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The Design and Implementation of Public Pension Systems in Developing Countries: Issues and Options

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ABSTRACT

The Design and Implementation of Public Pension Systems in Developing Countries: Issues and Options[1]

Developing countries are increasingly aware of the need to design and implement improvements in public systems for providing pensions to the elderly. Such systems may aim to smooth consumption and thus provide reliable income to older people, reduce poverty among the elderly, insure those no longer working against the risk of running out of funds, and promote equal treatment of men and women in retirement security even when lifetime earnings and projected average life expectancy may differ greatly. The increasing share of the elderly in the population of all countries makes implementation of sustainable pension systems both more urgent and more difficult. Planners must consider numerous options in pension system design and choose the combination of policies that will optimize coverage, benefits, and financing given a country's demographics, history, practices regarding family support of the elderly, political system, extent of informal labour, and fiscal situation.

JEL Classification: J14, J26, J11, J18

Keywords: pension systems, aging, retirement, life expectancy

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1. Introduction

Social security is commonly regarded as a basic human right. It is enshrined as such in international legal instruments such as the Universal Declaration of Human Rights[2] and the International Covenant on Economic, Social, and Cultural Rights[3]. For the elderly – defined here as those individuals who have reached a statutory minimum pensionable or retirement age – this supports the principle of the right to receive a cash income in the form of an old-age pension[4] on a regular and predictable basis.

Moreover, it should be viewed not only as desirable but, indeed, normal that societies should institute arrangements designed with the aim of working toward realizing this human right, given national customs and the existence of comprehensive frameworks of national and international law.

However, the global reality in this regard is deceiving. Although all countries have some form of institutional provision of social security coverage, such provision is, in practice, often insufficient. As a result, the International Labour Organization (ILO) reports that "[a]bout 5.1 billion people, 75 per cent of the world's population, are not covered by *adequate* social security" (ILO, 2011, p. xxi; emphasis added). What is lacking often is comprehensiveness in terms of population coverage and of the risks covered and the capacity to offer adequate benefits and quality services in a sustainable manner.

Of course, the degree of the problem varies widely. At one extreme are industrial countries, in most cases Organisation for Economic Co-operation and Development (OECD) members, where social security provision is typically both comprehensive (with provisions for old age, disability, survivorship, maternity, work injury and occupational diseases, unemployment, family allowances, medical benefits, and for a small but growing number of countries, long-term care) and universal (ostensibly covering 100 per cent of the target population). At the other extreme are lower-income countries in sub-Saharan Africa and South Asia where coverage may extend to less than 10 per cent of the population and handle only a limited number of contingencies (e.g., old age, disability, survivorship, and work injury). In the middle are a majority of countries, where risk coverage is at the intermediate level, as is the proportion of the population with access to such protection (ILO, 2010, p. 32; p. 43). Ensuring the successful design and delivery of old-age pensions is complex. This is so even for countries whose populations already have access to more comprehensive forms of (what may be considered as) adequate social security coverage. The literature cites a number of challenges facing all countries in their endeavours to provide protection to populations against the risks associated with old age – including the rising elder shares in the total population; greater longevity (Bloom and McKinnon, 2010; Bloom, Canning and Fink, 2011); lack of financial literacy (Barr and Diamond, 2008; Shankar and Asher, 2011; Regúlez-Castillo and Vidal-Meliá, 2012); public budget constraints and competing government spending priorities (ILO, 2010 and 2011); evolving labour markets and family structures (Standing, 2011; Bloom and McKinnon, 2010); and poor macroeconomic performance (ILO, 2010).

For developing countries, there are additional challenges: populations getting "old" (in some cases, rapidly) before they get "rich" (Bloom, Canning and Fink, 2011; Bloom, Mahal, and Rosenberg, 2012); large rural/agriculture populations and large informal-sector workforces; large internal and international migration flows (Sabates-Wheeler and Koettl, 2010)[5]; and weak institutions and information and governance systems (Musalem and Ortiz, 2011), which often have yet to earn the trust of the electorate.

Making matters worse, all countries have to cope with the political economy of these programs. For example, old-age pension programs typically involve, albeit to varying degrees, an element of redistribution – involving net transfers in society from relatively richer to relatively poorer members, and from "more productive" younger cohorts to "less productive" older cohorts. This creates eventual "winners" and "losers" in the sense that an individual may contribute more or less than another towards the financing of pensions relative to the amount they are actuarially due or actually receive (and such accounting does not include the value recipients place on risk reduction). Yet the legitimacy of any public program hinges normally on the existence of broad-based public support for it. This means that to foster such support, to develop "[s]hared values, trust and mutual expectations", a process of inclusive and transparent political mediation and social dialogue to shape opinion and give voice to all stakeholders is typically necessary (Ghellab, Varela and Woodall, 2011, p. 55). And the likely success of such a process will be heightened if the necessary reforms are presented for public debate in a timely fashion and in a clear and understandable manner (Boeri and Tabellini, 2010).

Another political economy issue is that in a context of limited financial resources and administrative capacities, a decision to spend more on an old-age pension program will come at the cost of having to channel expenditure away from other equally important needs, including other social policy goals. Such choices may represent a trade-off between equity and efficiency (McCord, 2010).

As a result, countries must rely on political will and leadership to widen or deepen old-age pension programs. Evidence suggests that a degree of policy learning may occur both at the national and international levels. However, the "iterative nature of policymaking reflects the fact that success is not always achieved and seldom at the first attempt" (Casey, 2009, p. 104). And even when policymaking might be deemed successful, future adaptation may be required to take into account the evolution of parameters. For old-age pension systems, these parameters commonly include increasing life expectancy, declining fertility, and earlier retirement ages (Barr and Diamond, 2008).

This chapter examines (a) the need for old-age pension support in developing countries; (b) design and implementation issues related to its provision; and (c) options and tools for addressing those issues. To this end, the chapter will speak to three broad questions:[6]

1. Why should policymakers in developing countries prioritize the implementation or strengthening of old-age pension programs?
2. What challenges stand in the way of realizing the successful implementation of sustainable old-age pension programs providing adequate economic support to the elderly in developing countries?
3. On the basis of existing good practice, critical policy analysis, and a growing potential for South-South knowledge transfer,[7] what steps can developing country decision makers take to address the identified challenges?

We begin with the arguments frequently used to justify developing public old-age pension programs – financed on a contributory or budget-financed (non-contributory) basis – in developing countries, before exploring key design and implementation issues, tools and options, and policy conclusions.

2. The need for old-age economic support

Why should improving the elderly's income security rank high on developing country policy agendas? Three reasons stand out: (1) the capacity of conventional contributory approaches to social security provision to extend coverage rapidly and significantly is limited; (2) international opinion around the goal of poverty reduction is coalescing, and such reduction requires some focus on income security for the elderly; and (3) global demographic shifts: all countries' populations are aging, so there are, or eventually will be, relatively fewer working-age individuals whose income can support the elderly.

2.1 Extending social security coverage

To begin with, how big is the problem of coverage? The ILO reports that globally, "nearly 40 per cent of the population of working age is legally covered by contributory old-age pension schemes", but effective coverage – the share of people in a country receiving a pension among all those who have reached the pensionable or legal retirement age – in many countries is lower, and in some cases, very much lower (ILO, 2010, p. 2).

Thus, it is no surprise that profound questioning is occurring about the ability of conventional contributory approaches to old-age social security provision – including social insurance programs,[8] national provident funds (NPFs, state-managed individual savings accounts[9]), and privately managed individual retirement savings accounts – to significantly and rapidly extend social security coverage in developing countries (Charlton and McKinnon, 2001).

Contributory benefits programs. In developed and developing countries alike, most social security programs were designed to be financed *predominantly* on the basis of contributions. In these programs, stable patterns of formal (regulated) employment are normally necessary for coverage. Yet, in many developing countries, stable patterns of widespread formal-sector employment have failed to materialize as was initially hoped in the middle decades of the twentieth century. As the ILO (2010, p. 27) summarizes:

> … while in developed economies nearly 85 per cent of all employed are employees, the figure is not much more than 20 per cent in South Asia and sub-Saharan Africa, less than 40 per cent in South-East Asia and the Pacific, slightly more than 40 per cent in East Asia and about 60 per cent in North Africa, the Middle East and Latin America and the Caribbean – but not all of them are in formal employment and thus have access to statutory social security benefits.

Furthermore, the potential for improving coverage rates is often limited by social security legislation, the constraining impact of which typically reflects historical legacy, shaped by practical administrative or financial considerations. In many developing countries, the self-employed (who often comprise a significant and growing element in the overall national labour force), workers in the agricultural and fisheries sectors, and the often large numbers of employees of very small enterprises (including unpaid family members), are commonly statutorily excluded from these contributory social security programs. For those deemed to be engaged in "atypical" work (which in reality is often much more "typical" than other work), social security coverage is usually restricted to a limited number of benefits (SSA and ISSA, various years).

Often, the self-employed in the regulated economy are permitted voluntary affiliation, and may be encouraged to do so through a number of mechanisms that tailor the amount and frequency of contribution payments to the specificities of their work and income patterns. For example, voluntary coverage would require the self-employed worker to pay the combined equivalent of the employer and employee contributions, based on declared monthly income – unless state-subsidized contributions are provided or there is greater flexibility in statutory arrangements for contributions by self-employed workers. As a rule of thumb, and at best, it is normally expected that around only 50 per cent of those with access to voluntary coverage will make full use of such provisions.

Legislative reform can progressively remove what may often be unnecessary and somewhat artificial blockages to coverage extension, including for the self-employed and micro-enterprise employees. But this process is typically slow, with incremental coverage extensions normally giving priority to relatively less-informal occupations and employees of larger-scale employers over the more-vulnerable majority who work in smaller-scale and more informal (less regulated) modes of employment.

Formal ILO pronouncements in the wake of the 2008 global financial and economic crisis[10] show how low the coverage levels are for contributory models of old-age protection in some regions:

> In sub-Saharan Africa only 5 per cent of the working-age population is effectively covered by contributory programs, while this share is about 20 per cent in Asia, the Middle East and North Africa. In Asia some countries have made major efforts to extend coverage beyond the formal sector. At the same time, while in high-income countries 75 per cent of persons aged 65 or over are receiving some kind of pension, in low-income countries less than 20 per cent of the elderly receive pension benefits; the median in this group of countries is just over 7 per cent (ILO, 2010, p. 2).

Budget-financed programs. Another approach is budget-financed provision (complemented sometimes by overseas development aid), with benefits either delivered on a universal basis to all citizens or residents who satisfy the predetermined eligibility criteria or targeted at specific population groups.. A significant issue here concerns the non-takeup of benefits (i.e., individuals who are legally entitled to benefits but who do not receive all benefits to which they are due, owing to a number of possible factors, including fear of stigma, lack of information, lack of access, administrative error, or a "rational" choice to not claim based on a self-assessment of the expected personal costs vis-à-vis benefits (van Oorshot, 2002); Hernanz, Malherbert and Pellizzari, 2004; Fuchs, 2009). The concern here is that non-takeup occurs predominantly among the most vulnerable and thereby undermines a key objective of the pension program.

The objective of budget-financed programs may be to guarantee a minimum subsistence income only, with contributory plans offering the covered working population the future possibility of receiving pension income based on previous earnings. Such a combination approach to public old-age pension provision – known as "pillared" or "tiered" pension systems – is typically found among OECD countries. Although less commonplace, pillared pension systems also exist in some developing countries, especially in Latin America.

Budget-financed programs may also be stand-alone programs (or *de facto* stand-alone, when the majority of the population is not effectively covered by contributory mechanisms). In fact, a small number of developing countries have eschewed developing contributory programs for old-age benefits – mostly in southern Africa (means-tested in South Africa and universal in Namibia, Botswana, and Lesotho). This sub-regional trend has been instrumental in drawing policy attention to "social pensions". Since the mid-1990s at least, the capacity of budget-financed old-age social pension programs to extend access to economic security, reduce old-age poverty, and support wider welfare-enhancing outcomes in pension-receiving households and their immediate communities has been acknowledged. Building on early research work from South Africa (for example, Ardington and Lund, 1995; Le Roux, 1995), the literature reporting on the perceived positive impacts of social pensions has since burgeoned (recent works include: Holzmann, Robalino and Takayama, 2009; Hanlon, Barrientos and Hulme, 2010; ILO, 2011).

Where do the dominant international organizations involved in pension policy, the ILO and the World Bank, stand on good practices? Since the mid-1990s, their positions have evolved. Within their respective "multi-tiered" and "multi-pillared" pension models, both of which traditionally favour promoting contributory financing mechanisms, greater reflection has recently been accorded to defining budget-financed minimum universal provisions to alleviate poverty. For the ILO, this is seen in its contribution to current United Nations-led endeavours to prioritize global poverty reduction – such as the 2012 International Labour Conference adoption of a Recommendation (No. 202) in support of promoting "national floors of social protection", including the development of a normative definition of minimum adequacy for an essential basket of social protection benefits. For the World Bank, its 1994 three-pillar model (World Bank, 1994) has expanded to a five-pillar model involving the "zero" pillar explicitly to address poverty (Holzmann and Hinz, 2005). The Bank's original three-pillar model attracted substantial criticism, and a vast literature developed after 1994 in response (for a seminal critique, see Beattie and McGillivray, 1995). A major criticism was the Bank's failure to address the needs of atypical workers. In time, internal critiques came from Bank staff (Gill, Packard, and Yermo, 2005) and the Bank's Operations Evaluation Department (OED) (Andrews, 2006), which evaluated the Bank's role in support of pension reform activities for the period 1994 to 2004. The 2005 Holzmann and Hinz publication, which introduced the Bank's expanded five-pillar model, may be seen both as a response to the wide-ranging criticism of the Bank's pension reform policies and to one of the OED's key evaluation messages: the need to explore "options to expand the safety net for those not covered by the pension system".

The bottom line is that although differences exist about the earliest age a pension may be payable and whether developing country old-age social pensions should seek to offer universal coverage or be restricted to the targeting (through means-tests, behavioural conditionalities, the use of proxy indicators of income, etc.) of vulnerable populations, there is some consensus that old-age social pension programs make a vital contribution, above all, to poverty alleviation – that is, ensuring that all members of society have, at the very least, a guaranteed minimum income. That said, it is important to recognize that the design and implementation of social pensions typically reflect a number of country-specific elements: (i) the level of national development and the breadth and depth of poverty within the national population, (ii) the need to avoid disincentives that may encourage movement out of formal employment and reduce participation in contributory pension programs, (iii) the need to cap (often by setting from the outset a relatively high earliest pensionable age) or prioritize government social expenditures, and (iv) divergent philosophical outlooks that accord different weight to the notions of human rights and citizens' obligations.

2.2 Poverty reduction

Internationally there has been a slow but steady coalescing of opinion around the goal of poverty reduction. Poverty reduction, defined as "Freedom from Want", was one of the three guiding principles of the 1942 Beveridge Report (p. 6, §8); alongside Disease, Ignorance, Squalor, and Idleness, these were Beveridge's "Five Giants". The ILO's 1944 Declaration of Philadelphia (which subsequently became an Annex to the ILO's Constitution) affirms that "poverty anywhere constitutes a danger to prosperity everywhere". In contemporary international discourse, the goal of poverty reduction is most readily associated with the United Nations' Millennium Development Goal (MDG) to halve the 1990 rate of extreme poverty by 2015.[11] The "Great Recession" that began in late 2008 has undoubtedly slowed, and in some cases may have reversed, progress on this front. Nonetheless, the United Nations affirm that "Despite significant setbacks after the 2008-2009 economic downturn, exacerbated by the food and energy crisis, the world is still on track to reach the poverty-reduction target. By 2015, it is now expected that the global poverty rate will fall below 15 per cent, well under the 23 per cent target" (United Nations, 2011, p. 4).

However, in contrast to this international goal to reduce all forms of poverty, over the past decade the debate on developing country "social security" (defined here in the wider European sense of the term) has been dominated by concerns about old-age poverty – to the relative exclusion of debates about how to direct limited resources to other vulnerable population groups, and to the needs of children in particular. There would appear to be five factors driving this state of affairs.

- The observation, based on European experience, that "[a] large share of the poverty-reducing impact of social security systems is based on old-age pensions" (ILO, 2011, p. 37).
- Challenges to the conventional wisdom that older people experience lower levels of poverty than the general population (Barrientos, 2002). Indeed, sub-populations among the elderly are often the poorest: "elderly-headed households with children tend to be among the poorest households, and poverty among older women is higher than among older men" (Kidd and Whitehouse, 2009, p. 41).
- The assertion that old-age pensions have wide welfare-enhancing and productive-activity supporting outcomes for pensioners, pension-receiving households, and local communities, which strengthens arguments to prioritize expenditure on large-scale old-age cash transfer mechanisms (ISSA, 2008). Of course, such prioritization may come at the cost of reduced expenditure on alternative policy options, such as extending affordable access to preventive primary health care (Lloyd-Sherlock, Minicuci and Beard, 2012), the absence of which may heighten the risk of poverty for the older population especially.
- The observed tendency in developing countries for existing poverty alleviation instruments, the delivery of which is not part of the traditional remit of most social security agencies, to focus their support on active working-age populations (Barrientos, 2009, p. 81). In many developing countries, social security pensions have moved progressively to take possession of this often vacant "old-age-poverty" policy space.
- The growing relative and absolute size of the older population in all regions of the world – and in this population older women, who experience more poverty than older men, will remain more numerous.

2.3 Global demographic shifts

The debate over greater old-age pension coverage is taking place against a backdrop of unprecedented demographic changes, as shown in Table 1, which reports a range of demographic indicators for countries in different income groups for 1970, 2010, and 2050.

Table 1

An unprecedented demographic upheaval

(Demographic indicators relevant to population ageing, by country income group)

Income group	Number of economies		Life expectancy*	%60+	%80+	Ratio WA/NWA** population
World	210	1970	58.5	8.3	0.7	1.19
		2010	69.3	11.0	1.5	1.65
		2050	76.3	21.8	4.3	1.36
Low ($1,005 or less)	35	1970	43.4	5.0	0.3	1.04
		2010	59.0	5.6	0.5	1.23
		2050	70.1	11.0	1.2	1.52
Lower-middle ($1,006 to $3,975)	55	1970	51.9	5.9	0.4	1.10
		2010	65.6	7.4	0.7	1.53
		2050	74.1	17.2	2.4	1.54
Upper-middle ($3,976 to $12,275)	54	1970	63.3	7.2	0.5	1.17
		2010	73.1	11.8	1.5	1.98
		2050	79.3	30.4	6.5	1.20
High ($12,276 or more)	66	1970	71.1	14.6	1.6	1.41
		2010	80.2	21.3	4.3	1.59
		2050	84.6	31.7	9.6	1.07

Source: United Nations Population Division (2011).

Notes:

All projections are based on the UN’s medium-variant fertility scenario. Mortality projections are derived from a model that assumes that life expectancy will increase less rapidly in countries where it is already high. Recent country- and sex-specific trends are taken into account, as are the effects of HIV/AIDS. Migration trends are assumed to follow past patterns, as potentially modified by current immigration policies. The UN’s methodology is described in detail in “Assumptions Underlying the 2010 Revision”*;*
see <http://esa.un.org/wpp/Documentation/pdf/WPP2010_Highlights-Chapter%20V.%20Assumptions_19-May-2011.pdf> (Accessed on 19.04.2012).

The UN refers to "economies" because some of the data are for entities other than countries.

Income classification is based on 2010 Gross National Income per capita. Groupings are as follows: Low: $1,005 or less; Lower-middle: $1,006 to $3,975; Upper-middle: $3,976 to $12,275; High: $12,276 or more.

* = Data are for five-year period beginning in year specified.

** WA/NWA: working-age (15-59) to non-working-age (0-14 and 60+).

Several patterns relevant to population ageing emerge from Table 1:

Increased longevity. Globally, life expectancy has risen from around age 58 in the early1970s to nearly 70 now, and is expected to increase further by 2050. This rise has occurred in all income groups, with the largest increase in the low-income countries and the smallest increase (both proportional and absolute) in the high-income countries. The variation across income groups is therefore much less now than in the early 1970s (27.7 years then versus 21.2 years in 2010).

Higher share of elderly. Globally, the share of the population that is aged 60+ has risen from 8.3 per cent in 1970 to 11 per cent in 2010, and is expected to reach 21.8 per cent in 2050. Although the ageing trend started in the developed world, it is now a global phenomenon, and it is accelerating, especially in the developing world. The rise in the 80+ share is also striking, with nearly 10 per cent of the population aged 80+ in high-income countries in 2050. Women account for about 55 per cent of the 60+ group and 64 per cent of the 80+ group.

Higher share of working-age people. The ratio of the working-age (15 – 59) population to the non-working-age (0 – 14 and 60+) population varies greatly across time and income group. In low-income countries, this ratio is rising, so there will be potentially more workers per dependent over the next few decades. An increasing share of those dependents will be aged 60+. If working-age people are productively employed, their output can help support the older segment of the population. In the upper-middle and high-income groups, this ratio will be decreasing, a fact that implies potential financial strains for supporting the elderly.

The above trends present challenges as well as opportunities for old-age pensions. On the one hand, increased longevity and a higher share of elderly mean that pensions will have to be paid to more pensioners and, on average, for longer – thus posing questions about intergenerational equity and risks to the longer-tem financial sustainability of pension systems. This is particularly challenging for the future adequacy of pay-as-you-go (PAYG) defined-benefit programs. But it is equally the case that policy responses to ageing that promote a greater reliance on funded pension schemes likewise pose important questions of equity for current workers and pensioners, owing to the often significant transition costs that such reform entails. A matter for immediate policy deliberation in all countries is how statutory pensionable ages can better take into account longer life expectancy. On the other hand, increased longevity may coincide with healthier ageing, thus making active ageing more feasible for more older people and for longer. It may coincide also in some countries with a smaller youth dependent population (0 – 14). This scenario may support pension system finances by encouraging deferred "retirement", prolonging wage-earning activity, and permitting higher proportions of total public expenditures to be directed toward older generations. It should also be conducive to higher levels of personal savings, social security contributions, and fiscal receipts. Ultimately, questions remain about future attitudes and possible opportunities to work and, indeed, the working behavior of the "elderly" and whether income received from continuing work should be seen as a complement or as an alternative to pension income. Difficult questions remain, too, about the kinds of work that will be available for older female and older male workers.

3. Design and implementation issues

As they craft pension programs, policymakers in developing countries must be clear on objectives, design, coverage, and implementation issues.

3.1. The objectives of old-age pension programs

When weighing objectives, it is useful to divide them into individual primary objectives and public primary and secondary policy objectives (Barr and Diamond, 2008).[12]

Individual primary objectives. For an individual, the objective is to support consumption smoothing across the life course and to offer a mechanism for insurance. Simply put, consumption smoothing is the process whereby a man or woman transfers consumption from his or her productive years to his or her unproductive years, defined normally by the attainment of the legal retirement or pensionable age. The need for insurance is dictated by longevity risk and uncertainty: longer-than-expected life expectancy may render one's savings (deferred consumption) insufficient to finance a steady and decent income flow; unexpected early death may mean that one has under-consumed and not fully drawn down all savings. To respond to this, insurance mechanisms use knowledge about a given birth cohort's life expectancy and, by pooling the savings that individuals in this cohort set aside for old age, collectively finance a predictable income flow – called an annuity – calculated using actuarial principles that will be paid to each individual until death. In practice, those cohort members who die earlier than the group average subsidize the incomes of those who live longer.

In an ideal world of perfect insurance markets, longevity risk and uncertainty could be addressed by individuals on a voluntary basis. But insurance markets are not perfect. Market "failure" may arise from: (i) issues of asymmetric information, where the insurance market has less knowledge about individual characteristics and behaviour than the insuree; (ii) poor understanding of insurance products and weak decision-making or procrastination by the population to be insured; (iii) incomplete insurance markets, with limited access to insurance products, or when the market is unable to provide the products people require; (iv) insurance markets being affected by public policies – taxation and redistribution policies in particular – that impact savings behaviour; (v) the capacity to save and purchase insurance not being steady across the productive life, owing to ad hoc expenditure needs, income shocks or unemployment; and (vi) insurance markets having difficulties tailoring commercial insurance products to those whose low financial income limits, or renders impractical, the deferring of consumption.

Primary public policy objectives. A key objective is to support, facilitate or, indeed, compel individuals to adopt measures that will mitigate risk. The need for this arises from the weaknesses of insurance markets and to counter the bounded rationality (i.e., inherent limits on rational decision-making) that directs human behaviour. Other primary public policy objectives (so-called solidarity objectives) are poverty alleviation and income redistribution. Their relative weight may vary with national culture and philosophy, the design of the pension system, and the existence of alternative public policy instruments to achieve these goals.

Secondary public objectives. These relate to the inherent potential of pension systems to shape the pattern of national social and economic development, including their influence upon incentives/disincentives for participating in labour markets and for developing national financial markets. These objectives may be more or less implicit/explicit as well as transparent according to national setting.

3.2. The design of old-age pension programs

As for design, even more important than the objectives will be the relative weight that policymakers accord to each of them. For the sake of convenience but at the risk of gross oversimplification, the influence of such relative preferences on the complex issue of pension system design can be caricatured as a straightforward dichotomy. In most of the post-World War II period, many countries have given greater relative weight to the primary individual objectives of insurance and consumption smoothing. Such an outlook has favoured the development and global diffusion of different defined benefit models (see box). In the last decades of the twentieth century, however, in developed and developing countries alike, increasing attention was given to the secondary public policy objectives. This essentially economic outlook may be deemed more favourable to developing and diffusing defined contribution models (Brown, 2008).

Currently, the need to address all objectives of old-age pension systems is generally accepted, as is the expectation that these objectives may be best achieved by using different elements in a composite approach to pension system design. This speaks to the relevance of the ILO's tiered and the World Bank's pillared pension "models", both of which also include budget-financed pensions (Jousten, 2009) to alleviate poverty – underlining the growing relative importance of this objective, and not just for developing countries.

Pension system design must also weigh issues of administration, which deal with (i) implementation of legal decisions by state and non-state agents who have been bestowed with the respective mandate, authority or role in the identification and enrolment of persons eligible for coverage under the system; (ii) collection, recording, and (where necessary) investment of individual contributions and reserve funds; (iii) calculation and payment of benefits; (iv) detecting and remedying occurrences of administrative error, misuse, or fraud in the system; and (v) the reporting of information about acquired rights and the financial health of the pension program to scheme members (Sluchynsky, 2009; Enoff and McKinnon, 2011; Robalino, Rawlings and Walker, 2012).

Governance issues matter, too. These operate on two interconnected planes: at the level of the administering body and at the national level. Governance oversight at the level of the administering body, measures that overlap often with routine administrative practices, relate to a broad set of responsibilities including: (i) ensuring the pension system's long-term sustainability; (ii) defining the investment strategy for the investment of pension funds; (iii) guaranteeing oversight of the investment strategy; (iv) maintaining accurate and up-to-date individual records of the acquired rights of, and benefits due to, all scheme members; and (v) the competent and strategic management of the pension administration's human resources, ICT infrastructure, and capital investment.

At the national level, a designated authority should oversee the strategic planning, realization, and monitoring of a coherent, affordable, and sustainable national social protection system. For budget-financed programs, the need to guarantee sufficient revenue over the long haul is fundamental. Given the multiple objectives of pension systems, the designated national authority has a role to play in liaising with the authorities responsible for other public policy areas (including employment, labour markets, and financial sector), to ensure a coherent and integrated approach to national development (Musalem and Ortiz, 2011). National level governance should also contribute to national transparency and inclusiveness – facilitating, for example, social dialogue among all legitimate stakeholders (Ghellab, Varela, and Woodall, 2011) or designing public communication strategies (Regúlez-Castillo and Vidal-Meliá, 2012; Laboul, 2012).

3.3. Old-age benefits

As a recognized benchmark of adequacy, defined benefit old-age pension programs may seek to provide periodic (normally monthly) benefits that pay to the pensioner a sum no less than 40 per cent of most recent earnings. This is the replacement rate defined in the ILO's Social Security (Minimum Standards) Convention (No. 102) of 1952. Regardless of the rate paid, such a level must be affordable and not threaten the future financial sustainability of the program or discourage contributory effort or formal labour market activities. To ensure future financial sustainability, it is essential to have actuarial projections of future contribution income and benefit expenditure (including the impact of periodic increases in pension amounts indexed, for example, to growth in wages or the cost of living) and demographic projections about life expectancy at the pensionable age and changes in the ratio between the active working-age population and pensioners.

For developing countries especially, Convention No. 102 does not offer a normative definition (or so-called "Standard") of minimum benefits to be provided by pensions with a primary objective of poverty alleviation. The 2012 ILO Recommendation (No. 202) concerning national floors of social protection seeks to clarify this situation.

More generally, the nature of the benefits (method of financing, their calculation and relative generosity) to be provided by the old-age pension system is linked tightly with the principal objectives assigned to the pension program. And for countries with "tiered" or "pillared" pension systems, the benefits provided by each element should be suitably differentiated to avoid disincentives to participate fully in contributory programs. In other words, the levels of any budget-financed pension, the minimum contributory pension, and the average contributory pension should be clear and distinct. Practice in this regard varies, but Mesa-Lago offers for debate the view that in such countries "the [budget-financed] pension should be at most half of the minimum contributory pension and this should have a similar relation to the average contributory pension" (Mesa-Lago 2012, p. 23). Likewise, where the option of an early retirement pension exists, the value of such a pension should be actuarially reduced vis-à-vis the pension payable at the legal pensionable age.

Ensuring gender equity remains a challenge for contributory pension programs. Women tend to spend fewer years in the workforce than men owing to childbearing and childrearing roles, and they are more likely to work informally than men and to earn less than men (Ghellab, Varela, and Woodall, 2011). As a result, women on average receive less adequate pension entitlements than men, and thus face a higher risk of poverty in old age. And higher female life expectancy heightens the risk of living in poverty for longer. The challenges faced by women are accentuated in "private" individual retirement plans, because such plans normally calculate annuity payments using mortality tables differentiated by sex (Mesa-Lago, 2012, p. 14). On the basis of the same value of accrued savings, average longer life expectancy leads to a smaller monthly annuity being paid to a woman than to a man. The use of unisex mortality tables can address this discrepancy, at the price of lowering the average male pension. Political pressure placed on private individual retirement plan providers to ensure that annuities are not differentiated by gender may be stymied by the inability of the insurance market to provide such annuity products (Fultz, 2012, pp. 7-8). To compensate for the lower average pensions paid to women, both Chile and Uruguay provide a maternity bonus for each live-born child, which is paid into the mother's individual account (see Mesa-Lago, 2012).

To address longevity risk, periodic benefits payable until death are preferred. However, partial or full payments in the form of a lump sum are provided by some countries' pre-funded defined contribution plans, and by national provident funds in particular. Some national provident funds also permit the drawing down of limited portions of retirement savings prior to the legal retirement age. While this may support the need for higher consumption, it does so by lowering future consumption, thereby heightening longevity risk.

3.4. Pension information and financial literacy

As individuals assume greater responsibility for deciding how contributions are invested and the age at which the pension (annuity) is first paid, they need better financial literacy and greater access to information about how the pension system functions. Although these issues are typically associated with defined contribution systems, they are also important to the transparent and inclusive functioning of defined benefit schemes, particularly when decisions are required on the timing of early retirement (Regúlez-Castillo and Vidal-Meliá, 2012).

The information needs of older adults, and the channels for effectively communicating such information, require careful consideration (Laboul, 2012). Movement toward state-of-the-art Web-based communication may not always be the most effective solution. Experience from OECD countries suggests that general information should be made available to scheme members, with more detailed information possibly available on request or through Internet platforms. That said, the communication of information is not in itself sufficient: the message communicated may not be internalized by the recipient. Thus, financial education may be needed, along with community-based support to more effectively access difficult-to-reach groups. For developing country populations with limited experience of access to old-age pensions, a first step in improving financial literacy and knowledge about pensions is to effect a change in mindset, to "shift from day-to-day to long-term planning" (Shankar and Asher, 2011, p. 18). Pension plans that offer investment choices to plan members carry important risks. The financial (welfare) losses that such risks may engender can sometimes justify arguments for limiting individual choice (Barr and Diamond, 2008).

4. Options and tools

As developing country policymakers weigh how to expand old-age pension coverage, they will need to build on the already operational old-age programs. But existing programs – regardless of their perceived effectiveness as national systems for providing old-age benefits – might even slow down reform or, indeed, contribute to reform inertia. For example, at least since the 1990s, both Kenya and Uganda have been discussing ways to replace their national provident fund retirement savings schemes with an alternative institutional approach to old-age security. Policymakers will also need to consider the relative size of formal-sector employment vis-à-vis informal-sector employment, along with the level of development of the country's national financial institutions and markets, which will influence the breadth of options available for financing and designing cash benefits and productively investing pension contributions and reserve funds.

A first task must be to identify who should be covered. This applies to all types of pension programs, regardless of whether private institutions as well as public agencies have a role in their administration and delivery.

For *budget-financed programs*, which may provide universal coverage or be targeted in scope, the challenge is to identify, keep accurate records on, and then deliver benefits to, all those persons eligible. This may require making use of existing "cadastres" – birth registers, voting lists, social security, and other public registers – and in the case of universal approaches, also identifying those who may not be found on such conventional lists. Omissions and errors are likely to be more commonplace in developing countries with poor institutional capacities. Moreover, those who do not appear on public lists are more likely to include those who are most vulnerable and possibly most in need of public support. Thus, it is vital to improve public administration and data collection (De Wispelaere and Stirton, 2012), including strategic investment in ICT infrastructure and systems.

In the absence of a nationwide network of social security offices, the use of local government and community level structures to identify and deliver payments to hard-to-reach beneficiaries and households may be a necessary option. Where local public and financial sector infrastructure permits, benefits may be disbursed by electronic transfers to individual accounts at banks or post offices, possibly through automatic teller machines (ATM). If such "cash machines" are lacking, especially in remote areas, investments in mobile ATMs may be required. In South Africa and Namibia, armoured trucks carrying mobile ATMs give access to cash benefits on set dates at predetermined locations, while in Brazil, some isolated riverside communities gain access to public pensions via ATM services that come by boat. The growing potential for "smart cards" and mobile telecommunications to help collect social security contributions and pay benefits is increasingly understood, but may require partnering social security agencies with commercial enterprises and telecommunications operators.[13]

Are budget-financed old-age programs fiscally prohibitive for developing countries? This has been a long-time concern, especially in a context of competing demands for limited public funds and the low tax take as a percentage of GDP by the national fiscal authority. As the elderly share of developing country populations' rise, so will the cost of budget-financed pensions, even in countries where the earliest age of eligibility is set relatively high. Even so, the ambition to gradually extend social protection "floors" to meet the basic needs of all vulnerable population groups, including the elderly, is now more widely accepted as a financially feasible option. In fact, the ILO reports that "[i]nternational experience shows that effective country-specific floors, which can expand, are not only affordable, but can pay for themselves in the long run by enhancing the productiveness of the labour force, the resilience of society and the tax revenues often foregone because of ineffective collection" (2011, p. 47). The ILO cites a HelpAge International study for 50 low- and middle-income countries that finds that providing a universal old-age pension for all persons aged 65 or older would cost between 0.4 to 1.5 per cent of GDP (and a much larger fraction of total government spending) in at least 41 of the countries studied (ILO, 2011, p. 43). The expectation is that better productivity in the national economy afforded by basic social transfers such as minimum pensions will help the sustainable development of more inclusive and adequate contributory benefits programs.

For *contributory old-age programs*, the key administrative challenge is to ensure the full and timely collection of all contributions due. Conventionally, contributions are shared by employers and their employees, with the employer being responsible for directing the total contribution to the contribution collection agency. Putting in place the regulatory structures to encourage full compliance and discourage under-payment and fraud are essential. Programs should be designed to avoid disincentive effects, both for contribution effort and for workers remaining in formal-sector employment. However, there is no clear evidence that effective contribution collection is best achieved by unifying social security contribution collection with the national tax collection agency or holding separate agencies responsible for these different tasks (Enoff and McKinnon, 2011). National context matters.

The needs of self-employed workers require particular attention, especially in developing economies, where the "self-employed" may represent a majority of the workforce. Typically, contributory social security programs have difficulty extending coverage to the self-employed, not least because the work and income patterns of this group are individually defined and variable and thus less easily accommodated within standardized contribution-collection mechanisms designed for larger-scale employer-employee relationships. One option is Argentina's *monotributo* approach for collecting contributions from irregular small contributors, wherein a single unified payment is used to cover tax and social security payments. Uruguay operates a similar contribution system. Other options include contribution levels subsidized by the state and more flexible conditions that permit paying contributions according to variable, and often seasonal, income flows (ISSA, 2010).

As for fiscal sustainability, actuarial valuations are essential – especially as populations age – to determine the program parameters (including contribution levels, minimum contribution period for eligibility, benefit levels, indexation of benefit increases, pension age, and early retirement age). If they have not already done so, developing country social security agencies should adopt good governance toolkits, such as the ISSA Good Governance Guidelines for Social Security Institutions (which specify reporting and disclosure considerations; verification procedures; considerations in determining contribution rates; and setting investment benchmarks, and the measuring of fund performance against these).

With people living longer and fertility rates falling, the actuarial challenge of how to maintain financially sustainable PAYG contributory pension programs is becoming more complex. Changes to the parameters of PAYG schemes can improve their medium-term financial position. However, the longer-term impact of ageing societies may lead to questions of equity with regard to the intergenerational financial transfer (the social contract) from smaller younger active cohorts towards bigger older non-active cohorts. PAYG programmes contribute significantly to the insurance objective of pension systems. While this is likely to remain so, the relative importance of this role may suffer if solutions cannot be found to better ensure the longer-term financial soundness of these programs.

For pension systems that incorporate funded individual retirement savings account options, further issues arise, as two diverging trends are taking place in developing countries. First, in recent decades, there has been a slow but continuing decline in the number of state-managed national provident funds. Second, there has been a widening international trend towards the use of private mandatory individual account schemes – in Latin America, Central Asia, Central and Eastern Europe, and sub-Saharan Africa (recently, Nigeria and Ghana) (Casey, 2011; Kpessa, 2011).[14] One issue is that individual personal savings may be insufficient to finance adequate replacement income in old age. This issue is accentuated by the high cost of private pension fund management fees. It is further accentuated by the effective absence of individual choice: most individuals are not sufficiently financially literate to permit them to devise autonomously an alternative, more appropriate investment strategy. Another issue is longevity risk – that is, the risk of outliving one's predicted life expectancy.

The financial tool required to address longevity risk is an annuity, which converts the accumulated balance in each individual account into a periodic pension income. But annuity markets in most countries remain poorly developed. At the end of 2011, Hungary and Poland – the two leaders in the movement in the late 1990s towards the use of mandatory individual account schemes in Central and Eastern Europe – were either still to define the legal basis on how annuities should be calculated (Poland) or how these benefits would be periodically updated for cost-of-living changes (Hungary) (Fultz, 2012). These design issues, paired with the fiscal costs of having moved from PAYG to funding, contributed to the *de facto* demise of the defined contribution system in Hungary (December 2010) and its scaling-back in Poland (April 2011).

For defined contribution schemes to become a feasible option, the hurdle to overcome is how to marry the (individual and thus gender-differentiated) products that private annuity markets typically supply (with their costs defined in relation to fluctuating market rates) with the demand of public social security systems for products that are gender-neutral, equitable, affordable for all, and inflation-indexed. Furthermore, the cost of private management fees must be capped. As Barr and Diamond highlight, an asset fee of just 1 per cent can reduce a worker's retirement savings account balance over a working career by about 20 per cent (2008, p. 163, Table 9.1) – signifying a loss of a significant portion of potential retirement income.

Elaine Fultz argues that public authorities can create the conditions required for private annuity markets to better become a feasible option as part of old-age pension systems: "to provide regular cost-of-living adjustments, governments can issue bonds indexed to inflation. (This would effectively shift the risk of high inflation from the private funds to taxpayers.) To enable private funds to deliver gender-neutral annuities, governments can create and enforce a system of financial transfers from those funds with disproportionately few women to those with disproportionately many. Alternatively, governments can create or mandate a single national annuity provider, which would face virtually no risk of a gender imbalance" (Fultz 2012, p. 8). Fultz's approach, which is perhaps impractical for many developing countries due to the thinness of their annuity markets, views growing life expectancy primarily as a risk. Alternatively, where pension systems are well-developed, it could be viewed rather as an uncertainty. In this regard, there is a role for government-issued longevity bonds. Such bonds are a form of insurance through which individuals can transfer a small portion of current income to deferred income that would be guaranteed for life, thus eliminating the risk of an individual outliving his or her savings.

Politics and financial market infrastructure permitting, there would appear to be a lot of opportunity to design and market annuities to manage longevity risk. This risk has grown dramatically in recent years, because many populations are outliving actuarial projections, and many people are outliving their own longevity expectations and related financial plans. The longevity risk burden is hitting those who are lucky enough to outlive their personal savings plans. But it is also hitting their children, public pension systems, and employers who offer their employees defined benefit pension plans.

Annuities represent an extremely promising private-sector solution to this problem. In return for one or more up-front payments, they guarantee purchasers a fixed periodic income until they die. Annuities thereby eliminate the purchaser's longevity risk by transferring it to an insurance company. Private-sector annuity providers will undoubtedly have greater scope to play a role in supporting old-age social security. This should be possible, as some portion of the transferred risk will be diversified across the population of annuity buyers. Other portions can be packaged and resold by the insurance company, although that may, quite appropriately, set off regulatory alarm bells in light of the recent mortgage banking crisis. Given the difficulties faced by individuals in ensuring the appropriateness of pre-retirement investment choices, realistic expectations are also required about the capacities of individuals at pension age to make appropriate choices when considering the purchase of some type of annuity in markets where these are on offer: less choice may be better.

To the extent that there is movement towards a greater use of defined contribution components in "tiered" or "pillared" pension systems, individuals will bear more risk. This requires that they be financially literate and well able to process (often complex) information and to make rational and reasonable decisions. For the average working-age person, this set of challenges will be demanding, and the pressure will heighten as people grow older. With this in mind, one investment option should be using multiple funds, wherein plan members can choose among investment strategies with different risk-return ratios, as is the case in Chile, Peru, and Mexico. This is especially important for plan members approaching the pensionable age who seek a lower level of risk exposure. Nevertheless, older people will continue to face risk based on the decisions they make, as some important decisions may only be made close to retirement age: the precise date the pension will first be received and the structure of the benefit package.

In developing countries, a large portion of the workforce (employees and the self-employed) may work in the informal sector. Typically, these workers are excluded from social security coverage under contributory social insurance and mandatory savings schemes. And for many, income patterns are low and uncertain, making private insurance and savings products difficult to access. One option to address these workers' old-age income security needs would be developing social pension schemes. But, as Shankar and Asher (2011) argue, the old-age pension needs of informal-sector workers, as well as the working poor more generally, extend beyond standard issues of income security alone: there is also demand for insurance and savings products. One innovative response is the development of micro-pension products in India, a retirement savings product delivered through established micro-finance institutions in partnership with community-level agents. Nevertheless, micro-pensions present the same set of problems as do all defined contribution schemes: how to invest contributions in a manner that fits the member's risk profile and liquidity needs; how to ensure the member understands the savings products and investment risks; and how to design the benefit package.

Concluding comments

For policymakers in developed and developing countries, the continuing development of public pension systems will require clarity and commitment in four key areas:

- ***Identifying general objectives.*** One core objective is consumption smoothing, which would enable the elderly to enjoy higher incomes. A second is redistribution, with the aim, for example, of averting or reducing poverty among the elderly. A third is insurance against longevity risk. If structured appropriately, a pension system can ensure that recipients will receive income for the entire period of their retirement. A fourth is gender equity.
- ***Defining the extent of population coverage.*** Is the system to be restricted to old-age pensioners, or will it include younger people, such as the permanently infirm, who cannot support themselves and have no other means of support? Will there be universal entitlement for the elderly with benefits financed from the state budget, or will benefits be restricted to those who have contributed to the system, or to those who have met some other requirement? Although the achievement of universal and adequate population coverage must be the goal, many developing countries will only be able to so progressively, with targets set in relation to nationally defined policy priorities, institutional capacity, and, for contributory programs especially, the structure of national labour markets.
- ***Choosing the level of benefits.*** Will a budget-financed system seek only to guarantee subsistence, or will it be more ambitious? Will there be different levels of budget-financed benefits, with eligibility based on current income or wealth, or on some other criterion? Will benefits for those who have contributed to the system be flat-rate or earnings-related? How will benefits be indexed for cost of living increases? In seeking affordable and sustainable answers to these questions, policy decisions should be guided by robust periodic and peer-reviewed actuarial valuations. The assumptions used for valuations must reflect accurately the national context and take into account likely future changes in demographic, labour market, and financial parameters.
- ***Picking the method of financing.*** Will the system be financed by contributions from individual workers, with at least matching contributions from their employer? To what extent will it be budget-financed? The answers to these questions will affect the extent to which the system is redistributive, and they also bear on the issue of intergenerational equity. The use of different financing approaches, which acknowledge the varying ability of different population groups to pay contributions on a consistent basis and which should help optimize the realization of the different objectives of pension programs, may be necessary and, indeed, preferable. For funded approaches to pension provision, the fees to be charged by commercial pension fund managers should be high enough to guarantee good service without abnormal profit. The same applies to charges to be levied by annuity providers.

For all of these areas, there are various options, each with advantages and disadvantages. Defined benefit systems have the advantage of ensuring a certain level of income to recipients, but they may encounter severe financing problems as populations age. Defined contribution systems, by contrast, generate uncertain income flows insofar as account balances are affected by variations in the investment returns on contributions. A further risk is the degree and possible nature of political influence over the management and investment of "private" defined contribution funds.

As for the objectives, they need to be realistic and set in relation to the country context in which a pension system must operate. Demographics, family structure, the political and economic systems, and the government's capacity to administer a pension system all bear on the possibility of reaching specific objectives. And there will be trade-offs in striving to reach pension system objectives while taking into account these many context-specific factors.

In addition, pension system design must reflect the changing world. A system that is ideal now will need to be flexible if it is to work well in the future. Intra-family obligations are changing rapidly in some countries, drawing into question the certainty of children supporting their parents in old age, and effectively shifting responsibility for the well-being of the elderly to governments. The share of employment in the formal sector – that is, the sector where pension contributions are more possible – is stagnant in some countries but growing rapidly in others. And in all countries, the age distribution of the population is changing, leading to a higher share of the population in older age groups. But as literacy, and particularly financial literacy, increases, and – it is to be hoped – as more people enter and remain in the formal sector, pension system strengthening and expansion may become more feasible.

The developing world, especially, is in flux regarding the identification of feasible goals for old-age pension systems and realistic options for achieving them. Current international debates about how best to ensure the goal of universal access to old-age pensions, however, suggest an emerging shift toward a paradigm based, in the first instance, on the provision of basic income security as a "citizens' right". This shift must be viewed in relation to the historically dominant paradigm for old-age income security, which in most countries has predominantly linked access to old-age pensions to previous work history: a "workers' right". For developing countries particularly, the manner in which debates about these two perspectives eventually plays out is sure to have great bearing on the possible objectives, and thus policy choices on the design and financing, of public old-age pension systems in the future.

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Box: **Demystifying pensions**

Types of benefits:

Defined benefit. Provides a payout at retirement, according to a fixed formula. The benefit is calculated on an actuarial basis using parameters including the insured's earnings across the career, the length of the period of contributions, a predetermined replacement rate, and demographic projections. These benefits can be funded or unfunded.

Unfunded defined benefit pension. No assets are set aside and the benefits are paid for by the employer or other pension sponsor as and when they are paid to pensioners. Typically, benefits are paid directly from current workers' contributions and taxes, a method known as Pay-As-You-Go (PAYG).

Funded defined benefit plan. Contributions from the employer, and sometimes also from plan members, are invested in a fund toward meeting the benefits.

Defined contribution. Provides a payout at retirement that is dependent upon the amount of money contributed and the performance of the investment vehicles utilized. Typically, monthly individual contributions are used to purchase (financial) assets, the investment returns on which accumulate in an individual fund until the pensionable age is attained, and whereupon the assets are transformed into a lump sum or periodic income flow (annuity products), or both.

Types of financing:

Contributory systems. These are financed using a joint total contribution, normally by the insured person plus the employer.

Budget-financed system. These are financed by the government, with benefits either delivered on a universal basis to all citizens or residents who satisfy the predetermined eligibility criteria or targeted at specific population groups.

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[2] Adopted by the UN General Assembly Resolution 217A (III) of 10 December 1948; Articles 22 and 25.

Article 22. Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

Article 25.

(1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

(2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

[3] Adopted by the UN General Assembly Resolution 2200A (XXI) of 16 December 1966; Article 9.

Article 9. The States Parties to the present Covenant recognize the right of everyone to social security, including social insurance.

[4] The term “pension” is used normally for a periodic payment received for the full duration of the contingency (i.e., paid monthly to an elderly person until death). Technically, old-age benefits that come in the form of lump-sum payments, which do not cover longevity risk, are not old-age “pensions”.

[5] For a concise overview of the many and complex issues surrounding the extension of old-age security to cross-border and migrant workers and their families, see ISSA (2011).

[6] In the pursuit of supporting the building of integrated and comprehensive social protection systems for developing countries, issues pertaining to the design and implementation of old-age pension programs are but one important aspect. By focusing on pension system issues alone, the risk is one of presenting an overly narrow perspective, missing important opportunities to discuss broader policy issues pertinent to the income protection and health care needs of populations, and of the elderly in particular. Moreover, this chapter will not address the issue of civil service pensions, the reform of which is increasingly seen as important for improving the health of public finances and as a matter of fairness. Accordingly, it is important that the messages presented in this chapter be read in a broader light to accompany and complement the findings of the other chapters in this volume.

[7] For a discussion of recent evidence of South-South knowledge sharing and capacity building in the development of social protection systems, see ILO (2011, pp. 71-75). As one example, Timor-Leste’s *Bolsa Mae* program is being revised based on Brazil’s experience with cash transfers and longer-term social protection programs (ILO, 2011, pp.73-74).

[8] There are two main variants of social insurance. In the late nineteenth century, Germany’s Chancellor Otto von Bismarck was responsible for introducing the world’s earliest national social insurance legislation, wherein protection for workers was organized on the basis of multiple occupationally segmented social insurance funds requiring earnings-related contributions and offering earnings-related benefits that ensured solidarity and redistribution only within the risk pool of each autonomous fund. In 1942, the “Social Insurance and Allied Services” report was published in the United Kingdom under the chairmanship of Sir William H. Beveridge. The Beveridge report emphasized the need for compulsory universal coverage, financed through flat-rate contributions and offering flat-rate benefits to guarantee subsistence, delivered through a centralized system of administration.

[9] There are a dozen or so NPFs in the Asia and the Pacific region, including in Fiji, India, Kiribati, Malaysia, Singapore and Sri Lanka. Beyond this region, NPFs are in terminal decline, generally having being replaced with social insurance programs. Plans are afoot to transform the last three African NPFs (Kenya, Uganda and Swaziland). All Caribbean NPFs had undergone this transformation by the mid-1980s.

[10] Among developing economies, the negative impacts on employment were most keenly felt in those countries with closer ties to international markets and most immediately so by workers in these countries’ formal sectors (McCord, 2010).

[11] For a historical and critical appraisal of the genesis and objectives of the MDGs, see Hume (2009).

[12] For a clear and succinct overview of the objectives of old-age pension programs, we need look no further than the important work of Nicholas Barr and Peter Diamond. The following draws heavily from their work (2008, pp. 26-33).

[13] Vincent and Cull (2011) offer an overview of developments in this regard in sub-Saharan Africa.

[14] This trend holds despite a number of countries having recently sought either to reconfigure or abandon this type of mandatory scheme (e.g., Argentina, Bolivia, Chile, Hungary and Poland).