40th Anniversary Edition

GHANA JOURNAL OF HIGHER EDUCATION MANAGEMENT

VOLUME 6

ISSN: 0855-6156

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Volume 6

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August 2020

ISSN: 0855-6156

Ghana Journal of Higher Education Management

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All manuscripts should be submitted to:

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EDITORIAL

The Ghana Association of University Administrators (GAUA) as part of its mission to promote the advancement of higher education in Ghana and around the world provides policy alternatives for national development. This is done through research reports, policy analysis, reflective practice among others. Mindful of this, the National Executives adopted this Journal from GAUA University of Education, Winneba branch in 2019 to advance this cause. The sixth edition of the journal is thus, the "first" edition since the adoption and it also serves as a special edition to commemorate the 40th Anniversary of GAUA (1980-2020).

In this edition, Kwame Boakye, Joshua Addo, Eric Awotwe and Joyce Anastasia Sam did a comparative study of pension benefits between Ghana Universities' Staff Superannuation (GUSSS) and Social Security and National Insurance Trust (SSNIT) Schemes. The writers advocated for the boards of GUSSS to educate their members on the superior financial retirement benefits offered by the scheme as compared to SSNIT and to review the pension rights under the GUSSS.

Again, George Kwadwo Anane, Elijah Ofori-Badu and Kwame Asante also examined 'cutoff aggregates' and academic performance of students in a public university in Ghana. The paper recommends that university managers must develop or review their admission policies and factor in more inclusive parameters for admitting students into universities, especially applicants from less-endowed schools.

The issue of work-life balance among Senior Female Administrators was examined by Rebecca Asiedu Owusu. She recommends for Ghanaian women in public career spaces to be provided with conducive working environments like flexible working hours, extended paid maternity leave, paid paternity leave and further stressed for Early Childhood Centres to be sited close to office environment.

In examining cleaners' perspective of littering behaviour of students in a Ghanaian university context, Fidelis Z. Tang urged university management and student leaders to provide adequate waste bins on university campuses, especially at vantage points with notes to encourage cleanliness. This, he believes, will encourage the culture of cleanliness and shared responsibility in safeguarding the environment.

In promoting peace among student religious groups in public universities in Ghana, Samuel Marfo, Musah Halidu and John Yaw Akparep recommend that periodic education on religious tolerance should be carried out by amalgamated religious bodies and university managements to help deepen the understanding and knowledge of students about religious pluralism and the need for peaceful coexistence.

Investigating into communication challenges in a multi-campus university system in Ghana, Amatus Dinye, Emmanuel K. Boon and Job Asante advocated for the deployment of modern communication technologies to enable satellite campus administrators to communicate in real-time with their main campus and this should be part of a well-developed communication policy.

In a research into the assessment of governance challenges in higher education institutions, Charles Obeng-Sarpong, Daniel Buor and Paul Kwadwo Addo found out that external issues such as: funding, quality assurance, getting requisite academics, and internationalisation among others militate against Ghanaian universities. They therefore advanced an argument for the need to build the capacity of management and council members on quality assurance systems, effective governance and leadership.

Examining service delivery and satisfaction of students and its implications for educational administration, Regina Nuako, Kweku Appiah-Badu, Benjamin Boampong Owusu and Abraham Adusei observed that suggestions about areas of service delivery improvement provided by students to university management are often not addressed to their satisfaction. The writers recommend for the need for university management to work with students and design service improvement strategies to bring about student satisfaction.

Lastly, Samuel Marfo, Joshua Akpade and Halidu Musah investigated crash helmet and safety implications for student motorcyclists and postulate that relatively low patronage of the full-face helmets observed among students in their study requires periodic educational campaigns.

We are extremely grateful to all our contributors and to our dedicated reviewers.

Happy 40th Anniversary to GAUA!

Dr. Paul Kwadwo Addo
National Editor/Editor-in-Chief
August 2020

Ghana Journal of Higher Education Management
Vol. 6, pp 1-20, August 2020
Print ISSN: 0855-6156

Comparative Study of Pension Benefits between Ghana Universities' Staff Superannuation (GUSSS) and Social Security and National Insurance Trust (SSNIT)Schemes

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Abstract
The practice of using public social security systems as potential welfare and income re-distribution policy tools is widely acknowledged both in academic and practitioner literature. From the perspective of a pension fund member, the most important thing is to receive a retirement benefit that is large enough to improve one's quality of life in the postretirement period. This is particularly true when the potential retiree faces the choice of two or more pension schemes; it is therefore useful to undertake a comparative analysis of retirement benefits under different schemes and under different conditions to facilitate an informed choice-making. While there is no consensus on which indicator best measures retirement benefits adequately, the total financial benefits received by the retiree following retirement represents one of the most important indicators of benefits adequacy. To this end, the total financial benefits of retirees under both the GUSSS and SSNIT was assessed. Employing different scenarios including different length of years of working and corresponding monthly contributions as well as the pension rates captured in the focal schemes, it was discovered that GUSSS generates superior retirement benefits side by side SSNIT. Among others, the writers seek to advocate that the board of GUSSS educate members on the superior financial retirement benefits offered by the scheme as compared with SSNIT and to review the pension rights under the GUSSS

Key words:

Introduction

The need for social protection, especially in old age is held in high esteem by all people. In the Ghanaian context, before the arrival of Europeans and modernity, social security/protection was ensured through the extended family system, where members of the family collectively put measures in place to cater for major catastrophes and contingencies (Kumado & Gockel, 2003). For good or bad, the arrival of Europeans replaced the traditional system of social security, and instituted foreign its equivalence – pension schemes. In 1950, the colonial masters through Pensions Ordinance No. 42, established a pension scheme for public servants in the then Gold Coast which later became what is now popularly known as the Cap 30 scheme. After independence in 1965, the Social Security Act 1965, (Act 279) was enacted to create a contributory Social Security Scheme for payment of superannuation, invalidity, survivors. There were other benefits for workers in every establishment employing not less than five workers in the private sector as well as non-pensionable workers in the public service.

In 1972 the Social Security Decree (NRCD 127) repealed Act 279 of 1965 and established the Social Security and National Insurance Trust (SSNIT) to administer a social security fund for all workers in the country. Finally in 1991, the Social Security Law 1991 (PNDC Law 247), was promulgated to transform the 1972 scheme from a provident fund to a full pension scheme. During this period, universities in the country as well as the Ghana Armed Forces were exempted from the SSNIT scheme. This was to allow them to manage their pension schemes. GUSSS was established in 1961/62 as a successor to the U.K based Federated Superannuation Scheme for Universities. The GUSSS scheme was revised and re-established on January 1, 1976.The core objective of pension systems is to protect against the risk of poverty at old age and smoothen consumption from one's work-life into retirement. To achieve this core objective, the establishment of pension schemes is based on certain core principles, one of which is 'adequacy' (Holzmann, Hinz & Dorfman 2008). Adequacy measures the degree to which the pension system enables people to achieve a sufficient standard of living in retirement, relative to either the standard they enjoyed while working or as compared to an objective budget standard for retirees.

At the basic level, the pension scheme aims to ensure that people who can no longer support themselves by working can maintain a level of security and dignity in retirement. A pension scheme, therefore, needs to be structured in such a way that in addition to the basic safety net retirement income, it enables people to build savings through compulsion and voluntary incentives that will allowone to achieve a standard of living in retirement above which the basic pension alone can provide (Andoh, 2019; Apedzi, Ahenka, & Apedzi, 2019).

There are two major approaches of designing pension schemes in the literature. These approaches are Defined Benefit (DB) and Defined Contribution (DC) schemes. Palacios (2004) and Willmore (1998) discussed DB and DC schemes extensively. SSNIT defines DB schemes as a pension plan with a guarantee by the insurer or pension agency that the benefit to be paid is based on a prescribed formula. Willmore (1998) described DB scheme as "grants pension on the basis of each individual's history of covered earnings, irrespective of the payments that he or she may have made into the system," Iyer (1999) asserted that DC schemes are schemes that the benefits have not been defined in advance but are linked to investment performance. Gustman and Steinmeier (2002) defined DB schemes to have pension formula which determines that benefits increase with age, years of service and final salary. In DC system, resources available for retirement come from the savings made during the lifetime plus their return minus administrative charges. A significant advantage of DB schemes over DC scheme is the opportunity for contributors to enjoy pension and grants beyond their contributions if they are contributory schemes (Iyer, 1999).

Where a pension scheme does not live up to this core principle, there is the general mistrust in the whole system. The feeling that SSNIT was mismanaged and the scheme was not living up to its core objectives sparked public outcry. Consequently in 2004, the government of Ghana instituted the Bediako commission to look into the SSNIT and all other pension matters. In 2008, the government overhauled the SSNIT pension system and this brought a lot of positive changes to its administration and management (Dovie, Ayimey & Adodo-Samani, 2018; Joust & Rattenhuber, 2018; National Pensions Regulatory Authority, 2020).

The current system of SSNIT offers a better pension income than the previous one. GUSSS which was supposed to be unified with the SSNIT from 2016 has taken a different discourse where the public universities in Ghana are resisting such unification. There are, therefore, discussions at Government level to grant an exemption for GUSSS to continue to run parallel with SSNIT. Against this backdrop, this paper primarily aims to undertake a relative assessment of the adequacy of retiree financial benefits under the GUSSS and SSNIT pension schemes.

Objectives of the study

The paper aims to achieve the following objectives:

- Assess retirement packages under GUSSS and SSNIT schemes.
- Enlighten contributors of GUSSS on how much they are worth at retirement.
- Take a position on which of the two pension schemes (GUSSS and BNSSS by SSNIT) available to public universities senior members is better in terms of the financial benefits provided.
- Make recommendations to managers of GUSSS on the way forward.

Relevance of study

The study presents some practical and theoretical relevance. One practical value of the study is that findings would help all potential retirees to make informed choice over which pension scheme yields superior financial benefits in the post retirement period. Obviously, since retirees seek to maximise their well-being, they should have an adequate knowledge of what pension schemes ultimately serve their economic and social goals. Another practical value of the study is that it would provide the starting point from which pension providers and planners can begin to take measures to adapt to various developments overtime. This study provides useful insights into such prominent issues like how much money a pension provider must pay to a retiree. In this context, the pensioner provider and planner can determine the best way in which their stock of contributions should be invested in order to yield an amount that can match up the lifetime cost of providing financial benefits to potential retirees. With regard to the theoretical relevance, the current study provides the starting point from which other researchers can undertake further studies on the relative pension benefits under various pension schemes in Ghana. Given the general paucity of research on comparative benefits of various pension schemes in the Ghanaian setting, the study contributes to existing scholarship in this area. Given the general iterative character of research, some novel findings in the study can motivate other researchers to employ variant theoretical paradigms to explore the focal research problem which altogether can provide enhanced understanding of retirement benefits under various pension schemes.

Literature Review and Identification of Research Gap

This study relates to existing literature at both the theoretical and empirical fronts. Theoretically, this study is underpinned by the notions of capabilities and functioning (Sen, 2000 2009). Capabilities and functioning represent two fundamental concepts in the capability approach (Robeyns, 2005). The capability approach puts primacy on the analysis of wellbeing based on what a person is able to achieve with available income (Pramono et al., 2010). In the context of Sen's capability approach, money counts but does not spontaneously lead to the achievement of wellbeing. Rather, wellbeing is seen as a measure of the opportunity to combine income, personal characteristics, skill and experience to do what needs to be done that maximizes satisfaction in dimensions of life that hold meaning for them (functioning), which produces a measure of wellbeing (Searle, 2008). Applying this theoretical notion in this study, the resources which retirees can utilise to ensure wellbeing transcends the retirement incomes (pensions) to include skills and experiences and socio-demographic conditions (e.g. marital status, dependants, education, professional status, etc.), which together create the necessary endowment for retirees to act as agents of their own wellbeing. However, in this study, wellbeing is akin to a superior financial benefit at the end of the retirement period though this claim has its own limitations. Obviously, assessment of financial benefits at the end of a retirement date is the core concern in the study.

At the empirical front, it might be said that studies on the relative benefits of various pensions schemes in Ghana are generally limited. However, our study relates to some strands of existing literature. One of such studies is the work of Kpessa (2011). Kpessa (2011) explored the risks and in Ghana's new three tier pension systems. Results of the study demonstrate that while the new pension schemes afford employees choice and freedom over what scheme to subscribe, the way it is designed gives room to some weaknesses that might compromise the income of potential retirees. As remedial measures Kpessa (2011) consequently advocates policy actions in these domains: establishing a statutory pension benefits insurance; scaling back the number of pension service providers; capping amount of each contributors ' funds that service providers can spend on administrative issues; and activating constitutional provisions on social assistance to augment the three-tier model. Anku-Tsede, Amertowo and Amankwaa (2014) in a related study report that there are several challenges in the management of pension schemes in Ghana including mismanagement, inequitable returns and employee-employer conflicts. Andoh (2019) explored the impact of pension and individual income on the well-being of retirees and found that both pension income and total individual income have strong correlation with all the proxy measures of wellbeing adopted in the study with the exception of financial wellbeing. This research in essence highlights the inadequacy of retirement income that can engender financial wellbeing of retirees. Doeh and Osei-Fosu (2017) in their country-wide study explored the extent to which pension schemes in selected African countries match up to the Social Protection Floor's objective. Adopting secondary data, they found that some selected countries including Ghana do not achieve the Social Protection Floor objective. Though these studies give much insight into various aspects of pension schemes in Ghana, they do not systematically analyse the relative financial benefits of various pension schemes. Obviously very little is known on the final retirement benefits under various pension schemes in Ghana. This study aims to fill this lacuna in scholarly research by assessing the relative financial benefits of pension schemes in Ghana by drawing on the SSNIT and the GUSSS.

Methodology

Our methodology is generally quantitative in nature. Quantitative research methods are widely recognised to lead to greater objective in research findings as they potentially address all potential human values and opinions in the research process. To contextualise our study, our methodology specifically draws on actuarial cost methodology in the area of pension funding. This approach focuses on fundament variables like an employee current wage/salary, the number of years they have until retirement, the annual rate at which the employee salary, and monthly contributions. These methods enjoy popular usage in both academic and practitioner literature when valuating retirement benefits (Collinson, 2001). To improve upon the robustness of our results, we employed different time dimensions/lengths, which in this context is proxied by years of working of a potential retiree. Further, our methodology is appropriate as both the GUSSS and SNNIT typify defined benefit pension schemes that make it possible for retirees to receive an income even greater than total contributions. This similar feature of the two schemes makes the comparison acceptable. Data collected in the study draws from the official information provided by the two pension schemes examined in the study as far as the parameters in determining pension benefits are concerned.

Measurement of Pension/Retirement Financial Benefits Adequacy

Existing literature affirms that the replacement rate so far represents the most extensively used measure of benefits in the retirement planning process (VanDerhei, 2006). Biggs and Springstead (2008) similarly observe that most discussions on retirement planning and social security policy often centre on replacement rates. However, there are diverse measures of replacement rates with the most predominant ones comprising final earnings: the constant income payable from the present value (PV) of lifetime earnings (PV payment); the wage-indexed average of all earnings prior to claiming social security benefits; and the inflation-adjusted average of all earnings prior to claiming Social Security benefits (consumer price index (CPI) average). This study, however, utilizes the final earnings as the proxy measure of replacement rates. Biggs and Springstead (2008) assert that the use of final earnings as a replacement rate carries several advantages. The first advantage relates to the fact that both financial planners and individuals can easily follow the final earnings approach especially for individuals who are generally more inclined to predict how their earnings will be after retirement. The second advantage is that many defined benefit pension plans are calculated on a final salary basis which is the case of the two studied schemes, to reiterate the SSNIT and GUSSS. Third, a final wage replacement rate indicates the degree to which an individual's consumption possibilities may change as he or she retires from work. In this regard one may argue soundly that final earnings replacement rates can be useful in projecting retirement behaviour, in which individuals who are employed but eligible for retirement benefits can choose between the earnings they receive at work and the benefits they could receive by retiring.

These advantages do not, however, leave our measure of replacement rates uncriticised. We concede to some of the limitations associated with the use of final earnings as a measure of replacement rates. One of the often cited criticisms against final earnings is their very simplistic nature as they usually take into account only such factors as importance of investment, longevity and health risks without considering equally important factors like investment risk, longevity risk, and risk of potentially catastrophic health care costs. To add up, replacement rate after all can be determined by the level of retirement expenditures, retirement age, gender, asset allocation, percentage of annuitization, and other variables. We further concede to the possible change of regulations overtime that can impact on our analysis. These limitations do not, however, question the validity of results that would subsequently emerge from our study. Rather, acknowledging these limitations can be of much value from the perspective of determining the research paths that future research will find worthwhile. As far as the total financial earnings of a scheme is concerned, we still consider the final earnings the most appropriate measure of replacement rates in our study especially in the Ghanaian context where the external economic environment tends to be more volatile. Afterall, financial earnings can be a precursor to achieving other important wellbeing measures like food, shelter, and health, thus our position represents a strong departure from critics who deny financial wellbeing as a measure of retirement wellbeing.

Discussions Basic National Social Security Scheme – SSNIT

Under the new contributory three-tier pension scheme (National Pension Act 2008, Act 766; Ofei-Kwapong, 2013), contributors are entitled to a monthly pension when they meet the minimum contributory years of 15 at old age (60 years) or early retirement (55 years) and a lump sum payment from the 2nd tier. Contributors who do the 3rd tier are also entitled to a lump sum payment at retirement.

The extent of monthly pension paid to pensioners under the SSNIT scheme is dependent on one's accumulated pension rights.

i. 2.5% Pension Right accrues for every year worked for the first 15 years (180 months) of working life.

ii. 1.125% Pension Right accrues for each additional year worked after 15 years and truncates at Maximum of 60%

Note: Minimum pegged at 37.5% and Maximum at 60%; - means that no Pension Right is earned beyond 35 years of working life.

Pension Right Calculator

$$\text{Pension Right} = 37.5\% + \left([x - 180] * \frac{1.125\%}{12}\right)$$

Where 'x' is the actual number of months a contributor contributes to SSNIT (National Pensions Act 2008, Act 766).

Determination of Old-Age Pension

$$\text{Old} - \text{Age pension} = (2.5\% * 15 \text{ years}) + (1.125\% * x)$$

‘x’ is the additional years of contribution after the first 15 years until the statutory retirement age of 60.

Benefits under SSNIT

i. Old-age pension
ii. Survivors Benefit (Lump Sum)
iii. This is a lump-sum payment made to a deceased contributor’s surviving dependents.
iv. Invalidity Benefit: To qualify for invalidity pension,
   a. The person must have contributed for not less than 12 months within the last 36 months before the occurrence of the invalidity
   b. Where the member has contributed for a period not less than 180 months, the member shall be entitled to a pension right (or pension credit) equivalent to that of Old age retirement pension of 60%
   c. Where the member does not satisfy the minimum contribution period of 180 months, the member shall be given a pension right of 37.5%.
   d. Where a person is subsequently certified by the SSNIT Medical Board to have fully recovered and that person has not attained the compulsory retirement age of 60 years, that person may re-join the Scheme
v. Full Refund (Old Age Retirement Lump Sum)
vi. Emigration Benefit

Ghana Universities Staff Superannuation Scheme (GUSSS)

GUSSS was established on 1st January 1976 by Public Universities of Ghana namely: University of Ghana (UG), Kwame Nkrumah University of Science and Technology (KNUST) and University of Cape Coast (UCC) but now include University of Education Winneba (UEW), University for Development Studies (UDS) and University of Mines and Technology (UMaT).

GUSSS which is the focus of this position paper provides superannuation scheme for:

i. University Teachers, Research Fellows and Librarians.
ii. University Administrators and Professionals of the status comparable with that of University Teachers. iii. Any other category of staff permitted by the University Council to be a member of the scheme.

It should be noted that all members of the above categories should have not less than 15 years to hit age 60 at the time of appointment to be eligible for membership. Every member contributes a rate determined from time to time by members. It is currently 25% of basic salary (GUSSS Constitution 2012).

Pension Right Calculator

$$\text{Pension Right} = \left(\frac{1}{40} * x\right) * 100$$

Where 'x' is the number of years' contribution to GUSSS

Determination of Full Pension

$$\text{Full pension} = \text{Pension Rights} * \text{Enhanced Terminal Basic Salary}$$

$$\text{Full pension} = \frac{1}{40} * \text{no. of years of contribution into the scheme} * \text{terminal salary} * 1.5$$

Benefits under GUSSS

Benefits available under GUSSS are as follows:

i. Full pension
ii. Residual pension plus gratuity
iii. Survivors Benefit
   a. Death of a member in service
      A death gratuity is paid at the rate of one-half of full pension for 20 years.
      That is 0.5*full pension*20 years
   b. Death of a pensioner
      A death gratuity is paid to nominated beneficiaries where a pensioner dies before 20 years of going on retirement. This is paid as the annual pension multiplied by the number of years short of the 20 years.

Quantitative Analysis

This part looks at the comparison between GUSSS and SSNIT using the monthly contributions made by members and the financial benefits that will accrue when members attain the age of 60 years. The analysis and comparison are done based on some assumptions.

The following are the general assumptions used in the analysis:

i. The staff is on a starting monthly basic salary of GH¢3,400.00

ii. 10% increase in the annual base rate is based on the revision of base rate since the implementation of the Single Spine Salary Structure in 2010. See Appendix A.

iii. 12% Return on Investment on an annual basis was determined using the least interest rate on Government of Ghana Treasury Bill from January 2012 to April 2019. See Appendix B.

iv. The writers assumed four (4) scenarios where members contribute for periods of 15 years, 20 years, 25 years, 30 years and 35 years.

v. The computations of the maturity values under Tier 2 and 3 were arrived at using the Future Value of Growing Annuity module.

vi. The writers assumed that all members are rational. That is, members will invest the 19.5% in excess of the 5.5% into the Superannuation Fund in Tier-3 when they have the option to join SSNIT.

vii. The analysis assumes that Mr A in each scenario is now joining the Ghana workforce and has therefore not contributed to SSNIT before. Hence, there is no consideration for some years' contribution to SSNIT before joining GUSSS.

We acknowledge the limitations of our assumptions in the study. However, we find them imperative to use in the study from a methodological standpoint. As Montalto (2001) observes, most previous research on measurement of retirement wealth adequacy is underpinned by uniform assumptions that do not account for variation across households.

Scenario 1

Under this scenario, Mr A has a maximum of 15 years to work at the time of appointment.

Under the GUSSS, Mr A's Pension is determined as follows:

Pension = Pension rights * Terminal Basic Salary * 1.5 * 20 years

Pension Rights for 15 years (2.5% * 15 years) 37.5%

Terminal Salary (GH¢3,400 * FVIFA) GH¢12,911.49 Annualized Terminal Salary (12,911.49 * 12) GH¢154,937.88

Total pension at age 60 (37.5%*GH¢154,937.88*1.5*20 years) GH¢1,743,051.15

Total Benefits accruing to Mr A under GUSSS is GH¢1,743,051.15.

Under the National Pension Scheme, Mr. A's Pension is determined as follows:

Mr. A is entitled to pension benefits from Tiers 1, 2 and 3 which is determined as follows:

Tier-1 from SSNIT

Pension Right for 15 years (15 years * 2.5%) 37.50%

Average of Best 3 Annual Basic Salaries
13 year (3,400 * FVIFA) GH¢10,670.66
14 year (3,400 * FVIFA) GH¢11,737.72
15 year (3,400 * FVIFA) GH¢12,911.49
Average GH¢11,773.29
Annualized pensionable basic (GH¢11,773.29 * 12) GH¢141,279.48

Total pension at age 60 (37.5% * GH¢141,279.48 * 15 years) GH¢794,697.08

Total Benefits accruing to Mr A under the National Pension Scheme is GH¢1,510,899.67. The detail is found in the table below.

Table 1: **Total SSNIT benefits to Mr A under the under Scenario 1**

	GH¢	
SSNIT Pension	794,697.08	
Tier 2	146,164.07	Using Growing Annuity
Personal Investment	570,038.52	Using Growing Annuity
TOTAL	**1,510,899.67**	

Scenario 2
Under this scenario, Mr A has a maximum of 20 years to work at the time of appointment.

Under the GUSSS, Mr A's Pension is determined as follows:
Pension = Pension rights * Terminal Basic Salary * 1.5 * 20 years
Pension Rights for 15 years (2.5% * 20 years) 50%
Terminal Salary (GH¢3,400 * FVIFA) GH¢20,794.10 Annualized Terminal Salary (20,794.10 * 12) GH¢249,529.20
Total pension at age 60 (50%*GH¢249,529.20*1.5*20 years) GH¢3,742,938.00

Total Benefits accruing to Mr A under GUSSS is GH¢3,742,938.00.

Under the National Pension Scheme, Mr. A's Pension is determined as follows:
Mr. A is entitled to pension benefits from Tiers 1, 2 and 3 which is determined as follows:
Tier-1 from SSNIT
First 15 years (15 years * 2.5%) 37.50%
Next 5 years (5 years * 1.125%) 5.625%

43.125%

Average of Best 3 Annual Basic Salaries

18 year (3,400 * FVIFA) GH¢17,185.20
19 year (3,400 * FVIFA) GH¢18,903.72
20 year (3,400 * FVIFA) GH¢20,794.10
Average GH¢18,961.01

Annualized pensionable basic (GH¢18,961.01 * 12) GH¢227,532.12

Total pension at age 60 (43.125% * GH¢227,532.12 * 20 years) GH¢1,962,464.54

Total Benefits accruing to Mr A under the National Pension Scheme is GH¢3,602,791.55. The detail in the table below.

Table 2: **Total SSNIT benefits to Mr A under the under Scenario 2**

	GH¢	
SSNIT Pension	1,962,464.54	
Tier 2	334,761.11	Using Growing Annuity
Personal Investment	1,305,565.90	Using Growing Annuity
TOTAL	**3,602,791.55**	

Scenario 3
Under this scenario, Mr A has a maximum of 25 years to work at the time of appointment.

Under the GUSSS, Mr. A's Pension is determined as follows:
Pension rights * Terminal Basic Salary * 20 years
Pension Rights for 25 years (2.5% * 25 years) 62.5%

Terminal Salary (3,400 * FVIFA) GH¢33,489.09
Annualized Terminal Salary (33,489.09 * 12) GH¢401,869.08
Total pension at age 60 (62.5%*GH¢401,869.08*1.5*20 years) GH¢7,535,045.25

Total Benefits accruing to Mr. A under GUSSS is GH¢7,535,045.25.

Under the SSNIT, Mr A's Pension is determined as follows:
Mr A is entitled to pension benefits from Tiers 1, 2 and 3 which are determined as follows:
Tier-1 from SSNIT
Therefore Mr A's Pension Right is
First 15 years (15 years * 2.5%) 37.50%
Next 10 years (10 years * 1.125%) 11.25%

48.75%

Average of Best 3 Annual Basic Salaries

23 year (3,400 * FVIFA)	GH¢27,676.93
24 year (3,400 * FVIFA)	GH¢30,444.63
25 year (3,400 * FVIFA)	GH¢33,489.09
Average	GH¢30,536.88

Annualized pensionable basic (GH¢30,536.88 * 12) GH¢366,442.56
Total pension at age 60 (48.75% * GH¢366,442.56 * 15 years) GH¢2,679,611.22

Total Benefits accruing to Mr A under the National Pension Scheme is GH¢6,205,734.61. The detail is found in the table below.

Table 3: **Total SSNIT benefits to Mr A under the under Scenario 3**

	GH¢	
SSNIT Pension	2,679,611.22	
Tier 2	719,617.02	Using Growing Annuity
Personal Investment	2,806,506.37	Using Growing Annuity
TOTAL	**6,205,734.61**	

Scenario 4

Under this scenario, Mr A has a maximum of 30 years to work at the time of appointment.

Under the GUSSS, Mr. A's Pension is determined as follows:

Pension rights * Terminal Basic Salary * 20 years

Pension Rights for 25 years (2.5% * 30 years)	75%
Terminal Salary (3,400 * FVIFA)	GH¢53,934.52
Annualized Terminal Salary (53,934.52 * 12)	GH¢647,214.24
Total pension at age 60 (75%*GH¢ 647,214.24*1.5*20 years)	GH¢14,562,320.40

Total Benefits accruing to Mr A under GUSSS is GH¢ 14,562,320.40.

Under the SSNIT, Mr. A's Pension is determined as follows:

Mr A is entitled to pension benefits from Tiers 1, 2 and 3 which are determined as follows:
Tier-1 from SSNIT
Therefore Mr A's Pension Right is

First 15 years (15 years * 2.5%)	37.50%
Next 15 years (15 years * 1.125%)	16.88%

54.38%

Average of Best 3 Annual Basic Salaries

28 year (3,400 * FVIFA)	GH¢44,573.98
29 year (3,400 * FVIFA)	GH¢49,031.38
30 year (3,400 * FVIFA)	GH¢53,934.52

Average GH¢49,179.96
Annualized pensionable basic (GH¢49,179.96 * 12) GH¢590,159.52
Total pension at age 60 (54.38% * GH¢590,159.52* 15 years) GH¢4,813,931.20

Total Benefits accruing to Mr A under the National Pension Scheme is GH¢12,099,664.81. Detail is found in the table below.

Table 4: **Total SSNIT benefits to Mr A under the under Scenario 4**

	GH¢	
SSNIT Pension	4,813,931.20	
Tier-2	1,486,884.41	Using Growing Annuity
Tier-3	5,798,849.20	Using Growing Annuity
TOTAL	**12,099,664.81**	

Under this scenario, Mr. A has a maximum of 35 years to work at the time of appointment.

Under the GUSSS, Mr. A's Pension is determined as follows:
Pension rights * Terminal Basic Salary * 20 years
Pension Rights for 25 years (2.5% * 35 years) 87.5%
Terminal Salary (3,400 * FVIFA) GH¢86,862.08
Annualized Terminal Salary (86,862.08 * 12) GH¢1,042,344.96
Total pension at age 60 (87.5%*GH¢1,042,344.96*1.5*20 years) GH¢27,361,555.20

Total Benefits accruing to Mr A under GUSSS is GH¢27,361,555.20.

Under the SSNIT, Mr. A's Pension is determined as follows:
Mr A is entitled to pension benefits from Tiers 1, 2 and 3 which are determined as follows:
Tier-1 from SSNIT
Therefore Mr. A's Pension Right is
First 15 years (15 years * 2.5%) 37.50%
Next 15 years (20 years * 1.125%) 22.50%
60.00%
Average of Best 3 Annual Basic Salaries
33 year (3,400 * FVIFA) GH¢71,786.84
34 year (3,400 * FVIFA) GH¢78,965.53
35 year (3,400 * FVIFA) GH¢86,862.08
Average GH¢79,204.81
Annualized pensionable basic (GH¢79,204.81 * 12) GH¢950,457.72

Total pension at age 60 (60% * GH¢950,457.72* 15 years) GH¢8,554,119.48

Total Benefits accruing to Mr. A under the National Pension Scheme is

GH¢12,099,664.81. The detail is in the table below.

Table 5: **Total SSNIT benefits to Mr. A under the under Scenario 5**

	GH¢	
SSNIT Pension	8,554,119.48	
Tier-2	2,990,398.84	Using Growing Annuity
Tier-3	11,662,555.47	Using Growing Annuity
TOTAL	**23,207,073.79**	

There is some inherent risk in the GUSSS scheme for staff who are dismissed, who vacate post. This inherent risk is associated with SSNIT. It is, therefore, imperative to consider those inherent risk as captured in rule 8 of the GUSSS rules

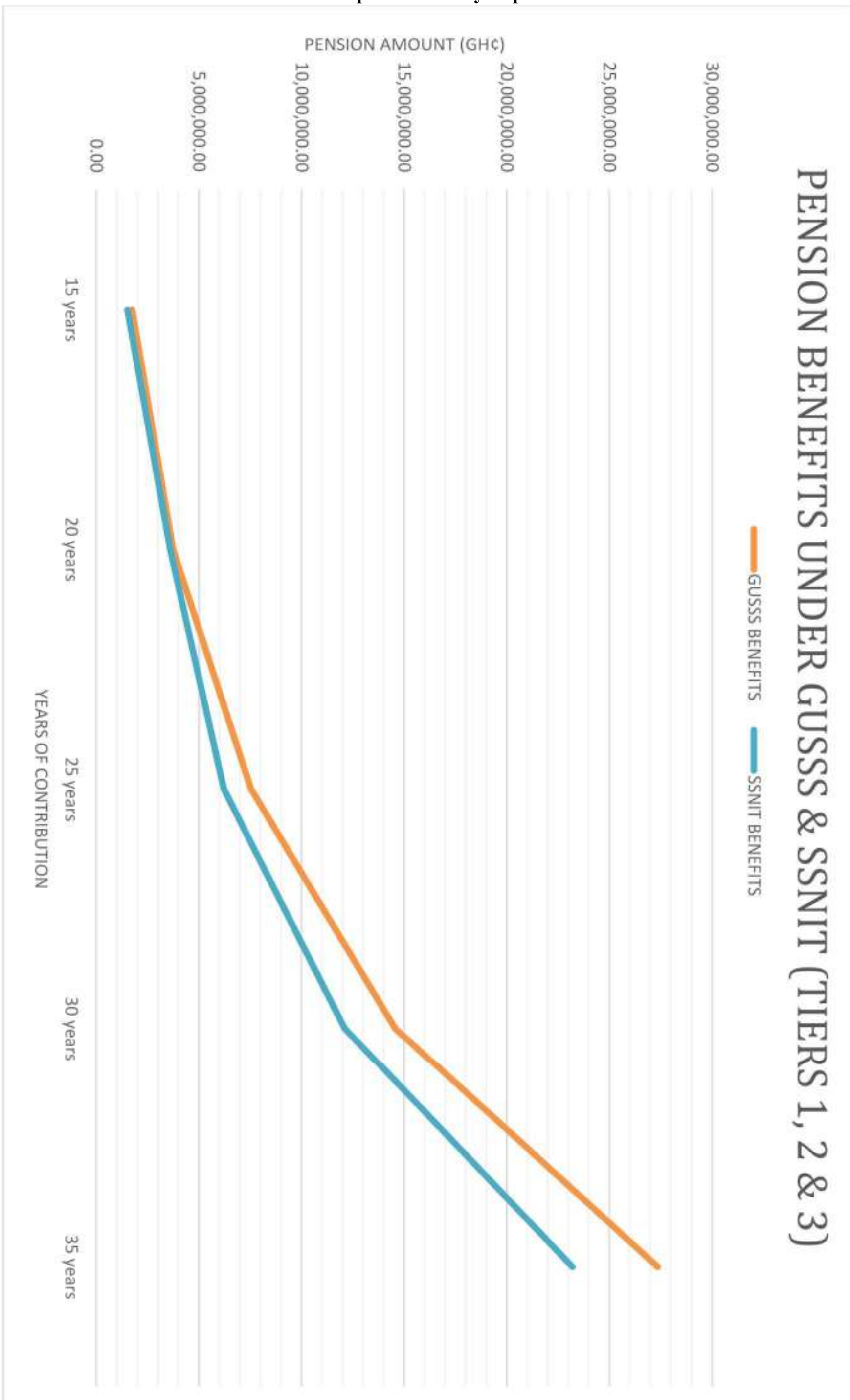
Comparative Summary of Financial Benefits

Based on the analysis, a contributor who contributes for 15, 25, 30 and 35 years under GUSSS earns GH¢232,151.48, GH¢1,329,310.64, GH¢2,462,655.59 and GH¢4,154,481.41 respectively more than a contributor to SSNIT for the same number of years.

Table 6: Summary of Retirement Benefits under GUSSS and SSNIT (TIERS 1, 2 & 3)

SCENARIOS	GUSSS BENEFITS	SSNIT BENEFITS	DIFFERENCE
	GH¢	GH¢	**GH¢**
1 (15 years)	1,743,051.15	1,510,899.67	**232,151.48**
2 (20 years)	3,742,938.00	3,602,791.55	**140,146.45**
3 (25 years)	7,535,045.25	6,205,734.61	**1,329,310.64**
4 (30 years)	14,562,320.40	12,099,664.81	**2,462,655.59**
5 (35 years)	27,361,555.20	23,207,073.79	**4,154,481.41**

Graph 1: Pension Benefits Under GUSSS and SSNIT (TIERS 1, 2 & 3)



Findings, Recommendations and Conclusion Findings

1. Under all the four scenarios, Mr. A is better off in terms of financial benefit under GUSSS than the financial benefit under SSNIT/tiers two and three option. However, there is less education and sensitisation for members to appreciate how worthy the GUSSS in relation to other social security schemes including SSNIT.
2. There are no specific guidelines on pension arrangements available to members who are unable to continue their contribution before old age or voluntary retiring age under the GUSSS option. That is, there is no invalidity arrangements in GUSSS as found in SSNIT.
3. The determination of pension right under GUSSS (1/40 for each year's contribution) is premised because members can contribute for 40 years. However, it is not so in reality. The minimum qualification requirement for someone to be appointed as a senior member in the University of Cape Coast is a second degree (research) or a first degree plus a professional certificate for non-teaching and PhD/MPhil for teaching. The average age for acquiring the said qualifications is 25 years. This means that it is practically impossible for a member of GUSS to contribute beyond 35 years.

Recommendations

1. The board of GUSSS should in addition to the annual general meeting, run some awareness and educative series for the members to educate members on matters of GUSSS. Moreover, the board of GUSSS should solicit concerns of members and offer them solutions to clear doubts that some members may incubate.
2. The board of GUSSS should develop guidelines on invalidity option available to members who are unable to continue their contributions on grounds of invalidity. The board can refer to the other social security schemes such as SSNIT for guidance.
3. The board should review the determinants of pension rights since conditions that lead to the choosing of 40 years may not currently exist.

Conclusion

Members may be justified for their discontent with offers from GUSSS due to the gaps in communication and education. There is no doubt that GUSSS offers superior financial benefits than SSNIT plus tier three. Notwithstanding the financial benefits that GUSSS provides, some areas need to be reviewed to make the scheme wholly beneficial to members. The areas of invalidity and pension right computation requires urgent consideration.

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Glossary

Emigration Benefit	Benefit paid to foreign nationals who work in Ghana for a short period and pay social security contributions. It is paid when the expatriate is leaving Ghana to resettle in his/her home country. It is also paid to Ghanaian social security contributors who want to relocate to another country. Contributions plus accrued interest is paid on application.
Enhanced Terminal Salary	It is the boosted terminal salary of superannuation contributors to increase the full pension. The enhancement is financed by the excess contribution of 19.5% (25%-5.5%) above the national requirement of 18.5% (National Pension Act, 2008). The enhanced factor is currently 50% of your terminal basic salary.
Full Pension	Yearly amount a pensioner is entitled after attainting old-age or 60 years (55 years for those hazardous employment like underground miners) or voluntary age of 55 years.
Full Refund	Benefit paid to contributors who do not meet the minimum contribution period of 180 months before retirement or leaves active service before retirement ages of 60 and 55.
Future value of Growing Annuity	The total value of a series of payments that are growing or declining at a constant rate during a certain time period.
Gratuity	Monies paid to employees for the services rendered during the period of employment. It is usually paid at the time of retirement but can be paid earlier, provided certain conditions are met.
Invalidity Benefit	Pension benefit paid to contributors who suffer ailment in the course of active service before attaining age 60.
Old-Age Pension	Benefit paid to contributors who successfully retire at age 60 (55 for those in hazardous employment like underground miners) or voluntarily at age 55.
Pension Right	The percentage points that pension contributors earn for each year's contribution made into a pension fund. 2.5% per year for first 15 years contribution and 1.125% for every year after 15 years but up to 35 years for SSNIT. 2.5% for every year's contribution for GUSSS.
Reduced Pension	Benefit paid to contributors who retire after 55 years but before 60 years.
Residual pension plus gratuity	This is a benefit where a quarter of your pension determined in full pension for a maximum of 20 years is paid to you on retirement and the remaining three-quarters are paid monthly.
Survivors Benefit	This is a lump-sum payment made to a deceased contributor's surviving dependents.

Appendices

Appendix A

Trends in base pay of public sector workers 2011 – 2019

Year	Percentage increase

2011	20
2012	18
2013	10
2014	-
2015	13
2016	10
2017	12.5
2018	11
2019	10
2020	12
Average	116.5/10 = 11.65

Source: Graphic online (https://www.graphic.com.gh/news/general-news/base-pay-goes-up-by11-percent.html)

The average growth in base pay is taken at the average of percentage increases from 2011 to 2020 which is 11.65% and stepped down to 10%. The average of 11.65% is stepped down to 10% to take care of the effects of the outliers in 2011 and 2012. Aside those two rates, all other rates have ranged between 10% and 13%.

Appendix B

Trends in 1-year note Treasury bill rate in Ghana (2011 – 2019)

Year	91-day	182-day	1-year
	%	%	%
2012			
January	10.82	11.09	11.25
April	13.85		
July	22.3415	22.9123	
September	23.1219		
2013			
January	23.0275	22.9947	22.9
April	22.9829		
July	23.0715	23.0314	
September	20.623		
2014			
January	19.233	19.1813	17
April	23.9862		
July	24.1023	22.3453	
September	25.7118		
2015			

January	25.8385	26.4077	22.5
April	25.2039		

July	25.1978	25.8819	
September	25.3026		
2016			
January	22.7939	24.3574	23
April	22.6829	24.5611	23
July	22.7827	24.6789	24
September	22.8699	24.6910	23.25
2017			
January	16.2478	17.8796	21
April	17.3888	17.1883	18.5
July	12.3176	13.1036	15
September	13.1494	13.9713	15
2018			
January	13.3282	13.8749	17.18
April	13.3148	13.8847	15
July	13.3152	13.8654	14.5
October	13.4068	14.3349	15
2019			
January	14.5963	15.0446	20
April	14.7266	15.1646	18.1
July	14.2064	14.1042	15.2
October	14.1650	14.0744	15.2

Source: Bank of Ghana (https://www.bog.gov.gh/markets/treasury-bill-rates)

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GHANA JOURNAL OF HIGHER EDUCATION MANAGEMENT

40th Anniversary Edition

ISSN: 0855-6156