

Pension Patterns in Sub-Saharan Africa

Mark Dorfman



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Abstract: This report provides an initial stocktaking of the characteristics, environment and performance of public and private pensions and elderly assistance programs in Sub-Saharan Africa. It identifies key challenges and suggests reform options for consideration. Considerations for future work and principles for pension policies are also suggested. Two major challenges noted in the report are the need to increase coverage of the labor force by pensions and social insurance schemes, and to increase the proportion of poor elderly covered by social assistance. The report suggests that improving coverage will require a number of parametric reforms to existing contributory schemes, strengthening institutions to serve informal sector workers, and piloting new design options. The report also proposes other parametric reforms, including the harmonization or merger of civil service and national pension schemes. A process of country assessments is suggested, including actuarial projections for existing schemes. Finally, the report recommends principles to consider for reform, including measures to improve coverage, protect the elderly poor, and better align pension design with needs and enabling conditions, including the needs of rural and informal sector workers.

Keywords: Social protection, social assistance, social insurance, pension

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Abbreviations

DB	Defined Benefit
DC	Defined Contribution
FDC	Funded Defined Contribution
GDP	Gross Domestic Product
PAYG	Pay-As-You-Go
PROST	Pensions Reform Options Simulation Toolkit
SSA	Sub-Saharan Africa

Note: All dollar amounts are U.S. dollars unless otherwise stated.

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Executive Summary

This report takes stock of the characteristics and performance of public and private pensions and elderly assistance programs in Sub-Saharan Africa (SSA). It identifies key challenges and proposes reform options for consideration. It also suggests a process for further evaluation.

1. Pension Designs and Environmental Conditions

Pension designs in the region are as follows:

- ***Mandatory contributory schemes*** are mostly defined benefit (DB), financed on a pay-as-you-go basis. Four countries have provident funds; one has a funded defined-contribution (DC) scheme (Nigeria); one has a hybrid of DB and DC scheme (Ghana); one has a recently established DC scheme (Malawi), and four have no national contributory schemes but do have significant occupational schemes.
- ***Non-contributory elderly assistance schemes*** exist in nine countries and include universal, pension-tested and means-tested eligibility schemes. Four countries have pilot programs.
- ***Occupational schemes*** exist throughout the region, although they mostly play an important role in the package of old-age support in Southern Africa.

- ***Civil service schemes*** exist in every country in the region. Of these, about one-fifth are integrated (or some cohorts are integrated) with national contributory schemes. Some efforts have been made to harmonize the parameters between public and private sector schemes.

2. Enabling Conditions

The slow pace of aging along with declining total dependency rates (the proportion of children and the elderly to the working-age population) suggests that there may be a demographic window for reform. Civil service schemes tend to have an older demographic profile as they are closed schemes and tend to be more mature.

Labor Markets in the region are largely rural and informal, though urbanization is increasing. Civil servants on average constitute more than a third of workers covered by contributory pension schemes.

Strong growth patterns may make it easier to reform pension schemes and support the establishment of social assistance programs. With the exception of Swaziland, all of the

countries in SSA have expected annual growth rates of at least 5.5 percent for the period 2015-2019. Countries with relatively greater fiscal space can afford more generous levels of support for contributory pensions and social assistance including non-contributory pensions. Government revenues and expenditures as a proportion of GDP were similar to those of other countries with emerging markets and developing economies during the period 2010-2014.

3. Key Challenges

This report suggests that the most important challenges in the region are to increase the percentage of the labor force which contributes to some type of pension or social insurance scheme and to increase the coverage of the elderly protected by social assistance or pensions. Contributory pension schemes in SSA have struggled to deliver meaningful old-age income protection to more than a fraction of the population, just as they have struggled to cover the informal sector in much of the developing and developed world. Payroll-tax financed pensions remain largely irrelevant to most people in the region, who must rely on informal family support structures strained by the prevalence of HIV/AIDS and various other shocks.

The key reason for the poor coverage of contributory schemes is that most workers are employed in the informal sector or in agriculture, with low and intermittent income, and have more pressing needs to earmark potential savings. Contributory pension schemes were designed for wage-based workers, and so may be insufficiently aligned with the realities of workers in the informal sector or agriculture without steady incomes.

Many countries in the region have neither the fiscal resources nor the delivery systems to deliver meaningful social assistance to the elderly, and face difficult choices such as whether to earmark scarce resources to other, often poorer segments of the population, such as children.

Another challenge, though less important than coverage, is the fragmentation between civil service and national contributory schemes. Only about one-fifth of countries have integrated their civil service and national contributory schemes. Substantial barriers exist for workers moving between the public and private sectors, including the portability of pension rights.

A third issue is the sustainability of national contributory schemes and the fiscal affordability of civil service schemes. We have very

limited data on the long-term projected financing gap for national and civil service schemes. Actuarial projections are essential to a more informed perspective. The slow pace of aging in most countries in the region suggests that many schemes may not face financial difficulties for some time. Civil service schemes may face financial challenges more quickly, as they tend to be more mature than the national schemes, and several have higher benefit promises relative to contribution rates.

A fourth issue is adequacy. A review of accrual rates suggests that almost all full career workers in defined-benefit schemes will have adequate benefits by most any metric. However, contribution densities in the few countries for which we have data suggest that workers on average have much shorter contributory work histories and therefore will have much lower benefits. In addition, a majority of countries have no automatic indexation. Retirees therefore run the risk of having benefits erode during retirement even if initial replacement rates are generous. Finally, low elderly coverage by contributory schemes suggests that these benefits may be adequate only for a small fraction of the elderly.

A review of the nine countries with national non-contributory elderly assistance schemes

found that eight of them delivered at least a basic poverty subsistence payment of \$1.25/day. Botswana and Swaziland had benefits of only about 4 percent and 7.5 percent of GDP per capita, while the rest had benefits from 12 percent to 38 percent of GDP per capita. Of note, Lesotho, which has the highest benefit as a proportion of GDP per capita, also provides the benefit only at age 70.

4. Reform Options

Options to increase coverage require multiple revisions in design, implementation and institutional support. Mandatory contributory schemes could be extended to small firms and the self-employed but need affordable contribution rates so that small businesses and low-income employees can participate. Moreover, simple, transparent retirement savings instruments are needed for informal sector workers. Pilot programs such as those in Kenya and Ghana are a useful means of testing what works under what circumstances. The piloting of matching contributions for the poorest could also be considered. Further, elderly assistance through broad-based household or elderly social assistance programs should be considered for those facing poverty or destitution in old age.

Programs for non-contributory elderly assistance or social assistance for poor households need to consider household composition and poverty as well as the vulnerability of the elderly population. Program designers will need to juggle the tradeoffs involved in ensuring a reasonable benefit for the maximum number of beneficiaries within an affordable fiscal envelope. Inevitably, the tradeoffs between the inclusion and exclusion errors of a targeted approach will need to be weighed against the targeting efficiency and greater fiscal cost of universal programs.

Parametric reforms to mandatory contributory schemes can improve sustainability, equity between workers, and incentives to participate.

Together, changes in accrual rate, retirement age, penalty for early retirement, and automatic indexation can improve such schemes. Extending the wage reference period for benefit determination and indexing the wage history can improve the equity or fairness of DB schemes. Parametric reforms that can improve incentives for coverage include ensuring the affordability of contributions and reducing vesting periods.

Strengthening voluntary savings arrangements can be an important policy option for improving coverage and adequacy. Such arrangements could supplement mandatory schemes or could

form the anchor for contributory old-age income protection, which could then be supplemented by non-contributory schemes such as those in Southern Africa. The following options could be considered:

- State subsidies in the form of matching contributions to improve incentives for retirement savings.
- Regulatory reform and stronger supervision to establish and ensure transparent, well supervised occupational and individual savings arrangements.
- State support for piloting and experimentation with new voluntary pension savings arrangements (such as in Ghana and Kenya).
- Tax incentives for pension contributions.

Structural reforms that move from PAYG defined-benefit schemes to funded defined-contribution schemes are only realistic options for countries that have enabling conditions to support such reforms and the means to finance the transition costs associated with moving to such a scheme.

Measures for harmonization and/or merger of national and civil service pension schemes are important options to remove barriers to labor mobility. Parametric reforms may be needed to

either or both schemes and careful attention should be paid to the sequencing of reforms.

Technological changes have improved reform options for delivery systems to support instruments for informal sector workers.

Several building blocks for such systems have been identified, such as unique identification systems, collection systems that utilize mobile telephony or other platforms appropriate to rural and informal sector populations, web-based account information access, and disbursement via direct transfers and smartcards. Investments in such infrastructure will be essential to realizing key policy objectives.

5. Considerations for Further Analysis and Reform

The following processes are suggested:

Exploration of new design options is needed for savings and social insurance instruments to support the needs of informal sector and agricultural populations with intermittent incomes. Contributions from these groups may need to be voluntary for most segments of the labor force and flexible to accommodate volatile incomes. Special savings incentives, including small matching contributions, may be needed for individuals with low and volatile incomes. Other incentives, such as default enrollment, need to be further explored. Changes in technology, for example the establishment of unique

identification systems, can be leveraged to achieve a credible and efficient administrative infrastructure.

Non-contributory elderly assistance programs can be important instruments to close coverage gaps and improve welfare.

The financial and economic costs and benefits of non-contributory elderly assistance need to be evaluated in the context of overall social assistance and social protection objectives. Policy makers will need to weigh the tradeoffs between earmarking scarce fiscal resources to elderly assistance or to poor households across the age spectrum. Similarly, categorical support for the elderly will need to be weighed against support to other groups. Targeting objectives will also need to be chosen.

Actuarial projections and solid evidence are needed to guide reform options. Projections such as those provided by the World Bank's Pension Reform Options Simulation Toolkit (PROST) can be used to evaluate the intergenerational effects of both costs and benefits of baseline evaluations of current provisions and reform options.

Careful attention must be paid to enabling conditions, including macroeconomic stability, the current and anticipated depth and breadth of financial markets, the information and

communication infrastructure, and the quality of governance regulation and supervision. Funded schemes should only be considered where the enabling conditions would support such schemes.

New policy options can only function if supported by essential information, communications and technology infrastructure.

Investments will be needed to establish unique identification systems and the infrastructure for collections, data management, and disbursement. Many SSA schemes spend an unacceptably high share of resources on administrative costs.

6. Concluding Points

The failure to achieve full coverage with contributory pension systems has motivated new thinking in Sub-Saharan Africa, as in much of the rest of the developing world, about better options for old-age income protection, particularly for people in the informal sector and agriculture with unstable incomes. Most countries in SSA can benefit from a favorable demographic dividend if they act quickly. Considerable experimentation will be needed to find the balance between reform designs, incentives, and oversight to fit each country's needs and economic conditions. Although the

challenges are great, it is time to seize the opportunity to achieve better results.

Reform measures need to be guided by solid evidence of their impact. Evidence-based policy choices need to be made based on actuarial projections that systematically evaluate pension costs to employers, employees and governments over a long-term time horizon. Evaluation of household survey data can inform choices.

Three core priorities could be considered to guide reform options:

- ***Close the coverage gap.*** The core focus of reforms could shift to better protection for uncovered workers and retirees in many countries. Protecting the elderly from poverty is the most important objective of public schemes; only by experimenting with new contributory designs and non-contributory support can material improvements be realized in reducing elderly poverty.
- ***Focus on the poorest.*** Government cash transfers could target the poorest, including the elderly living in poor households. Non-contributory support to the elderly needs to be fiscally sustainable over the long term. Otherwise, elderly beneficiaries will face losses in support with few other options to rely upon.

• ***Align pensions to country needs and enabling conditions.*** More work is needed to ensure that savings, social insurance and social assistance instruments are better aligned to the needs of informal and rural workers with low and insecure incomes. Scaling back target benefits from mandatory contributory schemes in several countries

may help achieve more affordable contribution rates. Finally, options to pre-fund civil servant or national contributory schemes need to carefully weigh enabling conditions including the fiscal capacity to support transition costs and the needed regulatory and institutional infrastructure.

Pension Reform Needs in Sub-Saharan Africa

I. Introduction

1. ***Pensions, social security and elderly social assistance schemes in Sub-Saharan Africa (SSA) face challenges that are in many ways similar to those faced in other regions.*** Contributory schemes have proved useful for workers with consistent wage incomes but large informal and rural labor forces have generally resulted in very low coverage for both workers and retirees. Contributory schemes tend to benefit the best-off workers while most retirees are left uncovered. In addition, fiscal costs will increase as national schemes mature and as the cost of civil service schemes increases. Finally, administrative infrastructure remains a constraint which many countries are seeking to address.¹
2. ***A growing number of SSA countries are reforming or considering reforms to their pension systems.*** Reform programs have accelerated, with parametric and structural reforms being undertaken or considered for state-sponsored social security and civil service schemes; some countries piloting or considering the introduction of non-contributory elderly social assistance or expanding social assistance programs; and several countries trying to strengthen the operation and supervision of voluntary occupational and individual pension savings arrangements.
3. ***In many countries, a broader set of policies is expanding the role of government in direct poverty alleviation efforts, particularly through cash transfers. In this context, non-contributory pension programs are being considered and piloted.*** Cash transfer programs have grown dramatically over the last decade: most of the 35 countries with some form of cash transfer program have introduced them since 2000.² Non-contributory pensions, while well-established in Southern Africa, are now being piloted in a number of other countries including Kenya, Zambia and Nigeria. In this way, the recent expansion of cash transfer programs is increasingly seen as a way to increase the persistently low coverage of contributory pension schemes.

¹ The 2011 *Africa Social Protection Strategy* set out reform needs, challenges and priorities. Key challenges to formal sector pension schemes identified in the report include limited coverage, fragmentation, fiscal drain, lack of financial sustainability, high administrative costs and lack of credibility. The Strategy also points out the limitations in trying to extend formal sector pension schemes to the informal sector and priorities for reform.

² See Garcia and Moore 2012.

4. ***This report has two objectives: (i) to take stock of SSA pension and social security policies, programs, parameters and enabling environment; and (ii) to initiate the first step of a diagnostic assessment of the key challenges facing these pension and social security systems.*** The intention is to identify common characteristics, reform needs, and policy and institutional challenges. *This report is substantially constrained by data constraints and weaknesses in data quality.* The report will undoubtedly need to be followed by additional work to further explore reform options that would be appropriate for groups of countries in the region. Country-specific assessments are also needed, as rarely does a one-size-fits-all approach apply in the pension and social security arena. The authors apologize in advance for the inevitable errors in data presented in the many tables and figures presented. The authors believe that the diagnostic assessment is valid in spite of the limits in data availability and weaknesses in data quality. Any errors or omissions are the responsibility of the authors.

5. ***The report employs the same diagnostic typology and indicators used in the global report International Patterns of Pension Provision II.*** It uses the same environment, system design and performance indicators and aims to provide international comparisons where the data supports it.

6. ***The report is structured in six parts.*** The next section (II) describes current pension system designs. Section III describes the enabling environment including demographics, labor markets and the macroeconomic conditions that shape reform needs and options. Section IV evaluates key challenges including coverage, adequacy, sustainability, efficiency and effectiveness. Section V proposes reform options to consider. Section VI proposes a process going forward. Section VII summarizes key findings and conclusions.

II. Current Pension Designs

A. A Multi-Pillar Design Typology

7. ***There are four types of pensions in Sub-Saharan Africa:*** (i) non-contributory pensions or transfers in old-age assistance which may be universal, pensions-tested or otherwise means-tested (Zero Pillar); (ii) mandatory contributory pension schemes (1st or 2nd pillar); (iii) voluntary, regulated occupational or personal pension savings and insurance arrangements (3rd pillar); and (iv) other informal voluntary savings arrangements and household assets, savings or transfers to support the elderly (4th pillar). Under this typology, civil service pension schemes are classified under occupational

pension schemes even though many such schemes in SSA are non-contributory. Contributory schemes may be entirely pay-as-you-go (PAYG) with contributions financing benefits; partially funded with some reserve accumulations; or fully (pre) funded with funds set aside for all pension liabilities.

8. ***National contributory schemes are almost entirely defined benefit and funded on a pay-as-you-go basis:*** 32 of 44 countries have such schemes (Table 1). Four countries retain historical provident fund designs, though most of these are exploring design alternatives. Three countries have established a national framework for funded-defined contribution schemes (Nigeria, Ghana and Malawi). Nigeria fully adopted this design in 1994; Ghana adopted a hybrid scheme which retains the PAYG defined benefit scheme in addition to the funded defined-contribution scheme; and Malawi has yet to fully implement its funded defined-contribution framework. Four countries (South Africa, Namibia, Botswana, and Lesotho) by design do not have national contributory schemes and two countries (Somaliland and South Sudan) have yet to establish a regulatory framework for any pension scheme.

9. ***All countries in the region have civil servant schemes.*** Of these, about a quarter are integrated into national contributory schemes, some of which apply to government employees who entered service after a given date (Table 1). Those countries that do not have a national contributory scheme have constituted their civil service schemes as occupational schemes (South Africa, Botswana, Namibia and Lesotho). About three-fourths of the schemes are PAYG defined-benefit schemes (31 of 44), although some of these schemes simply collect employee contributions while the state covers all benefits for current and future retirees from general revenues as needed. Four countries (Burundi, the Democratic Republic of the Congo, The Gambia and Kenya) do not collect any contributions for civil servants and pay benefits out of general revenues. Swaziland and South Africa have fully-funded defined benefit schemes, while Nigeria, Botswana and Namibia have funded defined-contribution schemes. Ghana has a hybrid scheme for both civil servants and private sector employees.

Table 1: Pension Scheme Design and Financing

	National Scheme			Civil Servants Schemes							Non-Contributory Elderly Assistance			
	Design			Scheme			Contributory and Funding				Univ- ersal	Pension- Tested	Means- Tested	Pilot Scheme
	PAYG DB	Provident Fund	Funded DC	Separate from National Scheme	Integrated with National Scheme	Occupational Scheme (no national scheme)	Non- contrib.	PAYG DB	FDB	FDC				
1 Angola	√			√				√						
2 Benin	√			√				√						
3 Botswana						√				√	√			
4 Burkina Faso	√			√				√						
5 Burundi	√			√			√							
6 Cameroon	√			√				√						
7 Cape Verde	√				√	1/		√					√	
8 Central African Rep.	√				√			√						
9 Chad	√				√			√						
10 Congo, Dem. Rep.	√			√			√							
11 Congo, Rep.	√			√				√						
12 Cote d'Ivoire	√			√				√						
13 Ethiopia	√				√			√						
14 Gambia, The		√		√				√						
15 Ghana	√		√		√	2/		√		√				
16 Guinea	√			√				√						
17 Guinea-Bissau	√				√			√						
18 Kenya		√		√				√						√
19 Lesotho							√	√				√		
20 Liberia	√				√	3/		√						
21 Madagascar	√			√				√						
22 Malawi			√		√					√				
23 Mali	√			√				√						
24 Mauritania	√			√				√						
25 Mauritius	√			√				√			√			
26 Mozambique	√			√				√				√		
27 Namibia							√			√	√			
28 Niger	√			√				√						
29 Nigeria			√		√					√				√
30 Rwanda	√				√			√						
31 Sao Tome & Principe	√				√			√						
32 Senegal	√			√				√						
33 Seychelles	√				√			√			√			
34 Sierra Leone	√				√	4/		√						
35 Somaliland						5/		5/						
36 South Africa				√		√				√			√	
37 South Sudan						5/		5/						
38 Sudan	√			√				7/						
39 Swaziland		√		√						√		√		
40 Tanzania	√			√				√						
41 Togo	√			√				√						
42 Uganda		√		√				√						√
43 Zambia	√				√	6/		√						√
44 Zimbabwe	√			√				√						

1/ Integrated for civil servants hired beginning in 2005.
2/ Integrated first in 1972 and then further integrated in 1991.
3/ Civil servants are integrated into the national scheme and some receive a supplementary benefit from the Treasury.
4/ Integrated for new civil servants beginning in 2002.
5/ Legislation is being developed to constitute a formal pension scheme for civil servants.
6/ Integrated for new civil servants hired after January 1, 2010.
7/ The contributions for the civil service scheme cannot be identified.

Source: World Bank estimates; SSA and ISSA 2013.

B. Non-Contributory Pensions

10. **Non-contributory elderly assistance schemes provide assistance to protect the elderly from poverty.** Such schemes may be *universal*, providing benefits for all elderly over an eligibility age;

pension-tested, whereby eligibility may be based on alternative sources of pension income, or *means-tested*, whereby eligibility is based on some type of means-testing arrangement.

11. **About one-fifth of the countries in the region have nationwide non-contributory elderly assistance schemes** and four countries have pilot schemes (Table 2). Seven are universal schemes (Botswana, Mauritius, Namibia, Seychelles, Uganda, Zambia pilot program and Kenya pilot program), three are pensions-tested (Lesotho, Swaziland and Nigeria-Ekiti State), and three are means-tested (South Africa, Cape Verde, and Kenya pilot).³ Some countries have social assistance programs that provide support to households across the age spectrum, which may of course also assist the elderly. Countries weigh four variables: eligibility age, benefit per capita, means-testing and fiscal costs. Below is a summary of key characteristics of these variables in SSA:

- **Benefit levels** vary between 4 percent of GDP per capita in Botswana (a universal scheme) up to a benefit of 39 percent of GDP per capita for eligible recipients over age 70 in Lesotho.
- **Eligibility ages** range between age 60 and 65 (70 for men in Lesotho) and tend to align with eligibility age under contributory schemes. Five of nine national schemes set eligibility at age 60; Mozambique also provides benefits for men beginning at age 60.
- **Coverage** for eight schemes that are offered nationwide to potential beneficiaries depends upon how restrictive the eligibility conditions are, how much means-testing limits the number of eligible beneficiaries, and how effective the registration mechanisms are. Universal schemes in Botswana, Mauritius, Namibia and Seychelles cover close to their entire target group of beneficiaries. Means-tested programs in South Africa and Cape Verde cover about 65 percent and 68 percent of their target populations, respectively, while the pension-tested program in Lesotho covers most of its qualifying beneficiaries. The means-tested scheme in Mozambique covers about 21 percent of the population over age 60.
- **Annual costs** reflect benefit level, eligibility age and coverage. Costs for nationwide schemes range from 0.265 percent of GDP in Botswana — where the benefit level is the lowest, to 2.2 percent of GDP in Mauritius — where a universal scheme provides a modest benefit at age 60.⁴

³ Pension-tested schemes determine eligibility and benefit level based on the benefit received from a contributory scheme. Means-tested schemes determine eligibility and benefits based on multiple indicators of elderly or household welfare.

⁴ The Kenyan scheme is intended to be a national scheme but has yet to be rolled out on a national basis, as evidenced by the low coverage rate.

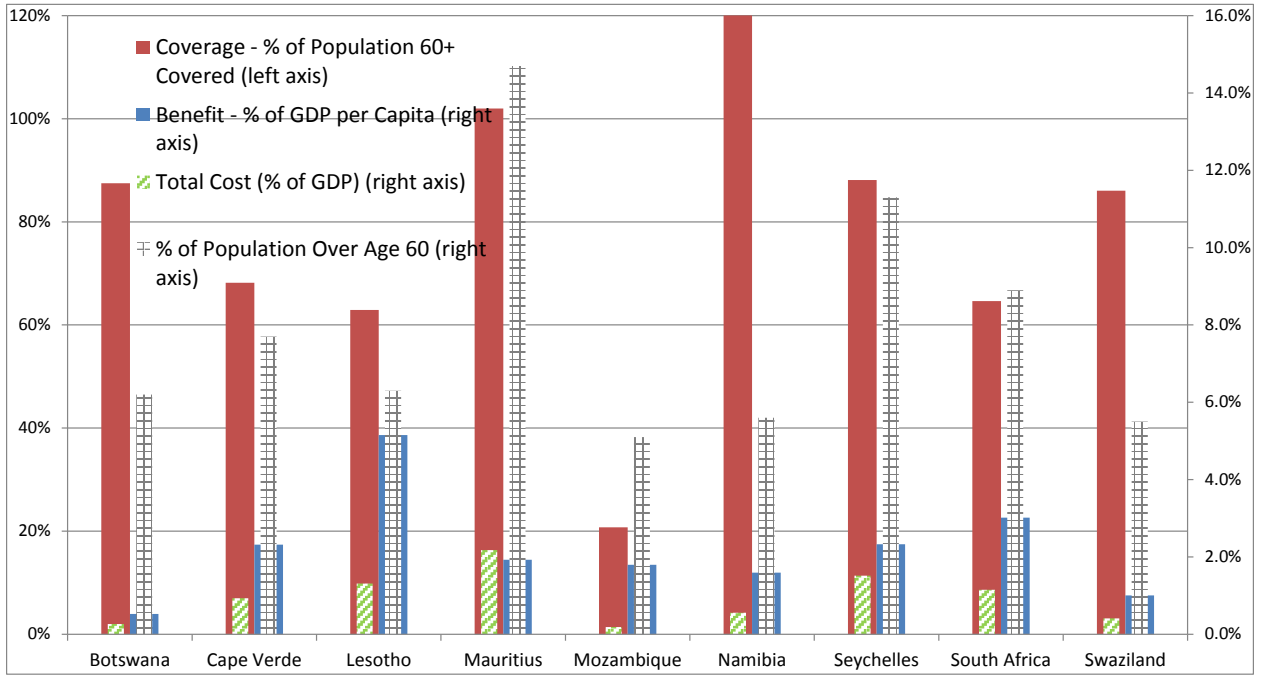
Lesotho constrains costs while providing a relatively generous benefit by having an eligibility age of 70.

Table 2: Non-Contributory Elderly Assistance Arrangements

Country	Name of scheme	Year introduced	Benefit level			Age of eligibility	Targeting	% of population over eligibility age covered	Total cost (% of GDP)
			US\$	% of GDP per capita*	% of \$1.25 poverty line***				
Botswana	State old age pension	1996	26	4.0%	148%	65	Universal	133.3%	0.26%
Cape Verde	Pensao Social Minima (Minimum Social Pension)	2006 (consolidated scheme)	63	17.4%	178%	60	Means-tested	83.6%	0.93%
Lesotho	Old Age Pension	2004	4	38.6%	243%	70	Pensions-tested	93.1%	1.31%
Mauritius	Basic Retirement Pension	1950 (scheme first implemented), 1958 (scheme became universal)	118	14.4%	532%	60	Universal	158.7%	2.18%
Mozambique	Basic Social Subsidy Programme	1992	8	13.5%	40%	55 women 60 men	Means-tested	31.9%	0.19%
Namibia	Old Age Pension (OAP)	1949 (for whites), 1992 (universal)	60	12.0%	225%	60	Universal	199.6%	0.56%
Seychelles	Old-age pension (social security fund)	1979	2086	17.4%	1015%	63	Universal	116.3%	1.52%
South Africa	Older Persons Grant	1927/8 first scheme introduced for whites, 1944 scheme extended to whole population, 1996 full parity achieved	125	22.6%	652%	60	Means-tested	100.2%	1.15%
Swaziland	Old Age Grant	2005	20	7.5%	95%	60	Pensions-tested	133.9%	0.41%
Pilot Schemes in SSA									
Kenya	Older Persons Cash Transfer	Began in 2006/2007 budget year	23	24%	115%	65	Means-tested	5%	0.02%
Nigeria	Ekiti State Social Security Scheme	2011	32	22.7%	135%	65 (residents of Ekiti State)	Regional and Pensions-tested	0.5%	0.00%
Nigeria (2)	Osun Elderly Persons Scheme	2012		45.3%	270%	no data	Regional and Means-tested	0.0%	0.01%
Uganda	Senior Citizens Grant (Pilot in 14 districts)	2011	9	16.5%	56%	65 (60 in Karamoja Region)	Regional and Universal	6.6%	0.03%
Zambia	Social Cash Transfer Programme, Katete (Pilot)	2007	12	10.5%	37%	60	Regional and Universal	no data	no data
Select Schemes in OECD Countries									
Australia	Age Pension	1900	1427	26.1%	2537%	65	Means-tested	71.4%	2.23%
Canada	Pension de la Securite Vieillesse (S.V.) (Old Age Security Pension)	1927	522	11.8%	1150%	65	Universal (with recovery from high-income earners)	95.6%	1.45%
France	Allocation de Solidarité aux Personnes Agées (ASPA)	1956	1078	28.7%	2294%	65	Means-tested	5.7%	0.25%
Germany	Needs-based pension supplement	2003	450	12.2%	1029%	65	Means-tested	2.7%	no data
Mexico	65 y mas	2001 (regional) 2007 (70 y mas) 2013 (extended to 65)	40	5.0%	160%	65	Pensions-tested	62.6%	0.20%
New Zealand	Superannuation	1898 (first scheme introduced), 1940 (universal)	1263	34.4%	2378%	65	Universal	97.3%	3.87%
United Kingdom	Pension credit (Guarantee Credit)	1909 (first scheme introduced)	949	27.3%	2289%	65	Means-tested	11.0%	0.44%
United States	Old age Supplementary Security Income	1935 (first national scheme introduced)	721	15.8%	1896%	65	Means-tested	4.6%	0.07%

Source: Pension Watch 2015. <http://www.pension-watch.net/about-social-pensions/>

Figure 1: Graphic Summary of Key Indicators for Non-Contributory Pensions in SSA



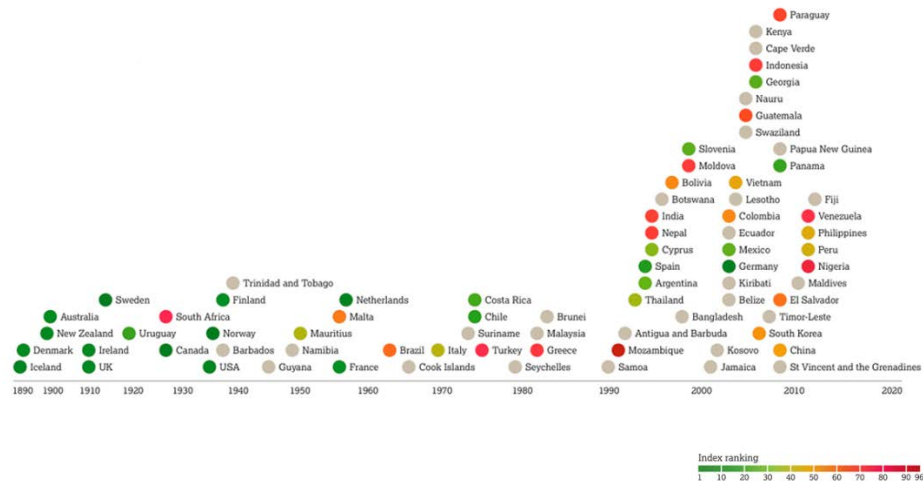
Source: Pension Watch 2015. <http://www.pension-watch.net/about-social-pensions/>

12. **Historical context provides insight into the design characteristics of SSA’s pension schemes.**

In South Africa, a social pension scheme originated in the late 1920s that aimed to protect the white minority population against poverty in old age (MacKinnon: 2008 in Nino-Zarazua, et. al.: 2010). Eligibility was extended to “coloreds” and then to blacks in the late 1940s, although with discriminatory entitlement rules and benefit levels. With the end of apartheid, the Older Persons Grant was extended to all citizens satisfying the means-testing criteria, regardless of ethnic group. Namibia established its universal scheme in 1992 and Botswana in 1996, while Lesotho and Swaziland established schemes in 2004 and 2005, respectively. Schemes in Southern Africa are intended to provide basic income assistance for those elderly not covered or sufficiently provided for by the voluntary occupational schemes that operate in formal sector workplaces. In Mauritius and the Seychelles, non-contributory pensions emerged as an essential thrust of social protection decades ago, complementing other contributory schemes. Cape Verde had several non-contributory elderly assistance schemes, which were consolidated in 2006. In Nigeria, Kenya, Zambia and Uganda, pilot programs established since 2007 are recent initiatives aimed to protect those elderly unprotected by contributory schemes.

13. *There has been a substantial expansion of elderly assistance programs in developing countries as country authorities have sought to establish poverty-protection measures for the vast majority of elderly that are not covered by contributory schemes* (see Figure 2). Many of these schemes were put in place in the 1990s and 2000s and are concentrated in developing countries.

Figure 2: Establishment Dates of Social Pension and Elderly Assistance Schemes (2014)



Source: HelpAge International, Social Pensions Database 2014. <http://www.pension-watch.net>

Note: Countries whose pension start year is unknown are not included. Colors refer to an index ranking developed by Pension Watch. Countries in grey have insufficient data to be included in the ranking.

C. Mandatory Contributory Pension Schemes

C.1 Designs

14. *Of the 47 countries in SSA for which data is available, 31 have national contributory PAYG DB schemes, four have provident funds, one has a defined-contribution (DC) scheme (Nigeria), one has a hybrid of DB and DC scheme (Ghana), and four have no national contributory schemes* but have some form of non-contributory old age benefit. Six either have no national scheme or lack the data for such schemes (Table 1). Most countries have separate occupational schemes for civil servants.

15. *The vast majority of contributory pension schemes in SSA are defined-benefit (DB) schemes financed on a pay-as-you-go (PAYG) basis.* Of the 47 countries in SSA for which data is available, 31 have national contributory PAYG DB schemes. Many of these schemes have their roots in the colonial

era. Several of the schemes in French-speaking SSA originated as work injury and family allowance schemes and only later added old age, disability and survivorship provisions. Schemes in former British colonies originated both as provident funds and as PAYG DB schemes.

16. ***Many countries that are former British colonies either had provident funds in the colonial era or adopted them soon after independence.*** Most though not all converted these schemes to pay-as-you-go defined-benefit schemes, in many cases with support from the ILO. This process of conversion has also been observed in former British colonies in other parts of the world, including the Caribbean, South and East Asia. Uganda, Swaziland, Kenya and The Gambia have retained provident funds, but have considered reform measures.

17. ***Funded defined-contribution and hybrid schemes.*** Nigeria in 2004 converted a PAYG defined-benefit scheme into a funded defined-contribution scheme, brought occupational schemes under a common regulatory framework and subsequently incorporated many of the public sector occupational schemes into the same framework. In 2010, Ghana diverted some of the contributions made to its PAYG defined-benefit scheme into a funded-defined contribution scheme, establishing a hybrid-design mandatory scheme. In 2011, Malawi passed legislation making contributions to occupational schemes mandatory under a defined-contribution framework.

18. ***No mandatory contributory scheme.*** Historically, occupational schemes in Southern Africa have played an important role in providing pensions for formal sector workers in government and the private sector. As previously indicated, these were supplemented by non-contributory old age assistance grants in most of the countries in the 1990s or 2000s. None of the countries in Southern Africa (South Africa, Namibia, Botswana, and Lesotho) have a national framework for mandatory contributory schemes, although Swaziland has had a provident fund in place since 1974.

C.2 Qualifying Conditions – Retirement Age and Vesting Provisions

19. ***The retirement age at which contributors can receive benefits has an important impact on system finances for DB schemes and benefit adequacy for DC schemes.*** The parameters for full benefits at retirement age were determined with the establishment of most schemes in SSA, though many have considered revising the retirement age and some have done so. Early retirement has also been possible in most schemes under certain conditions: the most prevalent of these are certification of partial disability and inability to work.

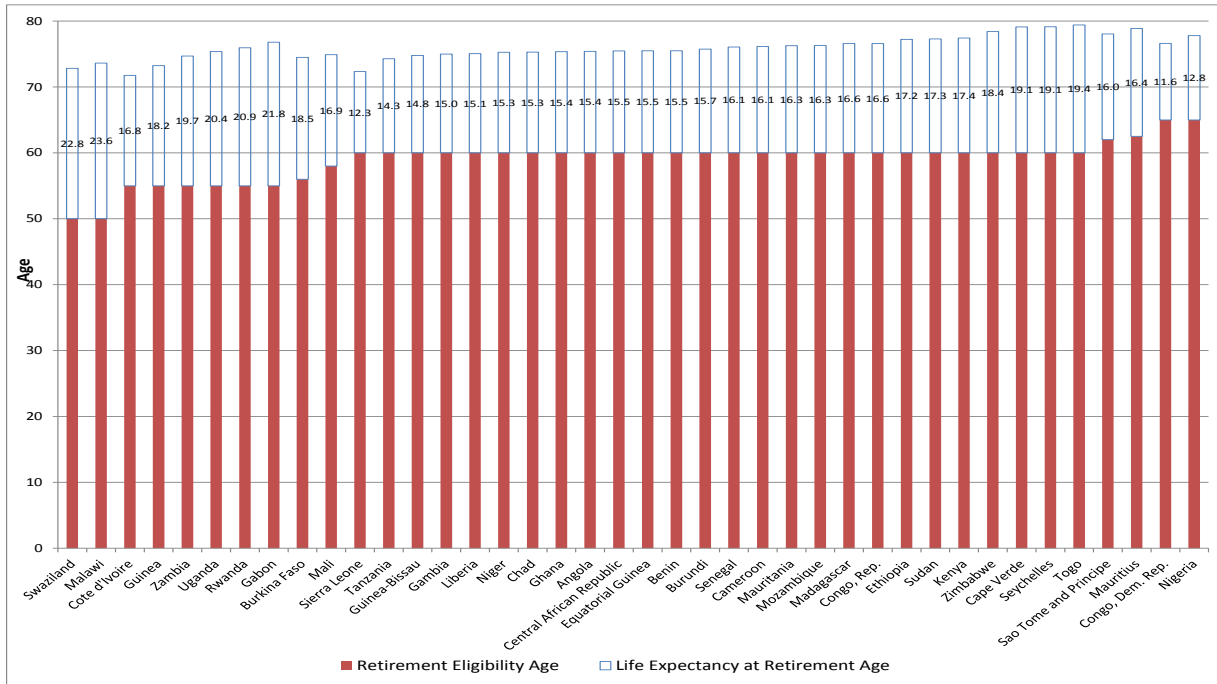
20. ***About two thirds of the 40 countries for which data is available have a retirement age of 60 for men and women***, or for men in those cases where the age is higher for men; 10 have lower retirement ages (mostly age 55) and four have higher ones (Figure 3). Life expectancy at retirement age suggests that people in schemes with a retirement age of 55 do not have lower life expectancies at age 55 compared to life expectancy at age 60 for people whose retirement age of 60.⁵ In other words, people in schemes with a retirement age of 55 tend to have nearly five additional years of retirement than people in schemes with a retirement age of 60. With the exception of Senegal, all of the schemes with a retirement age of 55 had a life expectancy at retirement age of at least 19.4 years, while schemes with a retirement age of 60 had life expectancies of between 15 and 18 years.

21. ***An important related parameter is the actuarial reduction applied to the benefit for those who retire prior to the retirement age and an actuarial supplement applied to those who retire after retirement age***. Ideally a national pension or social security scheme should have “actuarially fair” reductions or increases, which means that the reduction or increases should be consistent with the adjustment in the cost of providing benefits at an early or late age. However, insufficient cross-country data is available to measure actuarial reductions or increases applied.

22. ***The importance of retirement age (amongst other parametric reforms) will continue to increase as schemes in SSA gradually mature and as life expectancy at retirement increases***. Retirement age also influences labor market decisions. Since many retirees in national schemes have relatively short work histories when they retire, many of those who retire at age 55 could be retired for nearly as many years as they would have contributed to a pension.

⁵ It is important to note that the retirement ages and life expectancies refer to men. In about a quarter of the schemes, the retirement age for women is five years earlier, and the life expectancy at an equivalent retirement age is in all cases higher for women than men. Finally, life expectancy refers to life expectancy at retirement age for the entire country, although average life expectancy at retirement is undoubtedly longer for retiring contributors.

Figure 3: Retirement Age and Life Expectancy at Retirement
(2012)

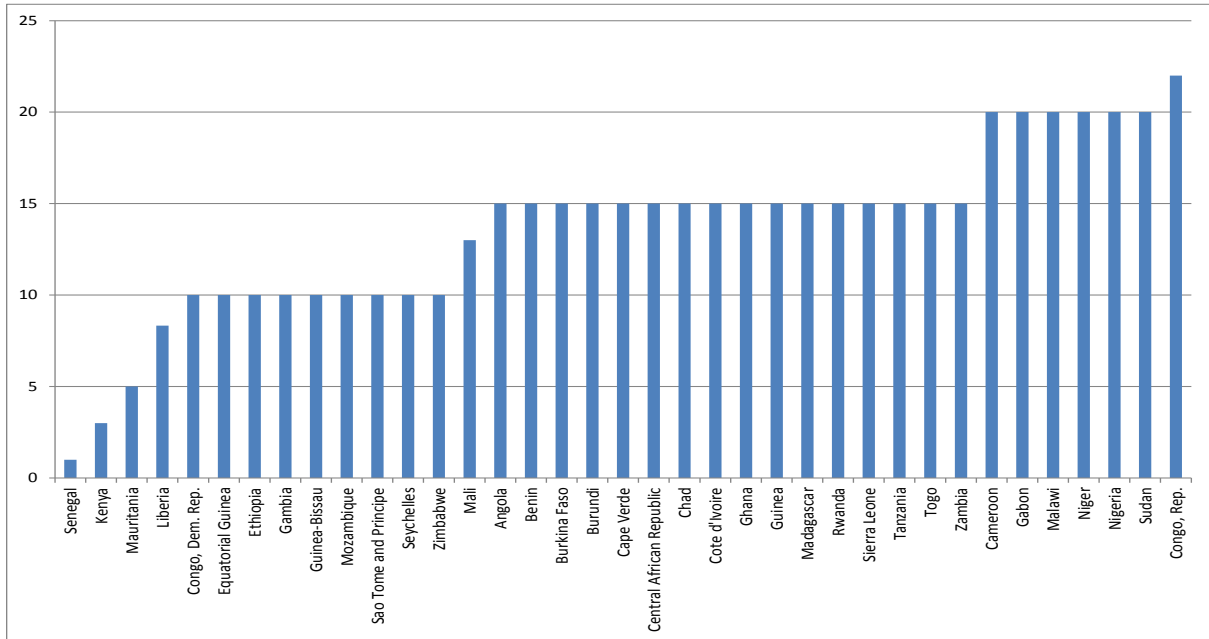


Source: SSA and ISSA 2013; United Nations 2013, and World Life Expectancy [website](#).

23. **Vesting periods range from 10 to 22 years for defined-benefit schemes, with a median of 15.0 years** (Figure 4). Vesting is a key condition for receiving an annuitized benefit and minimum pension benefits.⁶ Also, DB schemes with actuarially fair benefit reductions for early retirement or actuarially fair benefit increases for late retirement should in principle be able to support shorter vesting periods. Finally, long vesting periods make it difficult for workers who might go in and out of formal sector employment to qualify for a full pension benefit. Generally, the 15-year median is high for the region, since the contribution densities of many workers are insufficient to qualify for a pension. This suggests that an alternative such as eliminating a minimum pension and minimum vesting period might be better suited to the labor market conditions in the region.

⁶ Systematic cross-country data is not available on minimum pension benefits.

Figure 4: Years of Contributions Required for Vesting



Source: World Bank database; and SSA and ISSA 2013.

Note: Not included are countries without national schemes or countries with provident funds or DC schemes without vesting rules.

C.3 Contribution Rates

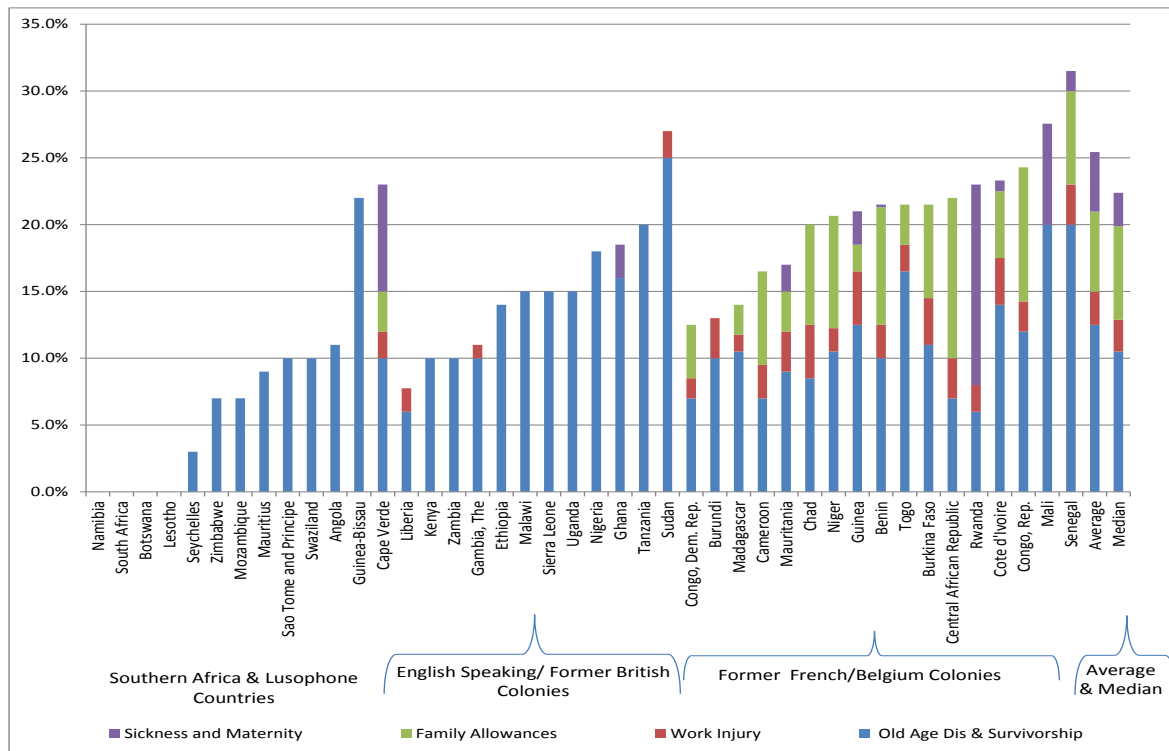
24. **Median contribution rates for pensions were 10.0 percent of wages for the 35 countries with mandatory contributory schemes and were 16.0 percent for all forms of social security, including health and unemployment insurance and workers injury programs (Figure 5).** More than a quarter of pension schemes in SSA had contribution rates at or above 15 percent for old age, disability and survivorship, which could be considered costly compared to the applicable wage levels on which they are levied as well as the minimal job security characteristic of many wage earners in the region.⁷ Such contribution rates can contribute to the incentives to under-report wages and limit worker coverage.

25. **Total contribution rates for all social security are considerably higher in former French and Belgian colonies (Figure 5).** The median contribution rate for these countries is 21.5 percent versus 14.0 percent for the other countries with mandatory schemes in the region. On the other hand, the median contribution rate for old age disability and survivorship is 10.5 percent for former French and

⁷ Average old-age pension contribution rates were 11.6 percent and the standard deviation was 5.4 percent. Cross-country data is not available on the wage base subject to pension contributions, so the effective contribution rate may be much smaller for higher wage contributors in several countries.

Belgian colonies, versus 11.0 percent for all the other countries. This disparity points to the importance of non-pension benefits in West and Central Africa and the impact on the contribution rate of these contributions.

Figure 5: Contribution Rates to Old Age Pensions and other Social Security



Source: World Bank database.

D. Civil Service Pension Schemes

26. ***The overall design characteristics of civil servant pension schemes, which exist in almost all of the SSA countries, include:*** (i) defined benefit (DB) or defined contribution; (ii) contributory or non-contributory; (iii) fully funded, partially-funded or unfunded pay-as-you-go; and (iv) separate or integrated with mandatory contributory schemes for the private sector (Table 3).⁸ For civil servant schemes that are separate from national schemes, most are legally constituted funds while some are departments in government ministries.

⁸ Exceptions are South Sudan, which is in the process of establishing schemes for the civil service and military, and Somaliland, which provides benefits for civil servants, but not through a specific legal framework. Liberia provides retirement benefits to civil servants but is in the process of considering legislation for special benefits in addition to those offered by the national scheme.

- Of 43 countries for which data is available, 40 have DB schemes, some of which provide benefits through a periodic benefit schedule rather than a specified accrual rate; two are DC schemes (Nigeria and Botswana); and one is a hybrid (Ghana). Most schemes are financed on a pay-as-you-go basis either from contributions, government transfers, or both; two are funded defined-benefit schemes (South Africa and Swaziland) and the two defined-contribution schemes in Nigeria and Botswana are both funded.⁹
- About three-quarters of the 43 schemes have legally defined contribution rates, while about a quarter of schemes are either non-contributory for both employer and employee or just for the employer (the government). We have no data for three countries.
- About one-fifth of civil servant schemes are integrated with the national scheme: in five cases the integration applies to workers joining after a particular date. Two countries are partially integrated, integrating civil servant schemes for specific cohorts or groups of workers.¹⁰ In some cases, efforts have been made to harmonize the parameters between public and private sector schemes.

27. ***Key parameters are as follows:***

- **Contribution rates.** Average contribution rates of about 17.4 percent for old-age, disability and survivorship schemes were substantially higher than national schemes at 12.1 percent.¹¹
- **Benefits.** While contribution rates are higher, the average old-age accrual rate for civil service DB schemes is 2.2 percent, about the same as for national schemes. The average replacement rate for a worker who is covered for 30 years is about 60 percent for civil servants and about 55 percent for national schemes (Figure 25). Accrual rates are higher in civil servant schemes than national schemes in five countries (DRC, Madagascar, Mozambique, Tanzania and Togo). Accrual rates are identical in civil servant and national schemes in over 40 percent of countries with separate schemes.

⁹ Kenya has legislated a conversion of its Public Sector Pension Fund from a PAYG DB to a funded DC scheme but has yet to implement the legislation.

¹⁰ In some cases such as Ghana, integration was established only for new entrants and for certain civil servant positions. In this case, civil servant pensions have continued for older cohorts entering service before 1981 and for certain positions such as Judges and Parliamentarians. Malawi in 2011 legislated a national framework, although the public service occupational scheme still has separate governing legislation and the 2011 framework has yet to be fully implemented.

¹¹ This does not include contribution rates for civil service schemes that are financed from current revenues without a specified employer contribution rate.

- **Portability.** Most schemes have limited portability provisions and most also result in losses for the retiree by deferring retirement.

Table 3: Civil Service Pension Scheme Design Parameters

	Integration with National Scheme	Design	Contribution Rate			Accrual Rate			Vesting Period
			Employer	Employee	Total	Accrual Rate	Accrual Rate After Vesting Period		
1 Angola	Separate	PAYG DB	Budget	7.00%			2.50%		
2 Benin	Separate	PAYG DB		14.00%	6.00%	20.00%	2.00%		
3 Botswana	Occupational	FDC		15.00%	5.00%	20.00%			
4 Burkina Faso	Separate	PAYG DB		14.00%	8.00%	22.00%	NA		
5 Burundi	Separate	PAYG DB	Budget				1.67%		
6 Cameroon	Separate	PAYG DB	Budget		10.00%		2.00%		
7 Cape Verde	Integrated after 2005	PAYG DB		7.00%	3.00%	10.00%	2.00%		
8 Central African Republic	Integrated	PAYG DB		4.00%	3.00%	7.00%	1.33%		
9 Chad	Integrated	PAYG DB		5.00%	3.50%	8.50%	2.00%	1.20%	
10 Congo, Dem. Rep.	Separate	PAYG DB	Budget				3.33%		
11 Congo, Rep.	Separate	PAYG DB		NA	NA		NA		
12 Cote d'Ivoire	Separate	PAYG DB		16.67%	8.33%	25.00%	1.75%		
13 Ethiopia	Integrated	PAYG DB		11.00%	7.00%	18.00%	3.00%	1.25%	10 years
14 Gambia, The	Separate	PAYG DB	Budget				2.00%		1/
15 Ghana	Integrated after 1991	Hybrid		10.50%	5.50%	16.00%	2.50%	1.125%	15 years
16 Guinea	Separate	PAYG DB		NA	NA		NA		
17 Guinea-Bissau	Integrated	PAYG DB		14.00%	8.00%	22.00%	NA		
18 Kenya	Separate	PAYG DB	Budget				2.50%		2/
19 Lesotho	Occupational	PAYG DB		5.00%	5.00%	10.00%	2.00%		
20 Liberia	Integrated + Suppl Occ. Scheme	PAYG DB		3.00%	3.00%	6.00%	3.00%	1.20%	8.33 years
21 Madagascar	Separate	PAYG DB		16.00%	4.00%	20.00%	2.00%		
22 Malawi	Occupational	PAYG DB	Budget				3.33%		
23 Mali	Separate	PAYG DB		12.00%	8.00%	20.00%	2.00%		
24 Mauritania	Separate	PAYG DB		12.00%	6.00%	18.00%	NA		
25 Mauritius	Separate	PAYG DB	Budget		6.00%		2.00%		
26 Mozambique	Separate	PAYG DB	Budget		7.00%		2.86%		
27 Namibia	Occupational	PAYG DB		16.00%	7.00%	23.00%	2.40%		
28 Niger	Separate	PAYG DB		14.00%	6.00%	20.00%	2.00%		
29 Nigeria	Integrated	FDC		10.00%	8.00%	18.00%			
30 Rwanda	Integrated	PAYG DB		3.00%	3.00%	6.00%	2.00%		
31 Sao Tome and Principe	Integrated	PAYG DB		6.00%	4.00%	10.00%	3.00%	1.00%	10 years
32 Senegal	Separate	PAYG DB		23.00%	12.00%	35.00%	1.80%		
33 Seychelles	Integrated	PAYG DB		1.50%	1.50%	3.00%	NA		3/
34 Sierra Leone	Integrated after 2002	PAYG DB		10.00%	5.00%	15.00%	2.00%		
35 South Africa	Occupational	FDB		16.00%	13.00%	29.00%	1.82%		4/
36 South Sudan	Occupational	PAYG DB		11.00%	5.00%	16.00%	NA		
37 Sudan	Separate	PAYG DB		NA	NA	NA	NA		
38 Swaziland	Separate	FDB		15.00%	5.00%	20.00%	2.00%		
39 Tanzania	Separate	PAYG DB		15.00%	5.00%	20.00%	2.22%		5/
40 Togo	Separate	PAYG DB		20.00%	7.00%	27.00%	2.50%		
41 Uganda	Separate	PAYG DB	Budget		Budget		2.40%		
42 Zambia	Integrated after 2010	PAYG DB		7.25%	7.25%	14.50%	1.82%		5/
43 Zimbabwe	Separate	PAYG DB		15.00%	7.50%	22.50%	NA		
Median				12.00%	6.00%	19.00%	2.00%		
Average				11.40%	6.16%	17.38%	2.24%		
1/ PSPS									
2/ Kenya has legislated a conversion to a funded defined contribution scheme for public servants									
3/ The benefit is indicated on a schedule which is appended to the law.									
4/ The annuity also has a supplemental benefit each year.									
5/ PSPF									

Source: World Bank estimates.

Note: "Separate" refers to a civil servant scheme that is legally and operationally separate from a national pension and/or social security scheme. "Occupational" refers to a civil servant scheme that is legally and operationally independent in a country where no national pension or social security scheme exists. "Integrated" refers to the inclusion of civil servants in a national scheme. Where a date for integration is indicated, this refers to the year in which the national and civil servant schemes were integrated for all or for specific groups of members. "Supplemental occupational scheme" refers to instances where civil servants participate in the national scheme but also receive a supplemental benefit from an occupational scheme.

E. Voluntary Occupational and Personal Pension Savings Arrangements

28. ***There are two types of occupational and personal pension savings arrangements in SSA:*** (i) occupational schemes sponsored by enterprises, unions or other organizations; and (ii) personal savings and insurance plans in which an individual can elect to participate.

29. ***Occupational schemes are prevalent in most countries in SSA, particularly countries in Southern Africa and those with a British colonial history.*** Such schemes were prominent in Britain; thus, in former British colonies foreign, multinational companies, and in many cases large domestic enterprises provided occupational pension plans for their employees. Occupational schemes often provide lump-sum benefits either at retirement or upon severance. In Southern Africa (South Africa, Namibia, Botswana, Lesotho and Swaziland) such arrangements provide a significant part of old-age income support, although in recent years there have been several initiatives to extend coverage through mandatory participation (Table 4).¹² Occupational schemes have been important sources of old-age income security for workers in several other countries as well, including Kenya, Tanzania, Ghana and Nigeria, to name a few.

Table 4: Occupational Scheme Coverage for Select Countries

	Members	% of Labor Force	Year
South Africa	9,991,743	53.6%	2011
Botswana	49,752	4.9%	2012
Mauritius	100,000	16.6%	2011
Namibia	50,000	6.0%	2013
Zambia	82,782	1.4%	2012

Source: World Bank estimates.

30. ***The level of regulation and supervision varies considerably.*** In most cases, tax qualification has required some level of reporting to tax authorities, both in application for tax qualification and in annual filings. In cases such as Kenya, a separate pension regulatory authority has been established with exclusive responsibility for oversight of pension schemes, including private occupational schemes. Nigeria had a number of occupational schemes prior to its 2nd pillar reform in 2004. These

¹² In South Africa, about half of employees with employment contracts make contributions to occupational schemes with much higher coverage rates for workers in the upper half of the income distribution. See Fletcher, Leape and Thomas 2009.

schemes were subsumed under 2nd pillar regulations. Ghana's 2008 reform also includes measures to bring occupational schemes under a stronger regulatory and supervisory umbrella.

31. ***Personal pension plans and related annuity schemes are offered by insurance companies and other financial institutional in a number of jurisdictions.***¹³ Such arrangements are often subject to the regulation and supervision of insurance regulatory authorities. In many cases, tax exemptions are provided for contributions to schemes authorized by the tax authority. Personal pension plans offering fixed annuities have not been a prominent financial product in most jurisdictions for several reasons, including the effective cost of longevity insurance for the policy holder.

III. The Enabling Environment

32. ***The enabling environment provides the context that can both motivate reform measures and condition reform options.*** The environment can be characterized by enabling conditions that include demographic conditions (current and projected), labor force conditions, macroeconomic conditions, fiscal space and financial sector development. This section focuses on demographic conditions, labor force composition and growth patterns in macroeconomic conditions.

33. ***Although there is considerable variation between countries, the following trends emerge in Sub-Saharan Africa:***

- While old-age dependency ratios at present are relatively low, they will increase slowly over the coming years
- The labor force is predominantly rural and informal, although urbanization is occurring and the labor force can be highly mobile in certain areas
- Growth rates have been relatively high for a majority of countries in SSA in the recent past, and are projected to continue over the next four years

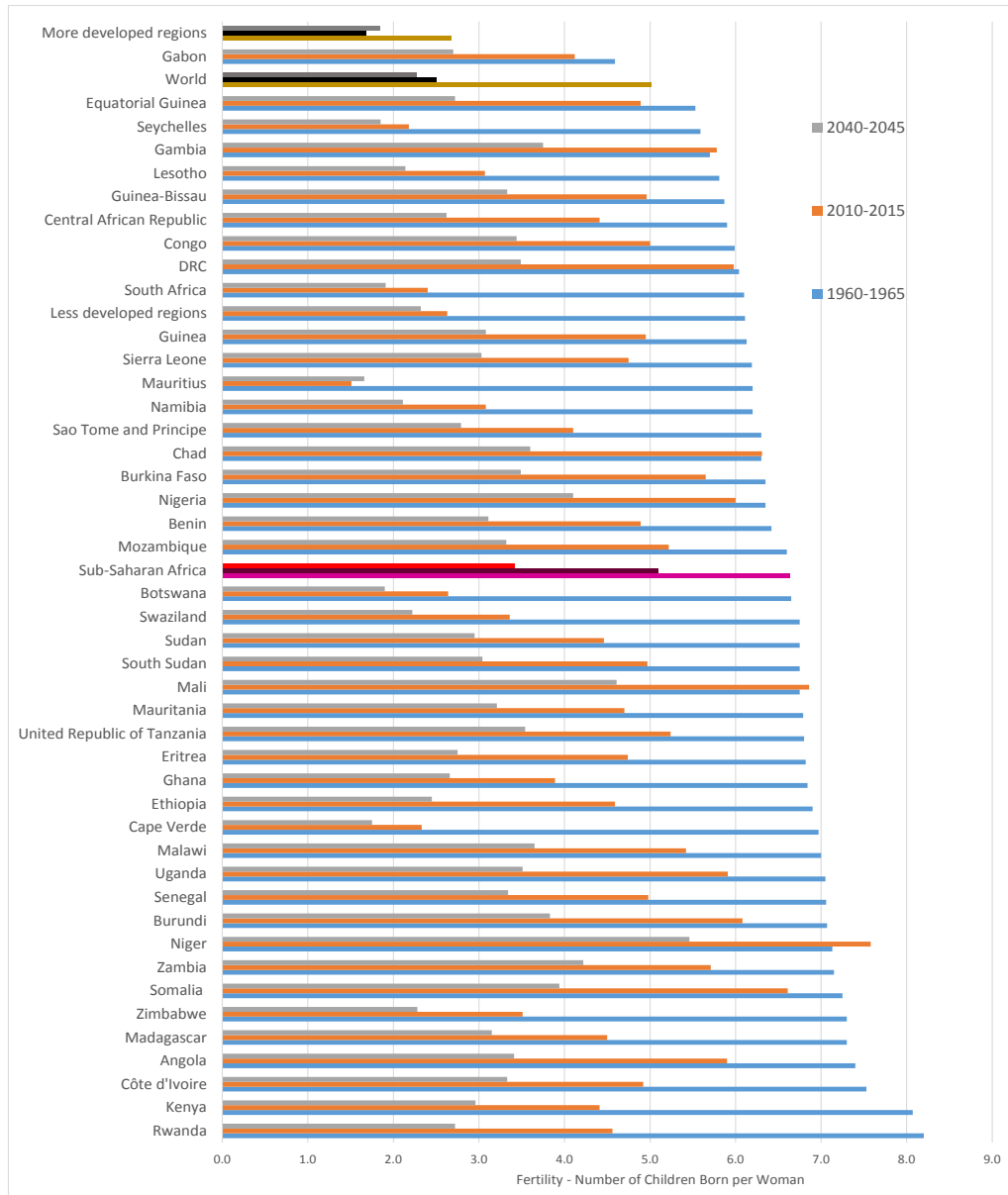
A. Demographic Characteristics

34. ***Demographic characteristics can have a big impact on SSA pension system needs and reform options.*** Declines in fertility in SSA over the past four decades, along with increases in longevity, will gradually influence the old-age dependency ratio—the size of the elderly population relative to the

¹³ Overall insurance penetration in SSA is about 3 percent by some estimates.

working-age population. Historical fertility rates have declined about 26 percent, from 6.7 births per woman from 1960-1965 to 4.9 from 2010-2015 (Figure 6). By comparison, global fertility rates fell almost 50 percent over the same period. Over the next 30 years, average fertility rates in SSA are projected to decline by almost 40 percent more to a level of about 3.4 births per woman in 2045, while global average fertility is projected to decline at a slower pace of about 12 percent over the period.

Figure 6: Historical and Projected Fertility Rates



Source: World Bank 2015c.

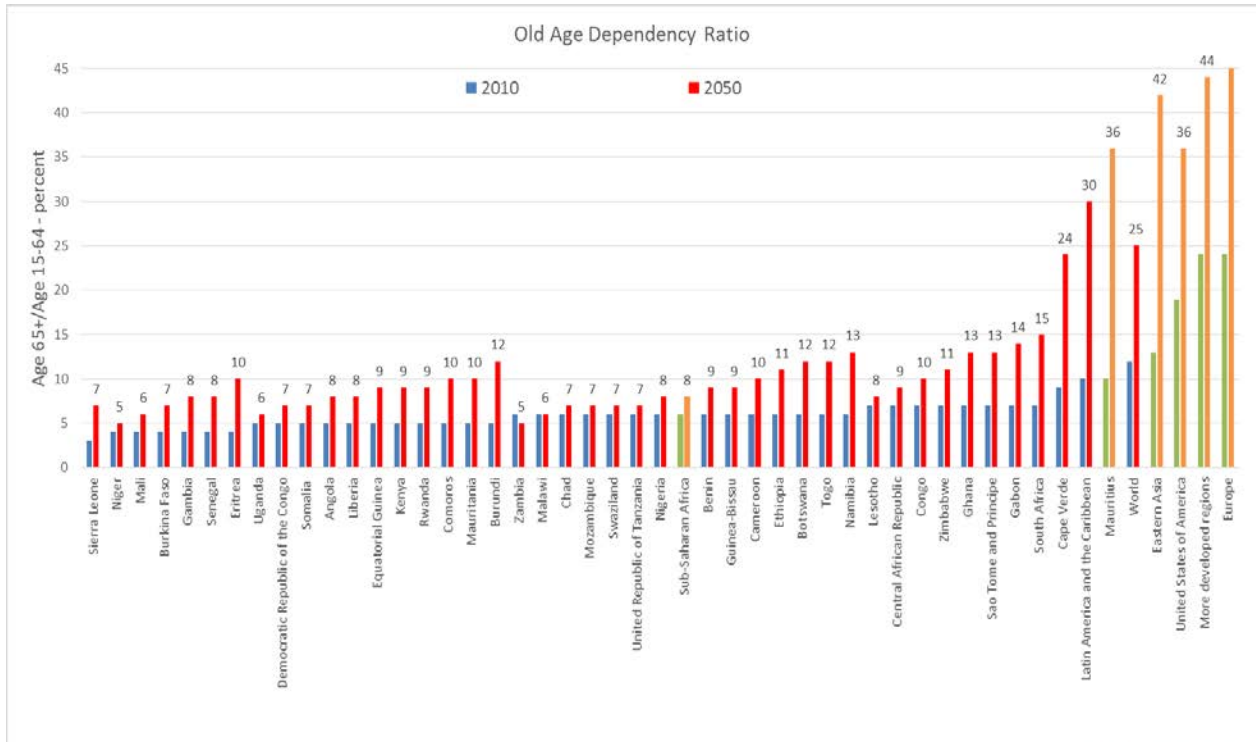
35. ***Increases in life expectancy will also affect old-age dependency ratios and system finances, particularly under defined-benefit arrangements.*** Increases in longevity affect pension system finances by increasing the number of years of disbursements in pay-as-you-go (PAYG) defined-benefit schemes and reducing pension adequacy in defined-contribution schemes such as provident funds. Life expectancy at age 60 has increased by roughly 5 percent over the past 15 years, from about 15.3 years to about 16.0 years, and is projected to increase another 17 percent over the next 40 years. Life expectancy at retirement age for contributors to public pension schemes is expected to be higher than for the national population in several countries.

36. ***Old-age dependency ratios in SSA are growing steadily,*** although SSA has the slowest growth of any region in the world (Figure 7). Since the working-age population is often defined as age 15-59, there is a 45-year cycle during which decreases in fertility will reduce the growth rate of the working-age population before beginning to affect the size of the elderly population. Old age dependency ratios were lower in 2010 in SSA than for the rest of the world, but will accelerate more rapidly over the decades ahead.

37. ***About 40 percent of SSA countries are projected to more than double their old-age dependency rates, with a profound impact on pension sustainability*** (Figure 7). To the extent that national demographic data is indicative of projected changes in system old-age dependency rates, the data suggests that most countries in SSA have a window of 15-20 years to undertake gradual reform programs to set their national pension schemes on a sustainable footing. The average old-age dependency ratio is projected to increase at a fairly slow pace of about 21 percent from 2010 to 2030, as declines in fertility rates gradually reduce the growth in size of the working-age population. The process is projected to accelerate from 2030 to 2050, with the ratio projected to increase an average of 57 percent, leading to a total average increase from 2010 to 2050 of 90 percent. Although most countries had relatively young populations in 2010, old-age dependency ratios were still projected to increase by 10 to 15 percent by 2050 in a number of countries (Sao Tome & Principe, Togo, Ghana, Sudan, Gabon, Comoros and South Africa).¹⁴ Cape Verde, Mauritius and the Seychelles have relatively older populations that are projected to age substantially from 2010 to 2050. The remaining countries are projected to have modest increases. Again, the coming decade presents a window of opportunity for countries to undertake reforms before the demographic transition accelerates.

¹⁴ In this section “old-age dependency ratios” refers to the ratio of those age 65 and over to those aged 15-64.

Figure 7: Projected Old Age Dependency Ratios
(Age 65+/age 15-64)

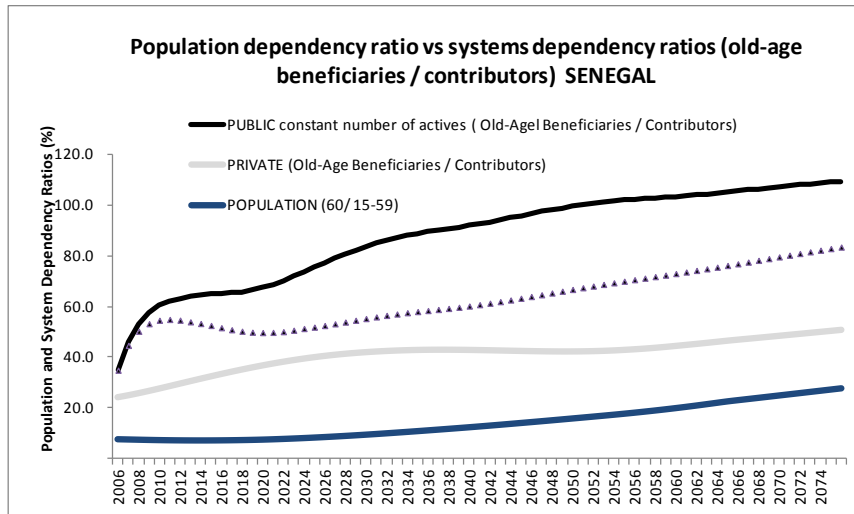


Source: World Bank database based on World Population Projections, 2010 revision.

Note: Mauritius and Seychelles are not included.

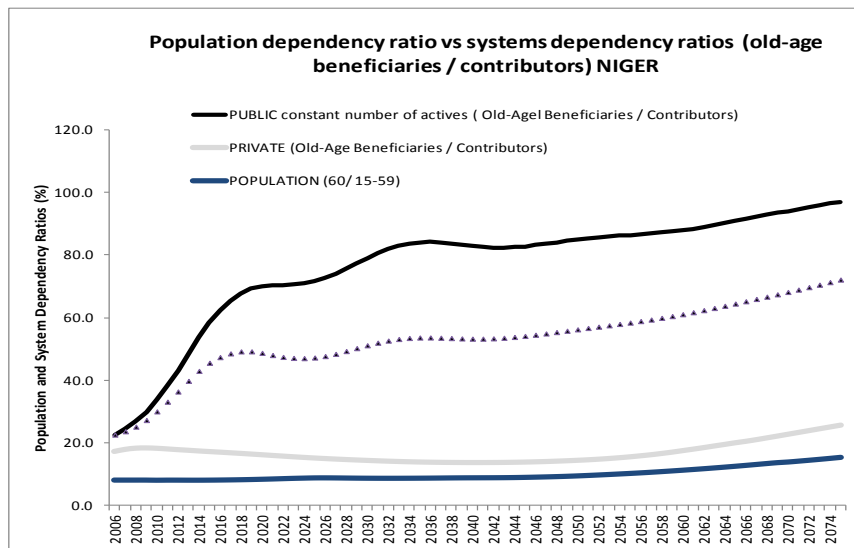
38. **System old-age dependency ratios may be higher than population old-age dependency ratios in several countries.** Covered populations, which generally are formal sector workers, often tend to have lower fertility rates and higher life expectancies compared with the overall population, which tends to be more rural. These differences have a significant impact on system finances, particularly for mature PAYG defined-benefit schemes. For example, system dependency ratios are much higher for both civil servant and social security schemes compared with the overall population in Senegal (Figure 8). A similar pattern can be observed in Niger (Figure 9).

Figure 8: Senegal: Projected Dependency Ratios



Source: Fond Nationale de Retraite (FNR).

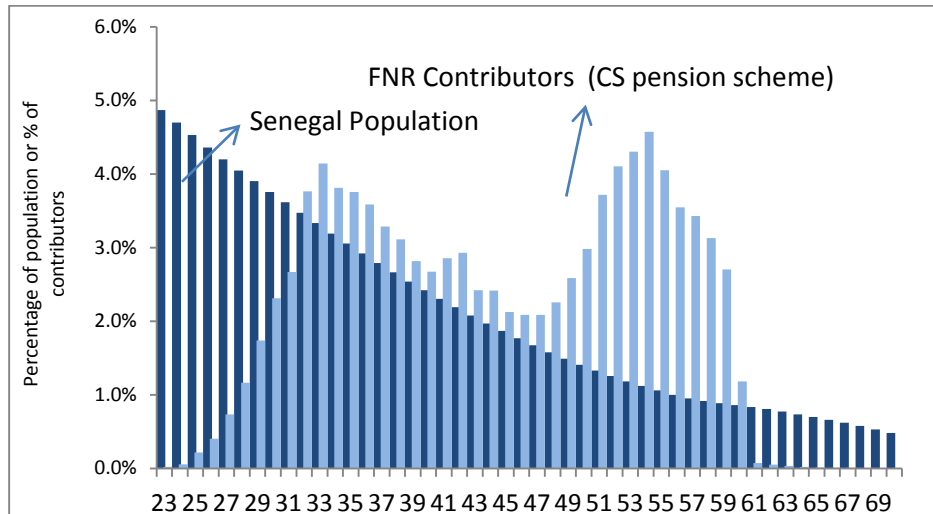
Figure 9: Niger: Projected Population and Pension System Old Age Dependency Ratios



Source: World Bank 2009.

39. ***As closed schemes which are generally fully mature, civil servant schemes in SSA also have older population profiles compared with both mandatory private sector schemes and the population as a whole.*** Civil servants also often have considerably longer life expectancy at retirement age compared to the overall population. This can be illustrated by the population profile and age system dependency ratios in Senegal (Figure 8, Figure 10).

Figure 10: Senegal: National and Civil Service Population Age Distributions

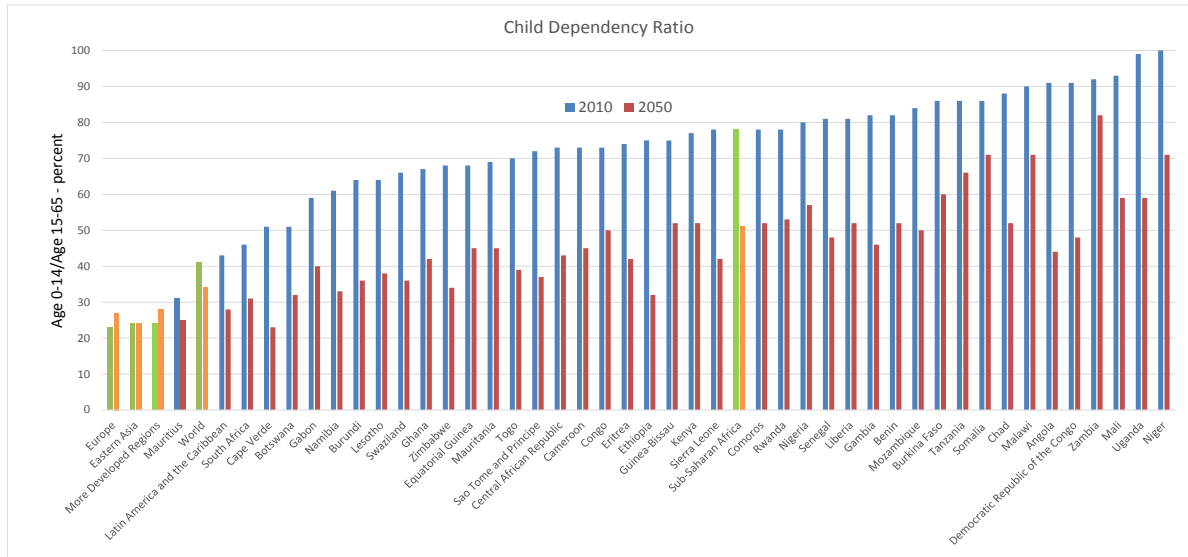


Source: FNR.

Note: The population graph is the population in each cohort as a percentage of the working-age population, while FNR contributors are measured as a percentage of the total FNR contributors.

40. **Total dependency ratios are expected to decline in most countries in SSA over the coming few decades** (Figure 12). Over the coming 40 years, the *youth dependency ratio* is projected to decrease at an even faster pace than the growth in the *old-age dependency ratio* as the steep decline in fertility rates over the past few decades impacts the overall age structure (Figure 11). The result is a projected decline in the *Total Dependency Ratio* providing a “demographic dividend” which may provide an opportunity for some countries to invest in stronger social protection systems (Figure 12). This demographic dividend accruing to all countries in SSA is mirrored, though on a more muted basis, globally and in Latin America. In contrast, more-developed countries are projected to have worsening total dependency ratios, almost entirely because of aging.

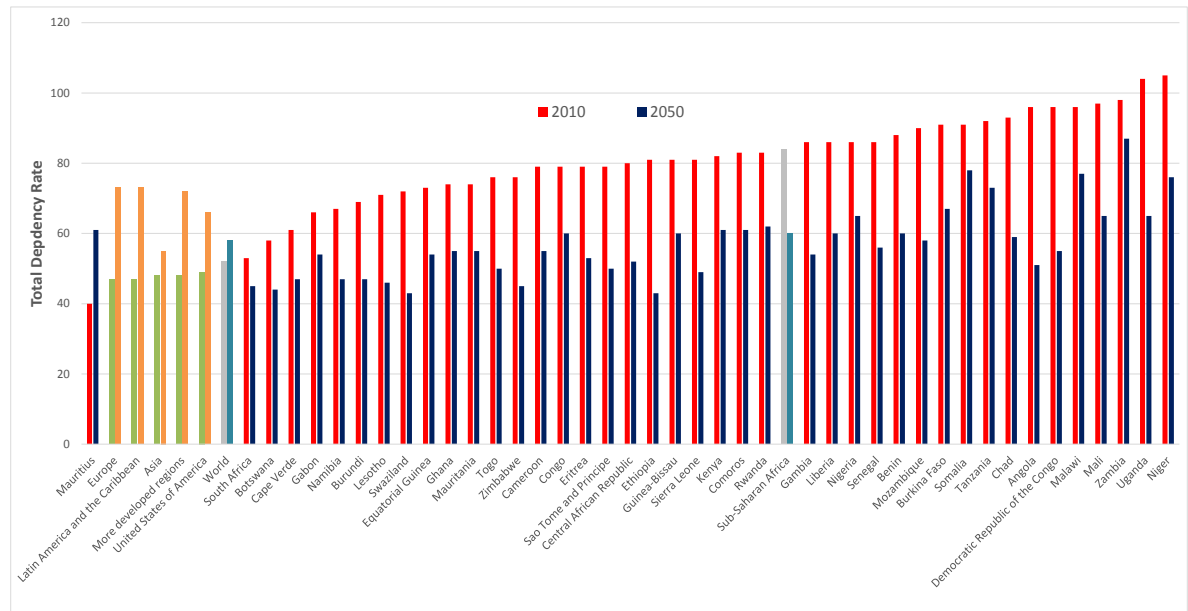
Figure 11: Child Dependency Ratio Projections
(Percent)



Source: United Nations, Population Division, Population Projections, 2010 Revision, 2012 Revision, http://esa.un.org/wpp/unpp/panel_indicators.htm

Note: Child Dependency Ratio= (Population 0-19) / (Population 20-64).

Figure 12: Total Dependency Ratio Projections
(Percent)



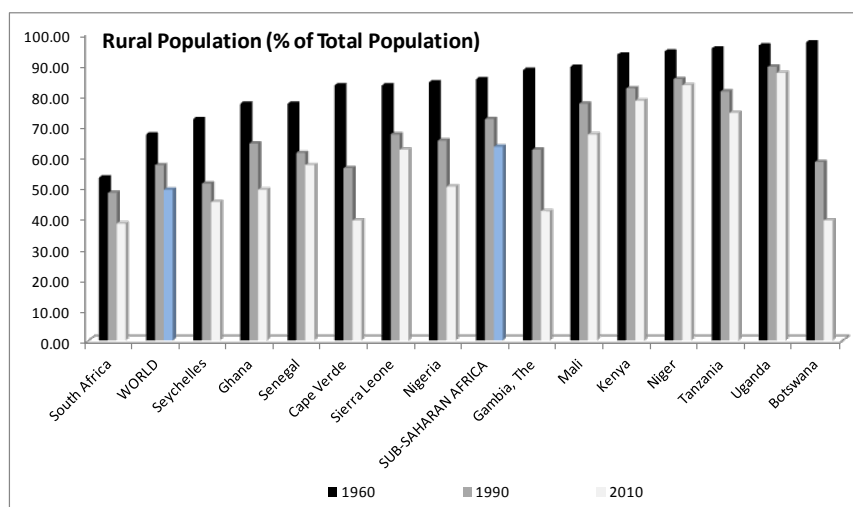
Source: United Nations, Population Division, Population Projections, 2012 Revision, http://esa.un.org/wpp/unpp/panel_indicators.htm

Note: Total Dependency Ratio= (Population 0-19) + (Population 65+) / (Population 20-64).

B. Rural and Informal Labor Markets

41. ***A majority of the population in SSA is rural, although urbanization is occurring and will continue.*** In 2010, about 63 percent of the population in the region was living in rural areas, a decline from 85 percent in 1960 (Figure 16). The correlation between coverage of the working-age population by contributory schemes on the one hand, and the level of urbanization on the other, was found to be weak. This suggests that other factors such as scheme design, compliance enforcement and informal labor markets may have a more powerful impact on coverage than urbanization.

Figure 13: Rural Population in Select Countries in Sub-Saharan Africa
(% of Total Population)



Source: World Bank database.

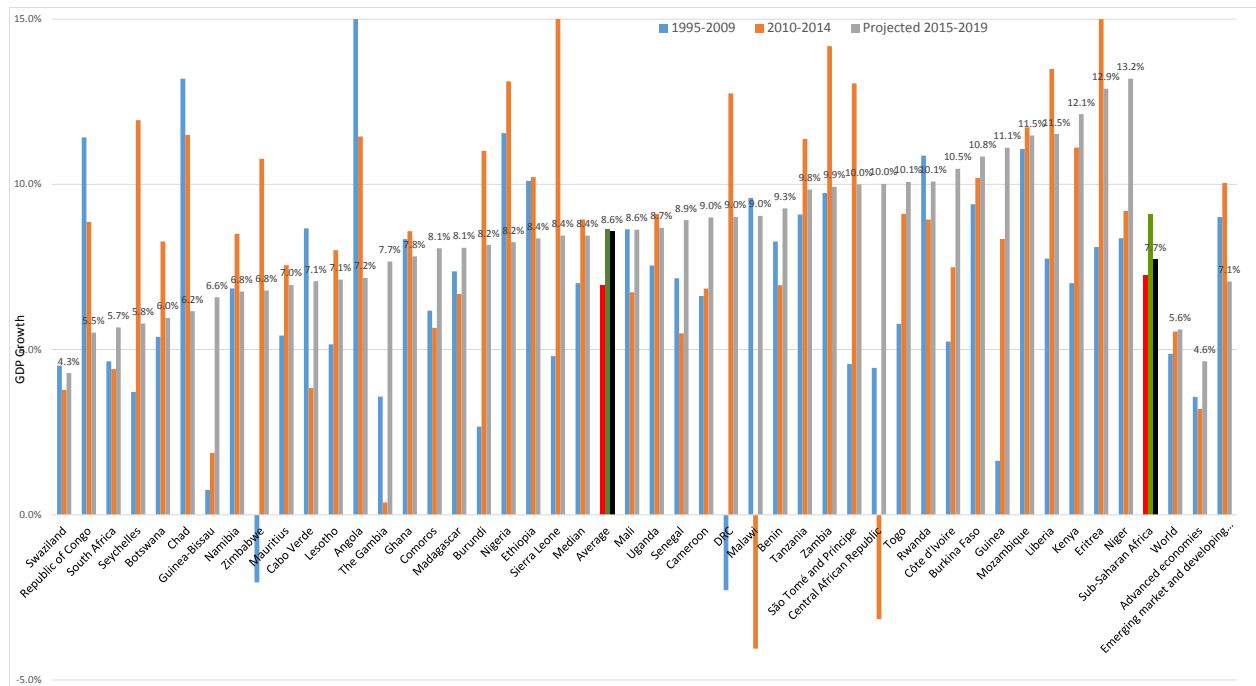
42. ***Labor market conditions and incentives to save for retirement vary considerably between formal wage-based workers on the one hand, and rural and informal sector workers on the other.*** Incomes tend to be lower and more volatile for rural and informal sector workers, so they are less inclined to set aside savings for retirement. In most of SSA, rural workers do not contribute to national pension schemes, in part because such schemes generally apply to workers with wage contracts.

C. Growth Patterns, Debt and Other Macroeconomic Conditions

43. ***Strong growth patterns and macroeconomic conditions make it easier to reform pension schemes and support the establishment of social assistance programs.*** GDP growth rates for SSA

have averaged about 6.9 percent for the period 1995-2009 and 8.6 percent for 2010-2014 (Figure 14). These growth rates substantially exceed both world growth averages and the rates for developed economies. Even more striking is that with the exception of Swaziland, all countries in SSA have annual growth rates forecast to be at least 5.5 percent for the period 2015-2019. This growth has translated into wage growth and urbanization.

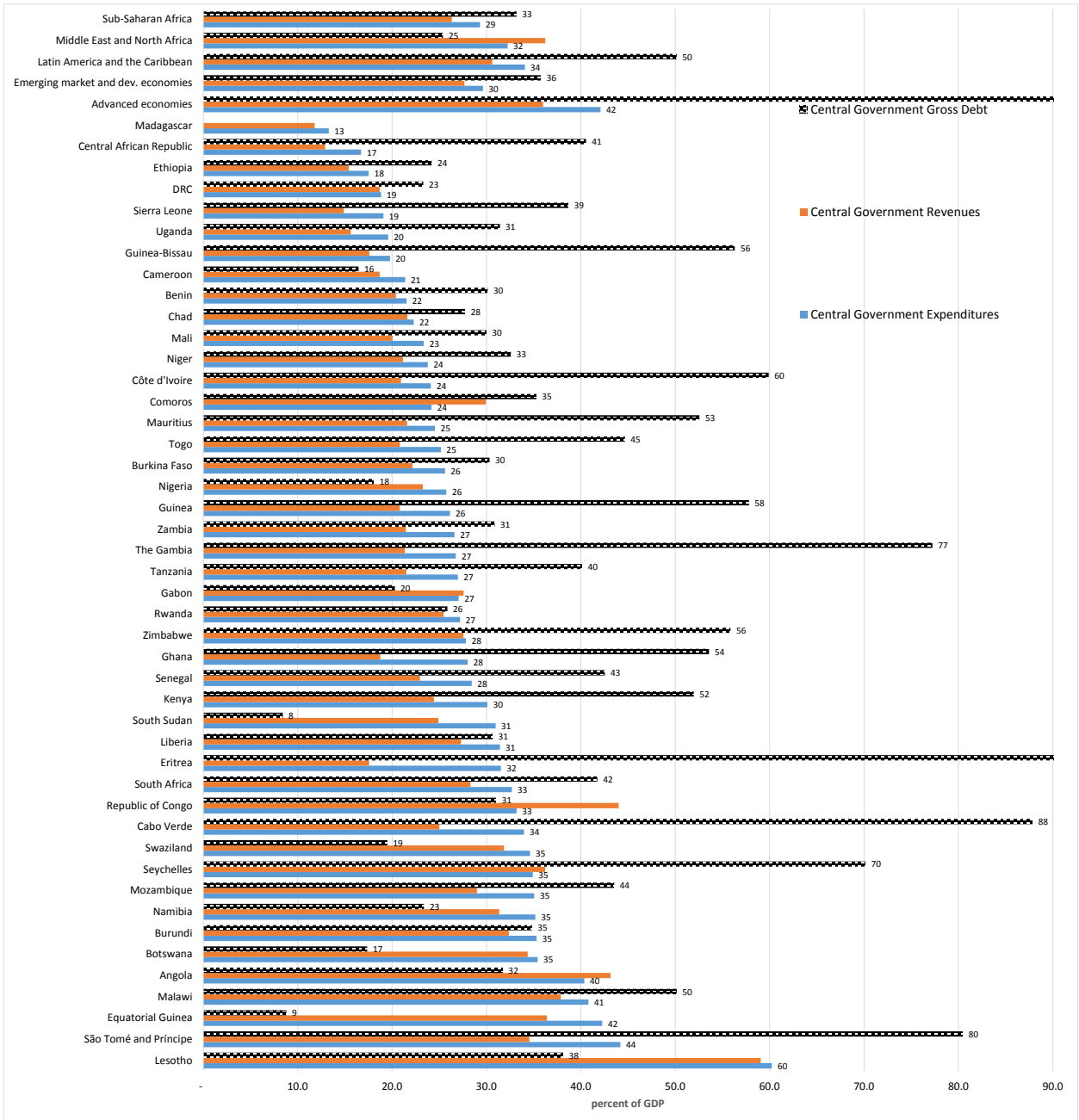
Figure 14: Recent and Projected Annual Real GDP Growth Rates



Source: IMF 2015.

44. **Countries with relatively greater fiscal space can afford more generous levels of support for contributory pensions and social assistance including non-contributory pensions.** Although government revenues in SSA averaged about 28.7 percent of GDP, there was substantial variation across countries and variation across time, with energy and commodity revenues having a major impact (see Figure 15). Government revenues and government expenditures were similar to those of other emerging markets and developing economies during the period 2010-2014. The same variation is observed in the central government gross debt burden.

Figure 15: Central Government Expenditures, Revenues and Gross Debt
(Annual average, 2010-2014, percent of GDP)



Source: IMF: World Economic Outlook Database, March 2014.

IV. Evaluation of Key Challenges

45. ***This section evaluates key challenges including coverage, sustainability of public and private pension system commitments, adequacy of benefits and the efficiency and effectiveness of the infrastructure for old age income protection:***

- ***It suggests that the most important challenge for a majority of countries in Sub-Saharan Africa is to increase coverage of the labor force that contributes to some type of social security scheme and the elderly that are protected by social assistance or pensions.*** As in much of the world, contributory pension systems in SSA have struggled to deliver meaningful old-age income protection to workers other than formal sector workers with steady wage incomes. Most retirees depend upon informal family support structures already strained by the prevalence of HIV/AIDS and various other shocks. The key reason for the poor coverage of contributory schemes is that most workers are in the informal sector or in agriculture with low and intermittent sources of income, and have more pressing needs to fill with any savings. Furthermore, most countries in the region have neither the fiscal resources nor the delivery systems to deliver meaningful social assistance to the elderly, and face difficult choices about whether to earmark scarce resources to other, often poorer segments of the population, such as children.
- ***Another challenge, although of less importance than coverage, is the fragmentation between civil service and national contributory schemes.*** Only about a quarter of countries have integrated their civil service and national contributory schemes, and substantial portability barriers exist for workers moving between the public and private sectors.
- ***A third challenge is the sustainability of national contributory schemes and the fiscal affordability of civil service schemes.*** It suggest the importance of actuarial projections for evidence-based and informed policy decisions. Civil service schemes may face financial challenges more quickly, as they tend to be more mature than the national schemes, and several have promised higher benefits relative to contribution rates.
- ***A fourth challenge is adequacy.*** While full-term workers will receive adequate benefits by almost any metric, experience with national schemes in a limited number of countries in the region suggests that workers on average have shorter contributory work histories and therefore will have much lower benefits. In addition, a majority of countries have no

automatic indexation and therefore workers risk having benefits erode during retirement even if the replacement rates are generous at retirement. Finally, elderly coverage rates suggest that contributory benefits may be adequate for only a small fraction of the elderly. A review of nine countries with national non-contributory elderly assistance schemes found that Botswana and Swaziland had benefits of only about 4 percent and 7.5 percent of GDP per capita, respectively, while the rest had benefits from 12 percent to 38 percent of GDP per capita.

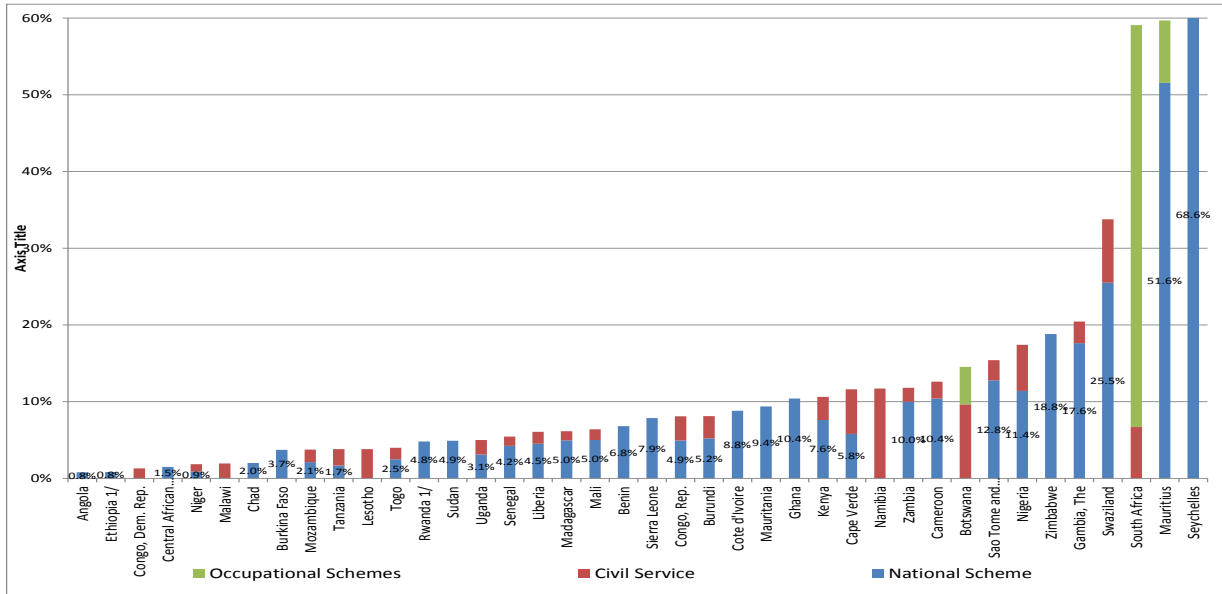
- ***The final challenge is perhaps the most important: severe constraints in infrastructure that prevent countries from efficiently and effectively offering social security to largely rural and informal sector populations.***

These points are elaborated more fully below.

A. Coverage

46. ***Contributory schemes in most countries in SSA cover only a small fraction of the labor force or working-age population (Figure 16).*** Together, mandatory contributory schemes, civil service schemes and occupational schemes cover less than 10 percent of the labor force in about two-thirds of countries for which we have data. About a quarter of countries have coverage rates of between 10 percent and 20 percent, and four countries have coverage rates substantially above 20 percent. Median labor force coverage was about 7.3 percent. There are several explanations for such low coverage levels, including a possible misalignment of wage-based contributory schemes with the characteristics and needs of economies that are dominated by informal sector workers and farmers. In addition, low income levels make savings for retirement very difficult for all but the highest-income workers.

Figure 16: Coverage of the Labor Force in SSA



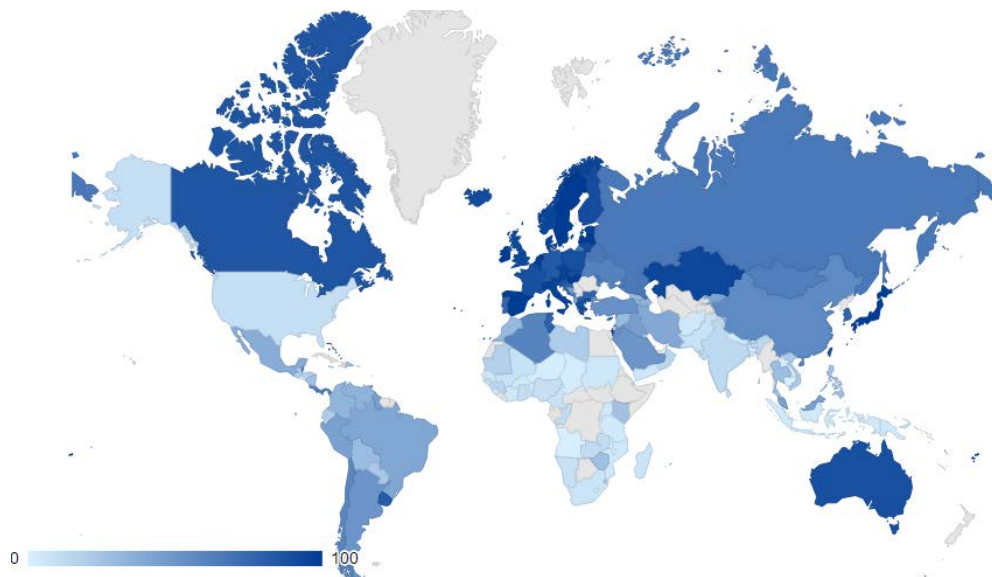
Source: World Bank and ILO estimates.

Note: For those countries with no explicit indication of civil service coverage, either data was not available for the civil service or the scheme was merged with the national scheme.

47. **Looking at globally, labor force coverage in SSA tends to be lower than in other regions** (Figure 17). Most of the difference can be explained by differences in GDP per capita across regions (Figure 18). As discussed below, the low coverage level in the region is one rationale for concentrating reform efforts on expanding coverage.

Figure 17: Global Labor Force Coverage

(% of labor force covered by contributory social security scheme for old age)



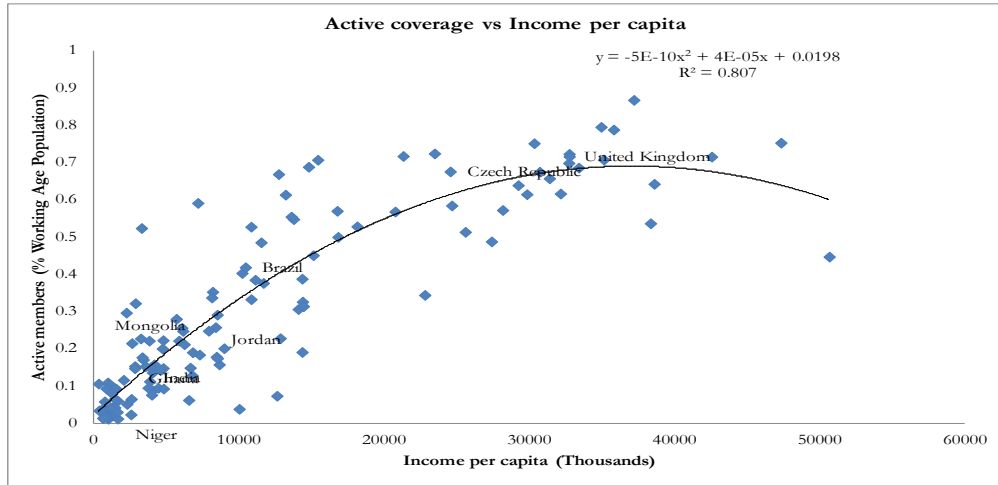
Source: ILO, Social Security Department, 2014, SSI Indicators on World Map [website](#).

48. ***It is useful to consider coverage in the context of per capita income as there is a strong correlation between the two, both globally and in SSA (Figure 18, Figure 19).***¹⁵ This correlation is in part because GDP per capita is correlated with formal sector employment. This metric can assess labor force coverage relative to a benchmark, which is the fitted line between the different observations of coverage for a given per capita GDP (Figure 19). Using this relative benchmark, we then measured proportionally above or below the fitted line in each country (Figure 20). This provides insights into which countries may want to focus on measures to improve coverage. According to this metric, Angola, Ethiopia, Chad, the Democratic Republic of Congo, Niger, Congo Republic, Malawi, and Tanzania have very low coverage relative to GDP per capita.¹⁶ On the other hand, South Africa, Mauritius, and Swaziland not only have higher contributory coverage relative to GDP per capita, but also have elderly assistance programs to cover the elderly poor. The Gambia, Zimbabwe, and Sao Tome and Principe have higher relative coverage, yet may nonetheless want to consider measures to improve coverage.

¹⁵ It is important to note in using the working-age population as an indicator that there is considerable variation in the ratio between the labor force and working-age population, which can affect the correlation.

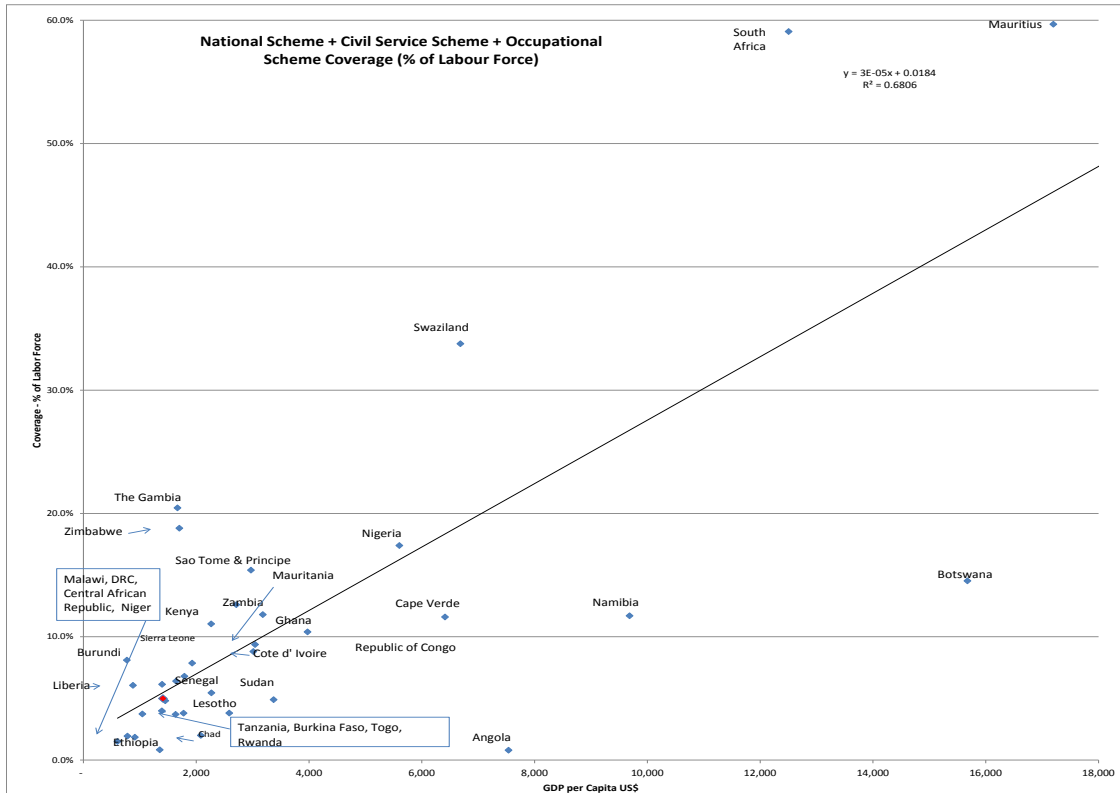
¹⁶ It is important to note that countries that are commodity producers may have substantially higher GDP per capita than actual income per capita, which may overstate the effective under-coverage for these countries.

Figure 18: Correlation between Global Working Age Coverage and Per Capita Income
 (% of working age population, income per capita – US\$ thousands)



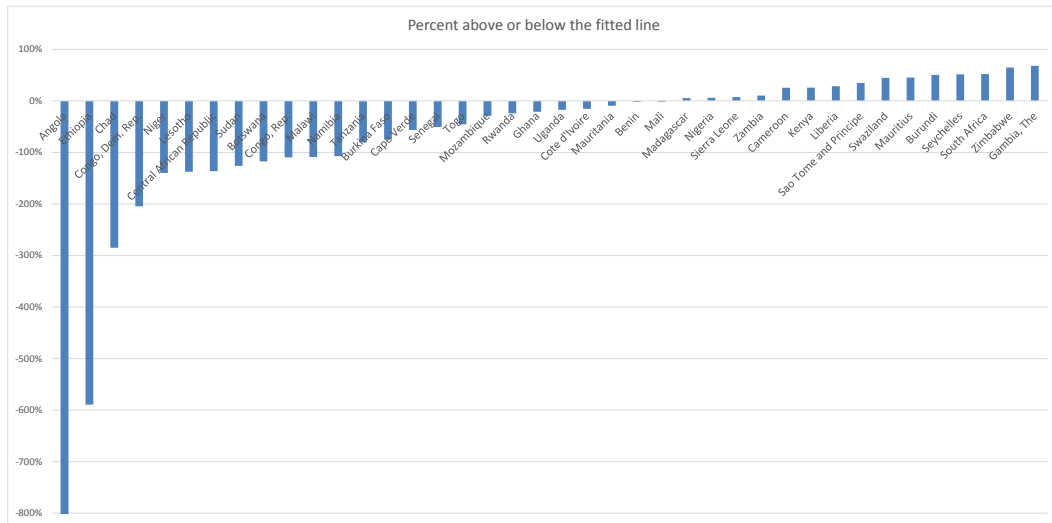
Source: World Bank database.
 Note: Data points are from late 2000s.

Figure 19: Labor Force Coverage vs. Income Per Capita in SSA



Sources: World Bank database, Bank estimates, and World Bank 2015c.
 Note: The database uses self-reported administrative data as its primary source of covered populations.

Figure 20: Deviation Above or Below the Relative Coverage Benchmark for Labor Force Coverage

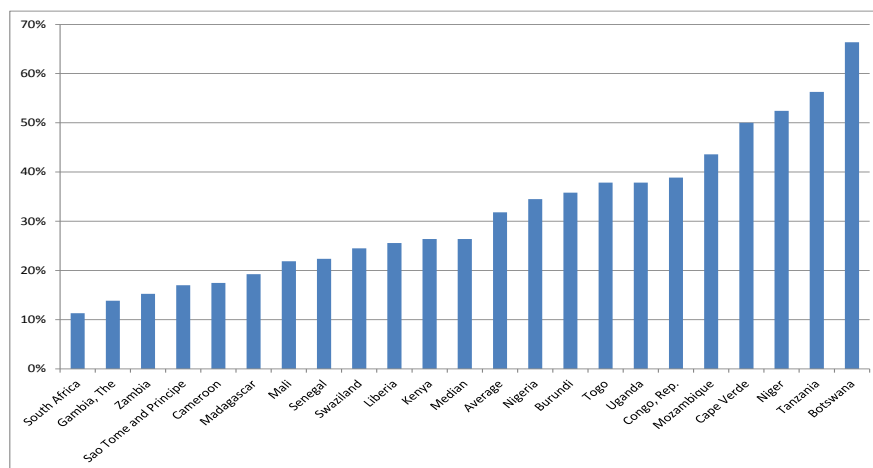


Sources: World Bank database, Bank estimates, and World Bank 2015c.

Note: The database uses self-reported administrative data as its primary source of covered populations.

49. **Coverage of civil servants is an important part of the overall covered population in most countries in SSA**, with a median of more than 25 percent (Figure 21). We also examined the correlation between civil service labor force coverage and per capita income and found a high correlation, as in the case of national schemes (Figure 22).

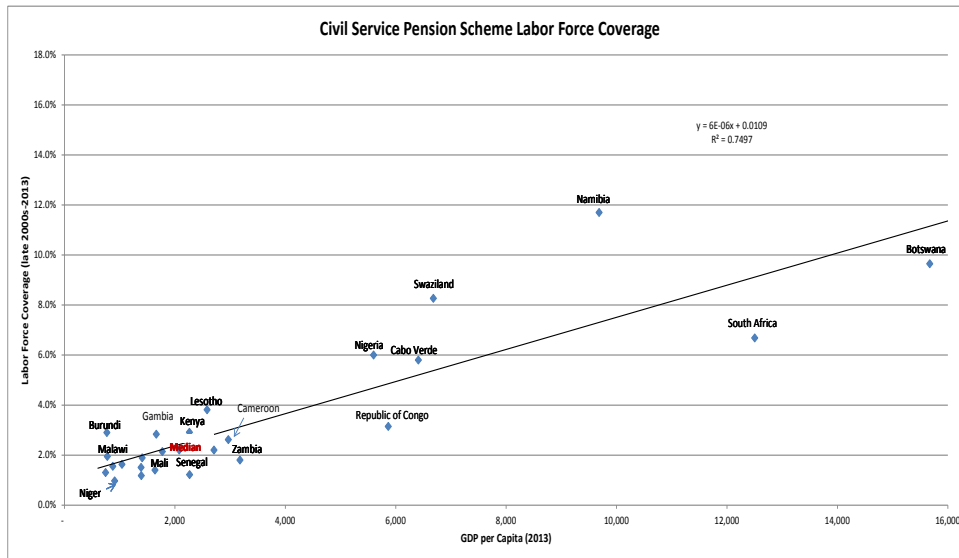
Figure 21: Civil Service Labor Force Coverage as a Proportion of Total Labor Force Coverage¹⁷



Source: World Bank estimates.

¹⁷ This does not include countries that have integrated civil servants into the national scheme. Nor does it include countries where civil servant or national scheme data is not available.

Figure 22: Civil Service Labor Force Coverage



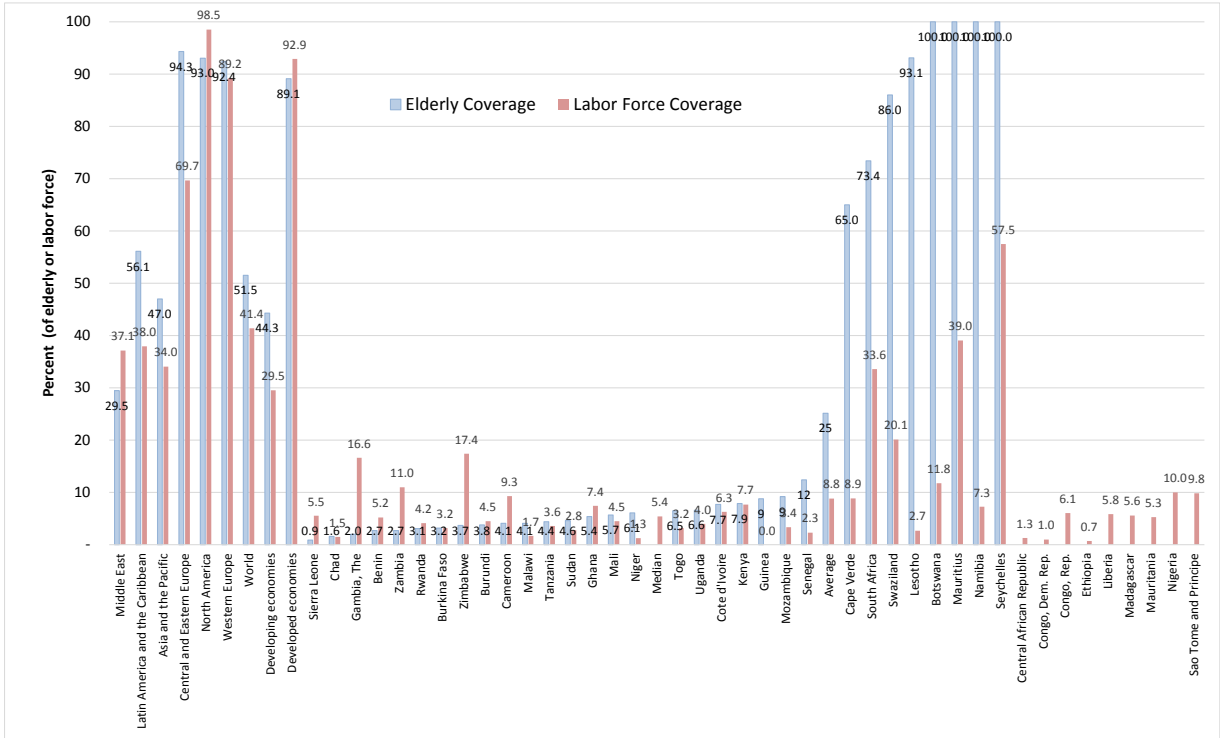
Source: World Bank estimates.

50. **One factor that has contributed to low coverage levels is that payroll contribution rates are relatively high, given labor market conditions of low wages and high levels of informality.** Any form of taxes tied to the wage base will adversely impact some economic activity, so applying the concept of affordability requires reasonable estimates of how different contribution rates will impact compliance and wage reporting.

51. **Elderly coverage is also very low,** although countries with significant non-contributory pensions such as South Africa, Lesotho, Swaziland, Botswana, Namibia, Seychelles, Mauritius and Cape Verde have very high levels of elderly coverage. In this way, non-contributory pensions are considered an essential part of the package of pension provisions in several countries, in part to improve elderly coverage. The average level of elderly coverage for contributory schemes was about 5.5 percent for the population over eligibility age; the median was 4.5 percent (Figure 23). These are both lower than labor force coverage. Elderly coverage in SSA is also much lower than in other regions, with the exception of Southern Africa with its elderly assistance programs (Figure 23, Figure 24).

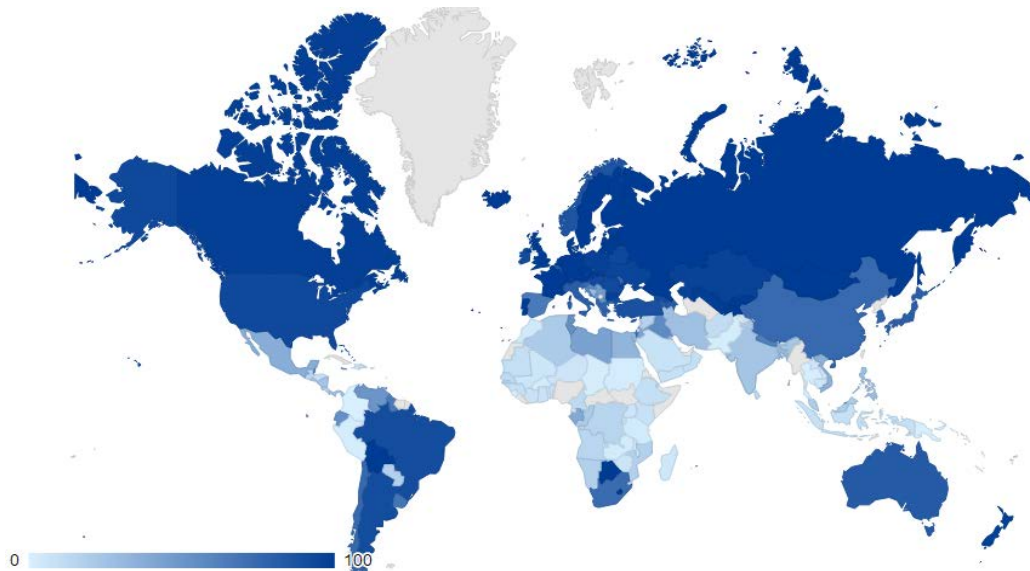
Figure 23: Elderly and Labor Force Coverage

(Late 2000s; % of elderly over eligibility age; % of labor force)



Sources: ILO, World Bank, country administrative data.

Figure 24: Global Elderly Coverage



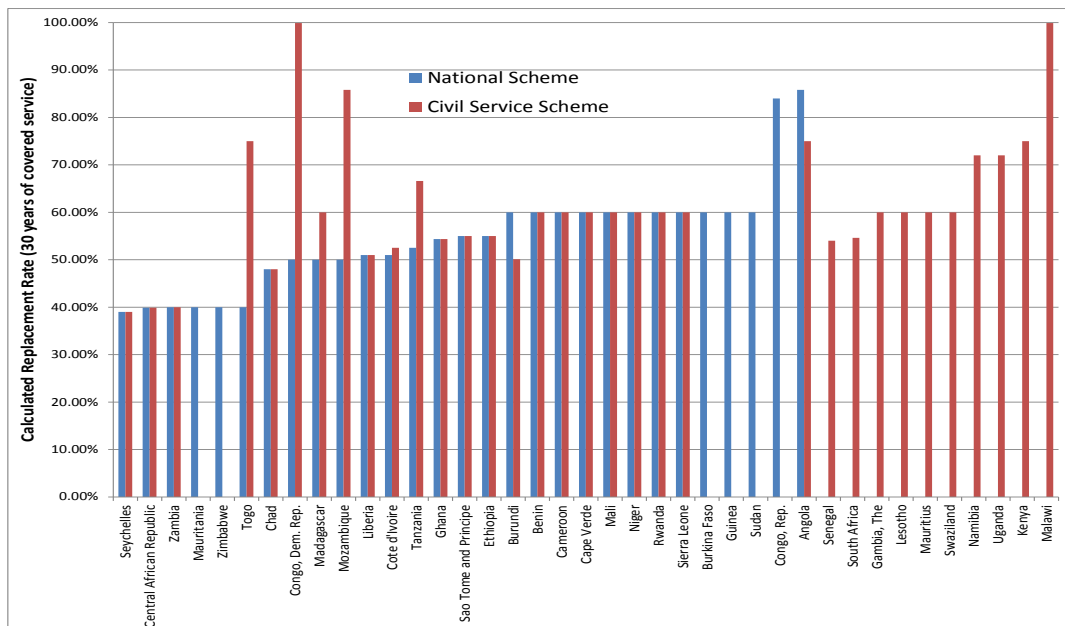
Source: ILO.

Note: Color gradient of color indicates level of coverage.

B. Adequacy

52. *While full-term workers enjoy generally adequate replacement rates according to most criteria, data from select countries suggests that many workers don't achieve such complete work histories to benefit from such replacement rates for a full-term (Figure 25). Simulated replacement rates for workers who contribute for 30 years suggests that 26 of 31 defined-benefit schemes would have replacement rates of 40-60 percent of individual wages with a median replacement rate of 56 percent.¹⁸ Such replacement rates would satisfy the adequacy criteria according to the standards established under ILO Convention 102 of 1952 though, as suggested, few individuals would receive such benefit levels. Data from the work histories of select countries in the region and from other regions suggests that most workers rarely achieve 30-year work histories as they spend long periods of their work lives either outside the formal sector or not employed.*

Figure 25: Simulated Replacement Rates



Source: World Bank database.

Note: Replacement rate based on a calculation of 30 years of service multiplied by the applicable accrual rates. In the case of Ghana, no additional benefit was applied for individual account contributions. Nigeria and other defined-contribution schemes were excluded from the calculation.

¹⁸ With no cross-country data on applicable limits on covered wages, there was no way of assessing the adequacy of benefits compared to total compensation. There was also very limited data on work histories in mandatory private-sector schemes, so a 30-year history is used for all countries, without regard to retirement age.

53. **One measure of adequacy can be the level of risk that workers or retirees bear—or, more narrowly, the inflation risk during the payout phase.** Pension beneficiaries bear a significant level of inflation risk in SSA. **Figure 26** shows that only about a quarter of countries' mandatory schemes have explicit wage or price indexation while the rest either do not have explicit indexation rules or make adjustments on a discretionary basis.¹⁹ Without some level of indexation, old age income and poverty protection can be extinguished during retirement by even modest inflation levels.

Figure 26: Contributory Pension Indexation

Angola	NA
Benin	Discretionary
Botswana	1/
Burkina Faso	Discretionary (acc to wages, minimum wage & resources of the scheme)
Burundi	Discretionary (according to changes in the cost of living, depending on the financial resources of the system)
Cameroon	No explicit indexation
Cape Verde	Ad-hoc
Central African Republic	No explicit indexation
Chad	Discretionary (by decree according to actuarial projections by the National Social Insurance Fund)
Congo, Dem. Rep.	Discretionary
Congo, Rep.	Price
Cote d'Ivoire	Price (and according to changes in the cost of living, depending on the financial resources of the system)
Ethiopia	NA
Gambia, The	2/
Ghana	Wage indexation
Guinea	Wage, depending on the financial resources of the system
Guinea-Bissau	NA
Kenya	2/
Lesotho	1/
Liberia	NA
Madagascar	According to increases in the legal minimum wage
Malawi	4/
Mali	Benefits are indexed (adjusted) by decree according to changes in the average salary and the legal minimum wage, depending on the financial resources of the system.
Mauritania	Price, depending on the financial resources of the National Social Security Fund
Mauritius	NA
Mozambique	NA
Namibia	1/
Niger	3/
Nigeria	4/
Rwanda	Ad hoc on the basis of Presidential Decree
Sao Tome and Principe	Wages
Senegal	3/
Seychelles	Periodically according to revisions in the regulations which specify the benefit scales and benefit adjustments
Sierra Leone	Wages, depending upon the financial position of NASSIT
South Africa	1/
South Sudan	1/
Sudan	NA
Swaziland	2/
Tanzania	Discretionary, according to the recommendation of the actuary
Togo	Price
Uganda	2/
Zambia	Wages
Zimbabwe	No explicit indexation
1/ No national scheme	
2/ Provident Fund.	
3/ Points scheme.	
4/ Defined-contribution scheme	

Source: SSA and ISSA 2013; and World Bank estimates.

¹⁹ Data is not available on the implementation of these provisions, nor has indexation been tracked across countries on a systematic basis.

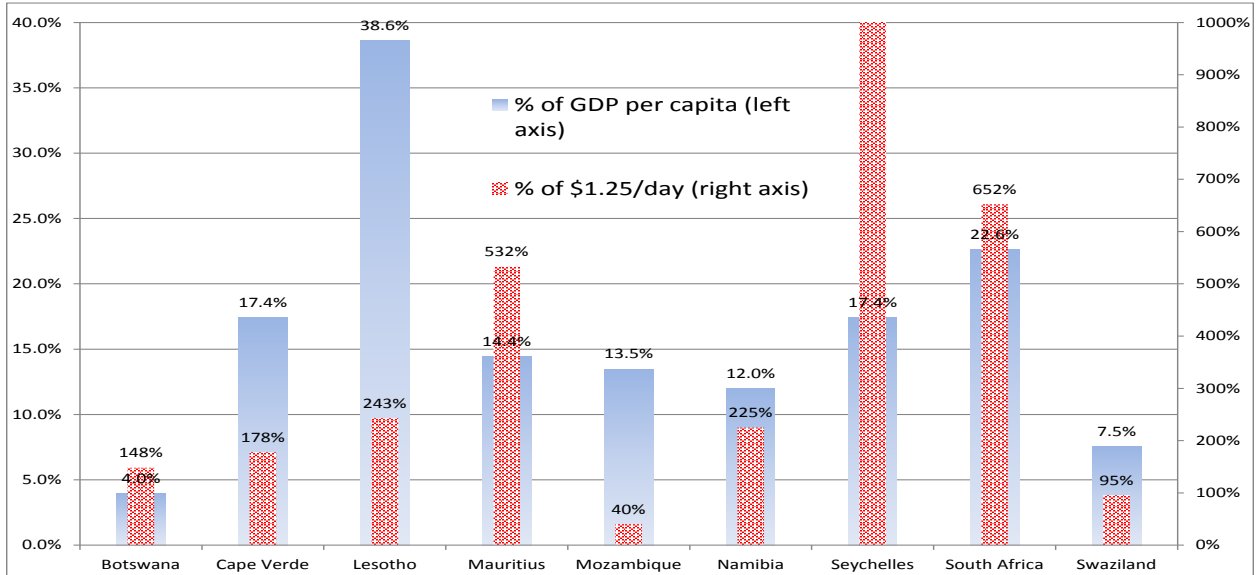
54. **Contributors to provident funds and funded defined-contribution pension schemes are exposed to performance risk** and to longevity risk, depending how payout is structured. Defined-contribution pension schemes need to have asset returns at least as great as wage growth in order to provide a continuous accrual of rights towards wage replacement. When compared with real wage growth, historical rates of return have been negative at the Kenya and Uganda National Social Security (provident) funds.

55. **Contributors to provident funds are subject to longevity risks, as are contributors to other defined-contribution pension schemes.** Many occupational pension schemes in the region provide benefits as a lump sum, in some cases at severance of employment. Additionally, many national defined-benefit schemes in SSA provide for partial commutation of benefits at retirement, which also exposes retirees to longevity risks.

56. **Another indicator of adequacy is how much a pension benefit protects against poverty in old age.**²⁰ If we measure individual poverty using an absolute income benchmark of \$1.25/day, we find that all of the schemes except Mozambique exceed the benchmark, and Swaziland's benefit is just under that level (Figure 27, Table 2). Another benchmark is a relative poverty measure for which we have GDP per capita as a proxy, even though this indicator may be heavily distorted in countries where a significant proportion of GDP is generated by energy or commodity exports. Using this benchmark, we find that seven of nine countries with national non-contributory schemes have benefits of at least 12 percent of GDP per capita, while Swaziland and Botswana have benefits below this level. Lesotho has the highest benefit level but only provides it to retirees at age 70. The largest program in the region is in South Africa, which provides a benefit of about 23 percent of GDP per capita starting at age 60.

²⁰ A key means of measuring the impact of contributory and non-contributory pensions on poverty incidence and the poverty gap is through cross-country evaluations of household survey data. Unfortunately, there is insufficient cross-country household survey data for the nine countries with national elderly assistance schemes.

Figure 27: Benefit Levels of Non-Contributory Pensions
(Benefit as % of GDP per capita)



Source: HelpAge International, Pensions Watch 2014.

C. Sustainability and Fiscal Affordability

57. ***Fiscal exposure to pension costs results from:*** (i) payment of contributions on behalf of civil service workers or benefits for civil service retirees; (ii) payment of benefits to non-contributory old age assistance benefits or other social assistance to the elderly; (iii) explicit subsidy requirements for national contributory pension schemes; and (iv) other financial assistance required to backstop national contributory pension schemes.²¹

58. ***The fiscal threat posed by the burden of obligations from unsustainable mandatory pension schemes or escalating civil service pension expenditures is not well known in many countries.*** Limited long-term actuarial projections have been undertaken in countries in the region to determine the long-term impact.²² Countries that have completed such projections have more often than not

²¹ In a number of African countries, administrative costs are also important and appear to be excessive relative to international benchmarks. See Sluchynsky 2015.

²² Long-term actuarial projections have been undertaken by the World Bank in connection with policy reports in Zambia, Ghana, Uganda, Tanzania, South Africa, The Gambia, Cape Verde, Mauritius, Mali, Senegal and Niger. Country authorities have in some cases contracted for long-term actuarial projections to inform policy choices. Most national schemes have statutory requirements for periodic actuarial valuations, although there is not a common framework for such valuations to ensure that long-term projections are carried out.

found that parametric or structural reforms were needed—though generally only over the long term, as their populations are largely young and the schemes still maturing.

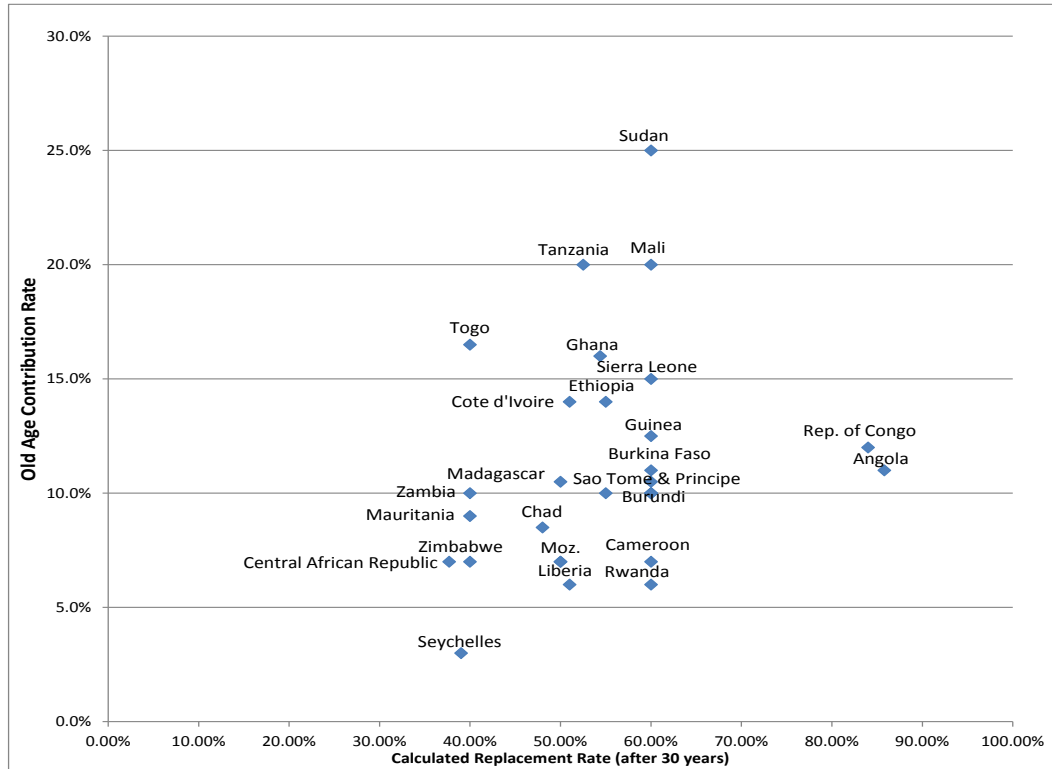
C1. Contributory Pension Scheme Sustainability

59. ***We have very limited data on the long-term projected financing gap for national contributory schemes.*** Actuarial projections will be essential to a more informed perspective. Sustainability is particularly important for partially-funded pay-as-you go pension schemes, as the profile of contributions changes over time, which will impact the ability of the pension scheme to deliver promised benefits for current and future retirees. Sustainability is profoundly affected by the relative parameters of the scheme (principally contribution rate, accrual rate and retirement age) as well as the trajectory of the anticipated system old-age dependency ratio discussed above. Sustainability can be determined through actuarial projections of inflows and outflows such as those undertaken by the Bank with the assistance of the Pension Reform Options Simulation Toolkit (PROST). Key indicators for the determination of sustainability are (i) the projected financing gap; and (ii) the projected implicit pension debt. Unfortunately we do not have cross-country projections that could support a rigorous comparison of the sustainability of public pension schemes. We therefore do not have a cross-country view of the sustainability of public pension schemes, though we do have data for some countries.

60. ***The slow pace of aging in most countries in the region suggests that many schemes may not face financial difficulties for some time.*** Costs of national contributory schemes that cannot be financed by pension contributions and investment returns represent a contingent fiscal cost. [Figure 28](#) plots the contribution rate associated with old age, disability and survivor insurance against a projected replacement rate for a retiree with 30 years of contributions. Although this figure cannot be analyzed in isolation from other data including the retirement age, demographic profile and system age, generally those countries with the highest replacement rates relative to contribution rates could face sustainability challenges in the long run.²³

²³ Actuarial projections are needed to more precisely assess the sustainability of individual country schemes.

Figure 28: Contribution Rates and Calculated Replacement Rates for Defined-Benefit Schemes



Source: SSA and ISSA 2013; and World Bank estimates.

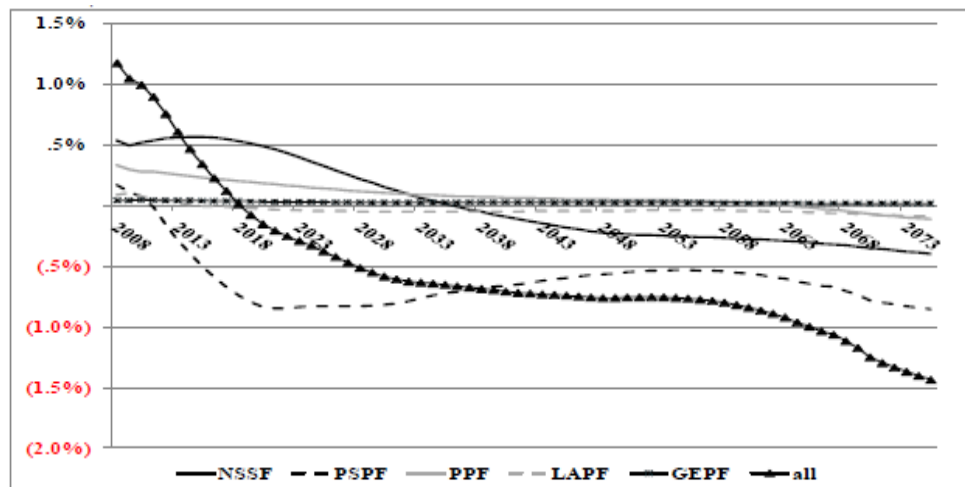
61. ***The projected current balances for five pension schemes in Tanzania illustrate the sustainability challenges faced by some of the mandatory schemes in the region (Figure 29).*** The current balances for the Tanzania National Social Security Fund (NSSF) for example, are projected to gradually increase over the next five to six years as the scheme continues in its accumulation and maturation phase, when contribution and asset return revenues exceed disbursements by about 0.6 percent of GDP per year. As the scheme matures and the number of beneficiaries increases relative to contributors, expenditures are projected to increase relative to contributions, decreasing the current balance surplus. By about 2035, the NSSF is projected to have a negative current balance (without parametric reforms).²⁴ Barring reforms, shortly after 2035, the NSSF would exhaust its reserves as well. The Public Employees' Pension Fund, by contrast, is projected to have deficits in

²⁴ There are a number of other dynamics at play that influence cash flows, in addition to demographics. These include relative changes in prevailing wages, changes in the age/wage profile of the contributors, changes in the average work histories of contributors, and adjustments in indexation of benefits.

2012 that will continue throughout the projection period. Only parametric or structural reforms can make the finances of these schemes sustainable.

Figure 29: Tanzania: Projected Current Balance of Public and Private Sector Pension Schemes

(% of GDP per annum)

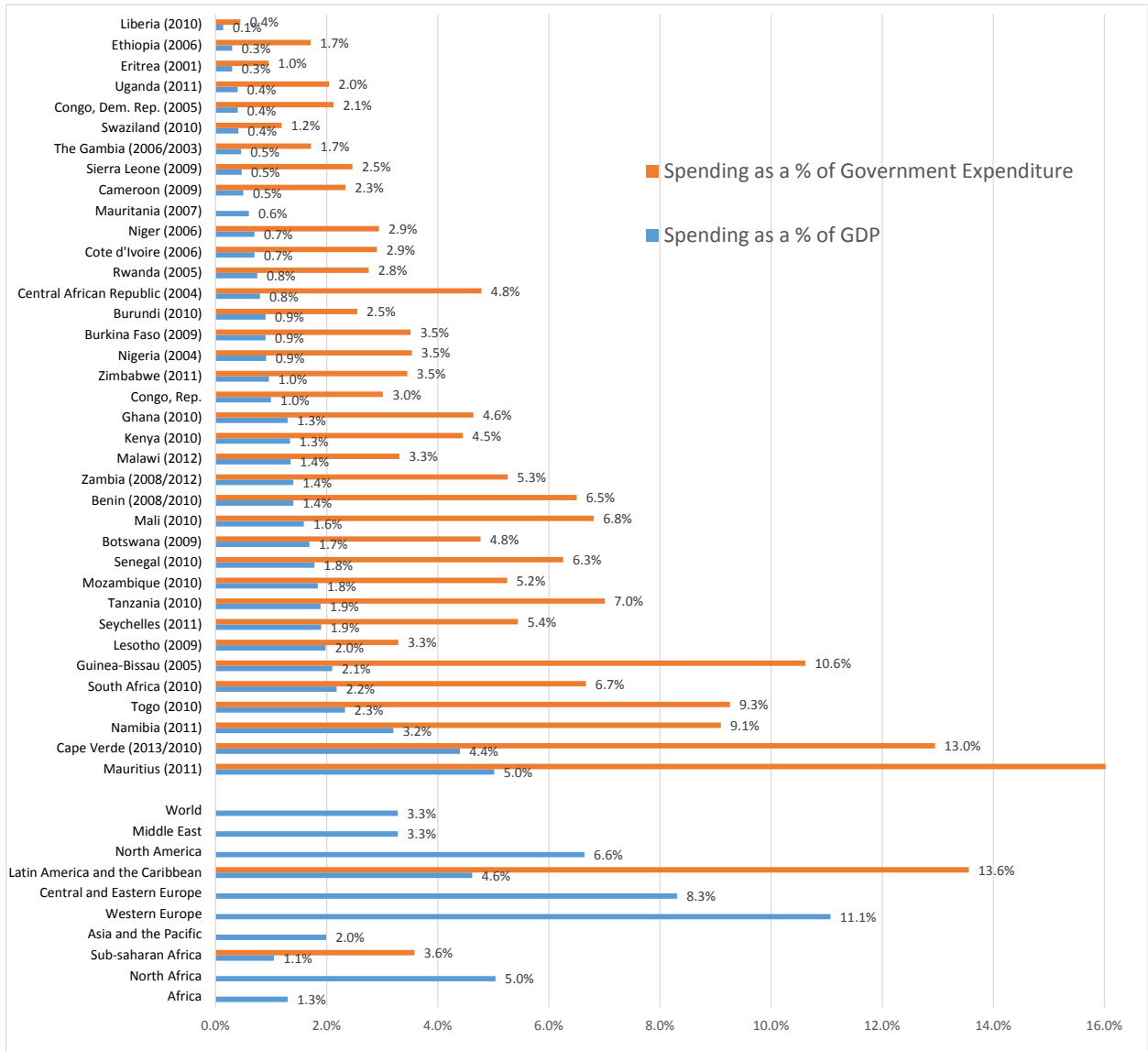


Source: World Bank 2010.

C2. Civil Service Pension Costs

62. ***Current and projected civil service pension costs in SSA are fiscal obligations that potentially crowd out other critical fiscal priorities, including civil service wages.*** Civil service pension expenditures by countries for which data is available range from about 0.3 percent in Swaziland to 2.6 percent of GDP in Cape Verde. This needs to be compared to total civil service wage and benefit expenses as well as total tax and fiscal revenues. In countries such as Mozambique, Benin, Zambia, Benin and Kenya, civil service expenditure levels may prove to be a substantial burden on fiscal expenditures.

Figure 30: Pension Spending
(% of GDP – late 2000s)



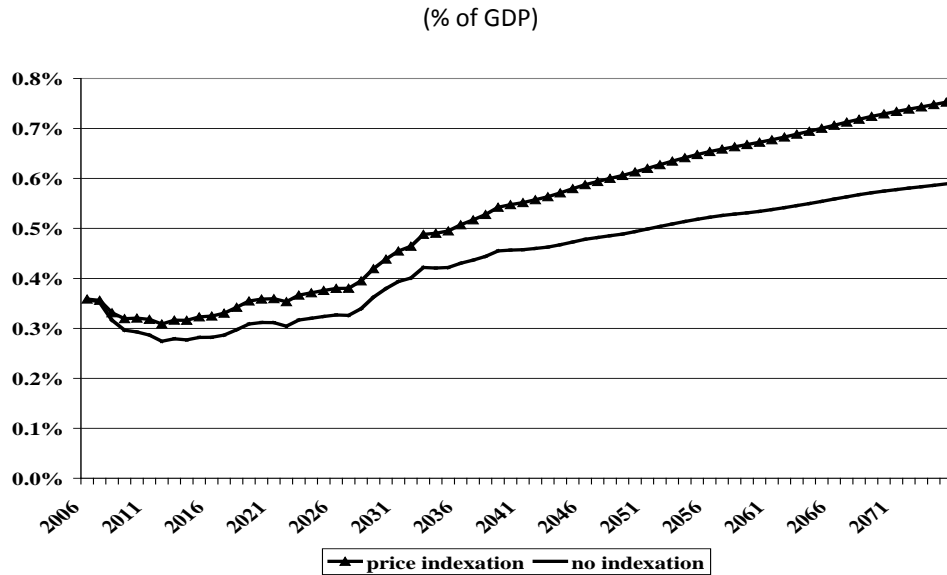
Source: ILO, World Bank estimates, and IMF World Economic Outlook Database 2014.

63. **Actuarial projections from some countries suggests that the fiscal costs of civil service pension benefits may accelerate as the number of retirees and beneficiaries increase and live longer.**

In Tanzania, The Gambia and Uganda, for example, civil service pension expenditures were projected to increase substantially over the coming years as suggested in Figure 29, Figure 31, and Figure 32. In some countries, civil service payrolls increased in the 1980s and early 1990s. Countries with subsequent civil service retrenchment now have lower levels of contribution inflows to support a

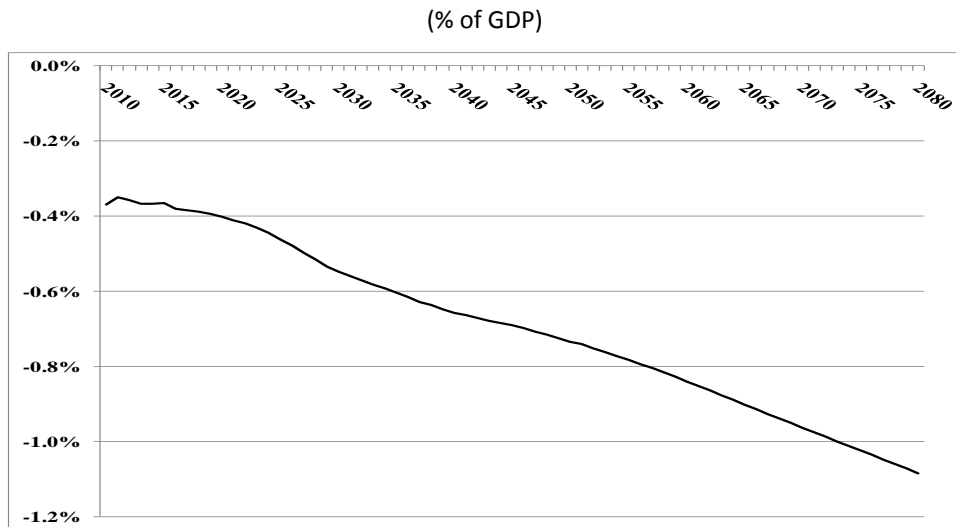
growing pool of retirees. Some civil service schemes may face another financial challenge as they mature: increasing life expectancy among beneficiaries at retirement.

Figure 31: The Gambia: Projected Expenditures for the Public Service Pension Fund²⁵



Source: World Bank 2007.

Figure 32: Uganda: Public Service Pension Fund Projected Baseline Pension Expenditure



Source: World Bank 2010.

²⁵ The Gambia Public Service Pension Fund is a non-contributory scheme and therefore has no contribution revenues.

C3. Non-Contributory Elderly Assistance Costs

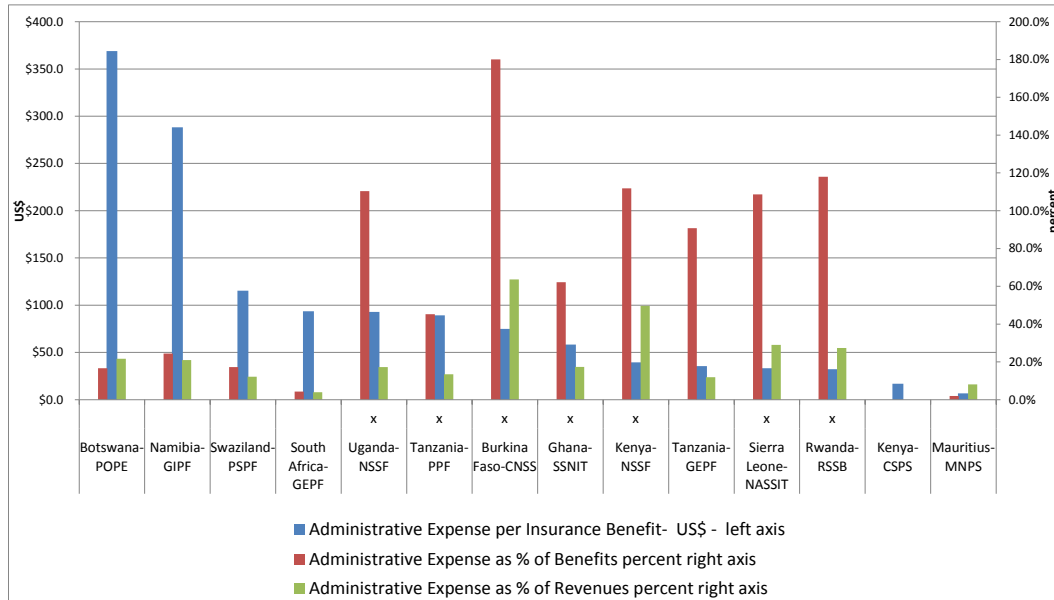
64. ***Fiscal costs are associated with the introduction of elderly assistance schemes and will increase gradually as the size of the elderly population grows.*** Simulated costs are indicated in [Figure 39](#) and [Figure 40](#) below. As shown in [Table 2](#) above, the cost of non-contributory elderly assistance programs in the nine countries with national non-contributory pensions ranged from 0.2 percent of GDP in Mozambique and Botswana to 2.2 percent of GDP in Mauritius. The projected median cost of a universal social pension — 20 percent of per-capita GDP for all individuals aged 65 and above — would be about 1.3 percent of GDP, or about 40 percent higher than the current average elderly assistance cost of about 0.9 percent of GDP in nine countries. Similarly, the estimated median cost of eliminating the elderly poverty gap in 15 countries for which data was available would be about 0.6 percent of GDP.²⁶

D. Efficiency and Effectiveness

65. ***The limited data available on the administrative efficiency of state-run contributory schemes suggests that they tend to be inefficient, and in many cases the administrative infrastructure is not well aligned to the needs of rural and informal contributors.*** Data from civil service and private sector schemes in 12 countries suggests that most are very costly to administer ([Figure 33](#)). Seven of 14 schemes evaluated against international benchmarks had operating costs that were more than five times greater than benchmark-predicted levels, based on observation of 100 pensions and social security programs throughout the world. Although administrative costs will not impact benefit promises in defined-benefit schemes, these costs will adversely affect the sustainability of such schemes, as the managing agency will use a substantial portion of contribution revenues for its own administrative costs. In the sample of 14 schemes, half had administrative expenses that were more than 50 percent of contribution revenues, and five were well above the entire revenue base. This suggests that efforts are needed to improve administrative efficiency.

²⁶ See Kakwani and Subbarao 2005.

Figure 33: Administrative Expense Indicators
(US\$ or % of Benefits/Expenditures)



Source: Sluchynsky 2015.

Note: An “x” above the scheme indicates that the actual costs of operation are more than five times expected levels based on the averages observed for 100 pension and social security programs throughout the world.

66. ***The infrastructure for both non-contributory elderly social assistance and contributory schemes needs to be strengthened.*** Non-contributory elderly assistance programs require unique identification systems, registration and birthdate validation mechanisms, eligibility processes and procedures, and efficient payment systems often to widely dispersed populations. Additional infrastructure is needed to the extent that the benefits require means testing. Contributory schemes will be heavily impacted by the quality of the institutional framework needed to ensure that all processes, from collection to data management and disbursement, are delivered to country populations. Technological innovation must be harnessed in order to meet the needs of rural and informal workers. Investments in administrative systems and infrastructure will be needed in most countries to ensure that public and private pension provisions operate on unified platforms that are accessible to rural and urban contributors and beneficiaries. Disclosure and accountability are essential to building public credibility and trust.

67. **Substantial additional enabling conditions and institutional requirements are associated with funded defined-contribution schemes.** Competitively managed funded schemes require the infrastructure to support employee or employer portfolio choice, including custodial services, a data management and reporting framework, and a strong regulator and supervisor. In addition, they require macroeconomic stability, a strong capital market reform agenda, and a strong rule of law for the functioning of financial markets and guarantee of worker, employer and pension fund rights and responsibilities. The experience in Nigeria provides some insights into the establishment of funded defined-contribution schemes (see Box 1).

Box 1: Funded Defined Contribution Schemes: Nigeria's Experience

Nigeria enacted a major structural reform to its pension system in 2004 and began implementation in 2006. The reforms replaced the earlier mandatory PAYG defined-benefit scheme for private sector workers under the National Social Insurance Trust Fund (NSITF) and unfunded federal civil servants scheme with a funded defined contribution scheme. The reform created a pensions supervisor, the National Pension Commission which had oversight for all pension schemes, including occupational schemes. It also established a framework for registering existing occupational schemes under the new framework. Non-contributory social pension provisions were not established at that time but were piloted subsequently.

Prior to the reform, the civil service operated a non-contributory defined-benefit scheme and payment of retirement benefits was budgeted annually, resulting in inadequate and untimely release of funds, delays and arrears accumulation. Many private sector employees were not covered by the NSITF or occupational pension schemes and many schemes were not funded.

The main objectives of the reform as stipulated by the authorities were:

1. To ensure that every person who worked in either the public service, federal Capital Territory or private sector receives his retirement benefits as and when due;
2. To assist individuals by ensuring that they save for their old age, thereby reducing old age poverty;
3. To ensure that pensioners are not subjected to untold suffering due to inefficient and cumbersome process of pension payment;
4. To establish a uniform set of rules, regulations and standards for the administration and payments of retirement benefits for the public service , federal Capital Territory and the private sector; and
5. To stem the growth of outstanding pension liabilities.

It is premature to fully assess the performance of the Nigerian reform, particularly since the scheme is in an accumulation phase with a young contributor profile. Moreover, it is difficult to disentangle the effects of different reform elements such as supervision, funding, information and payments infrastructure and benefit design. The reform can be credited for establishing a unified framework for pension provision (where previously it was fragmented), for establishing an authority for supervising pension provision, and for putting in place a framework to reduce or eliminate benefit arrears. Worker and elderly coverage remains low, though has improved markedly over the pre-2004 scheme. Only time will tell whether the scheme will be able to deliver meaningful old-age income replacement for a majority of its citizens.

One question that Nigerian authorities have grappled with, as have other countries pursuing 2nd pillar reforms, is whether enabling conditions in the country have been sufficient to support 2nd pillar reforms, including macroeconomic stability, a strong complementary capital market reform agenda, and the challenge of creating an effective regulatory and supervisory agency.

Sources: Nigeria National Pensions Commission [website](#); Casey and Dostal 2007; Dostal 2010; and Rudolf and Rocha 2009.

V. Policy Options for Consideration

68. ***A growing number of SSA countries have undertaken reforms to their pension systems over the past decade.***

- Several countries have enacted parametric reforms, including Cape Verde (2006), Niger (2010), and Zambia (2010).
- The civil servant scheme in Ethiopia was extended to private sector workers in 2011 while a framework was enacted requiring mandatory contributions for private sector firms.
- In 2001, Kenya established a regulatory and supervisory authority for its occupational and individual pension savings arrangements. Uganda, Zambia, Malawi, Ghana and Tanzania have also established a revised regulatory framework and oversight for pensions, and Botswana and Namibia have been working to strengthen oversight of occupational and personal pension arrangements.
- Nigeria in 2004 enacted a structural reform program, replacing state-run, mandatory defined-benefit civil service and private sector schemes with a funded defined-contribution scheme. Ghana in 2008 enacted a hybrid reform, retaining its existing pay-as-you-go defined benefit scheme but hiving off contributions to be placed in competitively managed individual accounts.
- New entrants to the civil service began to participate in a unified social security framework in Sierra Leone (2001); Cape Verde (2006) and Zambia (2010).
- Unfunded or partially-funded PAYG defined-benefit schemes for civil servants were replaced by funded defined contribution schemes in Botswana (2001) and Kenya (2012).²⁷

We also understand that active consideration of reform programs is ongoing in Rwanda, Uganda, Kenya, Tanzania, Lesotho and Mozambique.

69. ***This chapter discusses some policy options to address the challenges identified in the previous chapter.*** Designs for contributory schemes need to accommodate the low and irregular earnings of informal sector and rural workers. Household-based cash transfers and non-contributory elderly assistance programs should reinforce the broader objective of elderly coverage and poverty protection, while improving welfare across the age spectrum.

²⁷ The latter reform has been legislated but not been implemented.

A. Multiple Instruments to Increase Coverage

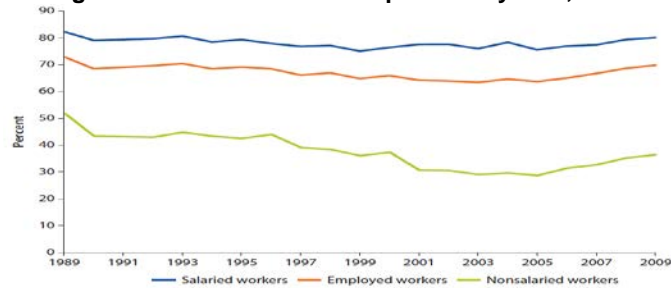
70. ***Increasing worker and retiree coverage will require several coordinated programmatic and institutional reforms to help strengthen the incentives to contribute to social security while ensuring that workers with low lifetime incomes are protected from poverty.*** Reform measures could include the following: (i) expanding the coverage and improving the targeting for non-contributory elderly assistance programs that aim to ensure that those workers with insufficient savings during their work life are ensured against poverty in old age; (ii) increasing the incentives for self-employed, temporary and informal sector workers to contribute, such as by establishing limited government matching subsidies for contributing; (iii) expanding the scope of supervision for those subject to mandatory contributions; and (iv) expanding the scope of mandatory contributions to include self-employed, temporary and informal sector workers to the extent that a supervision system is in place which can enforce such an expansion in scope. Box 2 below illustrates programmatic measures undertaken to improve coverage in Costa Rica, Mexico and Korea, respectively.

Box 2: Examples of Policy Measures to Improve Social Security Coverage

Several countries worldwide have established voluntary matching contribution subsidies, extended mandatory contributions to the self-employed and other informal workers, and have introduced non-contributory elderly assistance schemes.

Costa Rica. Beginning in 2000, non-salaried workers in Costa Rica were required to contribute to the social security system. In addition, a government program was introduced which provided a sliding scale of subsidies towards the final contribution of 7.75 percent of covered wages. The scale provided 27 percent of the contribution for workers earning less than two minimum wages, decreasing to no subsidy for those earning more than 10 minimum wages. Although coverage for self-employed workers increased from 15.4 percent in 2002 to 42.4 percent in 2010, coverage for all non-salaried workers increased more modestly from 2001 to 2009 as indicated in the figure below. Costa Rica has also had in place a non-contributory elderly assistance program since 1974. The program is means-tested and provides a benefit of about \$138 per month (15 percent of average income) for qualifying beneficiaries over age 65 at a cost of about 0.37 percent of GDP.

Coverage of Costa Rica's national pension system, 1989–2009

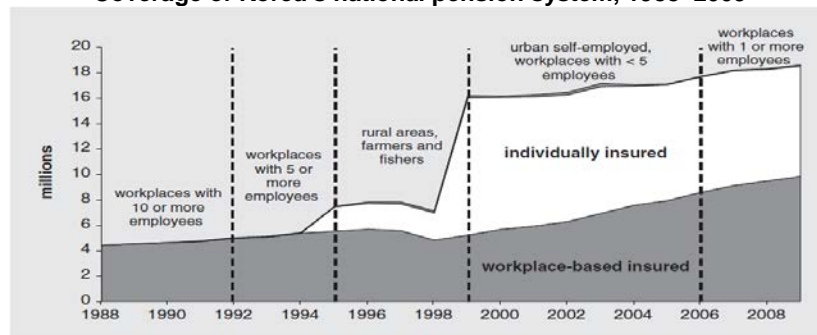


Source: Bosch, Melguizo, and Pages 2014.

Mexico. At least two matching-type schemes in Mexico function within the mandatory defined contribution pension system established in the late 1990s. The first is the *Social Contribution* which targets low-wage workers and is part of the mandatory defined contribution scheme. The value of the contribution is progressive, decreasing by steps with multiples of the minimum wage with payments limited to workers earning less than 15 times the minimum wage. The *Social Contribution* significantly increases the retirement savings of lower-income workers. Matching contributions were also introduced for civil servants since 2008 to increase the pension contributions of public sector workers. These “solidarity savings,” are included in their defined contribution scheme. For each Mex\$1 workers contributes voluntarily to their individual pension accounts, the state contributes Mex\$3.25 up to 2 percent of the employee contribution base with a maximum match of 6.5 percent. In addition, firms in Mexico have employer-based matching contribution schemes.

Korea. Korea gradually extended mandatory contribution to its social insurance scheme to all rural residents in 1995 and to its entire working population in 1999 (below). Although contributions are required, more than a third of workers have been not contributing, a majority of which have been poor or low-income workers with insecure employment, such as temporary workers, the self-employed, and small business owners. At the same time, in 2005 contribution subsidies were offered by the government to farmers and fishers for 50 percent of the total contribution amount up to a cap, and a fixed amount over that. An evaluation found that the probability of contributing to the national pension system was more than 10 percentage points higher among (subsidized) farmers and fishers than among nonsubsidized self-employed workers. In 2007 a non-contributory basic old-age pension was introduced that provides a benefit equivalent to 5 percent of average monthly income for those aged 65 or over whose income level is lower than a specified threshold.

Coverage of Korea's national pension system, 1988–2009



Source: National Pension Service [website](#), cited in Hyungpyo Moon, “Matching Contributions and Compliance in Korea’s National Pension Program, in Heinz et al. 2013.

B. Non-Contributory Assistance

71. ***Cash transfer programs aimed at addressing poverty at a household level or programs that target the elderly poor can have an important impact in closing elderly coverage gaps and providing elderly poverty protection.*** Categorical support for the elderly should be weighed against support to other poor and vulnerable groups and other development priorities. Key parameters and design options discussed below are: (i) universal verses means-tested; (ii) if means-tested, the target beneficiaries and targeting method; (iii) the age criteria for qualification (for those programs which target by age); (iv) parameters for the benefit level; and (v) potential design of pensions-test arrangement to link to the contributory pension or other retiree income sources.

72. ***Those evaluating these design options should consider:*** (i) projected fiscal costs; (ii) financial and economic impact on the elderly and non-elderly, including incentives to work and save; and (iii) parametric alignment and incentive compatibility with other contributory pension programs and safety net programs.

B1. Universal v. Means-Tested Programs

73. ***A universal benefit for the elderly offers both advantages and disadvantages.*** A universal benefit has the least distortive effective on the incentives to work or save. All citizens get the same benefit at a specified age and therefore there are no incentives to satisfy the qualification criteria. A universal benefit also has the least probability of exclusion errors, whereby individuals who are entitled to receive benefits don't receive them. Finally, universal benefits are generally the least costly to administer and in some cases can utilize existing administrative infrastructure. Unique identification registries, verifiable birth records, database management systems and disbursement mechanisms are all necessary. A key disadvantage of universal benefits is their cost: by providing benefits to all individuals over the qualification age, a substantial proportion may go to those who are not poor.

74. ***A key advantage of a means-testing is that elderly in the poorest or most vulnerable households can be targeted.*** This can reduce the fiscal outlays for this benefit (compared with universal benefits), thereby freeing up resources to allocate to other development priorities. Another advantage is equity—in many societies the social compact supports earmarking scarce fiscal resources to the relatively or absolutely poor in a society. The disadvantages of means-testing include: (i) the cost of administering a means-testing arrangement undoubtedly will be higher than for a universal benefit, although the cost of means-testing has been substantially reduced in recent years with the

support of technology; (ii) there will be inevitable exclusion errors whereby the means-testing mechanism applied results in qualified potential beneficiaries who do not receive benefits; (iii) there will be inevitable inclusion errors whereby those who should not qualify for benefits receive them; and (iv) there is a substantial challenge involved in putting institutional arrangements in place to support the application of means-testing criteria.

B2. Differentiating Social Assistance Beneficiaries by Age

75. ***Social assistance schemes can target the elderly or target poor households, including those with elderly.*** Social assistance schemes which target poor households inevitably will reach those with elderly members. Some countries have argued that targeting individual elderly can empower them by ensuring that the benefit is transferred to them.

B3. Options for Targeting Beneficiaries

76. ***Several targeting methods can be employed.*** Beneficiaries can be qualified by assessing household or individual incomes or welfare. Proxy means-testing can use household characteristics to pre-select potential beneficiaries. Potential beneficiaries can also be identified and validated using community input, and verification can be done electronically or with the assistance of agency staff. Age data needs to be verified locally in most schemes.

B4. Benefit Parameters: Age Criteria, Benefit Level, Indexation.

77. ***The age for potential eligibility for non-contributory pension benefits can be aligned with the age of receipt of a contributory pension, or a can be set higher to limit costs and target those least able to work.*** Considerations are cost, impact on reducing vulnerability, and incentive effects. Age criteria can have an unintended regressive effect: relatively wealthier individuals tend to live to the eligibility age and have the highest life expectancy at the eligibility age.

78. ***The benefit level should be determined considering its core objective, namely to protect the target set of beneficiaries against poverty while also considering fiscal costs.*** The profile and volatility of income and consumption of the elderly is a key consideration in setting the level. It is therefore useful to consider the poverty gap for the target set of beneficiaries. It is also useful to understand co-residency patterns and elderly income sources such as from contributory pension benefits, labor income, savings, rent and intra-household transfers. It is also important to consider the combined level of income replacement provided by contributory and non-contributory benefits at different levels of retirement income. For example, the benefit may be set to be at least as large as the average poverty gap for the elderly or it could be set at a relative level such as a proportion of the

median wage or median per capita income. As suggested in Table 2 above, the level of non-contributory benefits in SSA range from 4 percent of GDP per capita for Botswana to 39 percent for Lesotho.

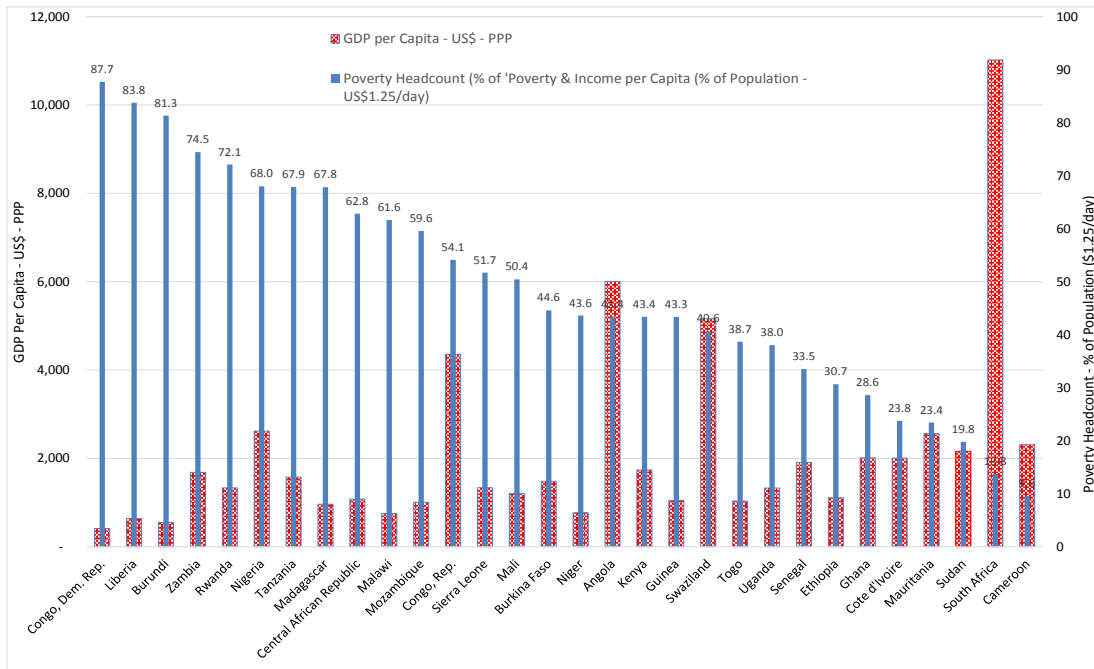
79. ***Automatic indexation can shield the elderly from inflation risks, yet its fiscal cost may be challenging to manage.*** Automatic indexation according to a trusted, publicly disclosed index of consumer prices can build confidence in the benefit.

80. ***Some countries apply a factor reduction or clawback to the benefit level based on benefits received from contributory pensions or other sources.*** This reduces benefits to those with alternative incomes under a specified threshold and calibrates the benefit in accordance with alternative income sources. If well designed, a clawback ensures that there are incentives to contribute to contributory schemes even for workers who will receive a non-contributory benefit.

B5. Policy and Cost Considerations

81. ***Consideration of non-contributory elderly assistance or social assistance for poor households should consider poverty and vulnerability of the overall and elderly populations and household composition.*** Countries with very high poverty headcounts and poverty gaps need to make strategic choices as to where social assistance can be most effective in improving welfare outcomes for the whole population. Many countries in the region have high rates of poverty, which on its own would suggest they should take a very strategic view of potentially earmarking fiscal resources for transfers to the elderly (Figure 34).

Figure 34: GDP per capita and Poverty Headcount
(US\$ left axis, percent right axis)



Source: World Economic Indicators 2012.

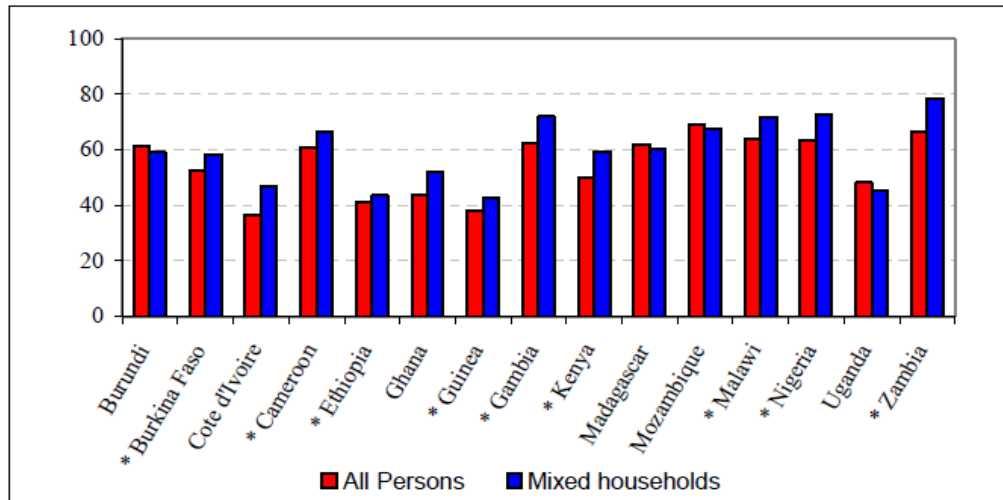
Note: Poverty headcount is from the most recent year between 2005 and 2012. The GDP per capita data is from 2012. The lack of uniformity between the poverty headcount figures and the GDP per capita figures reflects the difference in data points.

82. ***It is also important to evaluate the incidence of relative and absolute poverty among the elderly.*** A study by Kakwani and Subbarao in 2005 found the poverty incidence to be higher than average for households with elderly in 11 of 15 low-income SSA countries evaluated (Figure 35).²⁸ In Figure 37, the individualized poverty headcount is insignificantly higher for the elderly compared to working-age adults in Tanzania, Mozambique, Malawi, Mauritius, Rwanda and Zambia, yet materially lower for the elderly in Ghana. The trends are less conclusive when examining the poverty gap ratio by different household types (Figure 36). While elderly living alone are often perceived as having higher poverty gaps, the data suggests the opposite: that only elderly with sufficient resources can afford to live alone. A notable trend in the seven countries in Figure 37 is that poverty headcounts are significantly higher for children than for any other group. This suggests that if a social assistance

²⁸ The differences were statistically significant in nine of the 11 countries. See Kakwani and Subbarao 2005.

program were to be considered that targets recipients by age, then consideration should be given to a child welfare grant or other non-cash support program such as school feeding.

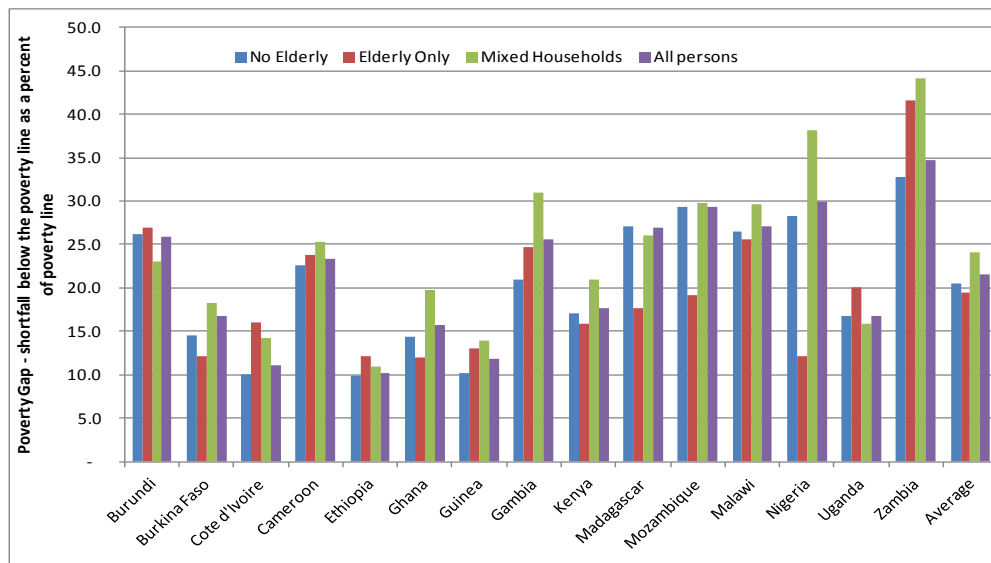
Figure 35: Incidence of Poverty for all Persons and for Mixed Households with the Elderly
(Percent)



Source: Kakwani and Subbarao 2005.

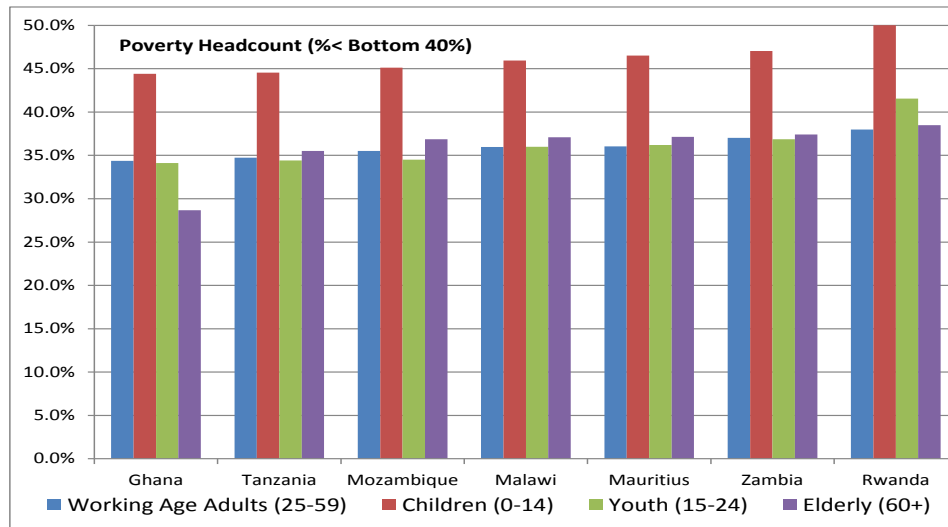
Note: * indicates that differences are statistically significant at a 5 percent or 10 percent level.

Figure 36: Poverty Gap Ratio for Different Household Types
(Percent)



Source: Kakwani and Subbarao 2005.

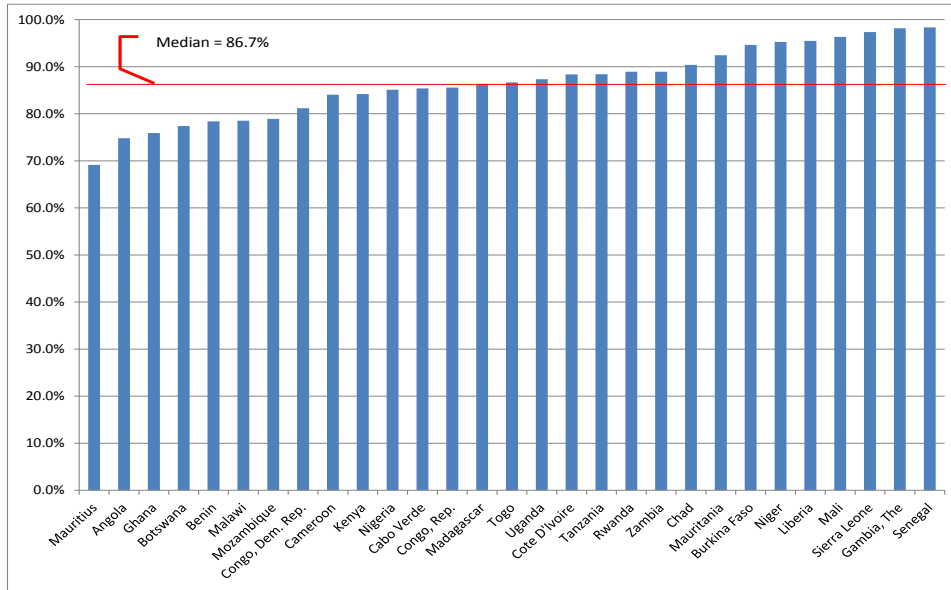
Figure 37: Poverty Headcount
(% in bottom 40%)



Source: World Bank ASPIRE database, accessed November 2014.

83. **Household characteristics impact living patterns and support networks for the elderly when they may not be able to work.** Typically, elderly that are living with individuals of working age have a stronger source of support in old age, provided of course that those of working age are gainfully employed. In addition, elderly living with working-age people and children under working age may provide support that enables working-age household members to be employed. Micro data from 26 countries suggests that the elderly in SSA are overwhelmingly living in households with individuals of working age or youth (Figure 38). The policy implication of such high co-residency is that social assistance programs aimed at poor households could benefit the elderly in those households as well as improve the welfare of other members such as children, discussed above. The high rates of co-residency also suggest that transfers from household members may serve as an essential source of financial support for elderly without access to pensions, elderly assistance programs or other sources of income.

Figure 38: Percentage of Elderly Living in Households with Non-Elderly

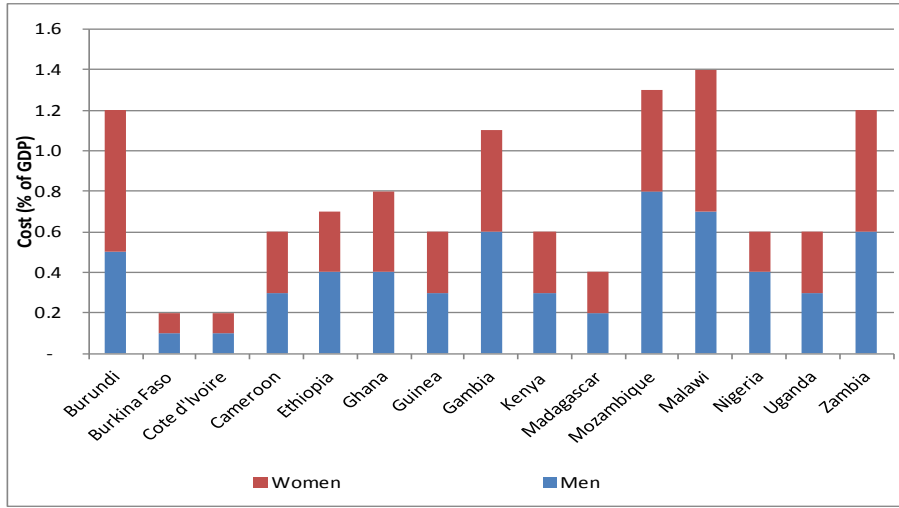


Source: World Bank ASPIRE database, accessed November 2014.

B6. Cost Considerations

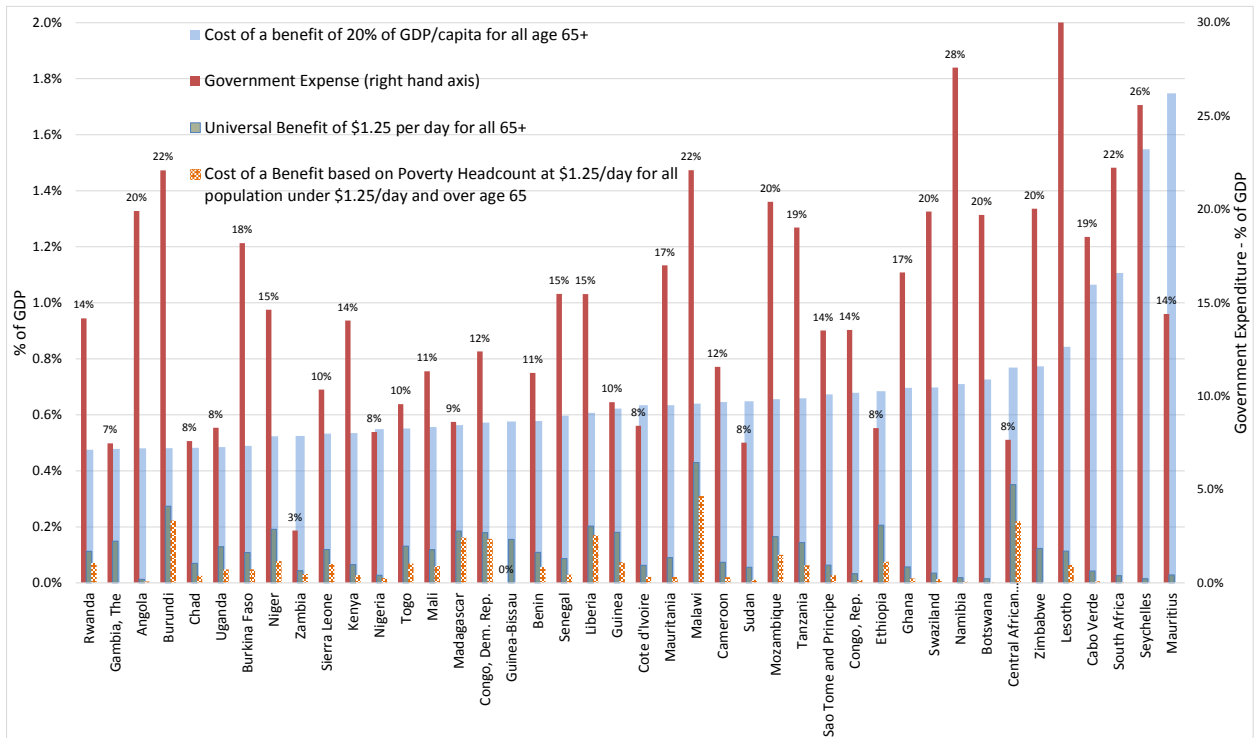
84. *Simulations in the 2005 study by Kakwani and Subbarao estimated that the costs of a universal pension with a benefit level calibrated to eliminate the poverty gap would cost between 0.2 percent and 1.4 percent of GDP in the 15 countries studied (Figure 39).* This needs to be compared with the country’s fiscal position and weighed against other options such as applying means-testing. A simplified cost calculation was undertaken of a universal benefit at age 65 based on benefit levels of \$1.25 per day and 20 percent of GDP per capita (PPP), respectively (Figure 40). In this case, a benefit targeted at those aged 65 and above with a level of 20 percent of per capita GDP would have a cost of between 0.6 percent and 1.9 percent of GDP for all countries with the exception of Mauritius and the Seychelles, which already have non-contributory elderly assistance programs in place. Aiming for an absolute benefit target logically has a very high cost for countries with low per-capita GDP and a very limited cost (though also a limited impact) in countries with middle-income status.

Figure 39: Budget as a Percentage of GDP to Eliminate Poverty Gap for the Elderly



Source: Kakwani and Subbarao 2005.

Figure 40: Cost Estimates for Elderly Assistance Schemes (% of GDP)



Source: World Bank 2015c.

Note: Demographic data is from 2013; GDP data, government expense data, poverty gap data from 2008-2013 as applicable.

85. **Subbarao and Kakwani also evaluated the cost and welfare impact of a means-tested elderly social assistance program in 15 SSA countries.** Targeting elderly assistance only to poor elderly was found to reduce national poverty almost twice as much as if the resources were spent on universal old age assistance benefits.²⁹ They also examined the impact of providing benefits at different ages and in 11 of 15 countries, and found that targeting elderly assistance to those aged 65 and older yielded a greater reduction in national poverty than targeting it to those aged 60 and older.

86. **Guyen and Leite simulated two scenarios with a 1 percent of GDP budget envelope** — a universal social pension for all elderly versus a social assistance transfer targeted at households in the bottom decile.³⁰ The results of these simulations for 12 countries suggest that a targeted social assistance transfer has a much greater impact on household welfare and poverty than does a universal social pension.

C. Mandatory contributory pensions

87. **Policy design options for mandatory contributory schemes include the following:**

- **Parametric reforms to benefit formulas or contribution rates**
- **Parametric reforms to qualifying conditions** such as increases in the retirement age or changing the vesting requirements
- **Adjustments to participation rules**
- **Matching contribution subsidies**
- **Structural reforms** including the introduction of pre-funding of individual accounts
- **Civil service pension reforms**

C1. Parametric Reforms to Benefit Formulas or Contribution Rates

88. **An important reform option is to modify the benefit formula along with other parametric reforms.** The benefit formulas need to be reviewed not only for old-age benefits but also for disability, survivorship, family benefits, work injury, maternity, health and unemployment. A key principle is that the accrual rate for DB schemes needs to be aligned with contribution rate, retirement age and other parameters to ensure a sustainable financing balance over the long term. One option worth considering is to set a modest target replacement rate of perhaps 30 to 40 percent of the individual wage and then to ensure that other instruments such as voluntary pension savings and non-

²⁹ See Kakwani and Subbarao 2005, p. 22.

³⁰ See Guven and Leite 2015.

contributory pensions provide additional old-age income protection. A modest target replacement rate could be supported by an equally modest contribution rate, which needs to be kept low in order to provide a strong incentive for compliance.

89. ***Automatic indexation is a parametric reform that can materially improve the coverage of inflation risk during retirement and therefore build public confidence in old-age income security provided by mandatory schemes.*** As indicated in Figure 26 above, only about a quarter of countries' mandatory schemes had explicit wage or price indexation while the rest did not have explicit indexation rules or made adjustments on a discretionary basis. Automatic indexation has been adopted in OECD countries and is a good practice increasingly being adopted worldwide.

90. ***Extending the wage reference period for benefit determination and indexing or “valorizing” wage history can improve the equity or fairness of DB schemes.*** Almost every DB scheme in SSA suffers from this weakness.³¹ Lengthening the wage base to a lifetime work history can eliminate incentives in almost all DB schemes in SSA to increase reported wages during the reference period to maximize retirement benefits. “Valorizing” the wage base has two important beneficial results: first, reducing the risk that an individual will retire during a period of high or low wage growth, and second, eliminating a regressive effect in current schemes, whereby higher-wage workers tend to have higher lifetime replacement rates than lower-wage workers, simply because wages have grown faster for high-wage workers during their work lives.

91. ***Contribution rates should be affordable for a broad spectrum of businesses while also being consistent with accrual rate and retirement age.*** As suggested in Chapter 3 above, median contribution rates for all forms of social security, including health and unemployment insurance and workers injury pensions, were 16.0 percent in the region (Figure 5). Contribution rates for social security schemes are considerably higher in former French and Belgian colonies. More than a quarter of pension schemes in SSA had contribution rates set at 15 percent or higher for old age, disability and survivorship. This could be considered costly compared to wage levels on which the rates are levied as well as the minimal job security characteristic of many wage earners in the region. Reducing contribution rates could help increase coverage since the wage tax levied on small and volatile businesses can significantly influence participation, compliance and competitiveness.

³¹ Exceptions are “points” schemes in Mauritius and Senegal.

C2. Parametric Reforms to Qualifying Conditions

92. ***The age for the receipt of benefits needs to be consistent with achieving financial sustainability for DB schemes and adequacy of benefits for DC schemes.*** As discussed above, about a quarter of mandatory schemes in SSA have retirement ages of less than 60, while more than a fifth have life expectancies of over 19 years at retirement age (Figure 3). Even more important, a majority of countries permit full retirement at younger ages without penalty. The retirement age should be consistent with system sustainability, while the penalty for early retirement or supplement for late retirement should in both cases be actuarially fair, so that individual retirement benefits are about the same in present-value terms regardless of the age of retirement.

93. ***Reduction of vesting periods.*** Vesting periods for defined benefit schemes are associated with receiving an annuitized benefit as well as, in most cases, a minimum benefit. As discussed above and in Figure 4, the median vesting period for DB schemes in SSA was 15.0 years (Figure 4). Vesting is a key condition for receiving an annuitized benefit and minimum pension benefit.³² Long vesting periods make it difficult for workers who go in and out of formal sector employment to qualify for a full pension benefit. Also, DB schemes with actuarially fair benefit reductions for early retirement or actuarially fair benefit increases for late retirement should in principle be able to support shorter vesting periods. Generally, the 15-year median is high for the region, since many workers don't contribute enough to qualify for a pension. One policy option which could therefore be considered is a combination of the following measures: (i) enact actuarially fair benefit reductions and supplements; (ii) reduce minimum pension benefits to a level that is consistent with lower vesting periods; and (iii) reduce the vesting period.

C3. Adjustments to Participation Rules

94. ***Extension of mandatory participation to the self-employed.*** Currently, most mandatory contributory schemes in the region compel workers with labor contracts to participate in national pension or social security schemes. Some countries also specify a size cutoff with respect to firm size, under which workers are exempt from participating. It is possible to reduce the size of the firm under which individuals are exempt from contributing and it is also possible to extend required participation to the self-employed. The challenge with this option is that overseeing compliance is challenging, costly, and, in the absence of other incentives, may not result in the desired coverage expansion.

³² Systematic cross-country data is not available on minimum pension benefits.

95. ***Institutional compliance measures.*** Additional institutional measures could also be attempted to increase coverage. These could include unifying social security, corporate and personal payroll tax collections in one institution and one database, which would potentially enable greater leverage in ensuring compliance. Another measure would be to link business licensing and operating permits to compliance with rules for social security contribution remittance. Similarly, certification of compliance can be required for firms to bid on government contracts.

C4 Matching Contribution Subsidies

96. ***Government-financed matching contribution subsidies are a means of strengthening the incentive for employers and workers to contribute to social security schemes.*** Such subsidies have been employed in several countries in an effort to increase labor force coverage.³³ Often, a key objective of such matching subsidies is to ensure that workers who retire have a sufficient pension to protect them from poverty in old age. The parameters of these programs need to be developed with careful consideration of the characteristics of the economy, social contract and role of government-mandated social protection at a country level. The key design parameters for a matching contribution scheme are: (i) the ratio of the matching subsidy to the worker contribution; (ii) the level of the contribution required; (iii) the scheme design, such as defined-benefit or defined-contribution; (iv) the financing mechanism, such as pay-as-you-go or fully funded; and (v) benefit design and qualifying conditions.

97. ***Three challenges associated with these subsidy schemes need to be considered:*** (i) matching subsidies may not have the desired effect of increasing coverage, depending upon public confidence that they will receive the benefits promised them at retirement; (ii) implementing such a scheme requires information systems, payment capacity and data management infrastructure to support it; and (iii) workers with the lowest or most volatile incomes, or both, will likely not be able to afford to participate in such schemes even if the matching subsidy is very generous. Many workers in the lowest income deciles will not have the resources to contribute to such schemes or will have other, more pressing risks which they need to save for. As a result, some kind of poverty-based social assistance will be needed for those workers who cannot participate in the matching grant scheme or otherwise end up in poverty above a specified age.

³³ See Hinz et al. 2013.

C5. Structural Reforms

98. **Structural reforms are policy options which have been considered and in a few cases adopted in an effort to transfer the risks and responsibility for pension management to members, while at the same time avoiding the contingent fiscal burden through the full funding of individual accounts.** Structural reforms generally refer to changing all or part of a scheme from defined-benefit to defined-contribution, and changing the financing from unfunded or partially funded to fully funded. Adoption of funded defined-contribution schemes in recent years has also often been accompanied by either employer or worker selection of the pension fund managers, and in some cases of the portfolio. The option of converting all or part of PAYG defined-benefit schemes to fully funded, defined-contribution schemes requires a number of enabling conditions be in place, not the least of which is a strong regulatory and supervisory framework. In addition, moving from an unfunded to a funded scheme results in transition costs, whereby the government must ensure that pension or social security funds have the resources to pay current retirees while at the same time contributions from those still working are channeled to funded accounts. There are therefore important risks and challenges associated with the option of structural reforms.

C6. Civil Service Pension Reforms

99. **A critical reform option is to merge civil service and national contributory pension schemes or to fully align the key parameters and facilitate full portability of rights.** Some countries have constitutional provisions that limit or prohibit changes to past and even future contractual obligations for pension benefits, as in Kenya and Zambia. Harmonization or merger can improve the incentives for workers to move between public and private sector employment, which can not only improve the adequacy of individual benefits but also labor market efficiency. Measures to harmonize may include establishing provisions for the preservation of rights, indexation for deferred retirement, rights recognition and portability to private sector schemes, including totalization for the purposes of vesting. Examples of merged schemes are Ghana, Sierra Leone, Nigeria, Cape Verde and Zambia (See Box 3). Some SSA schemes are already constituted as a single scheme for civil servant and private sector workers. For the few cases where the accrual rate for the private sector scheme is smaller than the civil service scheme, one means of merging these schemes is to also establish occupational schemes that provide supplementary arrangements for civil servants.

**Box 3: Merger of Civil Service and Private Sector Contributory Pension Schemes:
The Case of Zambia**

In 1996 the Government of Zambia passed legislation which established the National Pension Scheme (NAPSA), a mandatory defined-benefit pension scheme that replaced the earlier Zambian Provident Fund. At the same time, legislation was passed which mandated that all new civilian civil service entrants age 45 and under would participate in the NAPSA scheme. This merger had the effect of placing all civil servants hired after January 2000 in the same scheme as private sector workers. In this way, all workers can freely move between public and private sector employment after entry into service.

D. Voluntary Pensions

100. ***Strengthening voluntary savings arrangements can be an important policy option for improving coverage and adequacy.*** Such schemes could either supplement mandatory schemes as in most of SSA or could form the anchor for contributory old-age income protection, supplemented by non-contributory schemes as in South Africa, Botswana, Namibia, Lesotho, Namibia and Swaziland.

The following reform options are elaborated below:

- Voluntary instruments for informal sector workers, including potential matching subsidies
- Regulatory reform and strengthening supervision to establish and ensure transparent, well supervised occupational and individual savings arrangements
- Tax incentives for voluntary pension savings

101. ***State provision or facilitation of voluntary pension savings arrangements for the informal sector is still at the experimental stage, both in SSA and worldwide.*** The Kenyan and Ghanaian cases reviewed in Box 4 below illustrate two different state approaches to voluntary pension savings based on the initial conditions in each country. In Kenya, a strong pension regulator used its convening authority to link licensed pension funds with associations of medium and small micro-enterprises and taxi drivers, respectively. The regulator promoted the scheme in order to build interest and credibility with the public. In Ghana, which only recently established a pension regulator, the state-run social security fund (SSNIT) piloted and then launch an Informal Sector Pension Scheme and also utilized its collection, account management and disbursement infrastructure. The experience of both schemes can be instructive for other countries. As Kenya and Ghana further implement them, additional analysis is needed of their impact and whether some design features may be replicable in other countries with very different legal and institutional infrastructures.

102. ***As discussed in the section above on mandatory schemes, matching contribution subsidies can also be employed with voluntary schemes for informal sector workers.*** Making such schemes voluntary can better align them with the changing circumstances and preferences of informal sector workers. It also avoids the substantial cost of compliance monitoring and enforcement. A final advantage of this approach is that the costs of matching contributions can be managed, because generally no minimum wage level is applied and minimum pensions are also avoided for this type of instrument.

Box 4: Voluntary Pension Schemes for the Informal Sector in Kenya and Ghana

Kenya

In June, 2011, the Retirement Benefits Authority of Kenya (RBA) and the National Federation of Jua Kali Associations established the “*Mbao*” Pension plan for medium-and-small micro enterprises and Jua Kali associations. The program commits members to save at least about 20 Kenyan shillings a day (\$6 per month) toward retirement. Members can make payments through leading mobile transfer services such as M-PESA and Airtel. Within a month, the scheme had 42,000 members and has grown significantly since. A similar scheme is currently being developed between the RBA and “*Matatu*” (taxi and minibus) operators. It is important to note that the introduction of these plans in Kenya builds upon a strong payment and financial inclusion infrastructure, as well as a 10 -year history of licensing, regulating and supervising retirement benefit funds through administrators, fund managers and custodians.

Ghana

The Social Security National Insurance Trust (SSNIT) in Ghana piloted an *Informal Sector Pension Scheme* from 2005 to 2008 before launching it on a national basis. In 2010, over 90,000 members were contributing to the scheme, which is structured as follows:

- It is a voluntary contributory pension scheme.
- Contribution rates are not fixed but based on members’ preference and ability.
- Contributions can be made daily, weekly, monthly annually or seasonally.
- Contributions by members are divided into two equal parts and credited to two individual member sub-accounts: an occupational scheme account (50 percent of contribution) and a retirement account (50 percent of contribution) *after deduction of a life insurance premium.*
- Members are permitted to make periodic withdrawals from the occupational scheme account after five (5) months of initial contributions, provided the account has a credit balance.
- Members can withdraw from the retirement account only when they die, reach age 60, or become disabled.
- Members can use their contributions as partial collateral to secure credit from approved financial institutions.

Sources: Retirement Benefits Authority 2011; SSNIT Informal Sector Fund [website](#).

103. ***Regulatory reform and supervision for voluntary pension savings arrangements can definitely contribute to improving worker coverage for old age income protection.*** Kenya, which greatly strengthened its regulation and supervision of occupational and personal pension schemes beginning in 2001, has substantially increased public confidence in these schemes and as a result has seen significant increases in worker coverage. Currently, Kenya has about 32 registered individual pension plan providers and more than 1,400 occupational schemes that and are subject to a reporting and supervision process. Awareness campaigns have also assisted in increasing participation and public confidence. All of the entities in this market — including administrators, fund managers and custodians — are subject to licensing, regulatory and supervisory requirements enforced by the Kenya Retirement Benefits Authority. South Africa also has a strong history of regulation and supervision of occupational schemes and individual pension plan providers. Although the coverage in South Africa by such schemes is partly due to union agreements that ensure compulsory participation, some part can be attributed to public confidence in licensing, regulation and supervision. In looking at the composition of workers contributing to licensed schemes in Kenya and South Africa, one finds that they tend to be workers with formal employment contracts and also tend to have relatively higher incomes. Thus, although regulatory reform and supervision can contribute to improved coverage in SSA, it is unlikely that such interventions will have a substantial impact on those working in the informal sector who lack steady employment.

104. ***Tax incentives may help increase pension savings but they are unlikely to increase coverage, particularly in the informal sector.*** Tax incentives need to be designed judiciously and include deductibility limits, in order to limit potentially regressive tax effects as better-off individuals move savings from one vehicle to another to capture tax advantages.

E. Administrative Systems and Institutional Arrangements

105. ***Contributory pensions and non-contributory elderly assistance options require information, communication and disbursement systems, as well as infrastructure that efficiently and effectively suits the needs of rural and informal sector clients.*** New thinking is needed not only for policy designs but also for administrative systems and institutional arrangements for rural and informal sector clients. Several building blocks have been identified, such as unique identification systems, collection systems which utilize mobile telephony or other platforms appropriate to rural and informal sector populations, web-based account information access, and disbursement via direct transfers and

smartcards. While these building blocks are well known, efficient administrative systems for public and private pensions which can utilize such building blocks are still being developed.

106. ***As suggested in Table 5 below, all contributory and non-contributory pension arrangements require a platform for unique identification, record-keeping, data management, and disbursement.***

Contributory schemes also require infrastructure for collections and investment management and have additional data management and accountability requirements. Private pension schemes, whether mandatory or voluntary, require strong regulatory and supervisory arrangements, and a strong legal foundation to ensure compliance.

107. ***Each part of the process—identification, data management, fund management, client communications, benefit eligibility determination and disbursement—has multiple design options which need to be considered to ensure that reform objectives are realized.***

Pension reform for contributory schemes, whether it involves parametric reforms to existing schemes or the design of entirely new ones, will require careful consideration of administrative systems and institutional options to ensure that the reform objectives can be realized. Non-contributory schemes, whether they entail developing social pension designs or strengthening household social assistance, will also require considerable investment in the means-testing system as well as links to contributory schemes (as applicable), transparent eligibility certification, and effective disbursement and payment systems.

Table 5: Enabling Conditions for Different Pension Instruments

	Administrative Infrastructure and Institutional Arrangements	Fiscal and Macro-economic Stability	Governance and Accountability	Legal and Regulatory	Supervision
Non-contributory pensions or old age assistance	<ul style="list-style-type: none"> • Unique identification • Means-testing infrastructure (as needed) • Application and eligibility certification processes • Record-keeping and data management • Disbursement mechanisms 	<ul style="list-style-type: none"> • Fiscal capacity to support benefit commitment the face of aging 	<ul style="list-style-type: none"> • Rules, roles and controls supporting elderly assistance • Transparent disclosure of benefit formula and means testing • Mechanisms for redress of complaints 	Legal foundation supporting rules, roles and controls.	<ul style="list-style-type: none"> • External audit and evaluation • Periodic independent assessment • Monitoring and evaluation processes
1 st Pillar Mandatory Defined-benefit scheme	<ul style="list-style-type: none"> • Unique identification • Record-keeping and data management • Funds management infrastructure and governance • Contribution and disbursement mechanisms + payment system infrastructure. 	<ul style="list-style-type: none"> • Fiscal capacity to support pension commitments for civil servants • Fiscal capacity to ensure that pension system commitments are honored 	<ul style="list-style-type: none"> • Governing body, and governance policies for managing institutions to ensure that the rights of contributors and beneficiaries are upheld • Rules, roles and controls supporting elderly assistance • Transparent disclosure of benefit formula and means testing • Complaint redress mechanisms 	Legal foundation ensuring the rights of contributors and retirees.	<ul style="list-style-type: none"> • External oversight of managing institution useful. • External audit and accountability processes
2 nd Pillar funded defined contribution scheme	<ul style="list-style-type: none"> • Unique identification • Record-keeping and data management • Funds management infrastructure • Contribution and disbursement mechanisms+ payment system infrastructure. 	<ul style="list-style-type: none"> • Fiscal capacity and debt position which can manage transition costs 	<ul style="list-style-type: none"> • Accounting, audit and valuation infrastructure. • Depth, breadth and contestability for permissible pension fund investments 	Legal framework specifying the rights and responsibilities of contributors, beneficiaries, employers, agents, managers etc.	Competent, empowered and independent pension supervisory authority authorizing & supervising all necessary agents, instruments and processes
3 rd pillar occupational and personal pension schemes	<ul style="list-style-type: none"> • Unique identification • Record-keeping and data management • Custodial and deposit-taking institutional infrastructure • Funds management infrastructure • Contribution and disbursement mechanisms+ payment system infrastructure 	<ul style="list-style-type: none"> • Fiscal capacity to support pension commitments for civil servants as applicable 	<ul style="list-style-type: none"> • Accounting, audit and valuation infrastructure. • Depth, breadth and contestability for permissible pension fund investments 	Regulatory authority with responsibility for setting out the governing framework.	

Sources: World Bank evaluation; Heinz and Rocha 2009.

VI. Considerations for Further Analysis and Reform

108. ***This section outlines an evaluation process and design principles to strengthen old-age income protection in Sub-Saharan Africa.***

A. A Process for Evaluation and Engagement

109. ***Actuarial projections and solid evidence are needed to guide reform options.*** Actuarial projections, such as those provided by the World Bank's Pension Reform Options Simulation Toolkit (PROST) are necessary to conduct baseline evaluations of current provisions and different reform options and weigh their intergenerational effect on both costs and benefits. Such projections are essential for evidence-based policy choices for employers, employees and governments over a long-term horizon.³⁴

110. ***Civil servant schemes need to be evaluated in the context of broader government compensation reform.*** Civil service pensions are a part of the compensation package that often needs to be more fully examined. A proper evaluation should include projection of civil service pension liabilities according to different assumptions. In this context, parametric reforms can be enacted to civil service schemes or structural reforms can be made that harmonize or unify civil servant schemes with pension provisions for private sector workers. Reform measures should also consider labor incentives and efficiency.

111. ***The costs and economic effects of non-contributory elderly assistance need to be evaluated in the context of overall social assistance and social protection.*** Careful assessment is needed of the behavioral and distributional consequences of different designs and parameters for non-contributory elderly assistance programs. Furthermore, evaluation of micro-data can assist in making informed choices between social assistance to poor households or to demographic categories such as the elderly. Policymakers will need to weigh the tradeoffs between earmarking scarce public fiscal resources to elderly assistance and to other development priorities.

112. ***Careful attention must be paid to enabling conditions*** including macroeconomic stability, the current and anticipated depth and breadth of financial markets, the information and communication infrastructure, and the quality of governance regulation and supervision. Funded defined-

³⁴ It is important to note that this type of model can complement but not substitute for existing or mandated traditional actuarial valuations.

contribution schemes should only be introduced in countries where the enabling conditions would support them. Introduction of such schemes can prove counterproductive if investment in domestic markets is lacking and the market's depth, breadth and oversight are insufficient to support such pension investments.

B. Design Principles

113. ***Although country policy choices will depend in large part on existing pension provisions, some principles are worth considering in pension system design.***

- ***Explore new design options for savings instruments to support the needs of old-age income protection for the majority of the working age populations:*** (i) such contributions likely must be voluntary for most segments of the labor force and flexible based on the income volatility of the contributor; (ii) special incentives may be needed for individuals with low and volatile incomes to encourage them set aside savings over long periods for retirement; (iii) options such as default enrollment should be further explored; (iv) recent changes in technology should be leveraged to ensure effective and efficient administrative systems; and (v) disclosure and accountability are essential to contributors.
- ***Non-contributory elderly assistance programs can be important instruments to close coverage gaps in the elderly population and improve welfare outcomes.*** A few principles are worth considering: (i) categorical support for the elderly should be weighed against support to other groups and other development priorities. Limited fiscal resources in many cases may be better distributed to individuals in poor households across the age spectrum rather than targeting only the elderly who may receive such benefits with a strong targeting to households in any event; (ii) if properly designed, a non-contributory elderly assistance program can be part of a package of “ex-post” subsidies after retirement which are linked to pensions savings during one’s work-life; and (iii) a carefully considered transition program is needed by which the elderly assistance program is used to support those retirees with insufficient savings or household support for a poverty level retirement benefit while at the same time ensuring strong incentives to save for retirement.
- ***Mandatory contributory schemes should target modest levels of earnings replacement so that they are affordable for employers and employees alike and sustainable over the long-term.*** Contribution rates need to be affordable for both employers and employees. Credibility

can be achieved by establishing simple and transparent parameters based on transparent indices such as automatic CPI-based price indexation.

- ***Parametric reforms to mandatory schemes will be needed to ensure the sustainability of defined-benefit schemes and reasonable income replacement for defined-contribution schemes.*** Increases in life expectancy at retirement and system dependency rates will force adjustments in years of work life, contribution rates or replacement rates.
- ***The long-term fiscal affordability of civil service pension provisions*** must be considered, as well as vesting and portability provisions that may adversely affect labor mobility. The age profile and benefit design in several countries in SSA suggest that fiscal costs will rise substantially over time, potentially crowding out other fiscal priorities. Parametric reforms to civil service schemes or measures to harmonize and integrate such schemes with similarly reformed schemes for private sector workers can assure long-term fiscal affordability while at the same time removing disincentives to labor mobility.

C. Timing and Sequencing of Reform

114. ***The sequencing of reform measures should be contemplated as part of the vision and strategy for reform.*** Several countries have considered making their mandatory schemes sustainable and equitable prior to implementing significant measures to increase coverage. Increasing coverage in unsustainable schemes only increases contingent liabilities, and can make reform more difficult.

115. ***The slowly aging demographic in SSA presents an opportunity to reform national schemes now with only marginal effects on older cohorts.*** This window will narrow over the coming decades as system old-age dependency rates increase and the average age of the working age population increases. This window also provides the opportunity to enact gradual transition measures, such as increases in retirement ages, while not dramatically impacting those close to retirement.

The cost of providing means-tested elderly assistance can also be kept modest in the short term for most countries, but will increase with aging populations. A sequenced strategy can utilize elderly assistance programs to address coverage gaps for about a generation while other instruments are being developed to better ensure that individuals and households save for their own retirement needs.

116. ***Reform programs that aim to improve the governance, regulation, and management of public pension funds should be sequenced with financial market reform measures.*** Governance

reforms often rely upon legal and judicial foundations. Pension regulation and supervision similarly require that the markets for financial instruments are appropriately regulated and supervised. Prudent pension management requires deep, broad, and competitive financial markets for pension investment instruments.

VII. Conclusions

117. ***This report represents an initial stock taking of the characteristics, environment and performance of public and private pensions and elderly assistance programs in Sub-Saharan Africa.*** *Mandatory contributory schemes* were found to be mostly defined-benefit schemes financed on a pay-as-you-go basis. *Non-contributory elderly assistance schemes*, found in nine countries, include universal, pension-tested and means-tested eligibility. *Occupational schemes* exist throughout the region but are mostly important for old-age support in Southern Africa. *Civil service schemes* exist in every country in the region, but only about one-fifth are integrated with national contributory schemes.

118. ***The report suggests that priority for reform is the expansion of coverage to informal sector workers as contributors and poor elderly as beneficiaries.*** It suggests that counterparts and development partners need to expand consideration of appropriate instruments and supporting operational infrastructure to mobilize pension savings for the vast majority of workers with low and volatile incomes. Several measures were proposed, including policy reforms to existing contributory schemes, introduction and piloting of new pension instruments, matching contribution subsidies, and substantial institutional reforms.

119. ***The report also proposes parametric reforms to contributory schemes,*** both to improve equity and sustainability and to improve the incentive for participation by informal sector workers. Reforms to integrate or harmonize civil service schemes with national schemes were also proposed to improve the options and incentives for labor mobility.

120. ***Three core priorities could guide the consideration of reform options:***

- ***Close the coverage gap.*** A core focus of reforms for many countries could be ensuring better protection for the vast majority of workers and retirees left uncovered. Protecting the elderly from poverty in old age is the most important objective of public schemes. Only by

experimenting with new contributory designs and non-contributory old age assistance can elderly poverty be reduced.

- ***Focus on the poorest.*** Government cash transfers should target the poorest in society, including elderly living in poor households. The tradeoffs between universal and targeted support for the elderly should be carefully weighed. Similarly, the tradeoffs between social assistance for poor households should be weighed against targeting the elderly. Noncontributory support to the elderly needs to be fiscally sustainable over the long term. Otherwise, elderly beneficiaries risk loss of support with few other options to rely upon.
- ***Align pensions to country needs and enabling conditions.*** More work is needed to ensure that savings, social insurance and social assistance instruments for old-age income protection are better aligned to the reality of large informal and rural employment offering low, insecure income. Scaling back the target benefits from mandatory contributory schemes in some countries can assist in achieving more affordable contribution rates, which could help make the schemes more attractive to informal sector workers. Finally, before pre-funding civil servant or national contributory schemes, officials need to carefully weigh the enabling conditions, including the fiscal capacity to support transition costs and the needed regulatory and institutional infrastructure.

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Glossary

Accrual rate. The rate at which pension entitlement is built up relative to earnings per year of service in a defined-benefit scheme—for example, one percent of the reference salary per year of applicable service.

Accrued pension (benefit). The value of the pension to a member at any point prior to retirement, which can be calculated on the basis of current earnings or also include projections of future increases in earnings.

Active member. A pension plan member who is making contributions (and/or on behalf of whom contributions are being made) is accumulating assets.

Actuarial assumptions. The various estimates (including assumptions related to changes in longevity, wage, inflation, returns on assets, etc.) that the actuary makes in formulating the actuarial valuation.

Actuarial fairness. A method of setting pension benefits to equalize lifetime individual pension entitlements to lifetime individual pension contributions.

Actuarial reduction. The amount of benefit decrease the pension plan member receives – calculated based on actuarial assumptions – in case of early retirement.

Actuarial surplus. In a situation when the actuarial liability is less than the actuarial value of a pension fund's assets, the measure of this value.

Actuarial valuation. A valuation carried out by an actuary on a regular basis, in particular to test future funding or current solvency of the value of the pension fund's assets with its liabilities.

Actuary. The person or entity whose responsibility, as a minimum, is to evaluate present and future pension liabilities in order to determine the financial solvency of the pension plan, following recognized actuarial and accounting methods.

Annuitant. The person who is covered by an annuity and who will normally receive the benefits of the annuity.

Annuity. A specified income stream payable at stated intervals for a fixed or a contingent period, often for the recipient's life, in consideration of a stipulated premium paid either in prior installment payments or in a single payment.

Annuity factor. The net present value of a stream of pension or annuity benefits.

Average effective retirement age. The actual average retirement age, taking into account early retirement and special regimes.

Beneficiary. An individual who is entitled to a benefit (including plan members and dependents).

Benefit. Payment made to a pension fund member (or dependents) after retirement.

Closed pension funds. Funds that support only pension plans that are limited to certain employees. (e.g. those of an employer or group of employers).

Contributory pension scheme. A pension scheme where both the employer and the members have to pay into the scheme.

Contribution ceiling. A limit on the amount of earnings subject to contributions.

Custodian. The entity responsible, as a minimum, for holding the pension fund assets and for ensuring their safekeeping.

Commutation. Exchange of part of the annuity component of a pension for an immediate lump sum payment.

Contracting out. The right of employers or employees to use private pension fund managers instead of participating in the publicly managed scheme.

Deferred annuity. A stream of specified payments commencing at some future date.

Defined benefit. A pension plan with a guarantee by the insurer or pension agency that a benefit based on a prescribed formula will be paid.

Defined contribution. A pension plan in which the periodic contribution is prescribed and the benefit depends on the contribution plus the investment return.

Demographic transition. The historical process of changing demographic structure that takes place as fertility and mortality rates decline, resulting in an increasing ratio of older to younger persons.

Dependent. An individual who is financially dependent on a (passive or active) member of a pension scheme.

Disclosure. Statutory regulations requiring the communication of information regarding pension schemes, funds, and benefits to pensioners and employees.

Discretionary increase. An increase in a pension payment not specified by the pension scheme rules.

Early leaver. A person who leaves an occupational pension scheme without receiving an immediate benefit.

Early retirement. Retirement before reaching the state's pensionable age for receipt of full benefits.

Earnings cap (ceiling). A limit on the amount of earnings subject to contributions.

Final salary scheme. A type of defined benefit formula that uses the final salary to calculate the pension benefit

Fully funded. The term that refers to a pension fund that has assets equal to or greater than its liabilities.

Funding. Accumulation of assets in advance to meet future pension liabilities.

Implicit pension debt (net). The value of outstanding pension claims or liabilities of the government after subtracting pension reserves.

Indexation. Increases in benefits by reference to an index (typically prices, wages or some combination of both).

Indexed annuity. An annuity contract which is variable according to changes in an index such as the consumer price index or an equity market index (see annuity).

Individual account. An accounting entry which specifies accumulated contributions and other accumulations in the case of defined-contribution schemes and contribution histories in the case of defined-benefit schemes. Individual accounts can also be individual asset accumulations in the case of funded schemes.

Individual pension plans (Personal pension plans, voluntary personal pension plans). Access to these plans does not have to be linked to an employment relationship. The plans are established and administered directly by a pension fund or a financial institution acting as pension provider without any intervention of employers. Individuals independently purchase and select material aspects of the arrangements. The employer may nonetheless make contributions to individual pension plans.

Inter-generational distribution. Income transfers between members of a pension scheme that belong to different age cohorts.

Intra-generational distribution. Income transfers between members of a pension scheme within a certain age cohort of persons.

Legal retirement age (normal retirement age). The normal retirement age written into pension statutes at which employees become eligible for pension benefits, excluding early-retirement provisions.

Legacy costs. Cost of financing outstanding liabilities of a pension scheme

Mandatory contribution. The level of contribution the member (or an entity on behalf of the member) is required to pay according to scheme rules.

Matching Defined Contribution (MDC) approach. – An approach whereby worker pension contributions to an individual account are matched by contributions made by an employer or by the government.

Means-tested benefit. A benefit that is paid only if the recipient's income falls below a certain level.

Minimum pension (guarantee). The minimum level of pension benefits the plan pays out subject to the scheme member fulfilling certain conditions.

Moral hazard. A situation in which insured people do not protect themselves from risk as much as they would have if they were not insured. For example, in the case of old-age risk, people might not save sufficiently for themselves if they expect the public system to come to their aid.

Non-contributory pension scheme. A pension scheme where the beneficiaries do not have to pay into the scheme.

Nonfinancial (or notional) defined-contribution (plan). A defined-benefit pension plan that mimics the structure of (funded) defined-contribution plans but remains unfunded (except for a potential reserve fund).

Normal retirement age. See *legal retirement age*.

Occupational pension scheme. An arrangement by which an employer or employers provide retirement benefits to employees.

Old-age dependency ratio. The ratio of older persons to working-age individuals, for example, the number of persons over 60 divided by the number of persons ages 15–59.

Pay-as-you-go. In its strictest sense, a method of financing whereby current outlays on pension benefits are paid out of current revenues from an earmarked tax, often a payroll tax.

Pay-as-you-go assets. The present value of future contributions minus pension rights accruing to these contributions.

Pension coverage rate. The number of workers actively contributing to a publicly mandated contributory or retirement scheme during a particular period, divided by the estimated potential number of workers that could or are mandated to contribute, e.g., the labor force or the working-age population.

Pension liabilities. Balance of the obligations of a pension scheme to current workers and retirees at a point in time.

Pension lump sum. A cash withdrawal from a pension plan.

Pension spending. Usually defined as spending on old-age retirement, survivor, death, and invalidity-disability benefits including both contribution based and non-contributory pension schemes.

Pensionable earnings. The portion of remuneration on which pension benefits and contributions are calculated.

Portability. The ability to transfer accrued pension rights between pension plans.

Provident fund. A defined contribution savings scheme which may be mandatory and generally pays out accumulated contributions and other accumulations as a lump sum on retirement or other predetermined circumstances.

Price indexation. The method with which pension benefits are adjusted taking into account changes in prices.

Replacement rate. The value of a pension as a proportion of a worker's wage during a base period, such as the last year or two before retirement or the entire lifetime average wage. Can be used to describe this relationship for an individual or the scheme membership.

Retirement age. See *normal retirement age*.

System dependency ratio. The ratio of persons receiving pensions from a certain pension scheme divided by the number of workers contributing to the same scheme in the same period.

System maturation. The process by which a pension system moves from being immature, with young workers contributing to the system, but with few benefits being paid out since the initial elderly have not contributed and thus are not eligible for benefits, to being mature, with the proportion of elderly receiving pensions relatively equivalent to their proportion of the population.

Target replacement rate. The targeted level of wage replacement at retirement for an average wage worker.

Tax treatment of pension contributions, accumulations and payouts. A simple nomenclature for identifying tax treatment of pensions divides the tax treatment into three categories: (i) deductibility of employer and employee contributions from corporate and/or personal income for tax purposes; (ii) taxability of fund accumulations such as capital gains, dividends and interest; and (iii) treatment of distributions during retirement for purposes of personal

income tax. There are additional tax treatments of pension accounting beyond this simple nomenclature. Based on these three categories, *TEE tax treatment* refers to a form of taxation of pension plans whereby contributions are taxed, investment income and capital gains of the pension fund are exempt from tax and benefits are also exempt from personal income taxation. *EET* tax treatment refers to a form of taxation whereby contributions are exempt, investment income and capital gains of the pension fund are also exempt and benefits are taxed from personal income taxation during retirement. *ETE* is a form of taxation whereby contributions are exempt from taxation, investment income and capital gains of the pension fund are taxed and benefits are also exempt from personal income taxation during retirement.

Transition costs. Costs of financing both the benefits owed under the previous scheme while shifting to a prefunded scheme.

Trust. A legal scheme, whereby named people (termed trustees) hold property on behalf of other people (termed beneficiaries).

Trustee. A person or a company appointed to carry out the tasks of the trust.

Universal flat benefit. Pensions paid to all persons reaching a certain age (although it may be contingent on citizenship or residency) without regard to work or contribution records.

Valorization of earnings. A method of revaluing past earnings when calculating the amount of pension to be paid in a defined benefit scheme that uses historical earnings as the reference wage in order to compensate for changes in prices and earnings over the time period under consideration.

Vesting period. The minimum amount of time required to qualify for full and irrevocable ownership of pension benefits.

Voluntary contributions. An extra contribution paid in addition to the mandatory contribution to increase the future pension benefits.

Voluntary occupational pension plans. The establishment of these plans is voluntary for employers (including those in which there is automatic enrolment as part of an employment contract or where the law requires employees to join plans set up on a voluntary basis by their employers).

Wage indexation. The method with which pension benefits are adjusted taking into account changes in covered wages or overall wages.

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Abstract

This report provides an initial stocktaking of the characteristics, environment and performance of public and private pensions and elderly assistance programs in Sub-Saharan Africa. It identifies key challenges and suggests reform options for consideration. Considerations for future work and principles for pension policies are also suggested. Two major challenges noted in the report are the need to increase coverage of the labor force by pensions and social insurance schemes, and to increase the proportion of poor elderly covered by social assistance. The report suggests that improving coverage will require a number of parametric reforms to existing contributory schemes, strengthening institutions to serve informal sector workers, and piloting new design options. The report also proposes other parametric reforms, including the harmonization or merger of civil service and national pension schemes. A process of country assessments is suggested, including actuarial projections for existing schemes. Finally, the report recommends principles to consider for reform, including measures to improve coverage, protect the elderly poor, and better align pension design with needs and enabling conditions, including the needs of rural and informal sector workers.

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