | 2            | 4            |
| <b>Income from Post Retirement Job</b>     | 150                    | 3.01 | 0.764              | 1            | 4            |
| <b>Remittances from Family and Friends</b> | 150                    | 1.96 | 0.750              | 1            | 4            |
| <b>Personal Savings/Investment</b>         | 150                    | 1.39 | 0.722              | 1            | 4            |

*Source: Author's Survey, 2013*

## KENDALL'S W TEST

**Table 5.10 Ranks**

| Sources of Income                          | Mean Rank |
|--|-----------|
| <b>SSNIT Pension Benefit</b>               | 3.65      |
| <b>Income from Post Retirement Job</b>     | 3.01      |
| <b>Remittances from Family and Friends</b> | 1.96      |
| <b>Personal Savings/Investment</b>         | 1.39      |

**Table 5.11 Test statistics**

|                                |         |
|--------------------------------|---------|
| Number of Observations         | 150     |
| <b>Kendall's W</b>             | 0.621   |
| Chi-square                     | 279.240 |
| Degrees of freedom             | 3       |
| <b>Asymptotic Significance</b> | 0.000   |

*Kendall's coefficient of concordance*

As already stated in the methodology, Kendall's coefficient of concordance is used for inter-rater agreements. That is the extent to which raters agree on an issue. A mean rank closer to 4 is more important than a mean rank closer to 1 because 4 represent most important and 1 represent not important.

SSNIT Pension Benefit obtained the highest mean rank of 3.65. This means that SSNIT pension benefit on average is the most important source of retirement income to pensioners in Ghana. The next most important source is income from job after retirement which obtained a mean rank of 3.01 and this is followed by remittances from family and friends with a mean rank of 1.96. The least important source of income however is personal savings/investment. This income source obtained a mean rank of 1.39, the closest to 1 among the various income sources.

Kendall's W of 0.621 from table 5.11 means that approximately 62% of pensioners agree to the ranking of SSNIT pension benefit as the "Most Important" source of retirement income with regards to how significantly it contributes to financing consumption expenditure.

Income from post-retirement job is ranked as “More Important” source of retirement income. Remittances from family and friends is ranked as “Less Important” source and Personal Savings/Investment is considered as “Not Important” source of retirement income. The further interpretation that can be assigned to this is that, there is 62% inter-rater agreement by pensioners to the order of the ranks of SSNIT pension being most important, followed by income from post retirement job, remittances from family and friends and personal savings/investment being the least important. But for rental income and provident fund which is not part of this category of rankings, the order of importance of the income sources is the same as in table 5.7 without the use of Kendall’s test.

The asymptotic significance of 0.000 from the Kendall’s coefficient of concordance test statistic shown in table 5.11 is a test of the significance of the differences in importance of the income sources. In other words it shows the significant effect of the importance of the various retirement income sources in financing consumption expenditure. An asymptotic significance of 0.000 therefore imply that the differences in agreement of the rankings of the importance of pensioner’s retirement income sources is highly significant even at 1% significance level because it is less than a p-value of 0.01 ( $p < 0.01$ ). Put simply, the pensioner’s agreement to the order of importance of the income sources is highly significant.

Three unequivocal deductions can be made from the above analysis of rank order.

Firstly, Government in collaboration with SSNIT should improve upon the policies of SSNIT pension administration since SSNIT Pension Benefit is identified and agreed upon by pensioners as the most important source of retirement income. Any policy change therefore will greatly impact the lives of these pensioners and their dependants in a very significant way.

Secondly, government should intervene by increasing the compulsory retirement age to 65 years but a voluntary retirement age of 60 years and at this voluntary retirement age, pensioners can have access to their Pension benefits and still continue with their work if they so wish to work. This is to supplement their SSNIT pension due them, and it is mostly because, income from post retirement job was considered the second most important source of retirement income and a significant proportion of pensioners still work and quite a significant number of them are also able, willing to work and looking for work but are often discriminated on age grounds.

Thirdly, only 62% of pensioners agreed to the rank order of SSNIT pension being most important and followed by income from jobs, remittances and personal savings/investment in that order. 38% however disagree to this order. This disagreement is as a result of income from job being ranked by a number of pensioners as most important rather than SSNIT pension. This distorted the agreement and hence giving a smaller percent of 62%. This means that SSNIT to some extent is inefficient since they are not providing adequate pension benefit to pensioner's which is their main task. Pensioners therefore have to work and find other means to supplement this pension which shouldn't be the usual case.

In summary, the objective to be achieved is to find out the source(s) of retirement income that forms a significant part of pensioner's consumption expenditure. The answer to that is that there is 62% agreement among the pensioners that SSNIT pension benefit is the most important source of income, followed by income from post retirement job, remittances from family and friends and the least important source of income is personal savings/investment. This is highly significant at 1% level of significance.

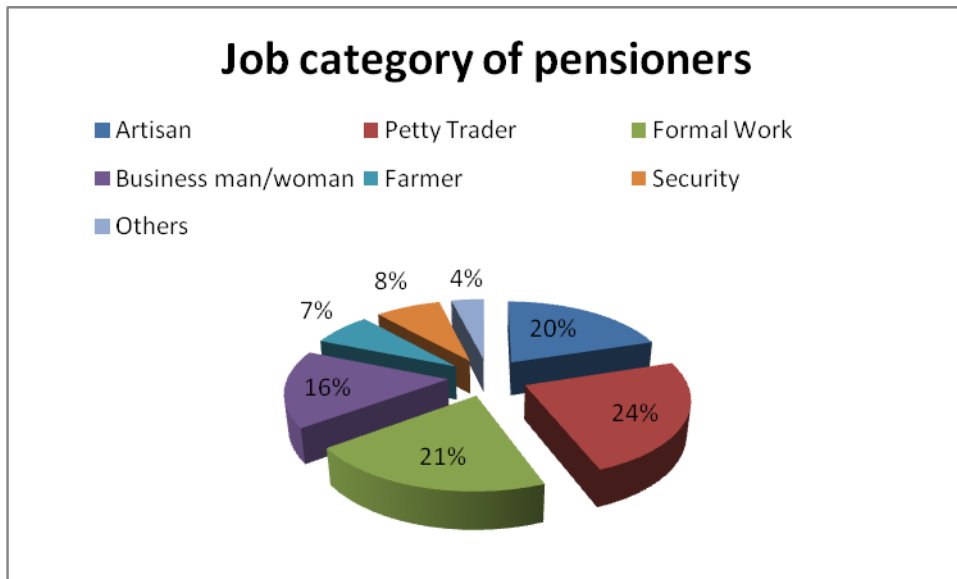
### **5.11 The extent to which pensioner's re-enter the job market as a means of consumption finance**

Surprisingly, quite a significant proportion of pensioners still find themselves in the job market be it formal or informal sector. Of the total respondents of 404 pensioners, 38% are engage in various jobs and 62% on the other hand do not work. The result of the robust standard errors of OLS indicates that job after retirement had a coefficient of approximately 33. This implies that pensioners who are working after retirement spend an additional GH¢33 on average in a month than those who are not working. This is fairly justified on the grounds that the higher the income (which is the additional income from the job), the higher the consumption level all other things being equal. Post-retirement job was also identified as a significant factor affecting consumption expenditure of pensioners.

Furthermore, the result of the Kendall's coefficient of concordance indicates 62% inter-rater agreement among pensioners that, income from post retirement job is the second most important source of financing consumption expenditure in retirement. Also 27% of the total respondents used in the ranking cited income from post retirement job to be the most important source of financing consumption expenditure even ahead of SSNIT pension benefits.

The categories of jobs pensioners are engage in is depicted in fig 5.2

Fig 5.2 Job Categories of pensioners



*Source: Author's Survey, 2013*

The result indicates that, petty trading is the job category which contains the highest percent of pensioners, of which 86% are women. All pensioners who belong to the artisan, security and farming categories are men. Formal work had equal percent of men and women. The job status of these pensioners shows that, 69% work full time whilst 31% work on part time basis.

Table 5.12 shows the type of work activity that falls under each category.

**Table 5.12 Job classification**

| <b>Job category</b>        | <b>Type of activity</b>   |
|----------------------------|---|
| Artisan                    | Technician, Plumber, Electrician, Painter, Welder, Mason, Carpenter, Driver, Photographer, Labourers and cleaners, etc                          |
| Petty Trader               | Selling of : sachet water, tap water, ice block, kerosene, oil and firewood, provisions, clothes, news papers, recharge cards, food items, etc. |
| Formal work/ Professionals | Journalist, Accountant, Nurses, Midwives Teachers, Typist, Administrators, Consultants, Pharmacist, Printer, etc                                |
| Business Man/Woman         | Renting of: canopies and chairs, cars, distribution of drinks. Corn mill business, Binding of books , lottery etc                               |
| Farmer                     | Cultivation of farm produce, cocoa and backyard gardening for sale and home consumption   |
| Security/Caretaker         | Night watchmen and caretakers of properties such as church premises etc   |
| Others                     | Pastor, Evangelist, Catechists, Missionaries, Herbalist, church worker.   |

*Source: Author's survey, 2013*

A cross tabulation of pension benefits and job status shows that 77% of pensioners who still work earn GH¢300 or less. With an average of 2.2 dependants per pensioner, we can conclude that the insufficiency of pension benefits is a factor that is driving some of the pensioners towards post-retirement work. In addition, a significant proportion of the pensioners stated categorically that inadequate pension income is the main reason why they still work and as such are willing to stop working if the money is enough pension benefit is provided. Simply, they work because they need to work to supplement pension benefits and not because they want to work.

Other reasons pensioners stated for being in the job market includes: to avoid boredom and idleness, to be intellectually active, some see themselves as still strong, so the need to work.

A significant number of those not working however are willing and able to work. Some are also looking for work but are often discriminated on age grounds.

## CHAPTER SIX

### CONCLUSION AND POLICY RECOMMENDATIONS

This chapter presents the summary of the main findings and policy recommendations. It is divided into three sections. Section one presents the summary of the main findings and conclusions. Section two presents the recommendations that are made from the findings. Lastly, section three discusses the suggestions and recommendations put forward by the pensioners as a form of expected policy change from the government and SSNIT.

#### 6.1 Summary of the main findings

The result of the survey shows that 82% of the pensioners had their average consumption expenditure (which includes amount spent on spouse and other dependants) greater than pension benefit. Furthermore, the mean monthly consumption expenditure is GH¢348 whilst the mean monthly pension benefit is GH¢247 which implies that average consumption expenditure exceeds average pension benefit by 29%. Consumption expenditure being more than pension benefit for majority of the pensioners means that these pensioners have alternative sources of income apart from the pension benefits.

The reasons identified in the study for the consumption-income disparity are inadequate pension benefits and several other socio-economic factors. These factors which affect consumption expenditure of the pensioners are: pension benefits, age, marital status, job after retirement and number of dependants. These variables significantly influence the consumption expenditure of pensioners. Sex and accommodation status though may affect consumption expenditure of pensioners, were found to be insignificant. These variables jointly account for 52% of variations in consumption expenditure.

The alternative sources of retirement income identified are: provident funds, personal savings with banks and financial institutions and investment in treasury bills and fixed deposits, remittances from family and friends, income from post-retirement jobs, rental income from renting of houses, and pension income from CAP 30 pension scheme. Some pensioners have as many as four alternative sources of income aside SSNIT monthly pension. Interestingly, 5% of the pensioners have no alternative source of retirement income and rely solely on SSNIT pension benefit whilst 95% have other sources of retirement income apart from SSNIT pension benefit. Also, 30% of the pensioners have remittances from family and friends as the only second source of retirement income aside SSNIT monthly pension benefit, of which to some, does not come on regular basis and cannot really be relied upon as a means of finance. This means that SSNIT monthly pension benefit is their only source of regular retirement income and means of financing consumption expenditure.

SSNIT pension benefit has been identified as the most important source of retirement income according to how significantly it contributes to financing consumption expenditure and based on its reliability. This is followed by income from post retirement job, remittances from family and friends and personal savings/investment in that order of importance. There is 62% inter-rater agreement by pensioners to the order of the ranks of SSNIT pension being most important and personal savings/investment being the least important. This rank order is also highly significant even at 1% significance level.

Finally, 38% of the pensioners are engaged in various post retirement jobs. The result of the regression implies that pensioners who are working after retirement spend an additional GH¢33 on average than those who are not working and income from post retirement job was ranked as the second most important source of retirement income. In addition, working after retirement was identified as a significant factor affecting the consumption expenditure of pensioners in Ghana. The major classifications of jobs pensioners are engaged in are:

Artisans, petty trading, formal workers or professionals, business men and women, farming, security/caretakers and others such as pastors and church workers. The main reason cited for their continued work even after retirement is the inadequacy of the SSNIT pension benefit. Simply, pensioners work because they need to and not because they want to.

## **6.2 Policy recommendations from the study**

The following recommendations are proposed based on the findings from the study.

- ❖ The current working population of Ghana especially those under the SSNIT pension scheme is advised to start planning for their retirement immediately they start working. They are advised to invest and save towards retirement early in life and should also make more enquiries about retirement investment packages they can undertake. This is mainly because, SSNIT pension is inadequate as evident in the study and most pensioners hardly save during working life for retirement.
- ❖ Government and private sector employers should organize retirement seminars annually for their employees to sensitize them on retirement planning especially those nearing retirement.
- ❖ Government in collaboration with SSNIT should set the minimum pension equal to the minimum wage in Ghana and should be adjusted anytime the minimum wage is adjusted. The current minimum wage is GH¢5.24 which gives a monthly wage of GH¢141.48.
- ❖ Government in collaboration with SSNIT should improve upon the policies of SSNIT pension administration since SSNIT pension benefit was identified and agreed upon by pensioners as the most important source of retirement income. Any policy change

therefore, will greatly impact the lives of these pensioners and their dependants in a very significant way.

- ❖ Government should intervene by increasing the compulsory retirement age to 65 years but a voluntary retirement age of 60 years, and at this voluntary retirement age, pensioners can have access to their pension benefits and still continue with their work if they so wish to work. This is because the other forms of retirement income such as remittances from family and friends and personal savings/investment are unreliable and also the average life expectancy in Ghana is 64.2 years.

### **6.3 Policy recommendations from the pensioners**

One of the questions asked during the survey was for pensioners to indicate policy change(s) expected from SSNIT or government about their well-being. A summary of the recurring recommendations are discussed below.

- ❖ The policy change that runs through is for an increment in pension benefits. While some recommend that the increase in pension be carried out annually, others say there should be an increment annually and anytime there is an increase in fuel prices. This is to enable the pensioners adjust adequately to the cost of living associated with fuel price increase.
- ❖ Few of the pensioners also suggested that the SSNIT pensioners should be considered under the government's Single Spine Salary Structure (SSSS). This expected policy change is arguable and might not be realized stemming from the fact that the SSSS is meant for government employees currently working and this change in salary of workers will reflect only in the pension benefits when they retire. Simply put SSSS can only affect future pensioners.

- ❖ Another suggestion by the pensioners is that, government policy on CAP 30 pension scheme be extended to SSNIT pension scheme. Hitherto CAP 30 was a non-contributory pension scheme meaning that workers do not contribute 5.5% of their salary to the scheme unlike what SSNIT does.
- ❖ A policy change that also runs through is on the National Health Insurance Scheme (NHIS). The pensioners suggested that NHIS should cover all drugs of pensioners. The NHIS does not cover some kinds of drugs and hence must be bought with cash at the dispensary or pharmacy whenever such drugs are prescribed for a patient. They argue that if the NHIS covers these drugs which hitherto were not covered, it will reduce the burden on pensioners in terms of expenditure on healthcare. Some are also of the view that, pensioners should be provided with absolutely free healthcare because they have contributed their quota to national development during their working days.
- ❖ Also it was suggested that pensioners be provided with accommodation. Whilst some argue that they should be housed in SSNIT accommodations, others argue that SSNIT should build decent houses for them with annual deductions from their pay, be it pension pay or salary when they were working. In addition government buses should provide free transportation to pensioners.
- ❖ Finally, some pensioners think that workers should be sensitized about retirement and its attendant effects prior to retirement by their various companies. This should be done for workers annually to create awareness and prepare their minds to save adequately towards their pension.

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## APPENDIX

### Appendix A.1 Variance inflation factor test for multicollinearity

| VARIABLE | VIF  | 1/VIF    |
|----------|------|----------|
| Mar      | 1.82 | 0.549767 |
| Sex      | 1.71 | 0.583567 |
| Pen      | 1.13 | 0.883098 |
| Age      | 1.10 | 0.910310 |
| Dep      | 1.08 | 0.928314 |
| Acc      | 1.04 | 0.960025 |
| Job      | 1.03 | 0.967788 |

---

Mean VIF                      1.27

According to Gujarati (2004, pg. 362), multicollinearity is a problem in a model when the Variance Inflation Factor (VIF) exceeds 10. But since all the VIF's are less than 10, there is no presence of multicollinearity in the model.

### Appendix A.2 Test for omitted variable

Ramsey regression specification-error test for omitted variable

$H_0$ : model has no omitted variables

$F(3, 367) = 3.54$

Prob > F = 0.0148

We fail to reject the null hypothesis at 5% significant level and this indicates that the model has no omitted variables. It is however insignificant at 1% and so, there could be further improvement by the addition of other variables like education in future research.

### **Appendix A. 3 Test for heteroscedasticity**

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity

H<sub>0</sub>: Constant Variance

Chi 2 (1) = 239.81

Prob > Chi 2 = 0.0000

We reject the null hypothesis of homoscedasticity and therefore acknowledge the presence of heteroscedasticity. This was however corrected for with the use of White Heteroscedasticity-corrected standard errors (robust standard errors).

## APPENDIX A.4 QUESTIONNAIRE

### TOPIC: CONSUMPTION DURING RETIREMENT IN GHANA: A CASE STUDY OF PENSIONERS IN ACCRA

Hello, I am \_\_\_\_\_, a research enumerator from the University of Ghana assisting in data collection for an ongoing research by Mark Edem Kunawotor in partial fulfillment for a Master of Philosophy Degree in Economics. We are interviewing a sample of pensioners in Accra. I will therefore be grateful if you can honestly respond to the following questions. Kindly tick the box where necessary or fill in the form as may be required. All information given is for academic purposes and shall be treated as highly confidential.

#### PART 1 -- Background of Respondents

1. Age (years) [1] 55-59 [2] 60 – 64 [3] 65 - 69 [4] 70 and above
2. Sex: [1] Male [2] Female
3. Marital Status: [1] Single [2] Married [3] Divorced [4] Widowed [5] Separated
4. How many dependants do you have? [1] None [2] 1-3 [3] 4-6 [4] Above 6
5. Which sector of work were you engaged in before retirement?  
[1] Government sector [2] Private sector [3] Both sectors
6. Do you work currently? [1] Yes [2] No
7. If Yes, which job (please specify) .....
8. If yes what is the job status

[1] Full time            [2] Part time

9. If Yes, why are you still working .....

10. How are you currently accommodated?

[1] Rented house

[2] Owner occupier

[3] Family house

[4] Other (please specify) .....

11. If female, are you the breadwinner? [1] Yes            [2] No

12. If No, then what do/did you use/used your pension benefits and Lump sum for?

[1] Supplement family income

[2] Spend on myself

[3] Build house

[4] Use to do business

[5] Other please specify .....

## **PART II -- Pension Benefits and Consumption Expenditure**

13. How much is your current monthly pension benefit from SSNIT? GH¢.....

14. Are you still living on your SSNIT Lump sum payment? [1] Yes            [2] No

15. If Yes, which form do/did you receive/appropriate/use it?

[1] Savings, with withdrawals periodically. If so, how much on the average is withdrawn periodically GH¢.....

[2] Savings, in the form of Annuities/Perpetuities. How much is received monthly GH¢.....

[3] Other, please specify .....

16. Did you receive any provident fund from your previous job on retirement? [1] Yes [2]

No

17. If yes, which form do/did you save/appropriate/used it?

[1] Savings, with withdrawals of any amount periodically. If so, how much on the average is withdrawn periodically GH¢.....

[2] Savings in the form of Annuities/Perpetuities. How much is received monthly GH¢.....

[3] Other, please specify .....

18. How much is your average daily consumption expenditure (including amount spent on dependents)? GH¢.....

19. How much do you spend on average in a month on the following items?

| Item of Expenditure                     | Before Pension (GH¢) | After Pension (GH¢) |
|---|----------------------|---------------------|
| Food and drinking water                 |                      |                     |
| Rent                                    |                      |                     |
| Utility(eg.water,electricity,telephone) |                      |                     |
| Clothing and footwear                   |                      |                     |
| Health Care                             |                      |                     |
| Transportation                          |                      |                     |
| Other (please specify).....             |                      |                     |
| TOTAL                                   |                      |                     |

### **PART III -- Sources of Retirement Income**

20. Which other source (s) of income do you have aside SSNIT pension benefits?

Please tick them.

[1] Provident Funds

[2] Personal savings

[3] Remittances from family and friends

[4] Income from job after retirement (including self employment)

[5] Rental Income

[6] Other, please specify .....

21. Please rank the sources of income above (including SSNIT pensions) according to how significantly it contributes to your consumption expenditure with (1) being most important (2) more important (3) important (4) least important and the last one (5) not important.

[ ] SSNIT monthly pension benefits

[ ] Provident Fund from previous job

- Personal savings
- Remittances from family and friends
- Income from job after retirement
- Rental Income
- Other, please specify .....

#### **PART IV – Policy Change**

22. What policy change (s) do you want/expect from SSNIT/Government in terms of pensions?

.....