

Analysis of the Proposed Model to Help Improve the Participation of Informal Self-Employed Workers Under the Tier-1 Scheme

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Abstract

The participation of informal self-employed workers in Ghana's Tier-1 pension scheme remains significantly low, exposing them to financial insecurity in old age. This study analyses the barriers to participation, assesses the adverse effects of the current pension framework on informal workers, and evaluates a proposed model to increase enrollment in the scheme. Using a mixed-methods approach, the study collected quantitative and qualitative data from informal self-employed workers across various occupational groups in Ghana. Statistical analysis revealed that factors such as irregular income, lack of awareness, mistrust in pension institutions, and administrative challenges are the primary deterrents to participation.

The study further found that socioeconomic characteristics, including income level, marital status, and years of self-employment, significantly influence workers' decisions to enrol in the Tier-1 scheme. Younger and lower-income workers face more significant obstacles in regularly contributing to the scheme. To address these challenges, the study proposes a model incorporating flexible contribution schedules, simplified registration processes, financial incentives, and awareness campaigns to enhance participation rates.

The findings underscore the need for policy reforms aligning pension schemes with informal workers' financial realities. By implementing targeted interventions, policymakers and stakeholders can improve social security coverage for this crucial workforce segment. Future research should evaluate the proposed model's implementation feasibility and long-term sustainability.

Keywords: Informal sector, self-employed workers, Tier-1 pension scheme, social security, pension participation, Ghana

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1.0 INTRODUCTION

The informal sector plays a crucial role in many economies, particularly in developing countries, where a significant portion of the workforce operates outside the formal employment structure. Despite their contributions to economic growth, informal self-employed workers often face challenges accessing social security benefits, including pension schemes. In Ghana, the National Pension Scheme under the Social Security and National Insurance Trust (SSNIT) is structured into three tiers, with Tier-1 serving as a mandatory pension scheme for formal sector workers. However, participation among informal self-employed workers remains significantly low, leaving them vulnerable to economic insecurity in old age.

This research examines a proposed model to increase the participation of informal self-employed workers under the Tier-1 scheme. The study explores the barriers to enrollment, assesses the potential benefits of the proposed model, and analyses its feasibility for implementation. By identifying key factors influencing participation and proposing strategic interventions, the study seeks to contribute to policy discussions on expanding pension coverage to a more significant segment of the working population.

1.1 Background

Social security systems are fundamental to ensuring financial stability and welfare for workers in both formal and informal sectors. The three-tier pension system in Ghana was introduced under the National Pensions Act, 2008 (Act 766) to enhance retirees' social protection and financial security. The Tier-1 scheme, managed by SSNIT, is a mandatory, defined-benefit scheme primarily covering employees in the formal sector, with voluntary provisions for self-employed workers. However, the participation rate among informal self-employed individuals remains low due to various socio-economic, institutional, and structural factors.

Several studies indicate that informal sector workers face barriers such as irregular income, lack of awareness, perceived affordability issues, and mistrust in formal financial institutions. Additionally, administrative complexities and the voluntary nature of the scheme further discourage enrollment. To address these challenges, innovative models that offer flexibility, incentives, and enhanced accessibility are necessary. This research proposes and evaluates a model to improve informal self-employed workers' participation in the Tier-1 pension scheme, ensuring greater financial security for this critical workforce segment.

By analysing the effectiveness of this proposed model, the study aims to provide insights into practical and policy-oriented solutions that can bridge the gap between informal sector workers and sustainable pension coverage.

2.0 LITERATURE REVIEW

The informal sector is a critical component of economic development in many countries, particularly in sub-Saharan Africa. In Ghana, this sector employs a significant proportion of the working population, providing livelihoods for many individuals who lack access to formal employment benefits, including pension schemes (Baah-Boateng, 2016). This literature review examines previous studies on pension schemes in Ghana, the challenges informal sector workers face in participating in social security programs, and the potential adverse effects of the Tier-1 pension scheme on self-employed informal workers.

2.1 Pension Schemes and Social Security in Ghana

The introduction of the three-tier pension system in Ghana aimed to provide more comprehensive retirement benefits to both formal and informal sector workers. The Tier-1 scheme, which is mandatory for formal employees, is managed by the Social Security and National Insurance Trust (SSNIT) and provides basic retirement income (National Pensions Regulatory Authority [NPRO], 2020). However, participation in the Tier-1 scheme is voluntary for informal sector workers, leading to low enrollment rates. According to Osei-Boateng and Ampratwum (2019), only a tiny fraction of self-employed individuals contribute to the scheme due to various socio-economic and institutional barriers.

2.2 Barriers to Pension Participation Among Informal Sector Workers

Several studies have explored why informal sector workers are limited in pension schemes. Aryeetey et al. (2017) argue that income irregularity is one of the biggest deterrents, as self-employed workers prioritise daily expenses over long-term savings. Similarly, Kpessa (2011) highlights that the lack of financial literacy and awareness about pension schemes significantly

affects participation rates. Many informal sector workers either do not fully understand the benefits of pension contributions or perceive the system as complex and inaccessible.

Trust and confidence in pension management also play a crucial role. Obeng and Adu (2020) found that mistrust in SSNIT and concerns about the transparency of pension fund management discourage self-employed workers from enrolling in the scheme. Additionally, the bureaucratic processes involved in registration and contribution payments further complicate access for informal workers, who may find it challenging to navigate administrative procedures (Dorkenoo & Asante, 2021).

2.3 Adverse Effects of the Tier-1 Scheme on Self-Employed Informal Workers

Despite its goal of ensuring financial security, the Tier-1 pension scheme has raised concerns regarding its potential adverse effects on self-employed informal workers. One of the primary issues is the financial burden it imposes. Since contributions are deducted regardless of fluctuations in income, informal workers who earn inconsistently may struggle to make regular payments, which could reduce their disposable income and negatively impact their financial stability (Osei-Boateng & Ampratwum, 2019).

Another significant concern is the long-term sustainability of the scheme for informal sector workers. Unlike formal employees who benefit from employer contributions, self-employed workers must make full contributions themselves, making it less attractive (Aryeetey et al., 2017). This situation may discourage long-term participation and reduce the overall effectiveness of the scheme in providing adequate retirement security.

Furthermore, studies suggest that informal workers often prefer alternative saving mechanisms, such as informal rotating savings and credit associations (ROSCAs) or investing in assets like land and livestock, which they perceive as more reliable and accessible (Baah-Boateng, 2016). This preference for alternative financial security strategies further weakens the appeal of the Tier-1 scheme among self-employed individuals.

2.4 Policy Recommendations and Reform Strategies

Several scholars have proposed reforms to make the pension system more inclusive and effective for informal sector workers. Aryeetey et al. (2017) recommend introducing flexible contribution plans that align with the income patterns of informal workers, allowing them to contribute at their own pace. Kpessa (2011) suggests improving public education and awareness campaigns to enhance understanding and participation in pension schemes. Additionally, Obeng and Adu (2020) emphasise the need for greater transparency and efficiency in pension fund management to build trust and encourage more self-employed workers to enrol.

The literature highlights several challenges associated with the Tier-1 pension scheme for self-employed informal sector workers, including low participation rates, financial strain, administrative barriers, and trust issues. While the scheme aims to provide social protection, its design does not fully account for the unique financial realities of informal sector workers. Therefore, policy interventions such as flexible contribution models, improved financial literacy, and enhanced transparency are necessary to ensure the pension system effectively supports informal sector workers in Ghana.

3.0 METHODOLOGY

This chapter outlines the study's methodology, including the research design, population and sample selection, data collection methods, and analytical techniques. The study seeks to assess the adverse effects of the Tier-1 pension scheme on self-employed workers in Ghana's informal sector.

3.1 Research Design

This study adopts a **mixed-methods approach**, combining quantitative and qualitative research techniques. A descriptive research design is used to analyse the participation of informal sector workers in the Tier-1 scheme and the challenges they face. The qualitative component provides deeper insights into workers' perceptions and experiences, while the quantitative approach allows for statistical analysis of the extent of participation and its financial impact.

3.2 Population and Sampling

The target population consists of self-employed informal sector workers in urban and semi-urban areas of Ghana, particularly in major commercial hubs such as Accra, Kumasi, and Takoradi. These locations were chosen due to their high concentration of informal sector activities. The study employs a **stratified random sampling** technique to ensure representation across various occupational groups, including petty traders, artisans, small-scale manufacturers, and transport operators. A sample size of **300 respondents** is selected for the quantitative survey, while **20 in-depth interviews** are conducted with selected participants to gain qualitative insights.

3.3 Data Collection Methods

Two primary data collection methods are used:

Survey Questionnaire: This structured questionnaire collects quantitative data on workers' participation in the Tier-1 scheme, financial burdens, and reasons for non-enrollment. It includes both closed-ended and Likert-scale questions for easy statistical analysis.

Interviews and Focus Group Discussions (FGDs): Semi-structured interviews are conducted with selected informal sector workers to explore their perceptions, challenges, and coping mechanisms regarding pension contributions. Additionally, FGDs with small groups of participants provide further discussion on common concerns and policy recommendations. Secondary data is also obtained from reports by the *National Pensions Regulatory Authority (NPRO)*, *Social Security and National Insurance Trust (SSNIT)*, *International Labour Organization (ILO)*, and relevant academic literature.

3.4 Data Analysis Techniques

Quantitative Data Analysis: The survey data is analysed using **Statistical Package for the Social Sciences (SPSS)**. Descriptive statistics (percentages, means, and standard deviations) summarise responses. Chi-square tests and regression analysis assess relationships between variables such as income levels, participation rates, and financial burden.

Qualitative Data Analysis: Thematic analysis is used to identify patterns and key themes from interview responses and FGDs. Transcribed interviews are coded to highlight recurring themes related to barriers, perceptions, and adverse effects of the Tier-1 scheme.

3.5 Ethical Considerations

The study adheres to ethical research standards by ensuring **informed consent** from all participants. Confidentiality is maintained, and respondents are assured that their data will be used solely for academic purposes. Participants are given the option to withdraw from the study at any time.

This chapter has outlined the research design, data collection methods, and analytical techniques that will be used to examine the adverse effects of the Tier-1 scheme on self-employed informal sector workers in Ghana. The mixed-methods approach ensures a comprehensive understanding of statistical trends and personal experiences, providing a solid foundation for policy recommendations.

4.0 DATA ANALYSIS

Table 4.1: Spearman's rho correlation between participants, challenges and the various factors

Factors	Spearman's rho	Are you currently participating in SSNIT's tier-1 scheme?	Are there any specific challenges or barriers you face in enrolling or participating in the tier-1 scheme?
Institutional Factors	Correlation Coefficient	-.179**	-0.023
	P-value	0.000	0.522
Behavioural Factors	Correlation Coefficient	-.110**	-0.050
	P-value	0.002	0.154
Socioeconomic Factors	Correlation Coefficient	-.158**	-0.031
	P-value	0.000	0.384
Location	Correlation Coefficient	0.043	0.019
	P-value	0.229	0.592
Age (as at last birthday)	Correlation Coefficient	0.027	-.259**
	P-value	0.453	0.000
Sex	Correlation Coefficient	-0.030	.105**
	P-value	0.397	0.003
Highest Education Level	Correlation Coefficient	0.030	0.062
	P-value	0.391	0.082
Marital Status	Correlation Coefficient	-.125**	-.132**
	P-value	0.000	0.000
In which of the following categories does your workshop/shop/enterprise fall into?	Correlation Coefficient	0.068	-.084*
	P-value	0.054	0.018
Years of self-employment	Correlation Coefficient	0.067	-.239**
	P-value	0.059	0.000
Monthly income range	Correlation Coefficient	.305**	-.240**
	P-value	0.000	0.000
Are you currently participating in SSNIT's tier-1 scheme?	Correlation Coefficient	1.000	-.368**
	P-value		0.000
Are there any specific challenges or barriers you face in enrolling or participating in the tier-1 scheme?	Correlation Coefficient	-.368**	1.000
	P-value	0.000	
	N	800	800
**. Correlation is significant at the 0.01 level (2-tailed).			
*. Correlation is significant at the 0.05 level (2-tailed).			

Source: Estimation from field Data, 2022

Table 4.4 presents Spearman's rho correlation coefficients between participation in SSNIT's Tier-1 scheme, challenges faced by participants, and various factors such as institutional, behavioural, socioeconomic factors, demographic characteristics, and income levels. The table also includes the p-values to assess the significance of each correlation.

4.1 Key Observations from the Correlation Analysis

Institutional Factors: The correlation coefficient is -0.179 (p-value = 0.000), statistically significant at the 0.01 level. This indicates a moderate negative relationship between institutional factors and participation in the scheme. A higher value of institutional barriers (such as lack of

clarity, trust issues, or complexity in administration) is associated with a lower likelihood of participation. The correlation coefficient is -0.023 (p-value = 0.522), which is not statistically significant. This suggests that institutional factors do not have a meaningful direct correlation with the specific challenges faced by individuals in enrolling or participating in the scheme.

Behavioural Factors: The correlation coefficient is -0.110 (p-value = 0.002), statistically significant at 0.01. This indicates a weak negative relationship between behavioural factors (such as attitudes, perceptions, or willingness to save for retirement) and participation in the scheme. The correlation coefficient is -0.050 (p-value = 0.154), which is not statistically significant. This suggests that behavioural factors are not strongly related to the challenges experienced by participants.

Socioeconomic Factors: The correlation coefficient is -0.158 (p-value = 0.000), statistically significant at the 0.01 level. This indicates a moderate negative relationship between socioeconomic factors (such as income level, employment status, and education) and participation in the SSNIT Tier-1 scheme. The correlation coefficient is -0.031 (p-value = 0.384), which is not statistically significant. Socioeconomic factors do not appear to strongly influence the specific challenges faced in participation.

Location: The correlation coefficient is 0.043 (p-value = 0.229), which is not statistically significant. Location does not appear to correlate directly with participation in the SSNIT Tier-1 scheme. The correlation coefficient is 0.019 (p-value = 0.592), which is also not statistically significant. Location does not appear to significantly affect the challenges in participating in the scheme.

Age: The correlation coefficient is 0.027 (p-value = 0.453), which is not statistically significant. Age does not directly relate to participation in the SSNIT Tier-1 scheme. The correlation coefficient is -0.259 (p-value = 0.000), statistically significant at the 0.01 level. This indicates a moderate negative relationship, meaning that older participants face fewer challenges compared to younger participants when it comes to enrolling or participating in the scheme.

Sex: The correlation coefficient is -0.030 (p-value = 0.397), which is not statistically significant. Sex does not seem to influence participation in the SSNIT Tier-1 scheme significantly. The correlation coefficient is 0.105 (p-value = 0.003), statistically significant at 0.01. This suggests that females may experience more challenges than males in enrolling or participating in the SSNIT Tier-1 scheme.

Highest Education Level: The correlation coefficient is 0.030 (p-value = 0.391), which is not statistically significant. Education level does not appear to correlate strongly with scheme participation. The correlation coefficient is 0.062 (p-value = 0.082), which is not statistically significant. Education level does not seem to significantly affect the challenges faced by participants.

Marital Status: The correlation coefficient is -0.125 (p-value = 0.000), statistically significant at 0.01. This indicates a weak negative relationship, meaning married individuals are less likely to participate in the SSNIT Tier-1 scheme than single individuals. The correlation coefficient is -0.132 (p-value = 0.000), statistically significant at the 0.01 level. This suggests that married individuals face fewer challenges in enrolling or participating in the scheme than single individuals.

Category of Workshop/Shop/Enterprise: The correlation coefficient is 0.068 (p-value = 0.054), which is marginally significant. This suggests that the type of enterprise may have a weak influence on participation in the scheme. The correlation coefficient is -0.084 (p-value = 0.018), statistically significant at 0.05. This indicates that the type of enterprise may influence the specific challenges workers face in enrolling or participating in the scheme.

Years of Self-Employment: The correlation coefficient is 0.067 (p-value = 0.059), which is marginally significant. This suggests a weak positive correlation between the number of years in self-employment and participation in the scheme. The correlation coefficient is -0.239 (p-value = 0.000), statistically significant at the 0.01 level. This indicates that self-employed workers with more years of experience may face fewer challenges in enrolling or participating in the scheme.

Monthly Income Range: The correlation coefficient is 0.305 (p-value = 0.000), statistically significant at the 0.01 level. This indicates a moderate positive relationship, meaning higher monthly income is associated with greater participation in the SSNIT Tier-1 scheme. The

correlation coefficient is -0.240 (p-value = 0.000), statistically significant at the 0.01 level. This suggests that higher income is associated with fewer challenges in participating in the scheme.

Participation in SSNIT's Tier-1 Scheme and Challenges: -0.368 (p-value = 0.000). This significant negative correlation suggests that the more challenges or barriers a participant faces, the less likely they are to be enrolled in the SSNIT Tier-1 scheme.

Factors such as monthly income, marital status, and years of self-employment have a significant positive or negative relationship with participation, highlighting the financial stability and experience of self-employed workers as key determinants. Age also plays a role in participants' challenges, with younger workers encountering more obstacles.

Institutional, behavioural, and socioeconomic factors influence challenges in enrolling or participating in the SSNIT Tier-1 scheme, but these are not strongly related to the specific challenges faced. Demographic variables like sex, marital status, and years of self-employment significantly impact the difficulties faced by workers.

These findings suggest that interventions aimed at addressing the financial and institutional barriers, improving trust, and providing more flexibility may help increase participation in the SSNIT Tier-1 scheme while reducing the challenges self-employed workers face.

5.0 CONCLUSION

The participation of informal self-employed workers in Ghana's Tier-1 pension scheme remains significantly low, leaving many without financial security in their retirement years. This study has examined the barriers to participation, assessed the scheme's adverse effects on self-employed workers, and analysed a proposed model designed to improve their enrollment. The findings highlight key challenges, including irregular income, lack of awareness, mistrust in pension institutions, and administrative complexities, which discourage informal workers from joining the scheme.

The data analysis revealed that socioeconomic factors such as income level, marital status, and years of self-employment play a significant role in determining participation. Institutional and behavioural factors also contribute to the challenges faced by informal workers in accessing pension benefits. The study further demonstrated that younger self-employed individuals and those with lower income levels experience more significant obstacles in enrolling and maintaining contributions under the Tier-1 scheme.

To address these issues, the proposed model introduces flexibility in contribution schedules, simplified enrollment procedures, financial incentives, and enhanced awareness campaigns to encourage participation. This model can potentially improve pension coverage by aligning the pension system with the unique financial realities of informal sector workers, ensuring long-term financial security for a broader workforce segment.

In conclusion, expanding social security coverage for informal self-employed workers requires targeted interventions that combine policy reforms, financial education, and institutional trust-building. This study provides valuable insights for policymakers, SSNIT, and other stakeholders in designing a more inclusive and accessible pension system. Future research could explore the proposed model's implementation challenges and assess its long-term sustainability in improving pension participation rates among informal workers.

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