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Pension Programs Around the World: New Comparative Global Policy Data

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ABSTRACT *Income protection during old age is a universally recognized human right. Are nations fulfilling their responsibility for income support for older adults? Using a new global dataset on social protection conceptualized and built by two of the authors, this paper examines whether countries have legislated for national pension systems, and the characteristics and adequacy of those systems.*

Keywords: pensions; older adults; income support; policy; global; comparative

Introduction

The markedly increasing population and proportion of older adults, long seen as a phenomenon affecting only higher-income countries, is now recognized as a global reality. In 2012, there were nearly 810 million adults aged 60 and over worldwide, two-thirds of whom live in low- and middle-income countries. By 2050, the population of older adults is expected to reach 2 billion, with 80 per cent living in low- and middle-income countries. By this date, almost a quarter of people in Asia and Latin America will be over 60, as will more than 10 per cent of people in sub-Saharan Africa (HelpAge International 2004; UNFPA and HelpAge International 2012).

As adults grow older, they are often more likely to be living in poverty. In Malaysia, for example, older adults make up 6 per cent of the population but over 30 per cent of the poor. An estimated 100 million older adults worldwide live on less than $1 per day (HelpAge

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International 2004). Older adults are less likely to be able to earn enough to support themselves due to a diminished capacity for work and the absence of suitable employment opportunities (Barrientos et al. 2003), particularly in a context of economic downturn. They are also more likely to require greater expenditures for their health and care than when they were younger. Countries with strong income security systems in place tend to have much lower rates of poverty among older adults (UNFPA and HelpAge International 2012).

However, traditional sources of support for older adults have become less and less adequate for their needs. In contexts that have traditionally relied on adult children to support aging parents, this support system is weakening due to migration and urbanization trends, as well as the growing prevalence of realities like HIV/AIDS which deeply disrupt the usual age and dependency patterns (Barrientos and Lloyd-Sherlock 2002; HelpAge International 2004; Overbye 2005; Johnson and Williamson 2006). In contexts that have relied on the pension income provided by private sector companies, these sources of income have lost value, due to companies retrenching benefits due to poor financial performance and other factors.

Are nations fulfilling their responsibility for income support for older adults? Using a new global data set on social protection conceptualized and built by two of the authors (Mahon and Heymann), this paper examines whether countries have legislated for national pension systems, and the characteristics and adequacy of those systems.

Social and Economic Effects of Pensions

Income protection during old age is a universally recognized human right. Article 25 of the Universal Declaration of Human Rights delineates "the right to social security in the event of … old age, or other lack of livelihood in circumstances beyond his control" (United Nations 1948). Also, older adults may need additional support to realize other life-long human rights, such as an adequate standard of living, access to social services, and a life with dignity. Providing income support for older adults has substantial economic and social benefits.

Transferring income to this vulnerable group can help governments achieve their poverty alleviation goals, even when transfer amounts are relatively small (Barrientos and Lloyd-Sherlock 2002). In South Africa, it is estimated that the social pension (costing the equivalent of 1.4 per cent of GDP) reduced the poverty gap among older adults by 94 per cent and among the overall population by 12.5 per cent (Barrientos 2005). In Brazil, social pensions cost about 1 per cent of GDP and reduced individual poverty by close to 25 per cent (Barrientos 2005). In Argentina, the provision of tax-financed pensions (amounting to just 1.1 per cent of total public spending and 0.23 per cent of GDP) reduced extreme poverty in recipient households by 67 per cent. In Chile, where these pensions constitute 2.6 per cent of public spending and 0.38 per cent of GDP, extreme poverty fell by 69 per cent in recipient households over ten years (Bertranou et al. 2004).

Providing older adults with a guaranteed source of income can have positive secondary economic effects, as well as primary ones. It can allow households to access credit more easily and withstand economic shocks, and can channel resources into marginalized areas (Johnson and Williamson 2006). In Namibia, for example, the provision of small social pensions in rural areas fostered the development of small shops in isolated villages whose business depends primarily on older adults – social pension recipients are responsible for between one-third and two-thirds of turnover in local shops in southern Namibia (Devereux 2002). Similar impacts on rural economic activity have been found in Brazil (Barrientos and Lloyd-Sherlock 2002).

While public spending on pensions is often seen as a pure expenditure required to support a segment of the population that is no longer economically productive, a broader view of the impact of pensions across society lends support to the idea that they are also an investment in the wellbeing of the nation. Pension income has ripple effects beyond the recipients. Especially in low- and middle-income countries, it is common for several generations to be living under the same roof; three-quarters of older adults in these regions do not live independently (UNFPA and HelpAge International 2004). There is substantial evidence of income pooling within households, with older adults contributing to overall household income. The National Transfer Accounts Project measured aggregate transfers of economic resources among generations and found that older people generally transfer more to younger generations than they receive from them (UNFPA and HelpAge International 2012), even before taking into account the value of the unpaid work they provide within the household. In the Philippines and Thailand, between 55 per cent and 67 per cent of older adults provided financial assistance to their children (UNFPA and HelpAge International 2012). In Namibia, more than one in ten households *not* headed by an older adult relied on a pension as the primary source of income (Devereux 2001).

Beyond direct income transfers received from older adults, when working-age adults do not need to use a substantial portion of their income to support the older generation, household resources are freed up for investment in productive resources and human capital development, maximizing the economic potential of working-age adults (Barrientos and Lloyd-Sherlock 2002). For example, a study in South Africa found that pensions provided to elderly members of the household allowed working-age adults to migrate in pursuit of better labor opportunities (Ardington et al. 2009).

Pensions are often spent directly on the health and human capital development of children, even when grandparents are not heads of household, fostering the development of the next generations of economic drivers (Barrientos and Lloyd-Sherlock 2002). In South Africa, for example, pension income in the hands of grandmothers has an impact on the nutritional status of their granddaughters, as measured by height and weight indicators (Duflo 2003). In Brazil, the school enrollment gap for girls in households receiving the rural social pension was reduced by 20 per cent; when a woman received the pension, girls were also less likely to participate in the labor force (Evangelista de Carvalho Filho 2008). In rural Tanzania, a small-scale regional program that provided pensions to grandmothers permitted increased spending on educational inputs such as school materials, uniforms, and kerosene for lamps (UNFPA and HelpAge International 2012).

One of the concerns raised with respect to pension provision and national wellbeing is the potential effect on savings rates. Saving rates are an important concern due to the linkages between savings, national investment, and economic growth. The empirical evidence on the topic is mixed, partly because of different estimation methods and ways of dealing with different pension system characteristics. Some studies show that public pensions have a negative impact on households' decisions to save (for example, Feldstein 1996; Bailliu and Reisen 1998; Meguire 1998). However, this evidence is not conclusive, and is not sufficient to dissuade pension provision, given its importance to the rights of older adults and its intergenerational benefits. For example, Cigno and Rosati (1996, 1997) and Cigno et al. (2003) find that old-age income security has a positive effect on aggregate household saving in Italy, the United States, the United Kingdom, Germany, and Japan. A study of savings rates and social benefit ratios in 22 OECD countries found no significant correlation between them (Horioka and Yin 2010). A study on New Zealand found a positive relationship between anticipated retirement benefits and savings (Obben and Waayer 2011).

The broad benefits of pensions across society make pension provision an investment in the human capital and productive capacity of citizens, as well as an important responsibility. To examine the extent to which nations are fulfilling this responsibility, we have developed a global database of statutory old-age benefit programs. Using these data, we examine global trends in the existence, generosity, and financing of old-age income support, taking special note of the forms of protection provided and the availability of these protections across regions and national income categories.

Methods

The data on old-age benefits used in this study are drawn from the Poverty Database developed by the World Policy Analysis Center at the McGill Institute for Health and Social Policy and the UCLA Fielding School of Public Health. The World Policy Analysis Center contains databases covering a wide range of important laws and policies, from education policy to constitutional rights to labor conditions, designed to facilitate international comparisons of national approaches to social determinants of health. We have used these data to conduct comparative global analyses of several policy areas including working conditions such as sick leave (Earle and Heymann 2006; Schliwen et al. 2011), constitutional rights (Heymann et al. 2013), child-related laws and policies (Heymann and McNeill 2013), and others; for details, please see http://worldpolicyforum.org/publications/. In this article, for the first time, we look at income support for older adults on a global scale.

The Poverty Database examined all 193 UN member nations to provide comparative, quantitatively analyzable information on national poverty reduction systems and policies, including pension, unemployment, family allowance, disability, and work injury benefit programs, as well as minimum wage and severance pay policies.

Our data on pensions cover contributory and non-contributory statutory programs promulgated at the national level. These data were analyzed and compiled by a coding team fluent in several languages using both primary and secondary sources. Original legislative labor and social security texts, accessed through the International Labour Organization's NATLEX legislation database and official government gazettes, were systematically read and analyzed for details of social security provision. Other important sources of information were the biannual regional reports from Social Security Programs throughout the World (SSA and ISSA 2009, 2010), compiled by the US Social Security Administration and International Social Security Association and containing information on the social security systems of 183 countries. When necessary, supplemental information was drawn from the Mutual Information System on Social Protection of the EU and the Council of Europe. This review was completed in April 2011 and is reflective of laws in force between 1 January 2009 and 1 January 2011.

Variables Analyzed

Provision and Type of Old-age Benefits. We examine whether a country has promulgated a law at the national level establishing a system of old-age benefit provision. Only benefit programs based in statute and implemented at the time of data collection are included.

We capture all types of old-age benefit provisions. Contributory programs normally operate through social insurance, and eligibility is typically determined based on periods of contribution or employment. Benefits are paid at regular intervals and generally bear some relationship to the beneficiary's previous earnings. Less common forms of contributory programs include mandatory occupational pensions, individual accounts, mandatory private insurance, and publicly administered provident funds. Provident funds are essentially compulsory savings programs typically paid into by contributions from both employees and employers. Upon retirement, the balance of the fund (including any accrued interest) is paid out as a lump-sum payment, though in some jurisdictions beneficiaries can opt to convert this payment into a pension annuity.

Non-contributory programs, financed by the government, can be provided universally to everyone fulfilling basic qualifying conditions (normally based on age and residency), or can be provided subject to a means test (often termed social assistance), determining eligibility based on assessed need. These programs are also typically disbursed as regular periodic payments, but normally at a flat rate or at a rate determined by minimum subsistence levels with no relationship to prior earnings.

Old-age Benefit Financing Model. We examine the financing model of the primary contributory pension system in each country, including provident funds. (Non-contributory programs are, by definition, government-financed.) The various benefit financing models captured by this variable can include contributions from one or any combination of employees, employers, and government.

Age of Pension Eligibility. We examine the minimum age at which adults become eligible for pensions. We examine contributory and non-contributory eligibility ages separately. We also look separately at minimum ages for men and women, because these frequently differ within countries.

Minimum Old-age Benefit Amount. The minimum level at which old-age benefits are paid per month to eligible recipients is captured by this variable. Minimum benefit amounts may vary according to circumstances such as a beneficiary's family structure, age, region of residence, or length of contribution; this variable, however, captures the absolute lowest benefit payable according to program regulations. We look separately at minimum amounts payable under contributory and non-contributory systems. However, we do not include provident funds in this analysis, due to their typical disbursement as a lump sum rather than a regular payment.

As minimum benefit amounts are typically described in national currency units, these amounts were converted to purchasing power parity-adjusted (PPP-adjusted) dollars using 2010 purchasing power parity conversion factors compiled by the United Nations Statistics Division as part of the Millennium Development Goals Database (UN Data 2012).

Analysis

The national income and region groupings used are based on 2011 World Bank classifications (World Bank 2013).

Results

Benefit Provision and Type

Of the 182 countries for which data were available, nearly all – 174 – have legislated for some form of income support during old age (Tables 1 and 2; Figure 1). Only eight countries (six low income and two lower-middle income) have not done so.

Table 1. Provision of old-age benefits (frequency and percentage), by economic category

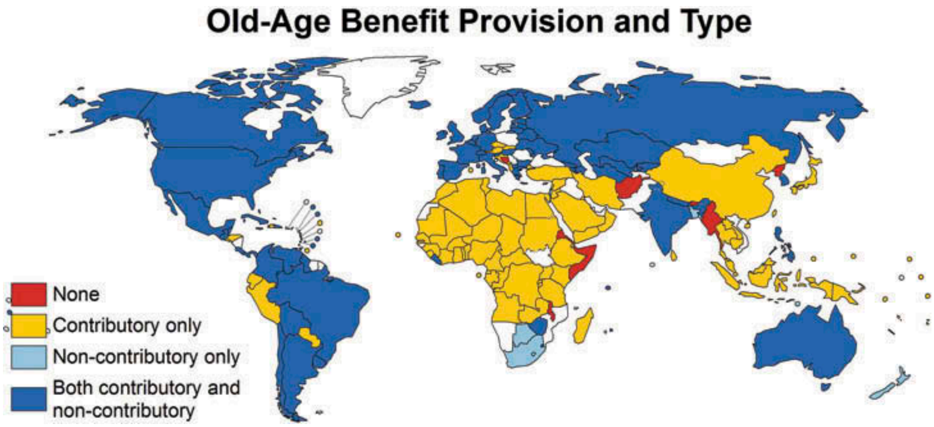
	Low income	Lower-middle income	Upper-middle income	High income	Total
No benefits	6 *12.2%*	2 *3.9%*	0 *0.0%*	0 *0.0%*	8 *4.4%*
Provident fund only	5 *10.2%*	6 *11.8%*	1 *2.6%*	1 *2.3%*	13 *7.1%*
Other contributory benefits only	29 *59.2%*	25 *49.0%*	18 *46.2%*	10 *23.3%*	82 *45.1%*
Non-contributory benefits only	2 *4.1%*	1 *2.0%*	2 *5.1%*	1 *2.3%*	6 *3.3%*
Dual Contributory (other)/non-contributory	6 *12.2%*	15 *29.4%*	18 *46.2%*	29 *67.4%*	68 *37.4%*
Dual Provident Fund/non-contributory	1 *2.0%*	2 *3.9%*	0 *0.0%*	2 *4.7%*	5 *2.7%*
Total	49 *100.0%*	51 *100.0%*	39 *100.0%*	43 *100.0%*	182 *100.0%*

Table 2. Provision of old-age benefits (frequency and percentage), by region

	South Asia	Sub-Saharan Africa	Americas	Middle East	East Asia	Europe	Total
No benefits	2 *28.6%*	3 *6.7%*	0 *0.0%*	0 *0.0%*	2 *7.1%*	1 *1.9%*	8 *4.4%*
Provident fund only	1 *14.3%*	3 *6.7%*	0 *0.0%*	0 *0.0%*	9 *32.1%*	0 *0.0%*	13 *7.1%*
Other contributory benefits only	0 *0.0%*	30 *66.7%*	10 *29.4%*	15 *93.8%*	11 *39.3%*	16 *30.8%*	82 *45.1%*
Non-contributory benefits only	1 *14.3%*	3 *6.7%*	0 *0.0%*	0 *0.0%*	2 *7.1%*	0 *0.0%*	6 *3.3%*
Dual Contributory (other)/non-contributory	2 *28.6%*	5 *11.1%*	24 *70.6%*	1 *6.3%*	1 *3.6%*	35 *67.3%*	68 *37.4%*
Dual Provident Fund/non-contributory	1 *14.3%*	1 *2.2%*	0 *0.0%*	0 *0.0%*	3 *10.7%*	0 *0.0%*	5 *2.7%*
Total	7 *100.0%*	45 *100.0%*	34 *100.0%*	16 *100.0%*	28 *100.0%*	52 *100.0%*	182 *100.0%*

The vast majority of countries have a contributory benefit system in place, a total of 168 countries (92 per cent). In 95 countries (52 per cent), contributory pensions are the only form of old-age income protection; of these, 13 countries provide pensions only through provident funds. In 73 countries (40 per cent), the primary contributory program is complemented with a non-contributory program; an additional six countries (3 per cent) legislate non-contributory pensions as the only form of old-age income support.

Figure 1. Old-age benefit provision and type



Note: Contributory benefits include provident funds.
Source: World Policy Analysis Center, Poverty Database.

Analyzing these findings by national income group, we find that nations are increasingly likely to have implemented a dual contributory and non-contributory system with rising levels of national income, and, conversely, that lower-income countries are more likely to rely on contributory pensions as the sole source of income support in old age.

Regionally, we find some interesting trends. Countries in Europe and the Americas are much more likely than other regions to provide dual contributory and non-contributory programs, at 67 per cent and 71 per cent of countries respectively. Perhaps the most striking trend, however, is the high concentration within Asia of provident fund programs. A sizeable majority of the world's provident fund systems (14 out of 18) are concentrated in South and East Asia/Pacific, particularly among the smaller island countries of Oceania.

Contributory Benefit Financing Model

Non-contributory benefit programs are, by definition, funded solely by government through general tax revenue, while contributory benefit programs may receive financing through several different contributory arrangements. Here, we examine the financing model associated with contributory pensions (Tables 3 and 4).

By far the most common means of financing contributory pensions is through bipartite contributions from both employees and employers (79 per cent of countries with contributory programs); this approach also often allows for irregular government contributions to cover budget deficits. The next most common approach, taken by 12 per cent of countries, is through regular tripartite contributions from employees, employers, and the government. Other financing models are used by less than 5 per cent of countries.

Table 3. Contributory old-age benefit (main program) financing model, by economic category

	Low income	Lower-middle income	Upper-middle income	High income	Total
Employee only	0 *0.0%*	3 *7.0%*	2 *5.6%*	1 *2.4%*	6 *3.8%*
Employer only	1 *2.6%*	1 *2.3%*	3 *8.3%*	2 *4.8%*	7 *4.4%*
Employee/employer	35 *92.1%*	32 *74.4%*	27 *75.0%*	32 *76.2%*	126 *79.2%*
Employer/government	1 *2.6%*	0 *0.0%*	0 *0.0%*	0 *0.0%*	1 *.6%*
Tripartite	1 *2.6%*	7 *16.3%*	4 *11.1%*	7 *16.7%*	19 *11.9%*
Total	38 *100.0%*	43 *100.0%*	36 *100.0%*	42 *100.0%*	159 *100.0%*

Table 4. Contributory old-age benefit (main program) financing model, by region

	South Asia	Sub-Saharan Africa	Americas	Middle East	East Asia	Europe	Total
Employee only	0 *0.0%*	0 *0.0%*	3 *9.1%*	0 *0.0%*	0 *0.0%*	3 *6.1%*	6 *3.8%*
Employer only	0 *0.0%*	1 *2.6%*	1 *3.0%*	1 *6.7%*	1 *4.8%*	3 *6.1%*	7 *4.4%*
Employee/employer	2 *66.7%*	35 *92.1%*	22 *66.7%*	10 *66.7%*	19 *90.5%*	38 *77.6%*	126 *79.2%*
Employer/government	1 *33.3%*	0 *0.0%*	0 *0.0%*	0 *0.0%*	0 *0.0%*	0 *0.0%*	1 *.6%*
Tripartite	0 *0.0%*	2 *5.3%*	7 *21.2%*	4 *26.7%*	1 *4.8%*	5 *10.2%*	19 *11.9%*
Total	3 *100.0%*	38 *100.0%*	33 *100.0%*	15 *100.0%*	21 *100.0%*	49 *100.0%*	159 *100.0%*

Age of Eligibility for Benefits

Around the world, the age of eligibility for non-contributory pensions tends to be higher than for contributory ones (Table 5). Looking at the minimum age eligibility breakdown for contributory benefits, we find that 75 per cent of countries with contributory benefit programs set the minimum age of eligibility for women at 60 or under and 58 per cent set this minimum age for men; on the other hand, among non-contributory programs, just 28 per cent and 17 per cent have a minimum age for women and men, respectively, of 60 or under.

This is true across regions and income levels, and eligibility ages tend to climb along with national income levels. While this may at first seem counterintuitive, it is likely due to the longer life expectancy typically experienced in countries with higher national income levels.

Table 5. Minimum age of pension eligibility

	Women	Men
Contributory		
50 and below	8 *4.8%*	6 *3.6%*
51 to 55	38 *22.9%*	19 *11.4%*
56 to 60	79 *47.6*	71 *42.8%*
61 to 65	35 *21.1%*	63 *38.0%*
66 and above	6 *3.6*	7 *4.2%*
Total	166 *100.0%*	166 *100.0%*
Non-contributory		
60 and below	21 *28.0%*	13 *17.3%*
61 to 65	40 *53.3%*	45 *60.0%*
66 to 70	12 *16.0%*	15 *20.0%*
Above 70	2 *2.7%*	2 *2.7%*
Total	75 *100.0%*	75 *100.0%*

Benefit Generosity

Looking separately at contributory and non-contributory systems, we examine the minimum level at which old-age benefits are paid (Tables 6 and 7). Here, we do not include provident funds, as they are normally structured to provide a lump-sum payment rather than a regular benefit, and thus cannot be compared in this way.

Table 6. Minimum monthly old-age benefit (contributory), by economic category

	Low income	Lower-middle income	Upper-middle income	High income	Total
Less than \$60 per month	18 *66.7%*	11 *28.2%*	4 *12.9%*	1 *2.9%*	34 *25.8%*
\$60–\$120 per month	8 *29.6%*	10 *25.6%*	2 *6.5%*	0 *0.0%*	20 *15.2%*
\$120–\$180 per month	1 *3.7%*	3 *7.7%*	7 *22.6%*	2 *5.7%*	13 *9.8%*
\$180–\$500 per month	0 *0.0%*	14 *35.9%*	16 *51.6%*	9 *25.7%*	39 *29.5%*
More than \$500 per month	0 *0.0%*	1 *2.6%*	2 *6.5%*	23 *65.7%*	26 *19.7%*
Total	27 *100.0%*	39 *100.0%*	31 *100.0%*	35 *100.0%*	132 *100.0%*

Table 7. Minimum monthly old-age benefit (non-contributory), by economic category

	Low income	Lower-middle income	Upper-middle income	High income	Total
Less than \$60 per month	3 *100.0%*	6 *40.0%*	2 *9.5%*	1 *3.3%*	12 *17.4%*
\$60–\$120 per month	0 *0.0%*	5 *33.3%*	4 *19.0%*	1 *3.3%*	10 *14.5%*
\$120–\$180 per month	0 *0.0%*	2 *13.3%*	8 *38.1%*	1 *3.3%*	11 *15.9%*
\$180–\$500 per month	0 *0.0%*	2 *13.3%*	7 *33.3%*	12 *40.0%*	21 *30.4%*
More than \$500 per month	0 *0.0%*	0 *0.0%*	0 *0.0%*	15 *50.0%*	15 *21.7%*
Total	3 *100.0%*	15 *100.0%*	21 *100.0%*	30 *100.0%*	69 *100.0%*

Unsurprisingly, minimum monthly payments display a strong association with national income levels in both contributory and non-contributory systems (Figure 2). On average, minimum monthly benefits from contributory programs are \$45.37 PPP-adjusted dollars in low-income countries and \$537.06 PPP in high-income countries. Non-contributory programs tend to be paid at lower levels. Among low-income countries, the average non-contributory benefit is \$10.70 per month, compared to \$495.70 in high-income countries. Interestingly, the relative disparity in minimum benefit levels of contributory and non-contributory programs narrows substantially as income levels rise.

Figure 2. Minimum monthly benefit (PPP-adjusted dollars), by economic category

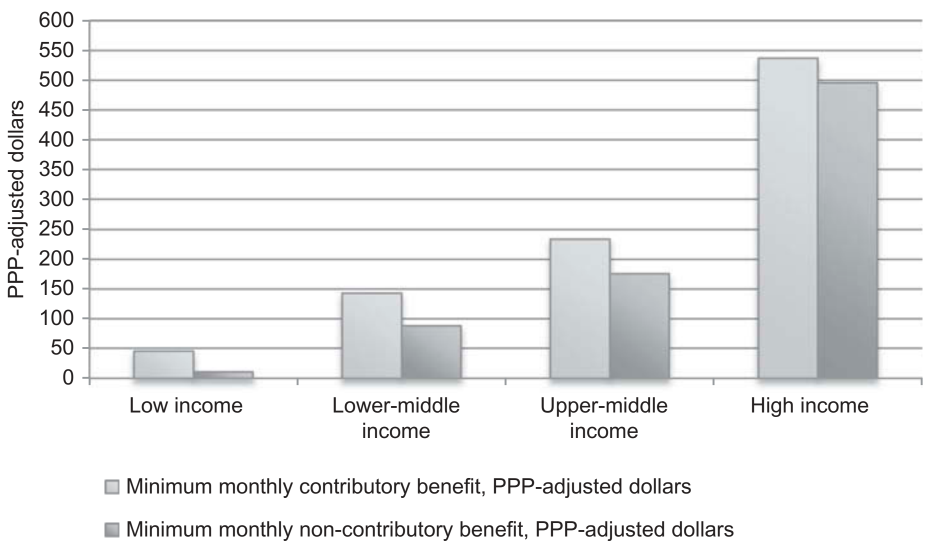
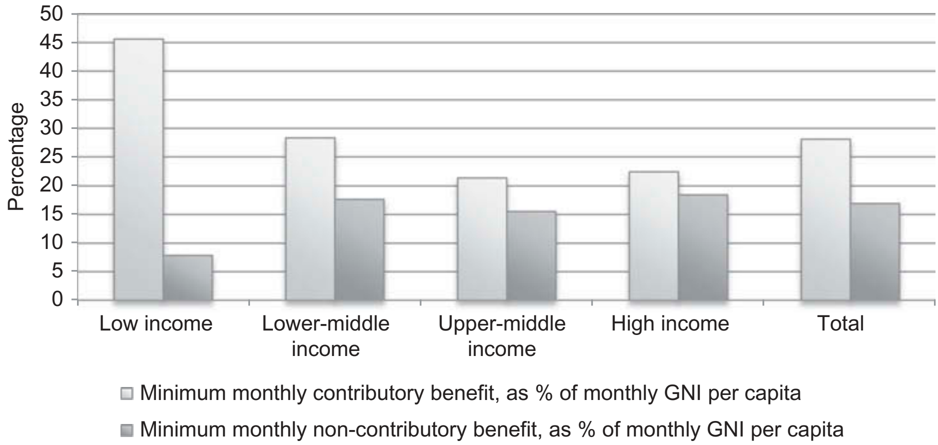


Figure 3. Minimum monthly benefit, as a percentage of monthly GNI per capita



Examining benefit levels in proportion to per capita gross national income (GNI), we find that the minimum monthly benefit paid under contributory benefit programs in low-income countries, on average, equates to 45.6 per cent of monthly GNI per capita – a much higher proportion than is observed in other economic categories (Figure 3). However, this tendency is reversed with regard to non-contributory benefits, which correspond to 7.8 per cent of GNI per capita in low-income countries, 17.7 per cent in lower-middle-income countries, 15.5 per cent in upper-middle-income countries, and 18.4 per cent in high-income countries. Indeed, the minimum benefit provided in low-income countries with non-contributory pensions is less than $1 per day.

Looking at benefit generosity by benefit financing mechanism, we find that in high-income countries, where governments have more financial resources, benefits financed through tripartite contributions tend to be higher than bipartite or single-party-financed benefits. However, in low- and middle-income countries, where governments have access to fewer resources, tripartite financing mechanisms are not necessarily associated with higher benefit levels.

Benefit Coverage

Using International Labour Organization (ILO) data measuring the percentage share of the population above legal retirement age receiving a pension (ILO 2010), we compare the effective coverage rates in nations with only contributory pension systems with those in countries with dual contributory and non-contributory systems. Across income groups, coverage rates are higher in nations with dual systems. This is especially striking in lower-income countries. In low-income countries with only contributory pensions, less than 10 per cent of older adults receive a pension, compared to over 40 per cent in low-income countries with dual systems. In lower-middle-income countries, coverage rates are less than 30 per cent in contributory-only countries and over 60 per cent in countries with dual systems. While the gap narrows in upper-middle-income and high-income countries, it still exists; while coverage rates are just over 70 per cent in high-income countries with only contributory pension systems, rates are 85 per cent in high-income countries with a dual system.

Discussion

Nearly all of the world's countries have legislated for some form of income protection during old age, the vast majority primarily through a contributory approach to pension provision, financed by some combination of employees, employers, and the government. This is an important global accomplishment – contributory pension systems are a critical component of income security for older adults. Because of the resource-pooling and risk-sharing involved, contributory programs can be designed to be financially sustainable. At present, they allow for the payment of substantially higher benefits than non-contributory systems.

However, the relatively narrow reach of old-age benefit coverage in many countries is linked to the provision of pensions exclusively through contributory benefit systems. Contributory pension systems nearly always have employers as a party. This provides a critical source of funding for the system, but means that it is structured such that many are excluded, including virtually all of the informal economy – which constitutes between 45 and 85 per cent of the total workforce in Asia and sub-Saharan Africa (ILO 2002). As a result, in the absence of complementary non-contributory pension systems, those already counted among the world's most vulnerable populations are among those least likely to have access to any income support during old age.

Additionally, those excluded by contributory systems tend to be quite poor; even if these systems could be structured to include them, it may not be helpful to further reduce their low income with pension contributions. The lowest-income workers may need all of their income just to meet basic daily needs; when they have any savings, they may need to use them to build their own human capital or that of their children, or invest in income-generating assets or activities to increase their chance to exit poverty.

To complement the contributory pension system, a non-contributory system is necessary to provide an income floor to prevent older adults from falling into extreme poverty and to fulfill nations' responsibility for social protection. As our findings show, operating complementary contributory and non-contributory pension systems is crucial to extend pension coverage to a greater proportion of the population. Globally, we are much further along on contributory than non-contributory pensions – less than half of countries (43 per cent) have legislated for a national system of non-contributory pensions.

Non-contributory pension provision also has an important gender equity component. Women are disproportionately at risk of poverty in old age. They tend to live longer than men and are much more likely to outlive their spouse; upon their spouse's death, they may lose income or assets associated with him or his family. Globally, there are 84 men for each 100 women aged 60 or over, and just 61 men for every 100 women aged 80 or over (UNFPA and HelpAge International 2012). Women face greater barriers to income security in old age than do men because of the cumulative effects of disadvantage throughout their lives – from less access to education, poorer opportunities for income generation, and greater likelihood of informal work, to primary responsibility for child-rearing and less independent access to land and property rights. As a result, they have much less access to contributory pensions than men – in Bangladesh, for example, only one in ten recipients of contributory pensions are women (UNFPA and HelpAge International 2012).

Financing and Affordability: A Complex Picture

A major question with regard to non-contributory pensions (and even contributory ones) is whether countries, particularly low- and middle-income countries, can afford to implement such a program. The several low-income countries across Asia and Africa that have legislated national-scale social pension programs show that this is indeed possible. This is confirmed by broad studies on the economic feasibility of non-contributory pensions in low- and middle-income countries (Barrientos and Lloyd-Sherlock 2002). An analysis of 12 countries in Asia and sub-Saharan Africa showed that providing a universal pension amounting to 30 per cent of GDP per capita to those aged 65 and over, as well as to all working-age people with disabilities, would cost between 0.6 and 1.5 per cent of GDP (Hagemejer 2009). Another study of 50 low- and middle-income countries showed that a universal pension for everyone over 65 at 20 per cent of average income would cost less than 1.5 per cent of GDP in most countries, and would not exceed 3 per cent in any country (Knox-Vydmanov 2011).

The specific methods that countries may use to finance their pension programs are beyond the scope of this paper, and depend on national contexts, program structure, tax base, overall resources, and other important factors. For example, Bolivia financed an initial roll-out through the privatization of state-owned enterprises, while Brazil's social pension has been paid for through a combination of transfers from the contributory social insurance program, revenues from excise duty, and taxes levied on large firms (Barrientos and Lloyd-Sherlock 2002). Non-contributory pensions can be provided initially at a level feasible for low-income nations to finance and administer, and gradually be scaled up as more resources become available. For example, providing initial benefits at a low level and at an older age of eligibility can keep costs low; levels can be increased and the age of eligibility can be lowered when possible, as has been done in other countries. Even very small income transfers have been shown to have benefits; a small-scale cash transfer program in Northern Tanzania provided benefits at a level corresponding to just a third of the international poverty line, but still improved nutritional status and rates of begging (Knox-Vydmanov 2011).

Additionally, our descriptive findings highlight that pension provision, like all social policy choices, is highly dependent on political will and national contexts; national income levels are not a binding constraint. While over 80 per cent of countries in the Americas are classified as low or middle income, every country takes at least some approach to income support during old age, and over 70 per cent have established dual contributory and non-contributory pension systems. Unlike in Europe, where non-contributory pension benefits are rooted in a broad historical tradition and even predated contributory benefit programs in some countries (Overbye 2005), the prevalence of non-contributory benefits in the Americas is largely due to relatively recent reforms in many countries that led to the implementation of social assistance schemes (Barrientos and Santibáñez 2009; Ferreira and Robalino 2010). In contrast, countries in the Middle East are less likely than low-income countries to have legislated non-contributory benefit schemes, despite the fact that only one country in the region is classified as low income. Political choices may partially explain this disparity. Competition for electoral support within democratic systems has been a driving force behind the extension of social security benefits in many countries in other regions (Baldwin 1990).

When designing a non-contributory pension system, nations must choose whether to make the pension universal or subject to a means test (Johnson and Williamson 2006). Means testing offers the advantage of targeting expenditures to those most in need and avoiding spending on those with alternate sources of income. However, in many low- and middle-income countries, the administrative complexity required by a means-tested system makes universal provision a more feasible choice that is substantially less costly to operate (HelpAge International 2004). A universal system can also lessen the potential for corruption by reducing the power of gatekeepers – when fewer elements are required to prove eligibility, it minimizes the ability of officials to take advantage of pension seekers (Willmore 2003, 2007). Universal provision can also avoid the disincentives to work that tend to accompany means-tested pensions (Barrientos and Lloyd-Sherlock 2002). Universal pensions have been endorsed by both the International Labour Organization and the World Bank as effective policy responses to poverty in old age (World Bank 1994; Holzmann and Hinz 2005; ILO 2010).

Conclusion

At present, it is estimated that old-age social security programs legally cover only 42 per cent of the world's working-age population, and only 40 per cent of the worldwide population above the legal retirement age are effectively in receipt of pensions, with even lower rates of effective coverage in many low- and middle-income countries (ILO 2010).

Pension provision complements the pursuit of other societal priorities by protecting a portion of the population vulnerable to poverty, and providing benefits across generations through intra-family transfers. Because of their broader effects, pensions can also be seen as investments in local economies and human capital development. They contribute crucially to the fulfillment of a broad range of human rights for older citizens.

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