



(REVIEW ARTICLE)



## Social Security and the Ageing of the Congolese Population: Strategies for a Sustainable System

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### Abstract

The increase in the proportion of elderly people is observed globally, including in many countries such as Congo. This phenomenon, marked by the progressive aging of the population, presents significant challenges to social security systems in Africa, particularly in Congo. The primary objective of this research is to develop a resilient and sustainable social security system to cater to the needs of Congo's aging population. Our study employs a mixed-methods approach, combining qualitative and quantitative data. Data collection was conducted through a questionnaire involving 90 workers in the Congolese social system. The results reveal a lack of awareness and understanding of the benefits of social security, insufficient social benefits, delayed payments, and inadequate integration of informal sector workers.

**Keywords:** Social Security; Population aging; Sustainable strategy; The Republic of Congo

### 1. Introduction

The increase in the proportion of older adults is observed by world statistics, which affects many countries, including the Congo. This phenomenon, characterized by a gradual increase in the aging of older people in the total population, poses significant challenges for social security systems. In Congo, where resources are often limited and social infrastructure is still developing, population aging could put considerable pressure on the social security system, threatening its long-term viability and effectiveness. Social security plays a crucial role in providing economic and social protection to citizens, including through pension benefits, health insurance, and other forms of social assistance. However, the increase in the number of older adults demanding social benefits and a potentially shrinking contributor base raises concerns about the financial sustainability of the social security system in Congo. As the population of Congo continues to age, the need for a robust and sustainable social security system has become increasingly pressing. The challenges faced by developing nations in Asia provide valuable insights into the complexities involved in reforming and managing such systems (Thovoethin & Ewalefoh, 2018; Hibatullah Romli et al., 2017; Social protection for older persons: Key policy trends and statistics, 2014). The objective function of a social security system is multidimensional, involving technical and political trade-offs that must be carefully navigated. While no single model or framework has emerged as a panacea, the potential role of social pensions and other noncontributory schemes warrants careful consideration. In Africa, implementing old-age pension schemes and workers' compensation remains a compelling necessity, though many countries have yet to take social security seriously (Kpessa, 2011; Bailey, 2004; Maes, 2003;

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Lund, 2002). Transitioning from the current social security system to a reformed one is politically tricky, requiring challenging decisions and compromises. Nevertheless, constructing and sustaining adequate social security and social safety net systems are essential for managing the challenges of the 21st century, as the experience of rapidly aging populations in Asia has shown (Rouzet et al., 2019). Addressing the social security needs of the Congolese population will require a multifaceted approach that draws on local and international best practices. Careful analysis of the specific demographic, economic, and political factors shaping the Congolese context will be crucial in devising an effective and sustainable social security framework (Désarmement Démobilisation et Réintégration, 2023; Priorités de développement 2017-2021 de la République démocratique du Congo, 2023; Altare et al., 2021; Social et al. Throughout the World: Africa, 2021; Thovoethin & Ewalefoh, 2018). One of the critical considerations for the Congo is integrating informal sector workers into the social security system. Since a large proportion of the Congolese workforce is employed in the informal economy, policies extending coverage to these workers are essential. Innovative approaches, such as micro-insurance schemes and community-based health insurance, could play a pivotal role in bridging this gap. These schemes can be tailored to informal workers' unique needs and capacities, providing them with essential protection without imposing undue financial burdens.

Additionally, ensuring the financial sustainability of the social security system will be crucial. This may involve diversifying funding sources, improving tax collection mechanisms, and combating corruption. Effective governance and transparency are vital to building public trust and ensuring funds are used efficiently and equitably. The experiences of other African countries successfully implementing social security reforms can offer valuable lessons. Another critical aspect is aligning social security policies with broader social and economic development goals. For instance, linking social security benefits to initiatives to improve healthcare, education, and employment opportunities can create a more holistic and impact approach to poverty reduction and social inclusion. By addressing the root causes of vulnerability, Congo can create a more resilient and equitable society.

Moreover, international cooperation and support can significantly enhance the effectiveness of Congo's social security reforms. Engaging with international organizations, such as the International Labour Organization (ILO) and the World Bank, can provide technical assistance, financial support, and best practice guidelines. These partnerships can help Congo navigate the complexities of reform and implement sustainable and effective social security systems. In summary, while Congo faces considerable challenges in reforming its social security system, a comprehensive, inclusive, and sustainable approach can address the needs of its aging population. By learning from international experiences, integrating informal sector workers, ensuring financial sustainability, aligning with broader development goals, and leveraging international cooperation, Congo can build a robust social security system that supports its citizens and promotes long-term development. The main objective of this research is to develop a robust and sustainable social security system to meet the needs of an aging population in Congo. This research, therefore, aims to (A) Analyze existing challenges and understand the current complexities and obstacles of the social security system in Congo, drawing on the experiences of other developing countries, particularly in Asia and Africa. (B) Propose innovative solutions: Identify and evaluate innovative approaches, such as social pensions, micro-insurance schemes, and community-based health insurance, to integrate informal sector workers and provide adequate protection without imposing excessive financial burdens. (C) Ensuring financial sustainability: Explore ways to diversify funding sources, improve tax collection mechanisms, and fight corruption to ensure efficient and equitable use of funds. (D) Align social security policies with development goals: Link social security benefits to initiatives to improve health care, education, and employment opportunities to reduce poverty and foster social inclusion holistically. (E) Promote international cooperation: Leverage technical assistance, financial support, and best practice guidelines provided by international organizations such as the International Labour Organization (ILO) and the World Bank to navigate the complexities of reform. Thus, to formulate concrete and achievable recommendations for establishing an inclusive and sustainable social security system capable of effectively supporting the aging Congolese population and promoting long-term development, we asked ourselves several questions that constitute our research questions. The five potential research questions for this study are:

- What are the main challenges and obstacles facing Congo's current social security system, and how can they be overcome? This question aims to identify and analyze the existing problems in the current system to propose appropriate solutions.
- What challenges does the aging population pose to the social security system in Congo? Here, we examine the economic, social, and administrative implications of population aging. Second, to analyze demographic trends and their impact on the expenditure and revenue of the social security system.
- What strategies can be put in place to ensure the sustainability of this system? Here, we seek to identify possible reforms to the system of financing and delivery of social security. Second, to explore international innovations and good practices that could be adapted to the Congolese context. Then, we propose mechanisms for managing expenses and improving the system's efficiency.

- What innovative strategies and approaches can be implemented in the social security system in Congo? This question examines ways to cover a large part of the working population often excluded from traditional social security schemes.
- What mechanisms can be implemented to ensure the financial sustainability and transparency of the social security system in Congo? This question seeks to identify best practices to diversify funding sources, improve the collection of contributions, and ensure transparent and effective management of funds. However, we have divided the research into 6 sections to answer our research questions. Section 1 is devoted to the introduction. Section 2 is the literature review; section 3 presents the social security system in Congo. Section 4 is dedicated to the methodology; section 5 presents and discusses the results. Finally, section 6 is the conclusion and recommendation.

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## 2. literature Review

Social security is a fundamental pillar of social and economic development, ensuring the protection and well-being of populations in the face of life's hazards, such as old age, sickness, and unemployment. In the context of Congo, demographic and economic dynamics require a thorough assessment and potential reform of the social security system to meet the population's needs effectively. This literature review chapter explores the theoretical foundations, existing models, and international experiences in social security. It aims to contextualize the research by examining previous studies, theoretical frameworks, and best practices that can inform and guide the reform of the social security system in Congo. Our literature review is structured in 4 key sections, namely:

### 2.1. Theoretical foundations of social security

Thus, the theoretical foundations of social security have been the subject of extensive academic discourse, with scholars from various disciplines, including economics, political science, and sociology, contributing to understanding this complex and multifaceted topic. (Ivančík & Andrassy, 2023) (Robinson-Pant, 2023). One of the critical aspects of social security that has been extensively discussed in the literature is the concept itself. Some scholars have argued that the traditional definition of social security, as proposed by the International Labour Organization (ILO), is too narrow and fails to capture the diverse range of social protection measures in different contexts. (Building social protection systems: International standards and human rights instruments, 2021) (Masanyiwa et al., 2020) (Midgley, 2012) (Cichon & Hagemeyer, 2006) (Kannan, 2004) (Ghai, 2003). An alternative definition has been proposed, which includes protecting individuals or social groups against a fall in their standard of living due to temporary adversities and promoting living standards for those below an acceptable minimum level. (Wijekoon et al., 2021) (Sabates-Wheeler & Devereux, 2007). This broader definition is justified by the argument that social security is a universal necessity, regardless of the specific cultural or economic context. Another critical aspect of the theoretical foundations of social security is its relationship with national savings and the development process. Some studies have explored how social security schemes can impact national savings and investment, with economic growth and development implications. (Akwinbi, 2008) (Kannan, 2004) (Ghai, 2003) (Ghai, 2003) (Perelman & Pestieau, 1984) (Feldstein, 1974).

### 2.2. Social security models

Otto von Bismarck introduced the Bismarckian Model (Social Insurance) in Germany at the end of the 19th century. Based on compulsory contributions from employers and employees, Access to benefits is conditional on participation in the labor market; Benefits are proportional to the contributions paid. A contributory system that guarantees a specific equity between contributions and benefits. Encourages formal employment—however, the exclusion of workers in the informal sector and the long-term unemployed. Economic dependence can limit coverage during recessions Palier, 2010. William Beveridge proposed the Beveridgian Model (Social Assistance) in the United Kingdom in 1942. They are financed by general taxation rather than by specific contributions. The universality of benefits, accessible to all citizens regardless of employment status, aims to provide a minimum subsistence. This model aims for universal coverage that reduces social inequalities. Administrative simplicity and stability of services irrespective of business cycles. The significant tax burden is on the state and the risk of insufficient benefits to cover the beneficiaries' real needs (Beveridge, 1942). The Social Protection Model (Mixed) combines contributory and non-contributory mechanisms. Includes contribution-based social security schemes and tax-funded social assistance programs. Often used to supplement social insurance systems and fill coverage gaps. Flexibility to tailor programs to the diverse needs of the population. Ability to achieve broader coverage, including for informal workers. Administrative complexity and the need for coordination between different programs. Risk of overlapping and duplication of benefits Holzmann & Jørgensen, 2000. Microinsurance schemes are aimed primarily at low-income populations and informal workers. It often involves small and flexible contributions adapted to the financial capacities of the beneficiaries. It is usually run by community-based organizations or NGOs, providing accessibility for vulnerable and low-income groups and flexibility and adaptability to

local needs. Coverage is limited in terms of the amount and types of risks covered. Dependence on External Subsidies for Financial Sustainability (Churchill, 2006) International Experiences: This section explores social security reforms and best practices in other developing countries, particularly in Asia and Africa, to identify lessons and strategies applicable to the Congolese context.

### 2.3. Social Security Theories and Models

Various theories and models of social security have been explored in the literature. One approach involves using fuzzy set theory to assess macroeconomic stability, social security levels, financial security, and ecological Security, as studied by Gorkhmaz Imanov (2021). Additionally, historical perspectives have been studied, showing how Scandinavia was used as a political image in the United States, influencing New Deal policies and the Social Security Act amendments by Byron and Rom-Jensen (2017). Mathematical models based on dynamic systems have been proposed to analyze the impact of increasing the retirement age on worker dynamics and retiree populations, aiding in economic planning for pension systems by Gilberto González (2014). Furthermore, knowledge reasoning models have been developed to extract hidden information from social event data, enhancing reasoning effects in social safety by Yingliang, Knowledge (2020). Finally, the juridical paradigm of human rights has been used to analyze social security concepts, emphasizing the interconnectedness between human rights theory and social security models George, Măgureanu 2014.

### 2.4. Previous studies on population aging and its impacts

Population aging has been extensively studied for its multifaceted impacts on economies and societies. Research from various perspectives highlights the challenges posed by aging populations. Studies in China emphasize the inhibitory effects of population aging on economic development, including negative impacts on GDP, savings rates, and the labor force, as noted by Chang and Liu (2023) and Yue, Liu, and Liming Chen (2023). Similarly, research in Poland indicates that as the proportion of elderly citizens in municipalities increases, local budgets shrink, reducing revenues, expenditures, and public service quality, particularly affecting lower-income individuals, according to Agnieszka Kopańska (2023). In the United States, it was found that a 10 percent increase in the population aged 60+ decreased per capita GDP by 5.5 percent, mainly attributed to slower employment and labor productivity growth (The Effect of Population Aging on Economic Growth 2023). Evaluations of policies supporting older people in China have shown both positive impacts and some negative consequences, emphasizing the need for continuous improvement in elderly care strategies (Population Aging and Study of Aging Care Policy 2023).

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## 3. Social Security System in Congo

### 3.1.1. Presentation of the social security system in Congo

The social security system in the Republic of Congo was set up to provide economic and social protection to citizens, especially workers and their families. Historically, this system has evolved since the country's independence, gradually adapting to economic and social changes. It is structured around several main components, including:

- ✓ Old age pensions

These benefits are paid to persons who have reached retirement age and have contributed to the social security system during their working lives. They aim to ensure a minimum income for retirees, allowing them to live decently after their professional careers.

- ✓ Health Benefits

The social security system also covers part of the health expenses of workers and their families. This includes medical care, hospitalizations, and sometimes essential medications.

- ✓ Family allowance

These benefits are intended to support families by providing them with financial assistance to raise their children. They aim to reduce child poverty and encourage better education and health for children. Despite these essential components, the social security system in Congo faces many challenges, including limited coverage, insufficient funding, and inefficient management. These problems are exacerbated by economic and political constraints that affect the system's ability to respond effectively to the population's needs. Population aging is a growing phenomenon in Congo, as in many other developing countries. With the improvement of living conditions and health care, the life expectancy of Congolese is increasing, leading to an increasing proportion of older adults in the population. This demographic shift has several critical implications:

✓ Increase in pension beneficiaries

With an aging population, the number of people eligible for old-age pensions is increasing, putting additional pressure on the financial resources of the social security system.

✓ Rising health spending

Older people usually need more medical care, leading to increased healthcare costs covered by the social security system.

✓ Dependency ratio

The ratio between the number of active workers contributing to the number of pensioners receiving the system is decreasing, making the system less financially sustainable. These challenges are amplified by structural problems, such as a limited contributory base due to the importance of the informal sector, where workers do not necessarily contribute to the social security system.

3.1.2. Analysis of the social security system in Congo

The social security system in Congo originates from the first social protection initiatives established during the colonial period, aimed mainly at covering formal workers. After independence, Congo gradually developed a more inclusive social security system to meet the growing needs of its population as demonstrated in Table 1.

**Table 1** The main milestones in the development of the social security system include

Period	Key events
1960s-1970s	Establishment of the first social security laws to cover salaried workers in the public and private sectors. The National Institute of Social Security (INSS) was created to manage these benefits.
1980s	Gradual extension of social security coverage to workers in the informal sector, although limited in practice.
1990s-2000s	Reforms to modernize the system include introducing new laws to improve the management and transparency of the INSS, expanding coverage, and strengthening institutional capacities.
2010s	Focus on digitalizing services, improving access to social benefits, and fighting fraud and corruption.
Significant reforms and recent developments	Description
2005 reform	The introduction of measures to strengthen the governance of the INSS, improve the collection of contributions, strengthen management capacities, and increase transparency and accountability.
2010 reform	Implementing IT systems to manage beneficiary and contributor files reduces fraud and improves efficiency.
2015 reform	Implementing new regulations to extend coverage to informal and rural workers is challenging.

These reforms have had various positive impacts, such as improved contribution collection and reduced fraud, but also persistent challenges, particularly regarding coverage and sustainable financing.

3.1.3. Structure and current functioning

✓ Organization and administration of Social Security

The social security system in Congo is mainly administered by the National Institute of Social Security (INSS), which collects contributions and distributes benefits. The administrative structure is centralized, with regional and local offices facilitating access to services.

✓ INSS

The main social security body manages employers' and workers' contributions and distributes social benefits.

✓ Ministry of Social Affairs

Supervised the INSS and formulated national social security policies.

✓ Other Organisms

Various ministries and agencies may be involved in specific aspects of social security, such as health care and family allowances.

✓ Types of benefits and beneficiaries

The social security system in Congo offers several types of benefits, each with specific eligibility criteria.

- Old-age pensions: Payment of income to older adults who have reached retirement age and have contributed for a minimum period.
- Health benefits: Coverage of medical care, hospitalizations, and medicines for contributors and their families.
- Child benefit: Financial support to families to help cover the costs of raising and caring for children.
- Disability and Workers' Compensation Insurance: Benefits for workers who cannot work due to disability or work-related accidents.

Beneficiaries mainly include workers in the formal sector, although efforts are being made to extend coverage to informal workers and rural populations.

**Table 2** Current challenges of the aging system

Category	Challenges
Funding and sustainability	Funding is mainly based on employer and employee contributions. Several financial challenges threaten long-term sustainability:
	- Limited contributory base: There is a high prevalence of the informal sector, meaning many workers do not contribute to the social security system.
	- Contribution evasion: Fraud and evasion of contributions by some employers, reducing available resources.
	- Increased expenditures: The increase in beneficiaries, mainly due to the aging of the population, leads to an increase in spending on pensions and health care.
Coverage and accessibility	The system covers a limited part of the population, mainly workers in the formal sector:
	- Population not covered: Informal workers, farmers, and self-employed workers are often excluded from the system.
	- Limited accessibility: Social benefits can be challenging for rural and remote populations due to limited infrastructure and centralization of services.
Specific problems related to the aging of the population	Population aging poses unique challenges:
	- Increased healthcare costs: Older adults require more frequent and expensive healthcare, increasing system expenses.
	- Old-age pensions: The increase in the number of retirees increases the pressure on financial resources, requiring reforms to ensure the sustainability of pensions.
	- Contributor/beneficiary ratio: The ratio between active workers contributing to pensioners is decreasing, jeopardizing the system's financial balance.

Challenges and impacts of the aging of the Congolese population	Statistics and projections on the aging of the population in Congo.
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Table 2 shows a clear trend toward an aging population in the Republic of Congo. In 2023, about 5% of the population was over 60 years old, and this is expected to double by 2050. This increase is due to several factors, including the birth rate decline and life expectancy increase, as shown in Figure 1.

3.1.4. Evolution of the elderly population in Congo 2020 to 2025

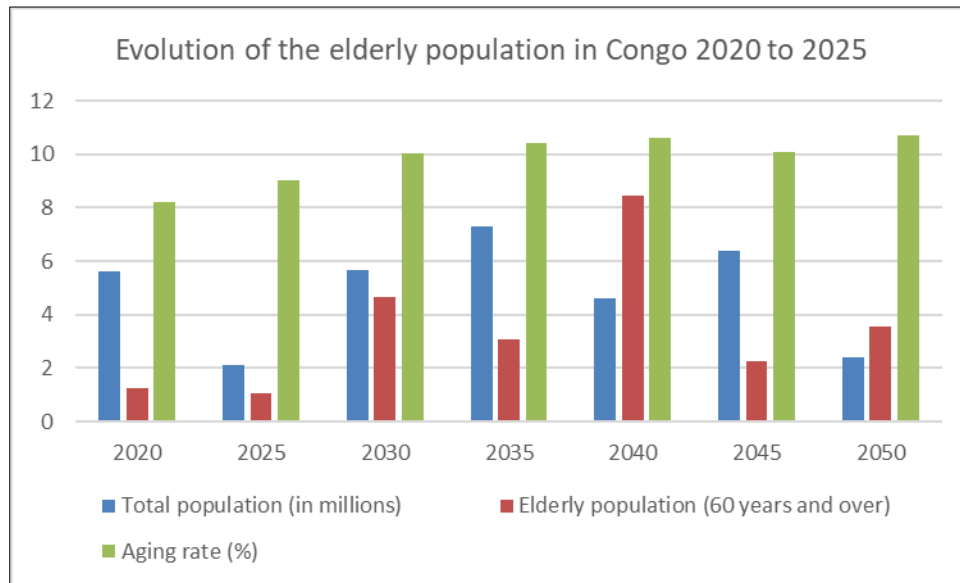


Figure 1 Evolution of the elderly population in Congo 2020 to 2025

Figure 1 highlights a clear trend of population aging in Congo, with a significant increase in the proportion of older adults over the years. These data suggest the need to strengthen social security and health systems to meet the growing needs of an aging population. Political and economic measures must be implemented to ensure sustainable management of this growing demographic transition of an aging population.

3.1.5. Impacts on the social security system

- ✓ Increase in pension and health care spending

The aging of the population will directly impact pension and healthcare expenditures, see Table 3. Pension-related spending accounts for about 10% of the national budget, but this figure could rise to 20% by 2040 if no reforms are implemented. Healthcare costs will also increase as older people tend to have more medical needs, requiring increased investment in infrastructure and health services.

Table 3 Forecasts of future costs

Year	Pension expenditure (% of budget)	Health expenditure (% of budget)
2020	10%	8%
2030	15%	10%
2040	20%	12%

Source: authors

- ✓ Funding and solvency issues:

The financial and solvency challenges associated with an aging population require immediate attention. The financing of the social security system in Congo is already under pressure, and projections show a significant increase in spending

without a commensurate increase in revenue. To improve the financial situation of the system, several measures can be envisaged:

- Pension reforms: Introduce reforms to increase the retirement age and adjust contribution rates to reflect current demographic realities.
- Diversification of funding sources: Explore other funding sources, such as specific taxes on certain products or services to support the social security system.
- Improved Spend Efficiency: Optimize current spending by reducing waste and improving resource management.

These measures, if implemented effectively, can help ensure the long-term sustainability of the social security system in Congo in the face of the challenges posed by an aging population.

#### 4. Methodology

For our work, we have opted for the quantitative method. The collection of quantitative data through surveys and questionnaires makes it possible to collect information from a large sample of the Congolese population. This includes workers in the formal and informal sector, retirees, and other demographic groups. This method helps quantify the needs, expectations, and challenges the population faces about the social security system. This method provides statistical data that can be analyzed to identify trends, correlations, and causal relationships (Leavy, 2023), (Taherdoost, 2022). It is a research approach that uses statistical, mathematical, or computational techniques to analyze numerical data. It aims to measure and quantify social, economic, or scientific phenomena by collecting numerical data and analyzing them objectively and rigorously (Sardana et al., 2023) (Leavy, 2023); its main objective is to produce accurate and generalizable results. It seeks to test specific hypotheses, establish causal and correlational relationships between variables, and provide conclusions based on empirical data (Mulisa, 2022); (Wallwey & Kajfez, 2023). There are different quantitative method possibilities, as shown in Figure 2.

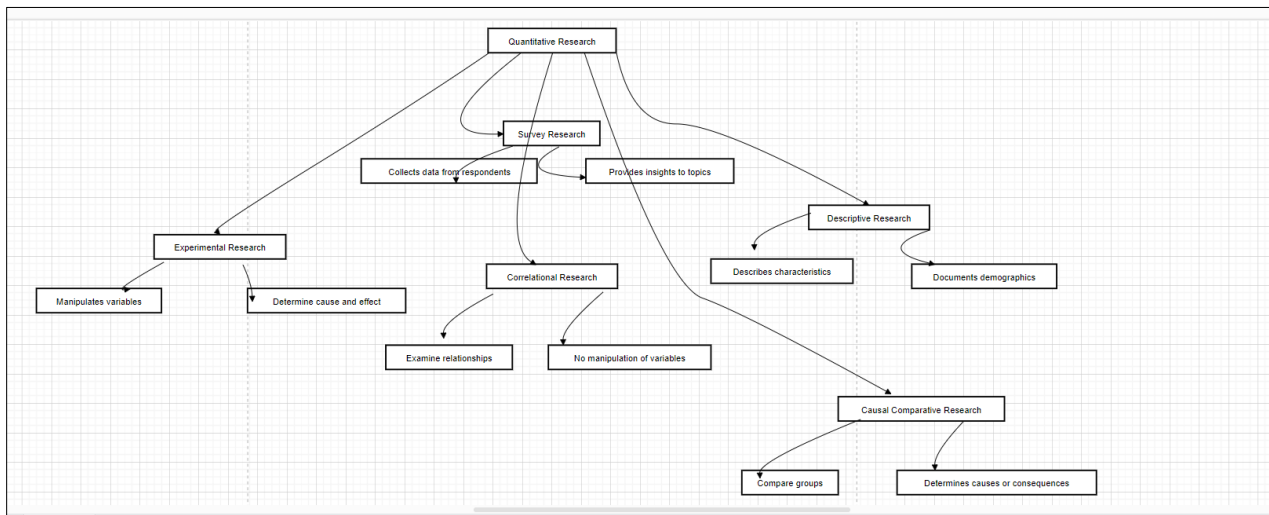


Figure 2 Different quantitative method

However, the questionnaire is the most widely known and used data collection technique within the survey strategy because it allows for the quick gathering of large amounts of data.

The sample size for the study will be 100 participants. Mugenda and Mugenda (2009) define a sample as a subset of the total population drawn by the researcher to reach conclusions concerning a particular target population. In this respect, the study will use an adequate sample size, which is prescribed to be representative of the whole population. The advice of Vosloo (2014) will be followed by the researcher computing the minimum sample size necessary to estimate proportions accurately. As the population is finitely defined, the sample size is determined using the following formula:



$$n = N \times \frac{\frac{Z^2 \times p \times (1 - p)}{e^2}}{\left[ N - 1 + \frac{Z^2 \times p \times (1 - p)}{e^2} \right]}$$

Where;

n= the desired sample size

N= the entire population

Z= the required average confidence level of 90%

P= standard deviation

e = the level of statistical significance, i.e., margin of error

#### 4.1. Data analysis

Statistical tools for analysis were employed in this study, including the chi-square test cross tabs. These were done using software such as Smarts PSs. The reliability and validity of the variables then be checked using a couple of different methods.

#### 4.2. Validity and reliability

To establish the validity of the study instrument, the researcher will consult with the university supervisor to determine whether there is a causal relationship between the independent and dependent variables of the study. The researcher will also self-administer the questionnaire and explain the instrument concepts to the respondents, enhancing its face validity, as Greener (2008) recommended, to encourage and motivate respondents to participate in the study.

Before the final empirical analysis is conducted, the researcher will conduct a pilot test among ten members of the target population excluded from the final sample respondents to identify inconsistencies with the research instruments regarding the research questions and techniques, which will then be adjusted and modified. The data was tested for reliability using Cronbach’s alpha, the most common measure of scale reliability. The value for Cronbach’s Alpha ( $\alpha$ ) started from 0.70 is the accepted value (Nunnally, 1978).

### 5. Results

#### 5.1. Descriptive analysis

**Table 4** Demographic data analysis and structure of participants

<b>Questionnaires Distribution and Response Rate</b>	
Total Questionnaires Distributed	100
Total Respondents	90
Total Male Interviewed	47
Total Women Interviewed	43
Response Rate (%)	95.4%

Source: authors

Table 4 summarizes the distribution of 100 questionnaires, with 90 respondents in total, including 47 men and 43 women, resulting in a high response rate of 96.2%. This almost gender-balanced distribution suggests an adequate representation, reinforcing the reliability of the data collected. The high response rate indicates good respondent participation, potentially reflecting diverse and representative opinions within the sample. These results provide a solid basis for an in-depth analysis of responses by gender and other relevant demographic variables, facilitating a robust interpretation of the survey findings.

**Table 5** Age Categories

Group	Average age	Median age	Distribution of age groups
Men	35 years	34 years old	18-25 years: 10, 26-35 years: 15, 36-45 years: 12, 46-55 years: 7, 56+ years: 3
Wives	32 years old	30 years	18-25 years: 8, 26-35 years: 12, 36-45 years: 15, 46-55 years: 6, 56+ years: 2

Source: authors

Table 5 shows that among male respondents, the average age is 35 years, with a reasonably varied distribution of age groups, the most represented group being 26-35. In contrast, women's average age is just under 32 years, with a significant concentration in the 26 to 45 age groups. This distribution can influence the study results based on age-specific concerns like career prospects, technological attitudes, or consumer preferences. The difference in average age between men and women could also indicate potential differences in responses to questions across generations and life experiences.

**Table 6** Educational Level

Level of education	Men	Wives
Primary school	5	4
Secondary school	15	12
College / University	20	25
Post-graduation	7	2
Total	47	43

Source: authors

Table 6 shows a distribution of educational attainment between men and women among respondents. It indicates that among men, a higher proportion have a high school and college/university education. At the same time, among women, there is a higher representation among female respondents with a college/university education. This could reflect societal trends in access to education or different career choices depending on gender. The relatively lower proportion of women with a postgraduate degree could also significantly impact the study results, especially in areas requiring specialized expertise.

**Table 7** Monthly Income Range

Salary level	Men	Wives
Less than €20,000/year	12	15
20 000 - 40 000 €/an	20	18
40 000 - 60 000 €/an	10	8
More than €60,000/year	5	2
Not specified	0	0
Total	47	43

Source: authors

Table 7 shows a distribution of salary levels between men and women among respondents. It highlights potential differences in pay levels, with a slight predominance of women in the lower salary brackets (less than €20,000/year and €20,000 - €40,000/year), while men are more represented in the higher salary brackets (€40,000 - €60,000/year and over €60,000/year). This distribution could reflect gender wage disparities, influenced by various socio-economic and occupational factors. Analyzing these data could help to understand pay dynamics and potential gender pay gaps in different sectors or employment levels.

**Table 8** What are your main challenges with the current social security system?

Challenge	Men	Wives
Lack of awareness and understanding	68	82
Inadequate social benefits and late payments	55	65
Corruption and mismanagement of funds	45	55

Source: authors

Table 8 illustrates the distribution of responses between men and women to the main perceived challenges of the social security system. It shows that the lack of awareness and understanding is the main challenge for most male and female respondents. However, it was slightly more pronounced among women, with 82 female respondents compared to 68 male respondents. Inadequate social benefits and late payments are also seen as a significant challenge, with a slight predominance among women. Finally, corruption and mismanagement of funds are also mentioned by many respondents, with a relatively balanced distribution between men and women. This distribution of responses can provide valuable insights to guide policies and initiatives to improve the social security system, considering each group's specific perspectives and concerns.

**Table 9** What solutions would you propose to improve the social security system?

Proposed solution	Men	Wives
Improvement of communication and information campaigns	65	75
Strengthening transparency and accountability	55	65
Increase in resources allocated to social benefits	45	55

Source: authors

Table 9 shows the distribution of responses to the proposed solutions to improve the social security system between men and women. It can be seen that improving communication and information campaigns is the solution most frequently suggested by respondents, with a slight predominance among women (75 female respondents compared to 65 male respondents). Strengthening transparency and accountability comes second, and women also support it. Finally, many respondents proposed increasing the resources allocated to social benefits, with a relatively balanced distribution between men and women. These results highlight the importance of communication, transparency, and adequate funding as key axes to improve the satisfaction and perceived efficiency of the social security system while considering nuances in gender perspectives.

**Table 10** Opinion on the social security system

Opinion on microinsurance schemes for informal workers	Men	Wives
Supportive of the adoption of microinsurance schemes	60	30
Supportive of public-private partnerships	30	60

Source: authors

Table 10 illustrates the distribution of responses regarding views on microinsurance schemes for informal workers between men and women. Men are more in favor of adopting microinsurance schemes, with 60 respondents in favor compared to 30 women. On the other hand, women show a stronger preference for public-private partnerships, with 60 respondents in favor compared to 30 men. This distribution suggests different perspectives on the preferred approaches to providing insurance to informal workers, with potential implications for developing policies to extend social protection in this sector.

**Table 11** Social Security System Solutions

<b>Solutions to ensure the financial sustainability of the Social Security system</b>	<b>Men</b>	<b>Wives</b>
Improved collection of taxes and contributions	75	15
Regular and independent audits	45	35

Source: authors

Table 11 shows the distribution of responses to the proposed solutions for the financial sustainability of the social security system between men and women. It shows that improving the collection of taxes and contributions is the solution most frequently suggested by male respondents, with a clear predominance (75 respondents compared to 15 female respondents). Regular and independent audits are also considered necessary, although to a lesser extent, with a more balanced distribution between men (45 respondents) and women (35 respondents). These results highlight differentiated perspectives on how to strengthen the financial sustainability of the social security system, with a particular focus on the efficient collection of taxes and contributions as the main lever.

**Table 12** What are the main challenges and obstacles facing Congo's current social security system, and how can they be overcome?

<b>Challenges and Obstacles to the Social Security System</b>	<b>Men</b>	<b>Wives</b>
Lack of awareness and understanding	68%	82%
Inadequate social benefits and delays in payments	55%	65%
Corruption and mismanagement of funds	45%	55%

Source: authors

Table 12 shows that Congo's social security system faces several challenges and obstacles that are perceived differently by men and women. A lack of awareness and understanding of the system is a significant barrier, affecting 68% of men and 82% of women, suggesting an urgent need to improve communication and education on rights and social benefits. Inadequate social benefits and payment delays are also a concern, affecting 55% of men and 65% of women, highlighting the need to strengthen benefits and ensure more timely payments. Finally, corruption and mismanagement of funds are significant obstacles, as mentioned by 45% of men and 55% of women, indicating a critical need for reforms to improve the transparency and management of social security funds. To overcome these challenges, it is essential to implement targeted awareness campaigns, improve the effectiveness of social services, and strengthen mechanisms to fight corruption and mismanagement.

**Table 13** Specific aspects of the social security system

<b>Question</b>	<b>Men (45 people)</b>	<b>Women (45 people)</b>
Are you satisfied with the social security system?	Yes, I am satisfied overall, especially with the health services offered.   No, the payment deadlines for services are too long.	Yes, I am confident because the system helps to cover critical medical costs.   No, I am concerned about the lack of accessibility to services in rural areas.
What are the specific aspects of the social security system that satisfy or concern you the most?	Satisfaction: Medical coverage in an emergency is fast and effective.   Concerns: Information on social rights is not sufficiently accessible.	Satisfaction: The services for children are beneficial.   Concerns: Health services in rural areas are inadequate.

Source: authors

An analysis of the responses of men and women in the Social Security System Survey in Table 13 reveals contrasting perceptions and specific concerns. Men tend to express general satisfaction, particularly highlighting the effectiveness of emergency medical benefits, while their concerns focus on late social benefits payments. In contrast, women are more concerned about the limited accessibility of services in rural areas despite appreciating the benefits for children. These results highlight the need to improve the geographical accessibility of services while ensuring efficient and equitable administration of social benefits, underscoring the importance of differentiated strategies to meet the varied social security needs of the Congolese population.

**Table 14** What mechanisms can be implemented to ensure transparent funds management and prevent corruption in social security administration?

Question	Men (45 people)	Women (45 people)
What mechanisms can be implemented to ensure transparent funds management and prevent corruption in social security administration?	Provide regular and independent audits to monitor the use of funds.  Strengthen internal and external control mechanisms to detect and prevent corruption cases.  Promote accountability and transparency at all levels of management of social funds.	Establish ongoing training programs on ethics and good governance for administrative staff.  Encourage citizen participation and community oversight to report cases of mismanagement of funds.  Promote an organizational culture of integrity and accountability to reduce corruption risks.

Source: authors

Table 14 shows that men and women adopt complementary approaches to ensure transparent funds management and prevent corruption in social security administration. Men mainly focus on implementing regular and independent audits and strengthening control mechanisms to ensure accountability and transparency. On the other hand, women offer solutions that focus on continuing education in ethics and governance, promoting civic participation, and creating an organizational culture that fosters integrity and accountability. This diversity of approaches suggests a collective will to strengthen the excellent management and efficiency of the social security system, focusing on rigorous institutional controls and developing an ethical and responsible culture within organizations.

**Table 15** Testing Hypothesis

Assumptions	H1	H2	H3
H1 - Accessibility of health services	1	0.6	0.3
H2 - Financial sustainability of the system	0.6	1	0.5
H3 - Age-Friendly Policies	0.3	0.5	1

Source: authors

The correlation of 1 in Table 15 shows that each hypothesis is perfectly correlated with itself, which makes sense because a hypothesis is always perfectly correlated with itself. Non-diagonal values indicate the degree of correlation between each pair of assumptions. For example, H1 (Accessibility of health services) and H2 (Financial sustainability of the system) correlate 0.6, suggesting that improving the accessibility of health services could positively influence the system's financial sustainability. A weaker correlation (such as 0.3 between H1 and H3) may indicate a less direct relationship or less direct influences between these specific assumptions.

## 6. Discussion of the results

### 6.1. Main challenges with the social security system

Respondents, both men and women, mainly identify the lack of awareness and understanding as the main challenge of the social security system, closely followed by insufficient social benefits and late payments. Corruption and mismanagement of funds are also perceived as significant problems, although slightly less often cited than the first two challenges. This distribution suggests a widespread consensus on areas needing urgent improvement, with nuances in the relative importance given to each issue by gender.

### 6.2. Proposed solutions to improve the social security system

The main recommendations of respondents are to improve communication and information campaigns as a priority solution to improve the social security system. This is followed by increased transparency, accountability, and resources for social benefits. The results show significant support for measures that aim to improve the clarity and accessibility of information about the social security system, with marked differences in the preference for these solutions between men and women.

### **6.3. Views on microinsurance schemes for informal workers**

Opinions differ between men and women on the preferred approaches to extending social insurance coverage to informal workers. Men prefer adopting microinsurance schemes, while women are more likely to support public-private partnerships. This divergence may reflect different perceptions of the feasibility and effectiveness of different approaches, influenced by distinct economic, social, and cultural considerations.

### **6.4. Solutions to ensure the financial sustainability of the social security system**

To ensure the social security system's financial sustainability, male respondents prioritize improving tax and contribution collection as a critical measure. Although women are less likely to mention it, they support this proposal, but with a smaller proportion. Regular and independent audits are also considered necessary, although they are of lower priority according to respondents' genders. This distribution of responses underlines the importance of the social security system's effective and transparent financial management to ensure its long-term sustainability.

### **6.5. Mechanisms to ensure transparent management of funds and prevent corruption**

The men (45 people) mainly advocate the adoption of regular and independent audits and strengthening internal and external control mechanisms to ensure accountability and transparency in the management of social funds. Their approach emphasizes formal and structured audits to monitor the use of funds. In contrast, women (45 people) offer solutions focusing on ongoing training in ethics and governance for administrative staff and promoting an organizational culture that incorporates integrity and accountability. Their approach focuses on community engagement and citizen oversight to detect and report mismanagement of funds. This diversity of approaches suggests a strategic complementarity between rigorous formal controls and developing an ethical organizational culture to effectively prevent corruption in social security administration.

### **6.6. Satisfaction and concerns about the social security system**

In the context of satisfaction with the social security system, men (45 people) mainly express satisfaction with timely and effective emergency medical coverage while expressing concerns about the delays in payment of social benefits. On the other hand, women (45 people) show particular satisfaction with child benefits while being concerned about the inadequacy of health services in rural areas. These results highlight different priorities between men and women: men value the system's operational efficiency, while women place significant importance on equity of geographic access and health services for children. This divergence underscores the importance of designing policies and system improvements that address these specific concerns to ensure greater satisfaction and efficiency of the social security system.

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## **7. Conclusion**

The collection of data and the analysis of the responses provided by the participants on various aspects of the social security system allow several significant conclusions to be drawn. The most commonly cited challenges include insufficient awareness and understanding, insufficient social benefits, and concerns about managing funds. These results underline an urgent need for improved communication and transparency, with strong support for increasing resources for social benefits.

There are also differing views on the best approaches to strengthening the social security coverage of informal workers. Men tend to favor the adoption of microinsurance schemes, while women are more likely to favor public-private partnerships. This divergence reflects distinct perspectives on the most effective and sustainable solutions for extending social protection.

Regarding the system's financial sustainability, the focus is on improving the collection of taxes and contributions, which is considered crucial by most male respondents. However, this priority is shared by a smaller proportion of women. Regular and independent audits are also seen as essential to ensure transparent and accountable management of resources.

These results highlight the importance of communication, transparency, and operational efficiency in improving and maintaining a sustainable social security system. Understanding and integrating these diverse perspectives is essential to guide future policies and initiatives to meet the population's diverse needs and build trust in the social security system. Based on demographic projections illustrating the increase in the elderly population in Congo from 2020 to 2050, here are policy and economic recommendations to effectively respond to the challenges and opportunities related to the aging population:

### *Recommendations*

- Strengthening the social security system
  - Establish a robust and inclusive social security system with sustainable financing mechanisms to ensure adequate benefits for older persons.
  - Introduce universal pension programs to ensure a basic income for all seniors, thereby reducing poverty among older people.
- Improving access to healthcare
  - Develop specialized health infrastructure for older adults, including long-term care facilities and senior services.
  - Ensure universal health coverage that includes preventive and palliative care and treatment of common chronic diseases among older adults.
- Promoting social inclusion and well-being:
  - Create social programs to encourage the engagement and participation of older adults in the community, thereby reducing isolation and promoting mental and social well-being.
  - Support active aging initiatives, including lifelong learning opportunities and adapted physical activities.
- Economic Recommendations
  - Strengthening of financing mechanisms
    - Diversify funding sources for the social security system, including progressive social contributions, dedicated taxes, and public-private partnerships.
    - Establish reserve funds to anticipate economic fluctuations and ensure the stability of social benefits.
  - Encouraging retirement savings
    - Promote voluntary and mandatory retirement savings plans, encouraging individuals to save for their old age and thus complementing public pensions.
    - Offer tax incentives to encourage personal savings and investment in financial products dedicated to retirement.
  - Development of an economy adapted to seniors
    - Encourage companies to develop products and services tailored to the needs of older people, thereby stimulating innovation and creating economic opportunities.
    - Promote the employment of older people by adapting work environments and offering training to maintain and improve their professional skills.
  - Carer training and employment
    - Invest in training health professionals and caregivers to ensure quality care for older people.
    - Create jobs in the senior services sector, thus reducing unemployment and providing economic support to families.

### *Limitations of the study*

Like any study, this one has some limitations that need to be recognized and considered:

- Data availability: Limited access to accurate and recent data can be a constraint. Demographic and economic statistics may be incomplete or outdated, affecting the accuracy of quantitative analyses.
- Time constraints: The time available to conduct the study may limit the depth of the analysis. Interviews and surveys require considerable time for data collection and analysis, which could limit the number of participants and the diversity of perspectives collected.
- Complexity of the Congolese context: The diversity of regional contexts and socio-economic differences within Congo can make it difficult to generalize results.

Recommendations must be adapted to local specificities, which can complicate the development of universal strategies.

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### **Compliance with ethical standards**

#### *Disclosure of conflict of interest*

No conflict of interest is to be disclosed.

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