Chapter 2. Towards social protection for all in Paraguay

To sustain and further improvements in living standards and well-being, Paraguay will need to review its social protection policies and transform them into a coherent system for all. This chapter analyses social protection in Paraguay and provides policy recommendations to foster coherence, equity and an integrated system. Social protection is split along the line of informality, leaving parts of society unprotected. Formal dependent workers are covered by social security, whose fragmentation results in unequitable provisions. The high degree of self-employment limits the reach of social security, while informality and evasion further reduce its coverage. Means-tested social assistance needs to be better targeted and scaled up to fully address the needs of the population not covered by social security. Key bottlenecks to expand social protection to the whole population are its governance, insufficient financial resources for social assistance and the inclusion of independent workers into social security. Independent workers' low and unstable incomes, as well as the system's design itself are barriers to the inclusion of independent workers.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

In recent years, living standards in Paraguay have improved, but the state has to review its social policies to continue along this path. Since increasing in the early 21st century, income poverty has nearly halved; yet poverty and inequalities remain high (OECD, 2018). Many Paraguayans remain vulnerable and the expanding middle class needs support to stabilise (UNDP, 2016). Volume 1 of the MDCR of Paraguay lays out that steering the economy in a sustainable growth path and furthering improvements in living standards require addressing the coverage and fragmentation of the social protection system.

Paraguay puts social protection at the core of its national development. Countries are increasingly recognising the value of social protection to achieve and sustain well-being (OECD, 2015). Paraguay is no exception; social protection plays a key role in achieving the objectives of the National Development Plan *Paraguay 2030*: reducing poverty, fostering social development and inclusive growth. The strategy even sets the ambitious goals of eradicating extreme poverty and reducing inequality. The state recognises that social protection is a key instrument to achieve these goals, as it sets the goal of universalising access to social security.

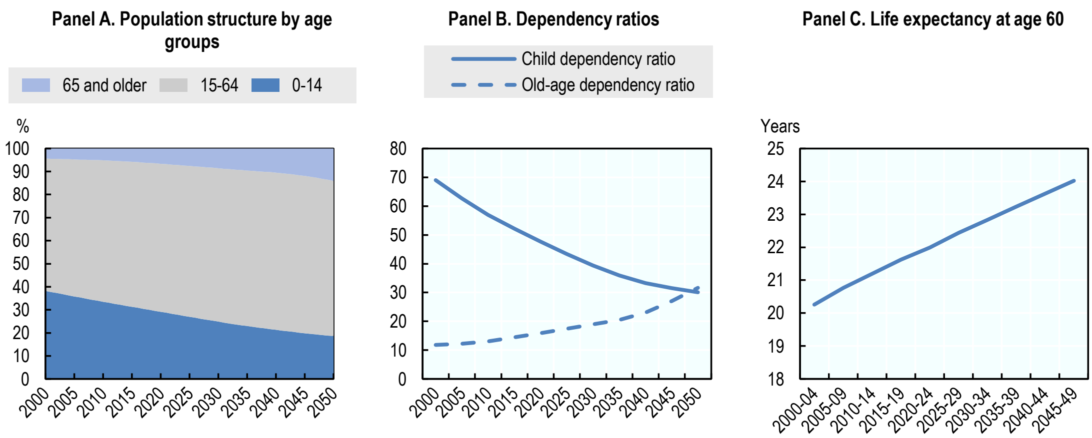
However, high informality and self-employment limit social security's impact and force Paraguay to have a parallel social assistance system. Traditionally, social security safeguards the population against various risks. Yet, low levels of formality (35% in 2015) and salaried work (55% in 2015) limit the reach and expansion of social security (OECD, 2018). The National Development Plan recognises that large swaths of society are left unprotected. In response to this Paraguay expanded social assistance to provide minimum living standards. While social assistance is an important element of social protection, Paraguay's high informality and self-employment risk creating parallel systems for formal and informal workers, which is the case for the pension system.

Demographic changes require preparing the social protection system for population aging if deficits for the treasury are to be averted. Complying with *Paraguay 2030*'s definition of vulnerable groups, the country's principal social protection provisions target the elderly and children. However, the demographic profile is changing: the share of children will have halved by 2050, while the elderly population will have nearly tripled (Figure 2.1 Panel A). Expectedly, the dependency ratios will revert with the old-age dependency ratio surpassing the child dependency ratio (Figure 2.1 Panel B). In addition, life expectancy at age 60 is expected to continue to increase, to reach 84 by 2050 (Figure 2.1 Panel C). Until now, Paraguay's youthful population allowed the country to maintain a generous pension system. These favourable conditions are slowly reversing, which could jeopardize the sustainability of the contributory and non-contributory pension system. The treasury is already covering the running deficit of the pension funds for non-civilians (police and military personnel). And the contributions to the major pension fund for private sector workers will not suffice to cover pension expenditure as of 2032 (IPS, 2014).

This chapter assesses Paraguay's social protection system and provides recommendations to reach the objective of providing for the population in need. Paraguay's health and education system are assessed in Chapter 3 and Chapter 4. First, the chapter analyses social protection's coverage and adequacy. Second, given the demographic transition and future liabilities the chapter assesses the pension system equity and sustainability. Third, it sets out three principal challenges Paraguay needs to overcome to universalise social protection: the system's governance, including independent workers into social security and the financing for non-contributory social assistance. It concludes with a set of policy recommendations to establish a social protection system for all.

Figure 2.1. Paraguay's aging society poses challenges for the provision of social protection

Projections of selected demographic indicators for Paraguay



Note: The child dependency ratio is the ratio between the population aged 0-14 and 15-59. The old-age dependency ratio is the ratio between the population above age 60 versus individuals aged 15-59. Panel C presents life expectancy at age 60 projections for a five years average.
Source: CELADE - Population Division of ECLAC (2013).

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Paraguay's social protection system provides too little for too few

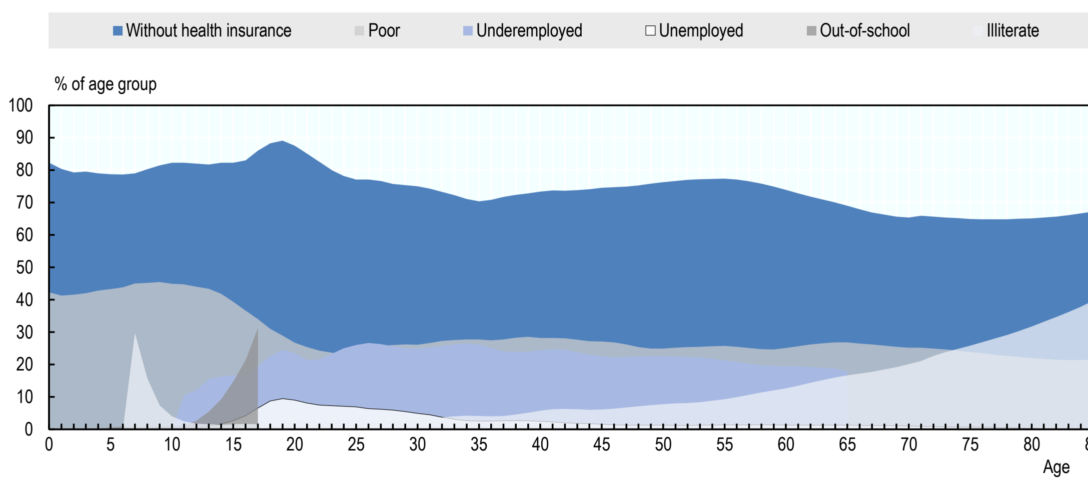
Despite social protection's key role in national development, Paraguay only has a working definition of social protection. In absence of a universally accepted definition, Paraguay guides its social protection system by the objective of mitigating social risks, guaranteeing a minimum living standard and promoting decent work and access to opportunities. A range of education, health and labour policies contribute to achieving these objectives, focusing on vulnerable groups, such as children, adolescents, indigenous people, people with disabilities, as well as the elderly, who are considered especially vulnerable (National Government of Paraguay, 2014; Gabinete Social, 2017).

Paraguay's social assistance and social security systems capture most aspects of the International Labour Organization's (ILO) holistic definition of social protection. Paraguay's social assistance aims at protecting children, enabling household's income generation and securing a minimum income in old-age; social security mitigates the loss of income due to sickness, occupational injuries, invalidity, death of the income earner and old-age; this is complemented by (basic) medical care. While covering fewer contingencies, these policies reflect the ILO's view on social protection. The ILO defines social protection as "the set of public measures that a society provides for its members to protect them against economic and social distress that would be caused by the absence or a substantial reduction of income from work as a result of various contingencies (sickness, maternity, employment injury, unemployment, invalidity, old age, and death of the breadwinner); the provision of healthcare; and the provision of benefits for families with children" (ILO, 2000).

Key provisions currently focus on children and the elderly, but social protection needs to address vulnerabilities at all ages. Since the first poverty reduction strategy in 2003 (*Estrategia Nacional de Reducción de la Pobreza, Desigualdad y Exclusión Social*), poverty and inequality reduction have been at the heart of country's social assistance programmes. Indeed, poverty and inequality have fallen since the 2002 crisis, and eradicating extreme poverty is within reach; but the reduction has been less impressive than in Latin America as a whole (OECD, 2018). While poverty remains a concern across ages (especially among minors), non-monetary vulnerabilities should be of equal concern (Figure 2.2). Many of these vulnerabilities are insufficiently addressed by the country's social protection system. Key vulnerabilities of the working age population, such as unemployment or – more frequently – underemployment, are insufficiently addressed by Paraguay's social protection system. Many, across all ages, live without health insurance. Literacy is a prerequisite for inclusion in a modern society. While literacy is not a concern for younger Paraguayans, a sizeable minority of adults above age 40 are illiterate and rates are even higher among the elderly.

Figure 2.2. Vulnerabilities are distributed across the life cycle

Vulnerabilities by age in Paraguay (2016)



Source: Own calculations based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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Paraguay does not protect all its population against all contingencies. A comprehensive social protection system needs to cover at least the aforementioned contingencies; this, however, is not the case in Paraguay. Social security for formal workers does not protect against unemployment, and formal workers do not receive child or family allowances, unless they qualify for the means-tested conditional cash transfer programme *Tekoporã* (Table 2.1). The inactive population and informal workers – until recently excluded from social security – are only partially protected against contingencies: contingencies such as income loss due to unemployment or sickness are not covered, other contingencies (except health) only in case of poverty or voluntary contribution to social security.

Table 2.1. Paraguay's social protection system does not cover all contingencies

Paraguay's social protection responses to contingencies

Contingencies	Social protection responses		
	Dependent workers	Independent workers	Inactive
Sickness (medical expenses, loss of income)	Contributory health insurance (IPS) Private insurance (civil servants and employees of the state)	Public medical care	Public medical care
Child and family benefits	means-tested CCT (*Tekoporã*, *Abrazo*)	means-tested CCT (*Tekoporã*, *Abrazo*)	means-tested CCT (*Tekoporã*, *Abrazo*)
Maternity	Contributory social security (IPS, Caja Fiscal), employer financed in case the mother is not affiliated with the IPS	means-tested CCT (*Tekoporã*)	means-tested CCT (*Tekoporã*)
Unemployment	no	no	n.a.
Occupational injury and illness	Contributory occupational injury insurance (IPS, Caja Fiscal, closed pension funds)	Voluntary social security (IPS)	n.a.
Disability	Contributory disability insurance (IPS, Caja Fiscal, closed pension funds)	Voluntary social security (IPS)	means-tested CCT (*Tekoporã*)
Death	Contributory survivors pension (IPS, Caja Fiscal, closed pension funds)	Voluntary social security (IPS)	no
Old-age	Contributory old-age pension (IPS, Caja Fiscal, closed pension funds)	Voluntary social security (IPS)	means-tested (*Adulto Mayor*)

Note: n.a. = not applicable. See Annex 2.A for details.
1. CCT stands for conditional cash transfer.
2. Civil servants' sickness benefits are covered by private pre-paid insurances or the health agencies of the Armed Forces and Police.
3. Dependent workers whose contract was terminated without a due cause are entitled to a compensation corresponding to 15 daily wages for each year of service.
Source: Own elaboration.

Paraguay's commitment to protect children targets the poor. Flagship programmes, such as the conditional cash transfers *Tekoporã* and *Abrazo*, provide for families with children in need; the conditionalities and the guidance of social workers have improved health indicators and school attendance of children (MH, 2016; Casalí and Velásquez, 2016) but exclude by design non-poor children and families, for whom social protection lacks an alternative offer.

Social assistance for the working age population concentrates on small-scale programmes providing support for income generation. While mandatory social security has a provision for most of the contingencies of the working age population, the country's economic structure excludes large groups of society from the system. Informal and independent workers' contingencies are de facto unaddressed. In absence of these provisions, informal and independent workers benefit from small-scale programmes providing financial and technical support to small, family run businesses and farms (see Annex Table 2.A.1). These measures include provisions that reach beyond traditional social protection, such as the land accreditation programme in the peri-urban areas from the SAS (*Tekoha*).

In addition to traditional social assistance programmes, Paraguay is increasingly investing in improving families' productive capacities and resilience. Programmes like *Tenonderã* and *Familia por Familia* aim at reducing poverty sustainably by helping families to become self-sufficient. *Tenonderã* is a graduation programme for families in the final years of their eligibility for *Tekoporã*. *Familia por Familia* was designed by the *Secretaría Técnica de Planificación* (STP) to target extreme poor families. Both programmes aim at sustainably reducing poverty by promoting social and economic inclusion of families through enhancing families' business ideas, providing skills training and (seed) capital to invest in assets, as well as coaching and technical support. In contrast to *Tenonderã*, *Familia por Familia* includes intensive individual coaching and a strong social work component to assist the needs of extreme poor families, it also helps to connect them to local markets.

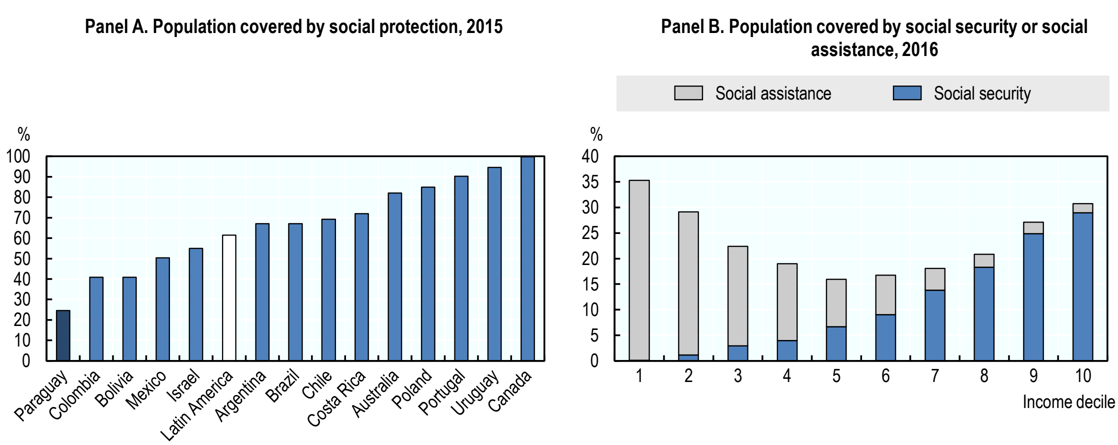
Paraguay's progress in providing for its elderly is split in parallel systems. With the flagship programme for the elderly (i.e. *Pensión Alimentaria para los Adultos Mayores*, henceforth *Adulto Mayor*), Paraguay grants a non-contributory pension to poor residing citizens above age 65. Poor elderly without labour income, contributory pensions and other cash transfers from the state are entitled to receive a benefit representing 25% of the minimum wage.[1] This is an important complement to contributory old-age pensions and its expansion is in line with the ILO's and Paraguay's working definition of social protection. However, the strong reliance on non-contributory pensions risks cementing the costly split between formal and informal workers.

The social protection system's coverage is low

Paraguay's social protection system covers considerably fewer people than in comparator countries. A quarter of Paraguayans are covered by at least one social protection programme (24.5%). One in ten Paraguayans (of all ages) either contributes to social security or receives a contributory benefit (11%); an additional 13.5% of the population receives exclusively social assistance. This places Paraguay at the bottom of an international comparison and considerably below the Latin American average (Figure 2.3 Panel A).

Figure 2.3. Paraguay's middle class is left unprotected

Effective social protection coverage



Note: Effective coverage of social protection is measured as the percentage of people actively contributing to a social insurance scheme or receiving at least one benefit (contributory or non-contributory, excluding health). Panel A: 2016 for Paraguay, 2015 or latest available for other countries. Panel B: Social assistance includes conditional cash transfers (*Tekoporã*); in-kind transfers (food) and non-contributory pensions (merit, veterans, survivors of veterans and military or police personnel, *Adulto Mayor*). Social security includes contributions to a social security scheme and receipt of contributory pensions.
Source: Panel A: Paraguay based on the Permanent Household Survey of Paraguay (DGEEC, 2017), others based on ILO (2017). Panel B: Own elaboration based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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Paraguay's social security and social assistance systems leave the middle class and certain contingencies unprotected. Social assistance plays an important role in increasing social protection's coverage rates, but large gaps remain. As a consequence of social assistance targeting the poor and social security being skewed towards high income individuals, the centre of the income distribution is insufficiently covered by the system (Figure 2.3 Panel B). Moreover, the system does not provide adequate protection against key contingencies set out in national strategies: the effective coverage of maternity benefits is low, insurance against unemployment does not exist and the effective coverage against other contingencies is low (Table 2.2). Since 2015, Law No. 5508/2015 extends paid maternity leave to informal workers. In that case employers have to cover the full salary during 18 weeks of maternity leave (the *Instituto de Previsión Social* [IPS] covers the salary during the maternity leave of formal workers).

Table 2.2. Coverage of contingencies, 2015

Contingency	Sickness (loss of income)[a]	Child and family benefits	Maternity	Unemployment	Occupational injury and illness	Disability	Old-age
Indicator	Insured (% of employed)	Cash transfer recipients, children (age 0-14)	Cash transfer recipient, Women giving birth	Cash transfer recipient, unemployed	Legal coverage[d]	Cash transfer recipient, persons with severe disabilities	Cash transfer recipients, above statutory pension age
Paraguay	19.6[b]	32.8	3.0[c]	n.a.	52.8	21.6	22.2
Argentina	..	84.6	34.0	7.2	69.7	..	89.3
Australia	..	100.0	..	52.7	77.9	100.0	74.3
Brazil	42.4	96.8	45.0	7.8	62.9	100.0	78.3
Canada	..	39.7	100.0	40.0	78.8	67.2	100.0
Chile	18.1	93.1	44.0	45.6	93.8	100.0	78.6
Colombia	..	27.3	..	4.6	44.6	6.0	51.7
Costa Rica	72.1	17.7	..		68.6		68.8
Israel	2.2		..	29.4	90.0	90.4	99.1
Mexico	..	25.0	..	..	49.3		64.1
Peru	..	..	..	..	48.4	3.9	19.3
Poland	..	100.0	100.0	..	100.0	100.0	100.0
Portugal	86.1	93.1	100.0	15.5	87.6	89.2	100.0
Thailand	25.4	18.9	..	43.2	41.0	35.7	83.0
Uruguay	88.0	66.2	100.0	45.6	68.3		76.5

Note: n.a. = not applicable.
.. = missing data.
a. 2015 or latest available year.
b. The percentage of the working population having an IPS insurance.
c. The percentage of women giving birth who benefit from paid maternity leave. The figure represents the situation before enacting Law No. 5.508/2015 which extends paid maternity leave to informal workers.
d. The legal coverage is the percentage of the labour force theoretically captured by the scheme. For Paraguay this is the population formally obliged to contribute to social security, thus dependent workers.
Source: ILO (2017), a. ILO (2018). b. own elaboration based on ELPS (STP, 2016).

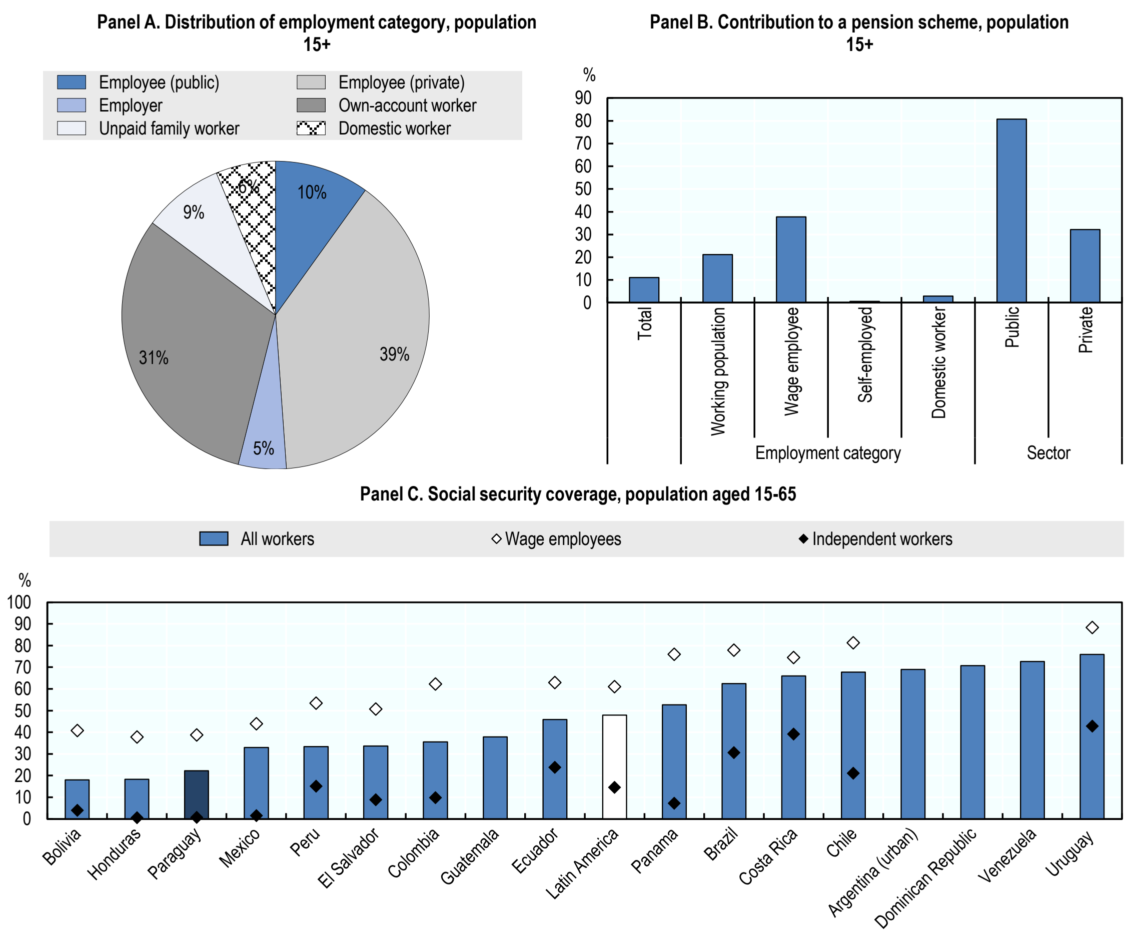
Social security coverage

Paraguay's low provision against key contingencies is a result of social security's focus on dependent employees. The Paraguayan social security system uses wage employment as the standard even though barely half the working population is in dependent wage employment (Figure 2.4 Panel A). The consequence of this focus is a low legal coverage:

only half of the working population are legally covered. Since November 2015, domestic workers and their employers are mandated to pay social security contributions. Given the country's high informality, the actual coverage of dependent employees is even lower (37.7%) (Figure 2.4 Panel B) and few domestic workers, self-employed and employers contribute voluntarily to the system. The high level of informality and self-employment in the private sector manifests in a lower share of private sector workers contributing to a social security scheme compared to public sector employees.

Figure 2.4. Paraguay's social security system reaches few of its target group

Employment distribution and affiliation to a social security scheme, in percent, 2016



Note: Panel B: Public and private sector workers refer to wage employees. Self-employed refer to employers and own-account workers. Panel C: Social security coverage is defined by active contributions to the pension system. In Paraguay, these contributions include all provisions of the social security system. Data from 2015; 2014 for Argentina, Guatemala, Mexico and Venezuela.

Source: Panel A and B: Own calculations based on the Permanent Household Survey of Paraguay (DGEEC, 2017). Panel C: ECLAC (2017).

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A regional comparison confirms Paraguay's challenge in providing social security to its citizens. The share of Paraguayan workers actively contributing to social security is half the Latin American average, placing the country at the lower end of a regional comparison (Figure 2.4 Panel C). Only Bolivia and Honduras have a lower coverage rate. Social security coverage among independent workers is low across Latin America (14.6%), but Paraguay's social security system leaves independent workers virtually uncovered.

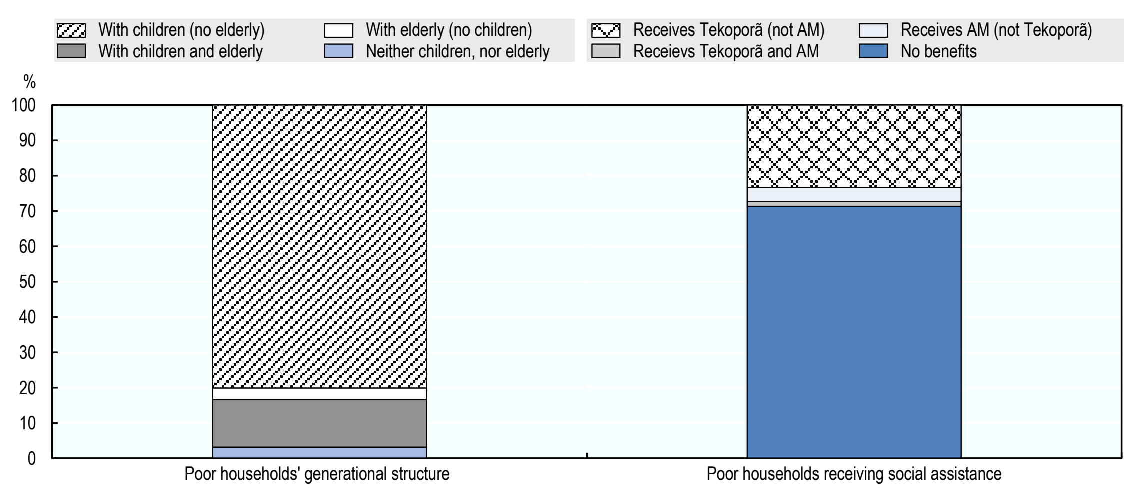
The social security system is skewed towards people with higher incomes. While social security coverage is generally low, it is especially low among Paraguayans from low and middle-income households (Figure 2.3 Panel B). Like in most countries, coverage rates increase with company size, income and years of schooling (Navarro and Ortiz, 2014; 2014; Casalí and Velásquez, 2016; ECLAC, 2017). Coverage is also comparatively high among urban and unionised workers, as well as workers in high income and productivity sectors. Lower labour market participation, higher incidence of underemployment and less stable employment history due to household responsibilities hamper women's possibilities to contribute sufficiently to social security. Consequently, coverage among women is lower than among men, leading to fewer women receiving contributory old-age pensions (MTESS, 2017).

Social assistance coverage

Paraguay's social assistance correctly identified its target group, but few of the target group receive cash benefits. The flagship social assistance programmes (*Tekoporã*, *Abrazo* and *Adulto Mayor*) target poor families with children and elderly. Focusing on these target groups is indeed adequate to achieve the National Development Plan's (*Plan Nacional de Desarollo* – PND) goal of reducing poverty: only 3.2% of poor households do not have a child or old person among their members (Figure 2.5). However, less than 30% of poor households receive one of the flagship social assistance programmes targeting children and elderly.

Figure 2.5. Social assistance has the right target group, but covers few

Poor households' generational structure and share of poor households receiving social assistance, in 2016



Note: AM = *Adulto Mayor*. A household member below age 18 is considered a child. A household member of age 65 or above is considered elderly.
Source: Own elaboration based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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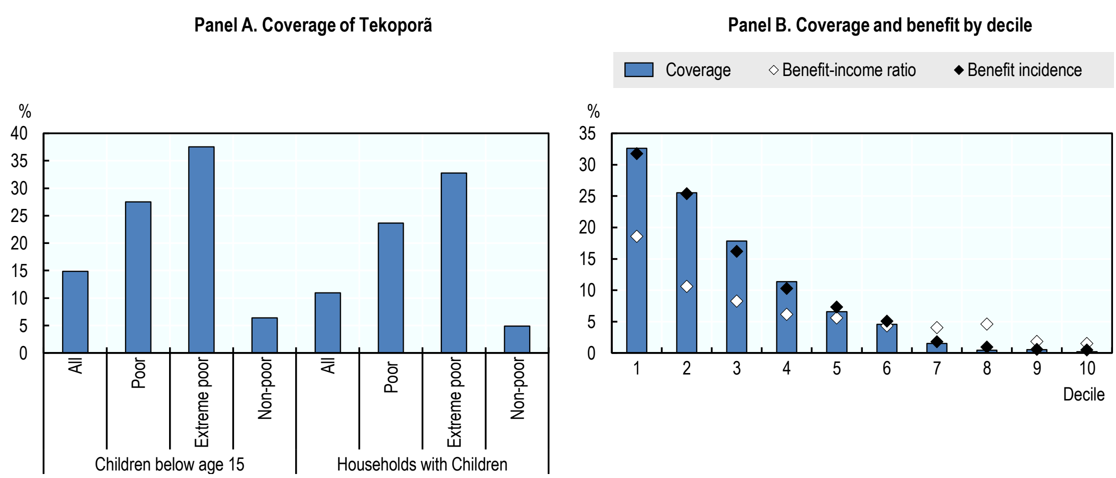
Tekoporã is well targeted, but provides for few. As discussed earlier, Paraguay's social assistance targets lower income individuals and households. Yet, only 25% of poor children below age 15 benefit from *Tekoporã*, among the extreme poor children the rate is higher but still far from complete (Figure 2.6 Panel A). For the extreme poor recipients, the benefit is an important income source; it represents 18.6% of household income for the first decile, but the ratio reduces to 10.6% among recipients in the second decile (Figure 2.6 Panel B). While *Tekoporã* still needs to expand to fully cover its target group (currently only 23.7% of poor households are covered), it is a considerably well-targeted benefit: coverage is higher among poorer households and four-fifths of total spending goes to the four bottom deciles. Still, approximately a third of benefiting households with children are not poor (own elaboration based on EPH, 2016).

Figure 2.6. *Tekoporã* benefits the most in need

Coverage and incidence of *Tekoporã*, 2016



Note: The benefit-income ratio presents the *Tekoporã* benefits as a share of the household's income. The benefit incidence is the percentage of benefits going to each decile of the income distribution relative to the total benefits going to the population.
Source: Own elaboration based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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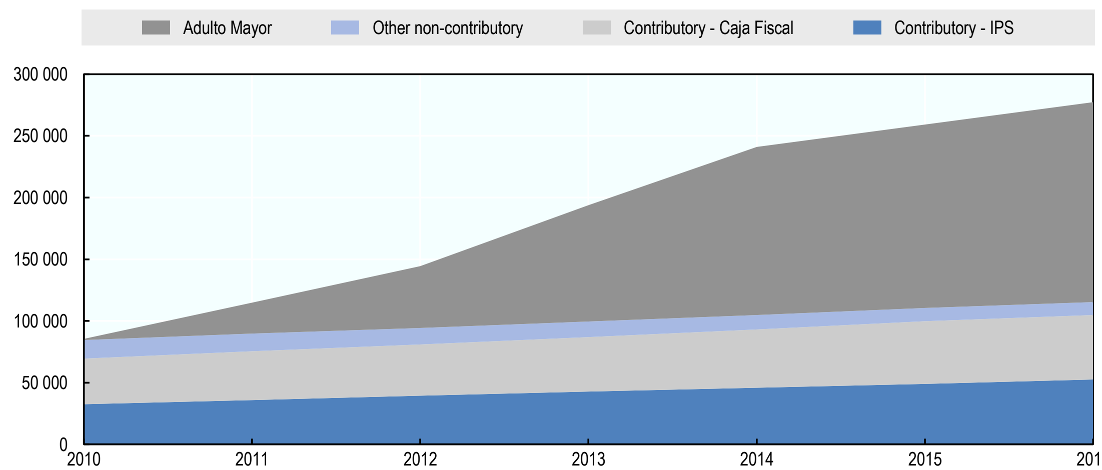
Pension coverage

Paraguay's main non-contributory pension increases the provision for the elderly. The introduction of *Adulto Mayor* helped to more than double the share of elderly Paraguayans receiving a pension between 2008 and 2015 (ECLAC, 2017). Since its creation the number of beneficiaries has increased considerably, from 909 in 2010 to 162 000 in 2016. In the same period, the number of contributory pension recipients increased as well. Whereas the number of other non-contributory pension receivers decreased from 15 000 to 10 000 (mostly due to a reduction in pensions for veterans and their surviving dependents (Figure 2.7). Without non-contributory pensions, pension coverage and the well-being of the elderly would be drastically lower in Paraguay.

Figure 2.7. The number of non-contributory pension recipients increased sharply

Number of pension recipients, 2010-16



Note: Recipients of a contributory pension depicted are IPS and Caja Fiscal beneficiaries. Other non-contributory pensions include merit pensions, and pensions for veterans and survivors of veterans as well as military and police personnel.
Source: Data for 2010-15 are from MTESS (2016); Data for 2016 are from MH (2017).

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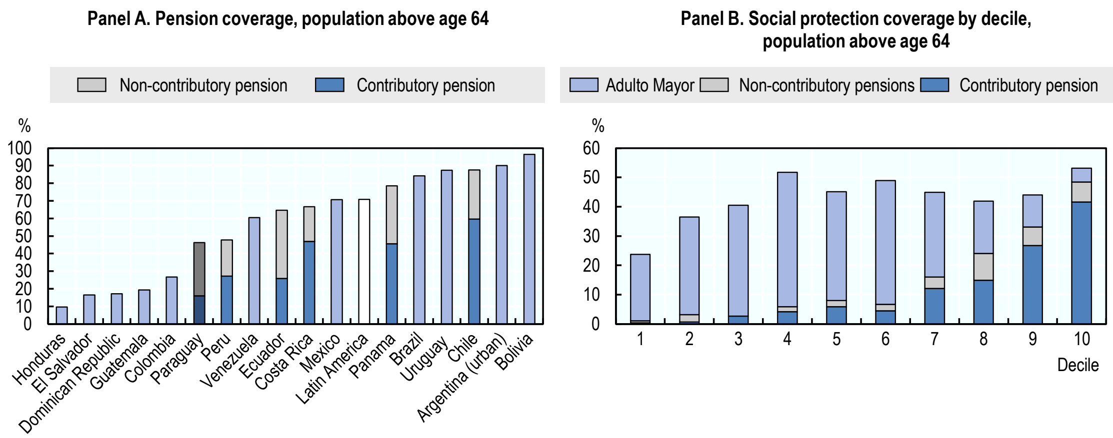
While closing the coverage gap, the non-contributory pension *Adulto Mayor* created a parallel system. Since the introduction of *Adulto Mayor*, the non-contributory pension system surpassed the number of contributory pension recipients. In 2015, more elderly Paraguayans received a non-contributory pension (30.3%) than a contributory pension (16%); in turn, more than half of the elderly are without a pension (53.7%). In fact, the share of contributory pension recipients is one of the lowest in Latin America; and, in general, the share of elderly pension recipients is below the regional average (Figure 2.8 Panel A).

Non-contributory pensions help to counter the contributory pension system's focus on the top income deciles. The coverage of contributory pensions among elderly in the first quintile is very low and lower than the Latin American average (0.9% vs. 6.2%) (ECLAC, 2017). Only thanks to non-contributory pensions this low coverage increases, and the percentage of pension recipients among the lower and middle deciles increases to numbers comparable to the top deciles (Figure 2.8 Panel B). In fact, Paraguay's non-contributory pensions contribute more to closing the coverage gap between the rich and poor than the Latin American average (ibid.). Compared to *Tekoporã*, *Adulto Mayor* is less well targeted, many recipients can be found in the centre of the income distribution. And at 43% the *Adulto Mayor*'s inclusion error is superior to *Tekoporã*'s inclusion error (own elaboration based on EPH 2016).

Figure 2.8. Few elderly Paraguayans receive a pension, but social assistance reduces inequities

Coverage of social security by decile, 2016



Note: Panel A: Data from 2015; 2014 for Argentina, Guatemala, Mexico and Venezuela. Non-contributory pensions include merit pensions, pensions for veterans and survivors of veterans, military and police personnel.
Source: Panel A: ECLAC (2017). Panel B: Own elaboration based on EPH (2016).

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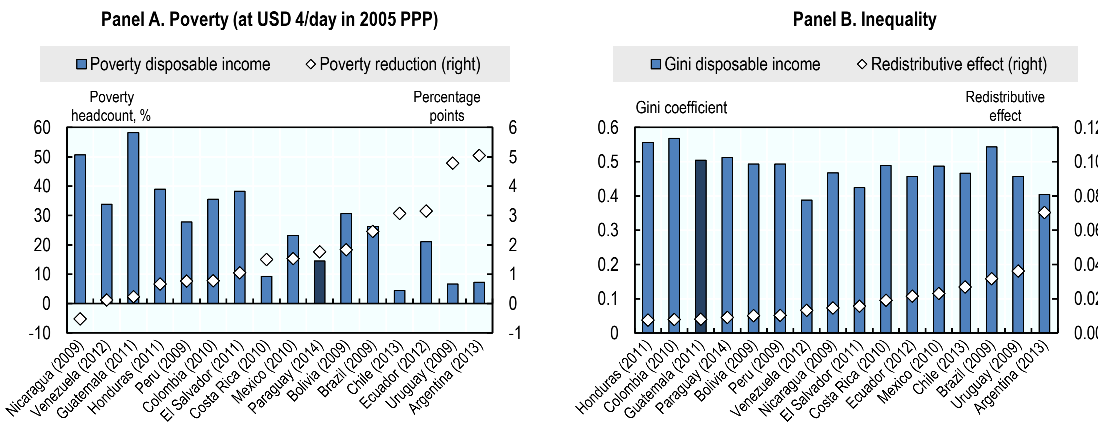
Social assistance reduces poverty and inequality less than in other countries

Paraguay's fiscal system reduces poverty. The fiscal system, measured via direct taxes and social assistance (*Tekoporã*, *Adulto Mayor*, scholarships and school lunch programmes), plays an important role in achieving the National Development Plan's goal of reducing poverty.[2] Thanks to direct taxes and benefits, the poverty headcount (measured with the $4 PPP a day poverty line) reduces by 1.8 percentage points (Figure 2.9 Panel A). This is a decent achievement compared to other countries in the region, but considerably below top performers such as Argentina, Chile, Ecuador and Uruguay. In absence of *Adulto Mayor*, the extreme poverty rate would be 0.9 percentage points higher; and without *Tekoporã*, extreme poverty would increase by 0.7 percentage points (Giménez et al., 2017). The higher benefit value of *Adulto Mayor* explains its bigger impact on poverty reduction.

The effects of social assistance and direct taxes on inequality are less marked. Income inequality decreases (but a reduction of only 0.9 Gini points), which places Paraguay at the bottom of a regional comparison (Figure 2.9 Panel B). The comparatively low redistributive effect is explained by Paraguay's low tax collection and especially low tax rates. Just as with poverty, *Adulto Mayor* reduces inequality. Without the non-contributory pension, income inequality would be 0.4 Gini points higher (ibid.).

Figure 2.9. Paraguay's fiscal system reduces poverty and inequality

Reduction of poverty and inequality rates due to direct taxes and social assistance



Notes: 1. Poverty and inequality reduction is measured as the difference between the market income including contributory pensions and the disposable income, which is the market income without direct taxes but with direct transfers.
2. Bolivia does not have personal income taxes.
3. In Bolivia, Costa Rica, Ecuador and Honduras market income does not include consumption of own production because the data was either not available or not reliable.
4. For Brazil, the results for the analysis presented here differ from the results published in Higgins and Pereira (2014) because the latter include taxes on services (ISS), on goods and services to finance pensions (CONFINS) and to finance Social Workers (PIS), while the results presented here do not include them. The authors concluded, after the publication of this paper, that the source for these taxes was not reliable.
5. Gini coefficients for Chile are estimated here using total income and, thus, differ from official figures of inequality, which are estimated using monetary income (i.e. official figures exclude the owner's occupied imputed rent).
6. For the Dominican Republic, the study analyses the effects of fiscal policy in 2013, but the household income and expenditure survey dates back to 2006-07.
Source: Commitment to Equity Institute Data Center on Fiscal Redistribution (CEQ, 2017). Based on information from: Argentina (Rossignolo, 2018); Bolivia (Paz Arauco et al., 2014); Brazil (Higgins and Pereira, 2014); Chile (Martinez-Aguilar et al., 2018); Colombia (Melendez and Martinez, 2015); Costa Rica (Sauma and Trejos, 2014); Dominican Republic (Aristy-Escuder et al., 2018); Ecuador (Llerena et al., 2015); El Salvador (Beneke, Lustig, and Oliva, 2018); Guatemala (Icefi, 2017a); Honduras (Icefi, 2017b); Mexico (Scott, 2014); Nicaragua (Icefi, 2017c); Paraguay (Giménez et al., 2017); Peru (Jaramillo, 2014); Uruguay (Bucheli et al., 2014) and Venezuela (Molina, 2016).

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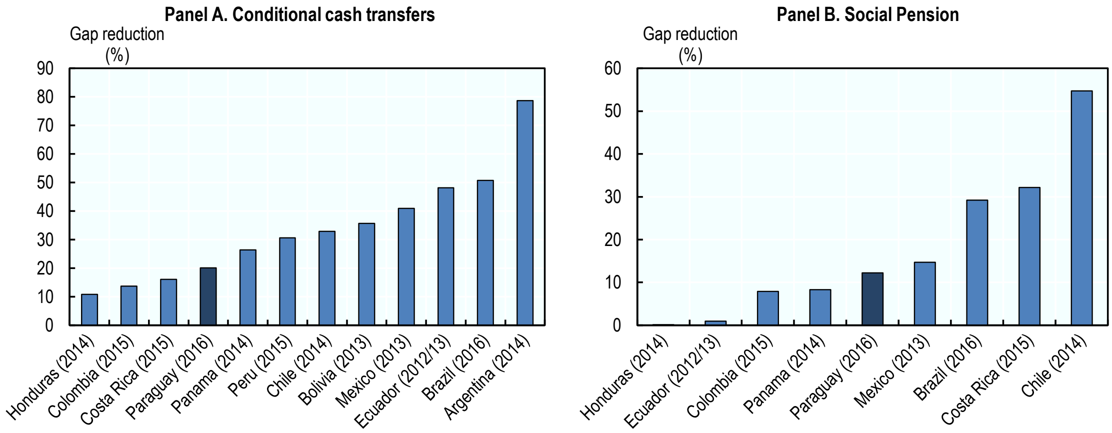
Despite the decent performance in reducing poverty headcount, the depth of poverty falls than in other countries. A closer look into *Tekoporã* and *Adulto Mayor* reveals that they lead to smaller reductions in the extreme poverty gap than in other countries in the region (Figure 2.10). *Tekoporã* and *Adulto Mayor* reduce the depth of extreme poverty by 20.1% and 12.2% respectively.

Figure 2.10. Social assistance reduces the poverty gap less than in other countries

Extreme poverty gap reduction in Latin America



Notes: 1. In Paraguay extreme poverty is measured based on the national 2016 definition, in the remaining countries extreme poverty is based on the international USD 1.9 PPP line.
2. Extreme poverty gap reduction is the difference between the extreme poverty gap pre-transfer and post-transfer divided by the extreme poverty gap pre-transfer.
Source: World Bank (2018a). Except extreme poverty gap reduction for Paraguay: own elaboration based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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Paraguay's contributory pension system needs to become more equitable and to expand

Paraguay's pension system is characterised by a multitude of providers with few affiliates. The number of affiliates in each pension scheme is symptomatic of the fragmentation of Paraguay's pension system. The approximately 750 000 active contributors and 110 000 contributory pension recipients are scattered among eight different pension funds offering 11 different pension schemes (see Annex Table 2.A.1 for more details). The two major funds, the IPS and the *Caja Fiscal*, cover more than 90% of the affiliates. The remaining affiliates are scattered among six closed pension funds. In recent years, private providers started offering voluntary pension schemes, such as the *Caja Mutual de Cooperativistas*, *Caja Médica, Caja de Profesores de la UCA*; these loosely-regulated voluntary private schemes cover approximately 30 000 people (Casalí and Velásquez, 2016). The contributory schemes are complemented by non-contributory pensions for veterans, survivors of killed police officers and military, poor elderly (*Adulto Mayor*) and merit pensions. *Adulto Mayor* is not officially a pension, but functions de facto as one and, with 162 000 benefit recipients, is larger than the contributory pension system. The present analysis focuses on the largest public contributory programmes, as most affiliates contribute to them and their future funding gaps constitute a potential risk for the treasury.

Retirement age, contribution periods and contribution rate are unequal

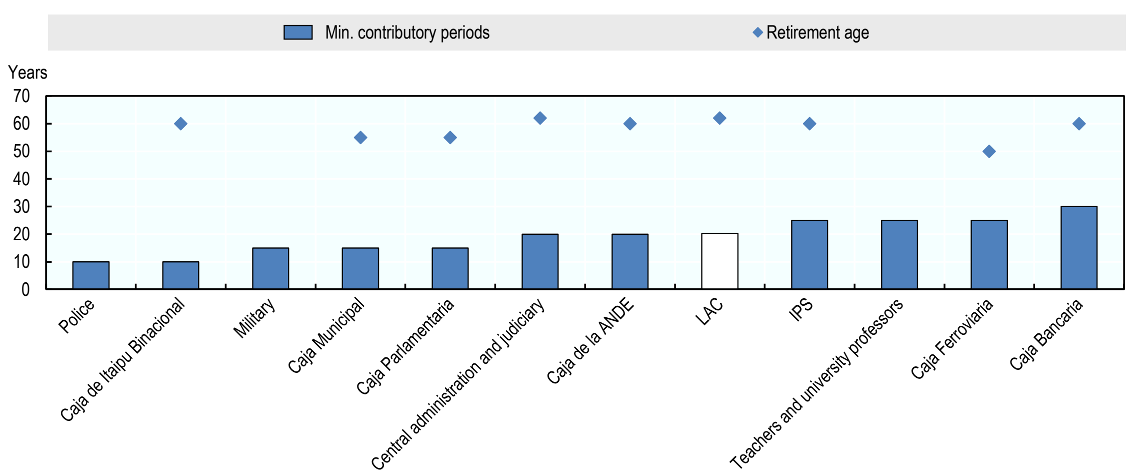
Paraguay does not have a harmonised standard retirement age. Each pension scheme has a different retirement age for its affiliates and most are below the Latin American average

(Figure 2.11). Affiliates of the IPS, the *Caja Bancaria*, the *Caja de la ANDE* and the *Caja de Itaipú Binacional* can access a full standard pension at age 60 if a minimum contributory period is reached (discussed below). Affiliates of the *Caja Municipal and Caja Parlamentaria* can retire with a standard pension at age 55, affiliates of the *Caja Ferroviaria* even at age 50. Civil servants of the central administration have the strictest scheme within the *Caja Fiscal*: they receive a standard pension only at age 62. All other *Caja Fiscal* schemes (military, police, teachers and university professors) have no official retirement age; their retirement is only subject to a minimum contributory period. Retirement becomes obligatory at age 65 for all *Caja Fiscal* affiliates, irrespective of the number of years contributed.

The minimum contributory periods for a standard pension differ for each scheme. The minimum contributory periods range from as little as 10 years (scheme for police) to 30 years (*Caja Bancaria*). The contributory periods are unrelated to the retirement age: schemes with low contributory periods (such as the schemes for police or military, *Caja Municipal and Caja Parlamentaria*) also have low retirement ages (Figure 2.11). The *Caja de Itaipu Binacional* has a high retirement age (age 60), but a low contributory period. The Caja Ferroviaria has one of the highest contributory periods (25 years), but also one of the lowest retirement ages (age 50).

Figure 2.11. Contributory periods and retirement age do not stand in relation

Retirement age and minimum contributory periods for a standard pension, in years



Note: The reported simple average for Latin America corresponds to men (age 62); women's retirement age is age 60.5. The schemes for teachers, military and police personnel have no official retirement age.
Source: Based on Navarro and Ortiz (2014). LAC average from OECD/IDB/World Bank (2014).

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Some providers offer early retirement schemes. Typically, the early retirement schemes are conditioned on longer contributory periods or grant lower replacement rates. IPS affiliates can already retire at age 55 with 30 years of contributions. *Caja Municipal* affiliates can retire at age 50 with 20 years of contributions. Civil servants of the central administration can retire at age 50 with a lower replacement rate. Police officers, military, teachers and university professors can retire at any age, as long as they have reached the minimum contributory period. Teachers and university professors who have been certified to be physically or mentally unfit for work can request an early retirement (different from a disability pension) with a minimum contribution period of 15 years and a lower replacement rate (40%).

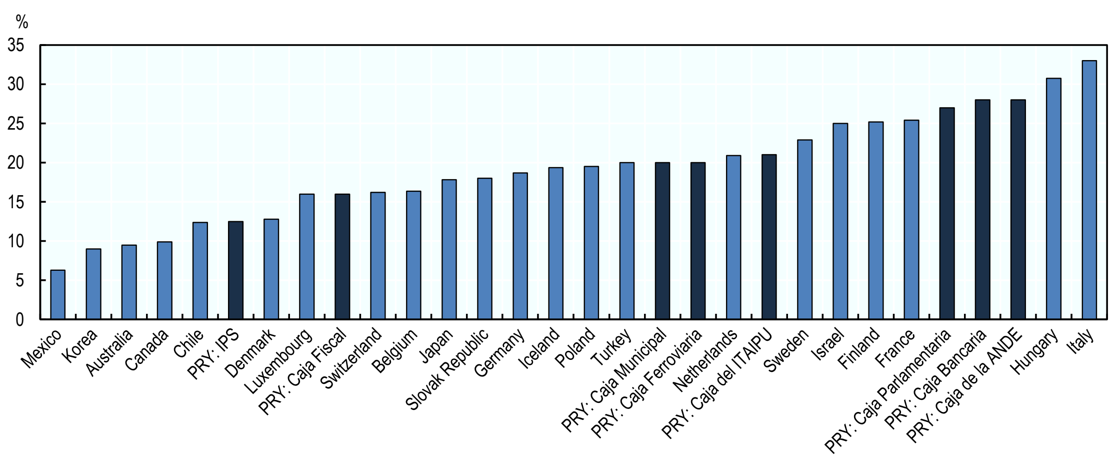
The IPS offers a proportional pension for affiliates not qualifying for a standard pension. As of 2011 these affiliates can claim a proportional pension at age 65 with 15 years of contributions (Law 4.290/11). An alternative to the proportional pension is settling the missing years of contribution by contributing 12.5% of the average wage of the last three years until requirements are met (Law 3.404/07).[3]

Since 2013, the IPS includes independent workers and employers to its pension scheme on a voluntary basis. However, in 2016, only 518 affiliates belonged to this voluntary scheme (IPS, 2018). Independent workers can voluntarily contribute 13% of their income (which cannot be below the minimum wage) and obtain an early, standard or proportional pension. Independent workers are only entitled to the IPS's health benefits once retired, not during working life.

Contribution rates are low. Like retirement age and minimum contributory period, the contribution rates differ for every scheme (see Annex 2.A). While the closed pension funds demand relatively high contribution rates, the main pension providers (IPS and *Caja Fiscal*) demand low rates compared to OECD countries (Figure 2.12). The low contribution rates are paired with a low retirement age and high replacement rate, making it a costly system (see next section).

Figure 2.12. Contribution rates are low

Mandatory pension contribution rates for employees and employers, 2016



Note: The IPS contributions depicted are the contributions to the IPS pension fund (excluding contributions to the health benefits). The Caja de la ANDE is a complementary system. Employers and employees contribute 5% each to the Caja de la ANDE and 12% and 6%, respectively, to the IPS.
Source: OECD (2017) and Navarro Ortiz (2014) for Paraguay.

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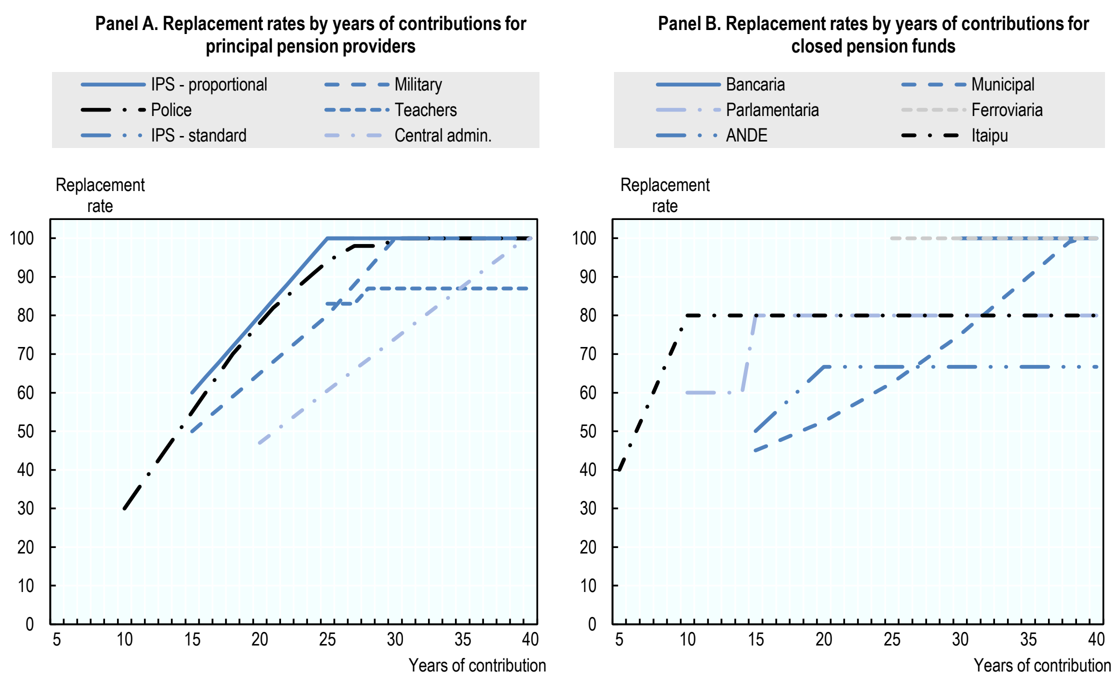
The IPS contributions differ from other schemes. The IPS provides health and pension benefits to its affiliates, which are financed by employers' and employees' contributions. The contribution to the pension and health benefits are mandatory for all IPS affiliates, except voluntary contributions of independent workers who are excluded from the health benefits. The contributions from employers (14% of the salary) and employees (9% of the salary) finance both benefits. These contributions are divided into the IPS pension, health and administrative funds. The actual contribution rate corresponding to the pension scheme would be 4.9% for the employee and 7.6% for the employer.[4]

Paraguay's pension funds have high replacement rates

The pension benefit calculation induces the underreporting of earnings. In Paraguay, the calculation of the pension benefits (earnings measure) is based on fewer years than in other countries. The earnings measure ranges from the last month (*Caja Parlamentaria*) to five years (*Caja Fiscal*). This is considerably below OECD countries, who typically take the lifelong earnings or at least the best 24 years to calculate the benefit value (OECD, 2017). Basing the pension calculation only on a few years disconnects pension benefits and contributions made; it also encourages contributors to underreport their early earnings in order to decrease contributions, as the benefit would not be affected.

The pension benefit calculation disadvantages independent workers. The IPS bases its pension calculation on the last three years before retirement, except for independent workers who make voluntary contributions. The earnings measure for the benefit calculation of independent workers is extended to ten years instead of three (Law 4.933/13). This difference with dependent workers creates inequity within the system, both groups have the same contribution rates, retirement age and replacement rate, but a different earnings measure.

Figure 2.13. Replacement rates are high



Note: The IPS proportional pension is granted at age 65 and available for affiliates not meeting the requirement for a standard pension.
Source: Own elaboration.

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Most pension benefits increase progressively with years of contributions. Except the IPS standard pension, all pensions increase with years of contributions. Initial replacement rates are high in most schemes and increase quickly with additional years (Figure 2.13). After 25 years of contributions the IPS's proportional pension grants a pension equal to IPS's standard pension.

The differentiated replacement rate of the *Caja Fiscal* highlights the inequity within that provider. *Caja Fiscal* offers different schemes to the military, police, teachers, university professors, central administration and judicial personnel. These schemes differ in their retirement age, replacement rate and minimum years of contribution required. However, the employee contribution rates are the same for all schemes (16%). This makes the *Caja Fiscal* an inequitable system, especially within the civilian segment, as funds can be transferred between the different civilian schemes to cover deficits.

Generous retirement benefits provide little incentive to contribute more than necessary. Benefit levels differ for each of Paraguay's schemes. The standard pension of the main social security provider, the IPS, is set at 100% with 25 years of contribution. Most other schemes also grant a pension benefit equal to 100% of the salary. The high replacement rates do not provide incentives to contribute more than the required minimum. Data from the IPS (2014) confirm that most affiliates retire as soon as they meet the requirements and only a negligible number of individuals contribute more than needed.

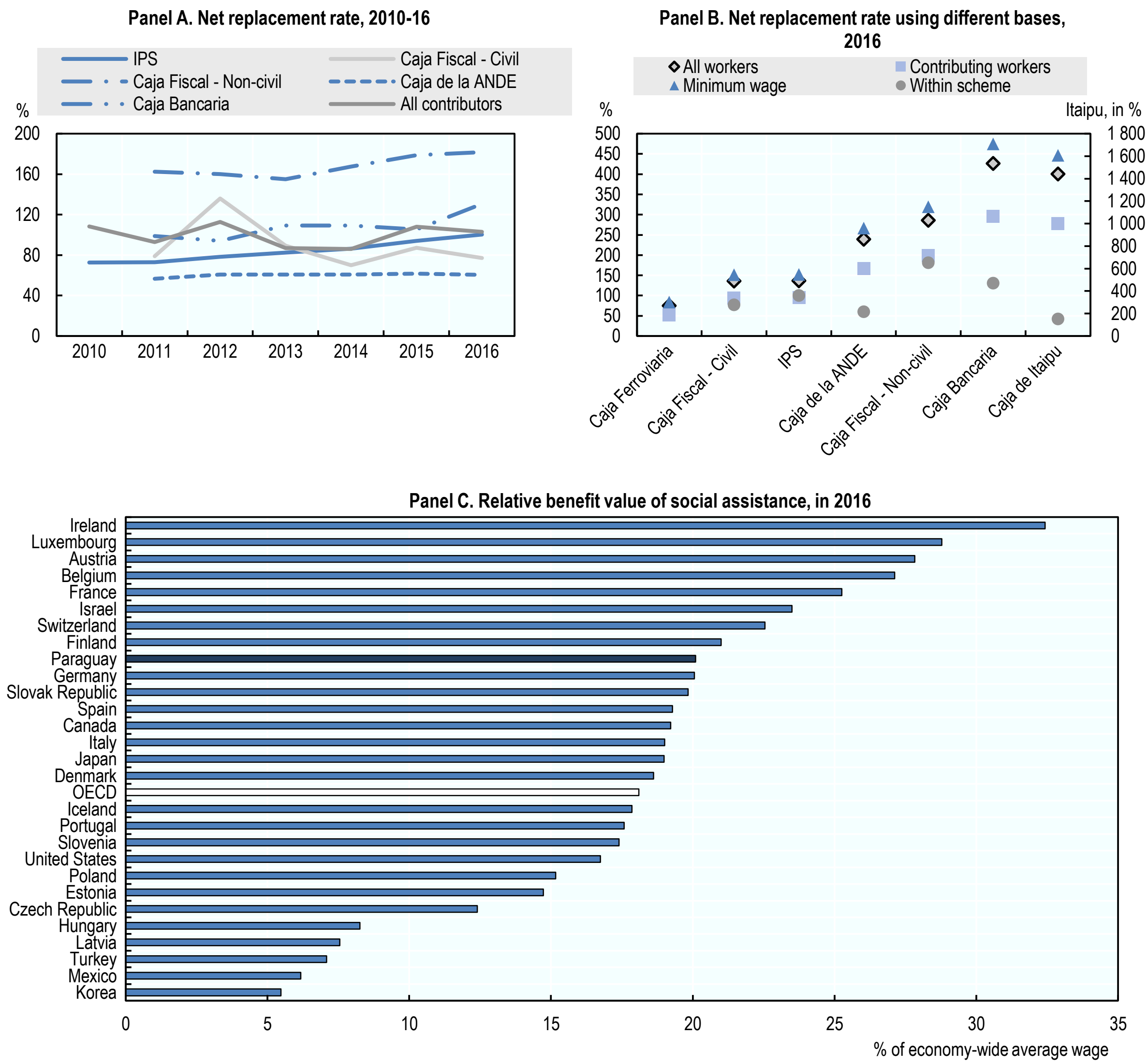
Under Paraguayan pension schemes, benefit entitlements can accumulate rather quickly. The accrual rate measures this speed; it indicates the percentage of the earnings that are covered with each year of contribution. In the standard pension of the IPS each year of contribution covers 4% of the earnings. This accrual rate is superior to those of OECD countries, which range between 0.55% and 2.81% (OECD, 2017).

Pension benefits are generous

Contributory and non-contributory pension benefits are comparatively high. The net replacement rate of the IPS pension was 103.8%. This replacement rate is considerably above the OECD average (62.9%) and the highest among Latin American countries (OECD, 2017; OECD/IDB/World Bank, 2014). Most contributory pensions are above 100% of current contributors' wages (Figure 2.14 Panel A).[5] Pensions from closed schemes (*Caja de la ANDE*, *Caja Bancaria*, *Caja de Itaipu*) but also from the *Caja Fiscal* scheme for non-civilians are even higher: these schemes offer their affiliates pensions that are more than double the economy-wide average earnings and more than triple the minimum wage (Figure 2.14 Panel B). Moreover, the benefit value of *Adulto Mayor* is one of the highest in the region (Bosch, Melguizo and Pagés, 2013). Its relative benefit value expressed as a percentage of the economy-wide average wage (20.1%) is above the OECD average for social assistance benefits (18.1%) (Figure 2.14 Panel C).[6]

Figure 2.14. Pension benefits are generous

Value of pensions in relation to the average wage



Note: The replacement rate presents the average net pension value as a ratio of the average net income of current workers. Panel A depicts the ratio between the average pension and the net income of contributors to the scheme. Panel B depicts the ratio between the average pension and a range of net incomes. The replacement rate for the Caja de la ANDE reports only the benefit stemming from Caja de la ANDE, not the complementary IPS benefit.
Source: Panels A and B: Own calculations based on MTESS (2017). Panel C: For OECD countries OECD (2017), for Paraguay own calculations based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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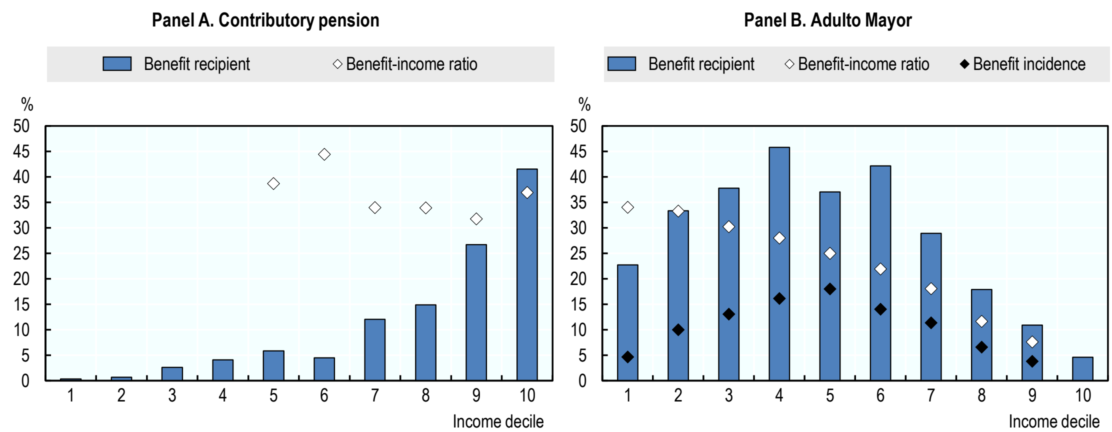
Contributory and non-contributory pensions are an important part of households' income. Most contributory pension recipients are situated in the top income deciles. Among contributory pension recipients the benefit represents an important part of household income: the pension represents more than a third of total consumable household income

(Figure 2.15 Panel A). *Adulto Mayor* is of great importance for low-income households; the benefit represents more than 30% of the consumable household income for the first to third decile (Figure 2.15 Panel B).

Figure 2.15. Pensions are a major income source

Pension recipients and benefit-income ratio by decile, population aged 65 or above in 2016



Note: The benefit-income ratio presents the *Adulto Mayor* benefits as a share of the household's income. The benefit incidence is the percentage of benefits going to each decile of the income distribution relative to the total benefits going to the population. Decile based on per capita consumable household income. The consumable income is the market income plus pensions, direct and indirect transfers minus direct taxes.
Source: Own elaboration based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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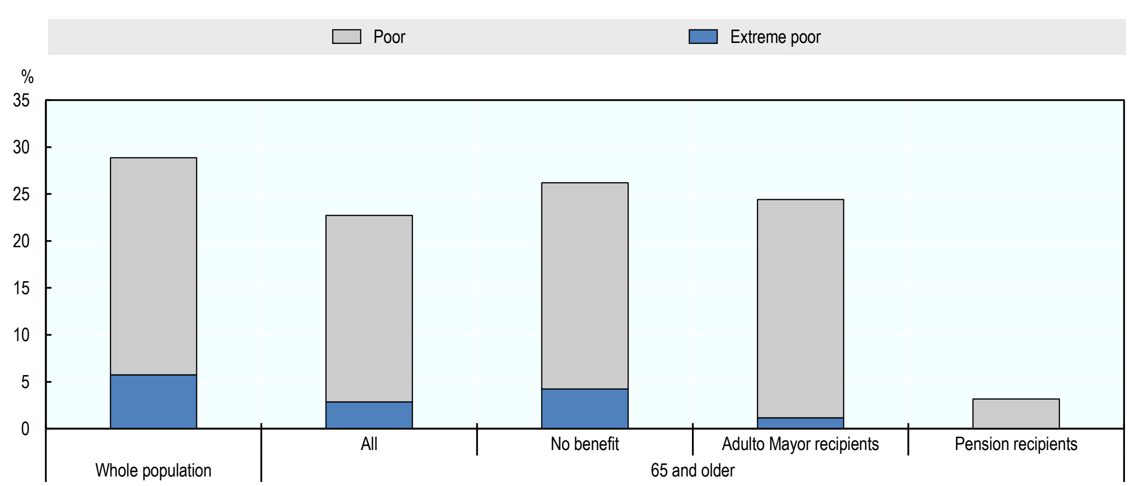
Figure 2.16. Poverty is lower among pension recipients

Poverty rates among pension recipients, 2016



Source: Own calculations based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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Pensions are an important instrument to reduce old-age poverty. Elderly without any pension benefits have a much higher poverty rate than contributory pension recipients, but also higher than *Adulto Mayor* recipients (Figure 2.16). Indeed, analyses confirm *Adulto Mayor*'s impact on reducing poverty and inequality among the elderly (Bruno, 2017; Rodríguez and Benítez, 2018).

Certain segments of the current system are not financially sustainable

Demographic trends threaten the sustainability of the pension schemes. An expanding elderly population with higher life expectancies leads to low and decreasing contributors-per-pensioner rates; in other words, expenditure outstrips revenues. Most pension schemes, especially the closed schemes, have a low contributors-per-pensioner ratio (Table 2.3). This ratio has been decreasing over the years and will continue to fall with the demographic transition. For example, the *Caja de la ANDE*'s contributors-per-pensioner rate decreased from 3.7 in 2005 to 2.4 in 2016 (*Caja ANDE*, 2017). The IPS still has 10.1 contributors per pensioner, but this ratio is projected to halve to 5.0 by 2050 (IPS, 2014). Given the current replacement and contribution rates, the IPS requires at least eight contributors per pensioner to fully finance (with affiliates' contributions) an ordinary old-age pension equal to 100% of the current average wage.

The fragmentation of Paraguay's pension system increases administrative costs. The small closed pension funds are not very efficient in offering and running pension plans, judged by total operating costs in relation to assets managed. The operating costs are equal to 1.1% to 7% of the total assets managed (Table 2.3),[7] which surpass those in OECD countries, which typically range between 0.1% and 1.5% (OECD, 2017). The low efficiency in managing the assets is explained in large part by the size of the closed pension funds. Indeed, hardly any economies of scale are generated given the low number of affiliates. A consolidation between the small funds could reduce administrative costs.

Few contributing affiliates and actuarial deficits endanger public finances and cement inequalities. The low number of contributing affiliates constitutes a latent liability for the treasury: poor elderly without a contributory pension might qualify for a non-contributory pension. This would increase both the target population and programme costs, which already accounted for 0.7% of GDP in 2016 (MH, 2018). On the other hand, due to the public character of the pension funds, the state will need to bail out the funds that turn unprofitable. These future liabilities are a serious concern for public finances. Eventual bailouts are also problematic from an equity perspective: the non-affiliated population has lower income than affiliates to social security; a bailout for any pension fund would thus have regressive distribution effects.

The IPS's positive financial situation will turn negative by mid-century. Currently, IPS revenues exceed its expenses and, thus, the IPS holds reserves worth USD 1 140.3 million (Box 2.1). Yet, this situation is not expected to last. By 2032, the IPS's expenses for pension and administration are projected to be higher than revenues from employers' and employees' contributions (IPS, 2014). The turning point could be postponed by seven years, if the state were to actually contribute the 1.5% of affiliates' payroll stipulated in the Law No. 375/56, which it currently does not. The turning point could be postponed by an additional five years if the IPS were to stop paying a year-end bonus to its beneficiaries. Indeed, end-of-year bonuses are not part of the base for social security contributions. Moreover, actuarial predictions indicate that the accumulated reserves will be depleted ten years after the running expenses surpass the contributions collected.

Table 2.3. Indicators of the funds' financial situation, 2015 or latest available

		Caja Fiscal								
	IPS	Military and Police	Teachers and university professors	Central Administration and judicial personnel	Caja Bancaria	Caja Municipal	Parlamentaria	Ferroviaria	ANDE	ITAIPU
Contributors per pensioner [a]	10.1	2.3	3.8	7.1	4.7	5.1	0.6	0.0	2.4	0.8
Contributions (% of GDP) [b]	3.2		1.4		0.3	0.0	n.a.	n.a.	0.0	0.2
Benefits (% of GDP) [b]	1.1		1.5		0.2	0.0	n.a.	n.a.	0.1	0.2
Management costs (%) [c]	n.a.	n.a.	n.a.	n.a.	4.0	7	n.a.	n.a.	1.1	5.7
Reserves (in million USD) [c]	2 067.7[d]	0	n.a.	604.9	213.8	41.3	n.a.	0	148.7[e]	283.0

Note: n.a. = not available. 0 = smaller than 0.0%. Management costs are the ratio between operation costs and the value of the assets managed.

a. Data from 2016. b. 2015 for IPS, Caja Bancaria, Caja de la ANDE, Caja del Itaipu, 2014 for Caja Fiscal and Caja Municipal.

Source: Own elaboration based on MTESS (2017); b. IMF (2017); c. Navarro and Ortiz (2014); d. IPS (2017). e. Caja ANDE (2017).

Box 2.1. IPS affiliates without entitlements make the generous system possible

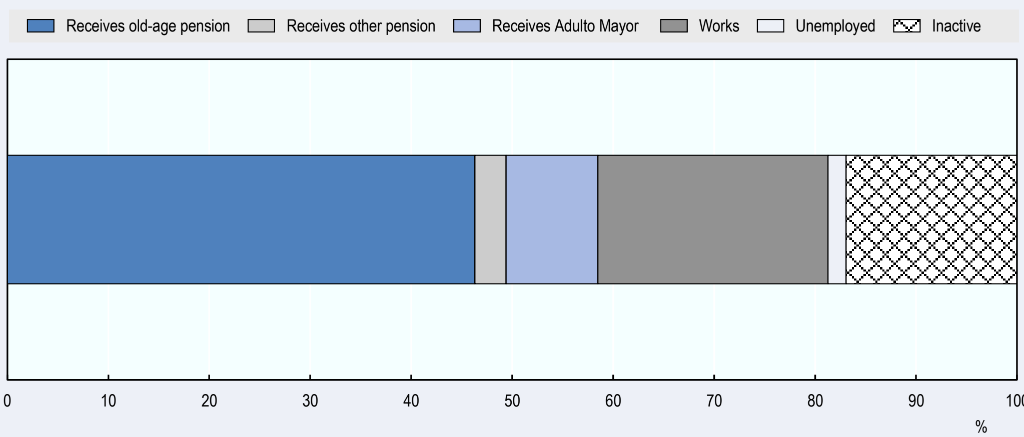
Only one in two Paraguayans of age 65 or above, who contributed to the IPS, receives a pension: 46.3% receive an old-age pension, 3.1% receive an invalidity or survivors pension. More than half of the elderly above age 65 who contributed to the IPS at one point in their working life do not receive a contributory pension: 22.8% continue to work, 16.9% finished their working life (inactive) but do not receive a pension and 9.1% of former contributors receive a non-contributory pension (*Adulto Mayor*) (Figure 2.17). These affiliates typically did not contribute sufficiently to be entitled to a pension. According to the former affiliates' own accounts, the median number of months they have contributed is 120 months (ten years).

The IPS partially owes its current good financial situation to the large number of former affiliates who do not receive a pension. IPS affiliates who did not contribute sufficiently to obtain a standard, proportional or early pension are not entitled to a refund of their contributions. In a pay-as-you-go system, without a refund possibility, not receiving a pension benefit means that the contributions of these affiliates finances the pensions of actual recipients. Thus, having a considerable number of affiliates not entitled to pension benefits increases the IPS's revenues, without obligations on the other side of the balance sheet.

Affiliates with more than 25 years of contributions also generate additional revenues for the system. Standard pension benefits are capped at 100% with 25 years of contributions. Thus, excess contributions would also help the IPS to maintain its generous benefits, but in practice few contribute longer than the required minimum contributory period.

Figure 2.17. IPS affiliates without entitlements subsidise pension recipients

Situation of population of age 65 and above who contributed to the IPS (as a percentage)



Note: The population considered are the elderly (age 65 or older) who report having contributed to the IPS at one point in their life; they are not necessarily active affiliates currently.
Source: Own calculations on ELPS (STP, 2016).

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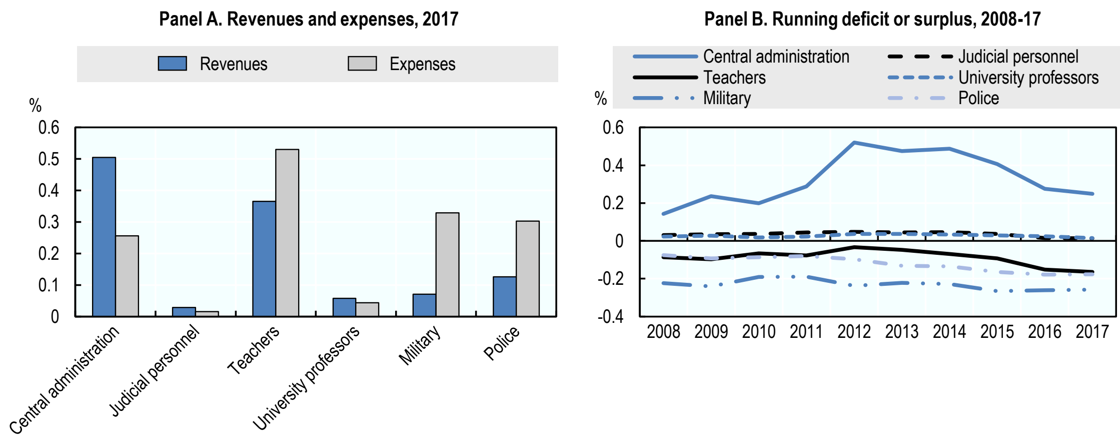
The financial situation of the *Caja Fiscal* is especially alarming. The *Caja Fiscal* is already unable to cover its liabilities: in 2016 the running deficit of the non-civilian schemes represented 0.44% of GDP (Figure 2.18 Panel B). The treasury covers this deficit with general tax revenues, which is especially regressive as Value-added tax (VAT) (paid also by the poor and non-affiliates) is the largest tax revenue in Paraguay. Without reforms, the situation will only get worse: the IMF (2017) forecasts that the discounted value of the *Caja Fiscal*'s deficits to 2065 accounts for 28% of current GDP.

The imbalance of the *Caja Fiscal* originates from the generosity of certain pension schemes. Retirement age and the required years of contributions are low, paired with a high replacement rate. This is especially true for military and police personnel: the average old-age pension for non-civilians is 181.6% of the current average income for non-civilians, for the civilians within the *Caja Fiscal* this ratio is only 77.2% (MTESS, 2017). The system is not only inequitable, but has been running a deficit for several years (Figure 2.18). While the law No. 4.252/2010 allows cross-financing between the civilian schemes (teachers and university professors, central administration and judicial personnel), a surplus of the civilian scheme cannot be used to cover deficits in the non-civilian schemes (police and military) and vice-versa. Actuarial studies predict that the turning point for the civilian schemes will be between 2021 and 2023; as of then, the overall surplus of the civilian schemes will turn into a deficit (Larrain, Viteri and Zucal, 2013 as cited in Alaimo and Tapia, 2014).

Figure 2.18. Only one of the *Caja Fiscal*'s schemes is in good shape

Financial situation of the Caja Fiscal, percent of GDP



Source: Own elaboration based on Ministry of Finance (MH, 2018) data, *Revenues and Expenses by Schemes*, www.hacienda.gov.py/web-hacienda/jubilaciones (accessed on February 2018).

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Most pension funds run actuarial deficits. The complementary pension schemes of the *Caja de la ANDE* and *Caja Itaipu* will be in deficit by the middle of this century. Given their smaller scale, the actuarial deficits are low compared to the IPS and the *Caja Fiscal* (Navarro and Ortiz, 2014; IMF, 2017). While the financial position of the *Caja Bancaria* will also deteriorate over time, it has no actuarial deficit (IMF, 2017).

The way forward

In its efforts to build a social protection system for all, Paraguay must tackle three key challenges: enhancing the governance of the system, encouraging independent workers to contribute to social security and securing financial resources for non-contributory social assistance. The Social Cabinet (2018) recognises these challenges and calls to tackle them.

The governance of the social protection system needs to be enhanced

Paraguay's social assistance and social security systems act in isolation. The two mainstays of the social protection system do not interact; the only provisions in common are old-age benefits. Non-contributory and contributory pensions are administrated separately and are incompatible. A coherent social protection system needs to bring these two important schemes together.

An uncoordinated pension system could have deterring effects on social security contributions. Social assistance benefits for elderly reduce poverty; however, they risk segmenting the pension system into an informal (non-contributory) and formal (contributory) pillar. This can happen if non-contributory pension benefits reduce incentives to contribute to social security. A non-contributory pension can represent a sort of tax on contributions, when the non-contributory pension reduces with the receipt of a contributory pension; it, thus, discourages contributions to social security (Bosch, Melguizo and Pagés, 2013).

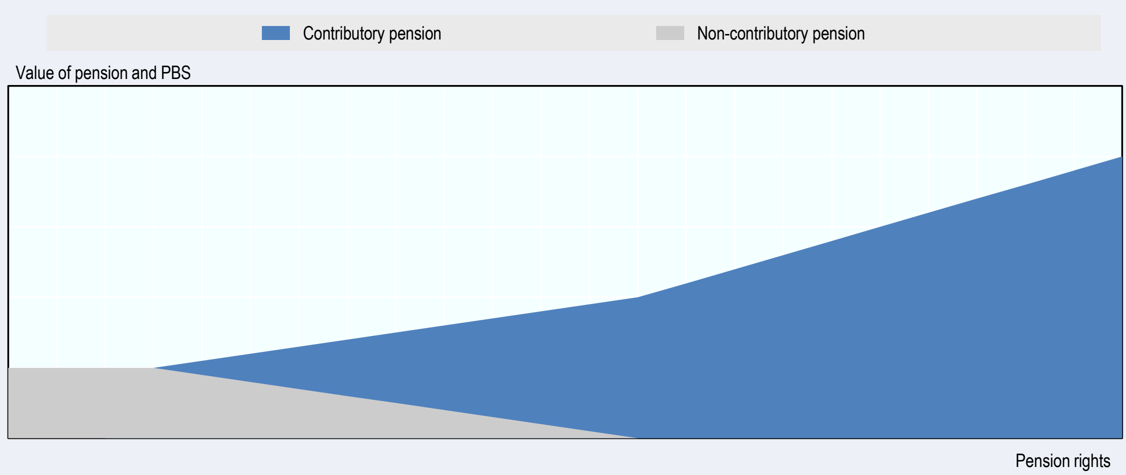
Box 2.2. Chileans can receive both a non-contributory and contributory pension

Chile's pension system has three components: a redistributive first tier, a second tier of mandatory individual accounts (defined contributions) and voluntary savings plans as a third tier. The redistributive first tier was introduced in March 2008 following sustained criticism about low contributory pensions (Santoro, 2017). The special feature of this first tier is that it is gradually phased out to decrease eventual deterring effects on pension contributions. Thanks to this reform, pension coverage increased by 10 percentage points and extreme poverty among elderly reduced to 1.5% in 2015 from an initial 7.5% in 2006 (ECLAC, 2017).

The first tier is organised in a non-contributory pension (*Pensión Básica Solidaria [PBS]*) and a supplementary welfare pension (*Aporte Previsional Solidario [APS]*). The PBS is a basic non-contributory pension entitlement for individuals without other pensions. The PBS is payable from the age of 65 to the poorest 60% of the population complying with a set of residency criteria. The APS is a state funded supplementary welfare pension for individuals who made contributions to the second tier but receive low pensions (the same wealth and residence criteria apply). Pensioners with a pension below a set threshold receive the APS, which is gradually phased out until reaching said threshold. The maximum level of the APS is equal to the PBS, in case the person's contributory pension is equal to zero.

Figure 2.19. Chile phases its non-contributory pension out

Stylised value of Chilean pension



Source: Own elaboration.

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Source: ECLAC (2017), Santoro (2017), OECD (2011), OECD (2017).

A holistic pension system must consider the interactions between its main parts. Further research must show whether the difference between the *Adulto Mayor* benefit and the minimum contributory pension benefit (33% of the minimum wage in place) is too small and dampens incentives to contribute to social security. To avoid such negative side effects, the transition between non-contributory and contributory pensions has to be carefully designed. To avoid such negative effects, Chile, for example, phases out its non-contributory pension while the value of the contributory pension increases (Box 2.2).

Social assistance and social security face governance challenges, beyond the challenges involving the interaction of non-contributory and contributory pensions.

Social assistance needs a national champion

While social assistance plays an important role in the National Development Plan, it is a field orphaned of clear leadership and suffering from a lack of political level co-ordination. In the past, the Social Cabinet (*Gabinete Social*), created in 2003 used to act as the ministerial co-ordinating body for all government entities providing any kind of social programme (18 entities). Its function was to promote, co-ordinate and steer the management of social programmes and policies (Decree 751, November 2013). The Social Cabinet is chaired by the President and co-ordinated by the Secretary-General of the Presidency. A more reduced executive team led by the STP and comprising six of the 18 entities was also created by Presidential decree within the Social Cabinet. The Social Cabinet also has a Technical Secretariat to support its work. The Social Cabinet was deemed inefficient and the co-ordination at ministerial level through regular meetings was discontinued in 2013. The Executive Team, led by the STP has maintained regular meetings and driven co-ordination efforts. The Technical Secretariat of the Social Cabinet remains active and has focused on areas beyond day-to-day co-ordination of social policy. It has led the development of an integrated database of beneficiaries of social programmes and the development of a medium-term framework for social protection. The institutional divide between the Technical Secretariat, situated directly at the Social Cabinet and in practice reporting to the Secretary-General of the Presidency, and the executive team, led by the Executive Secretary of the STP, reduces the effectiveness of co-ordination efforts.

At present, the only major co-ordination effort in social policy is based around the national poverty reduction programme *Sembrando Oportunidades*. This programme was created by Presidential Decree to foster poverty reduction, established as a "national priority". The programme acts as an umbrella programme for actions towards the poor, under the co-ordination of the STP and therefore covers a number of pre-existing programmes. Once a week the STP hosts a technical meeting (*mesa técnica*) between the 27 entities that have a stake in *Sembrando Oportunidades*. The weekly technical co-ordination between technical staff and policy makers offer opportunities to respond in a co-ordinated manner to specific needs, as was the case during the droughts of 2014/15 in the North of the country, and to respond rapidly to co-ordination needs such as articulating the intervention of several actors in specific areas in the field. However, its technical nature limits its decision-making and strategic capacity. To improve their effectiveness and reach, meetings could be structured around particular themes or population groups, follow-up could be intensified and stakeholders should attend the meetings more regularly (FAO/STP, 2018). Furthermore, *Sembrando Oportunidades* would benefit from stronger political guidance (ibid).

The lack of leadership and co-ordination leads to overlapping programmes and unexploited synergies. Numerous programmes provide income generation support for family businesses and farms; these programmes are dispersed and reach less than 10% of rural households with agricultural activities (Serafini, 2016). Two major programmes were recently created and have received a lot of attention: *Familia por Familia* (a pilot programme implemented by the STP) and *Tenonderã* (implemented by the SAS). Although target groups and intervention methods differ, both programmes are designed with the aim of integrating social transfers and promotion actions following the graduation methodology and could benefit from a stronger co-ordination and synergies.

Key co-ordination tools have been implemented and need to be consolidated

Paraguay has put in place key instruments to improve policy co-ordination. The country recently designed a single targeting instrument (*Ficha Social*) and is rolling out a single beneficiary register (the Integrated Social Information System [SIIS]) and a reporting matrix (*Tablero de Control*). These instruments reflect the positive experiences in the region, such as Brazil's development of the Single registry of beneficiaries (*Cadastro Único*) (see Box 2.3). To be more effective co-ordination tools, these building blocks need to be enhanced and integrated. Ultimately, beneficiary identification, programme promotion and service delivery can be further integrated through single agents as in the case of South Africa's one stop service vehicles (Box 2.4).

A unified targeting instrument has been set up and data collection efforts are ongoing. A targeting mechanism was developed in the context of the implementation of the national anti-poverty programme *Sembrando Oportunidades.* It consists of a questionnaire (*Ficha Social*) to collect information on households, including their civil status, education, living standards, health, employment and agricultural activities. This questionnaire is complemented by an algorithm to classify the surveyed population as extreme poor, poor, vulnerable and neither poor nor vulnerable. Information was collected from almost 1.1 million people (16% of the population) between 2013 and the end of 2017. The households included were largely from the administration of questionnaires to beneficiaries of social programmes of the SAS and the Ministry of Agriculture. Systematic surveying of areas with high prevalence of poverty complemented the roster. Creating the single targeting instrument was an important step to create synergies and a more co-ordinated and coherent delivery of social assistance. The information is available to public entities and linked to the information in the dashboard of the programme.

Generalising the use of the *Ficha Social* as a targeting instrument is still a challenge. The agencies implementing social assistance programmes lack a common approach to target beneficiaries. Different institutions implement the flagship programmes *Tekoporã, Abrazo* and *Adulto Mayor*, with few possibilities for mutual learning and synergies. All of these programmes use different targeting instruments and none of these is the single targeting instrument (*Ficha Social*) put forward by *Sembrando Oportunidades*. While the SAS, which implements *Tekoporã*, has applied the *Ficha Social* to its beneficiaries, it still relies on a different data collection instrument and a different means test, based on a quality of life index, to identify beneficiaries. To overcome the current institutional resistance and effectively enforce the take-up of the single targeting instrument, it is essential that the *Ficha Social* receives political backing. *Adulto Mayor* currently uses a modified algorithm of the *Ficha Social*, including additional information. This partial deviation of the standard methodology exemplifies how the single targeting instrument can be adjusted to specific programmes' needs.

Box 2.3. A unified registry for Brazilian social policies

The *Cadastro Único* is a single registry of Brazilian households living in poverty and extreme poverty. The *Cadastro* aims to register all low-income families with a household income below 3 monthly minimum wages or individuals earning less than half a minimum wage. The Federal Government, States and municipalities use this information to implement social programmes aimed at improving the lives of these families.

Before introducing the *Cadastro Único*, each government programme had its own mechanisms to collect data about potential beneficiaries, to process that information and to determine the allocation of benefits. Even within the same government agencies, registries were kept separate. Consequently, social protection programmes were segmented and uncoordinated. This frequently led to inclusion and exclusion errors and limited outreach. The lack of unified and more detailed information on poor families hindered policy-making and therefore timeliness and effectiveness of social policies (ILO, 2014).

In 2001, the Brazilian government formally created by law the Single Registry (*Cadastro Único*) and launched the *Bolsa Familia* programme two years later, which unified four similar cash transfer programmes targeting poor and vulnerable families. The goals of the *Cadastro Único* were to identify poor families, develop an understanding about their characteristics, and geo-reference poor households. Following the initial success in registering poor households, the government invested in improving data collection and launched an exhaustive legislative and regulatory review of the registry, resulting in a new online version of the registry launched in 2010. Three years later all municipalities had access to the online database, helping them to target policy interventions more accurately.

In practice, *Cadastro Único* is based on a decentralized data collection and entry scheme and a centralized database consolidation and management. Municipalities are responsible for collecting data and registering families. Municipalities survey households in geographically targeted areas for their inclusion in the *Cadastro*. Citizens can also request their registration directly through dedicated structures in municipalities. Once data are collected, municipal officials enter registry data into a unified software and make some crosschecks to identify potential inconsistencies or gaps in the data. *Caixa Econômica Federal* consolidates data from municipalities, assigns identification numbers and runs some additional crosschecks. The resulting consolidated family registry is the *Cadastro Único* and includes information from all registered families, regardless of whether they are eligible or not for government's social programmes. Finally, the Federal Government, the States and the municipalities use this information to determine families' eligibility for social programmes and subsequent attribution of benefits (Lindert et al, 2007).

Source: ILO (2014) and Lindert et al. (2007).

Plans to enhance the single beneficiary register can contribute to reaching all Paraguayans in need. The SIIS lists all people currently or previously benefiting from one or more social assistance programmes. It is an important management and monitoring tool and helps to identify eventual inclusion errors in programmes. Expanding the SIIS and integrating it with a database of potential beneficiaries registered with the single targeting instrument would be a welcome step towards more co-ordination, efficiency and synergies, bringing the information system closer to the Brazilian *Cadastro Unico*.

The planning and monitoring system of *Sembrando Oportunidades* is a major co-ordination tool for social policy. One of the functions of the *Mesa técnica* is to populate and monitor the on-line dashboard (*Tablero de control*) of the programme. Participating entities set out their targets for implementation actions, including when and where they will carry them out. They also record the delivery of services, so that the same system serves to co-ordinate at the planning stage and to monitor progress. Regular progress reports for all programmes at the regional level are published regularly. The public has access to the online tool, where they can check the degree of advancement of a programme at the district level.

Box 2.4. Reaching South Africa's rural poor with mobile one-stop service vehicles

The Integrated Community Registration Outreach Programme (ICROP) consists of fully equipped mobile one-stop service vehicles bringing the social protection system to rural South Africa. Created by the South African Social Security Agency in 2007 to deliver their child benefits, the ICROP quickly developed to become a whole-of-government initiative bringing all social services to the rural population under the same umbrella. Entities involved in the ICROP include the South African Social Security Agency, the Department of Health, the Department of Education, the Department of Home Affairs, the South African Police Services, municipalities, community leaders and NGOs.

The one-stop service vehicles provide a variety of services. They inform the population about existing benefits and services and help them sign up for social assistance programmes. They also identify potential beneficiaries, update the beneficiary registry, facilitate access to appeals procedures, process identity documents and birth certificates, promote access to health services and ensure involvement of community members in service delivery. Each service vehicle is equipped with a modern IT system and staffed with a driver, two attesting officers, a medical doctor (on-site assessment of medical/disability condition and basic health services), an approval officer (on-site approval and quality control), an IT support technician and a customer care official (managing enquiries and outreach).

Programme beneficiary numbers increased faster in areas served by the ICROP than in areas excluded from the programme. The shared delivery mechanism increased outreach at lower administrative costs and improved institutional co-ordination by using shared processes and tools.

Source: Van Panhuys et al. (2015) and DSD/SASSA/UNICEF (2016).

The *Sembrando Oportunidades* dashboard is integrated into the results-based planning (SPR) system and linked to the budgeting process. The STP has developed and manages a tool to assist in planning, managing and monitoring the achievement of the goals related to the National Development Plan. The service delivery plans of each institution are part of the entity's operational plan, which is linked through the SPR to specific strategies of the PND, and to the annual budget. The link to the budgetary process ensures that co-ordination at the planning stage leads effectively to co-ordinated action plans. There is still scope for improving the functioning of results-based planning, in particular through improvements in the quality of the performance indicators, the establishment of links with the medium-term expenditure plan and the development of the evaluation function (OECD, 2018b; Medina-Giopp and Codas Salinas, 2018).

Social security providers need to be supervised and strengthened

At present, social security providers operate without any major supervision. The only supervision comes from the Supreme Audit Institution (*Contraloría General de la República*), which audits pension providers.[8] However, the Supreme Audit Institution lacks the resources to carry out its vast remit. More importantly, there is a conflict of interest: the auditors contracted by pension providers are paid by the audited institution (Navarro and Ortiz, 2014). The Ministry of Labour, Employment and Social Security (MTESS) – officially in charge of social security – was only created recently and is still working to build up its authority. A bill to create a supervisory body – to be presided by the Minister of Labour Employment and Social Security – is in parliament awaiting approval (Box 2.5).

Box 2.5. The draft legislation of the supervisory authority for pension providers

The draft legislation is well crafted, but certain aspects need to be enhanced

The investments that have been made for Paraguay's pension funds are less diversified than elsewhere in Latin America (IMF, 2017). Little diversification and regulation can pose a threat to affiliates' contributions and pension entitlements. The IPS primarily invests in savings deposits, real estate (principally health facilities), as well as bonds issued by the *Agencia Financiera de Desarollo* (AFD). Due to its internal regulation, the *Caja Fiscal* invests exclusively in bonds issued by the AFD or deposits any eventual surplus with the central bank. The closed pension providers' investments are slightly more diversified; still, they mostly hold loans to their members. The *Caja de la ANDE* invests more than four-fifths of its assets in loans to its members (Caja Ande, 2017). Such practices should be generally limited according to the OECD Core Principles of Private Pension Regulation (OECD, 2016b); the draft legislation promises to remedy this and enforce sound management of providers' assets.

According to the OECD Core Principles of Private Pension Regulation, the supervisory body should promote the stability, security and good governance of pension funds, pension entities and/or pension plans with the aim of protecting the interests of plan members and beneficiaries. Effective supervision of pension funds and plans must be set up and focus on legal compliance, financial control, actuarial examination and supervision of those with the responsibility of operating or managing the plan. Supervisory bodies should be endowed with appropriate regulatory and supervisory powers over private pension plans, pension funds and pension entities, including powers over the functions that are outsourced.

Paraguay's draft law on the creation of a supervisory body, its governing board and pension funds' investment standards complies with most of the OECD Core Principles of Private Pension Regulation and IOPS' (2013) Good Practices for Governance of Pension Supervisory Authorities. However, certain aspects, insufficiently addressed in the draft legislation, deserve special attention, such as:

- establishing a clear and transparent funding mechanism for the supervisory body and its director to ensure independence;

- auditing the supervisory authority regularly and reporting about its activities to allow for the assessment of how well the authority is fulfilling its responsibilities;
- granting indemnity from civil prosecution for the staff of the supervisory authority; and
- requiring internal reviews for important supervisory decisions.

The rules for intervening in pension funds are clearly laid out, but a potential intervention in the *Caja Fiscal* could pose problems, as the *Caja Fiscal* is directly managed by the Ministry of Finance.

The bill provides a clear basis for pension funds to develop sound investment strategies, and even gives pension funds a voice in setting the ceilings for levels of investment by category (no minimum). However, the ceilings for the transitory period stipulated in the legislation might be difficult to meet for many pension providers.

The OECD Core Principles further recommend:

- financing and staffing the supervisory body adequately. The hiring, training and retention of qualified staff is key to the functioning of the body;
- adopting risk-based supervision. This requires a legal framework allowing suitable discretion in terms of interpretation and exercise of supervisory powers; and
- consulting, as appropriate, with pension providers when determining its approach to supervision.

Source: OECD (2016), IOPS (2013) and IMF (2017).

An imperfect separation of the IPS pension and health branches can pose a risk to the institute's governance. As an integrated social security provider the IPS offers health, pension and other cash benefits (maternity, disability, sickness, occupational injury, death) to its affiliates. The health and pension branches are managed separately and the IPS divides employers' and employees' contributions into three separate funds for (i) pensions, (ii) health and (iii) administrative expenses. However, the IPS's charter would allow a joint management of the pension and health services, as evidenced by a common fund for administrative expenses. While the charter does not allow transfers between the pension and health funds, a joint management can still expose the IPS's pension branch to the risk of bad practices (Alaimo and Tapia, 2014; Casalí and Velásquez, 2016). Most of the IPS's real estate investments are in hospitals. These investments yield low returns, can only be sold with parliamentary approval and the market value of the investments is often unknown to the IPS. Furthermore, the IPS does not split the resources destined to finance old-age pensions and other cash benefits (such as invalidity), which complicates the management of the benefits (IPS, 2014).

The lack of independence of the *Caja Fiscal* impedes good governance. The *Caja Fiscal* is not an independent legal entity, but part of the Ministry of Finance, and, thus, lacks a charter and governing board that would set strategic guidelines, supervise the performance and take responsibility for results. The principal risk of this institutional arrangement is that the Ministry of Finance has to directly cover any deficits of the *Caja*

Fiscal (Alaimo and Tapia, 2014; Navarro and Ortiz, 2014), which strips the Ministry of Finance of its tools to demand good governance in return for a bailout. Furthermore, the *Caja Fiscal* – and hence the Ministry of Finance – is subject to political pressure of its clients and other interest groups. For example, the parliament diluted the 2003 reform of the *Caja Fiscal* (Law 2.345/03) bowing to the pressure of civil servants demanding better benefits and disregarding the technical advice of the Ministry of Finance.[9]

An incomplete information management system complicates the work of the IPS and the *Caja Fiscal*. The digital registry of the contribution of IPS affiliates dates back to the year 2000, earlier entries have to be retrieved from the books. This insufficient digitalisation increases administrative costs, slows the process of determining pension entitlements and, thus, makes it difficult to have reliable statistics on future obligations. Registries and data availability are also inadequate in the *Caja Fiscal*, which makes it difficult to assess the *Caja Fiscal*'s management efficiency or carry out periodic actuarial studies. Moreover, annual balance reports submitted by the pension providers to the Ministry of Finance lack a standardised structure, information and language, which handicap the analysis.

Some of the historic reasons for creating closed pension programmes became obsolete. The closed pension funds were created to provide pension schemes for previously uncovered workers (*Ferroviaria* in 1924, *Caja Municipal* in 1978) or to improve the situation of a specific group of workers (*Caja Bancaria* 1951, *Caja de la ANDE* in 1968, C*aja del Itaipú*, 1988). The scheme from ANDE is complementary to the pension provided by the IPS. The complementary scheme for electricity utility employees was created at a time in which the IPS pension represented 42.5% of the salary after 15 years of contribution. Since then the IPS reformed its pension scheme offering more generous pensions. Nevertheless, the ANDE maintained the arrangement of providing its personnel a pension from two schemes: 42.5% from the IPS and 66.7% from the *Caja ANDE*. Another extreme case is the *Caja Ferroviaria*. The Paraguayan railways ceased their activity many years ago and the *Caja Ferroviaria* consequently manages the pensions of retired employees and the sole contributors are the administrators of the *Caja Ferroviaria*.

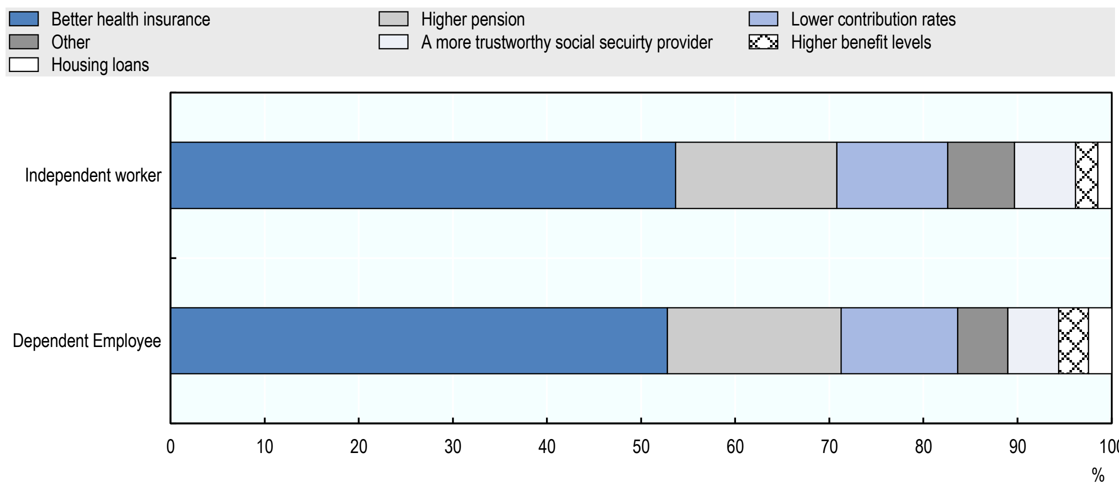
Including independent workers is the next frontier for Paraguay's social security

Expanding social security coverage requires including independent workers into the system. Yet, in its current state Paraguay's social security system de facto excludes independent workers from contributing. The system's principal challenge is to include this group without creating a parallel system. In response to this challenge, many countries in the region experiment with innovative approaches such as fostering formalisation with simplified tax codes, lowering the contribution base and matching contributions. Furthermore, independent workers should have the possibility to access full social security.

Independent workers want the full social security package, including health. Among the uninsured, half would consider contributing to social security if the health insurance provided were better (Figure 2.20). Having (better) health insurance is more important to the uninsured than having a higher pension or lower contribution rates. The aspects that could motivate the uninsured to contribute to social security do not differ by employment category. Even among actual IPS affiliates, close to half contribute because of the medical care offered (STP, 2016). The high importance people place on health insurance can partially explain the low voluntary affiliation of independent workers, as the current voluntary scheme for independent workers excludes them from contributing to the IPS health insurance until retiring.

Figure 2.20. Independent workers want health insurance

Aspects that would motivate the uninsured to contribute to social security, in 2015



Source: Own calculations on ELPS (STP, 2016).

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Simplifying contribution collection for independent workers

Frequent employment changes hinder regular contributions to social security. Paraguay's labour market is very dynamic; large sections of the working age population frequently transit between employment status and category. This high turnover can lead to interrupted contribution payments. Indeed, close to 15% of formal employees in the private sector in Greater Asuncion regularly transits into informality, unemployment or inactivity (Alaimo and Taipa, 2014; Ovando, 2017; Ruppert Bulmer et al. 2017). Job changes are especially common among independent workers: close to 40% of independent workers in Greater Asuncion change their job from one year to the other (Ruppert Bulmer et al. 2017). This instability and the aforementioned low income of independent workers hinder affiliation and regular contributions to social security.

Flexible contribution schedules and innovative collection mechanisms can be a positive response to independent workers' volatile income. Monthly contribution payments can be a challenge for independent workers given their volatile income. In response to such a challenge, Chile, for example, allows irregular contributions corresponding to the income pattern of seasonal industries and workers (Hu and Stewart, 2009). Innovative contribution collection, such as agreed withdrawals with utility bills, can help to substitute the automatic withdrawal independent workers lack compared to their dependent counterparts, whose contributions are automatically deducted by employers (Bosch, Melguizo and Pagés, 2013). And modern communication technology can help to bridge the divide between pension providers and independent workers. In 2014, the Brazilian Ministry of Social Security experimented with reminders by post to independent workers about their obligation to contribute to social security; compliance rates increased by 7 percentage points within the first three months after sending the reminders (Bosch, Fernandes and Villa, 2015).

Many Latin American countries simplified tax and contribution collection to foster formalisation and accommodate independent workers' unstable employment histories. Such a response is the "monotax" levied on micro- and small enterprises with low revenues. This tax regime simplifies registration and collection of taxes (and social security contributions) by bundling numerous taxes in one payment. Generally, the most successful cases charge a fixed fee (lower than normal taxes) on presumptive income categories; income categories are presumed based on gross revenues and a range of parameters, such as the business' surface, water or electricity consumption, or the capital destined to carry out the activity (González, 2006). The regimes with the biggest traction (Argentina, Brazil and Uruguay) include social security contributions in the monotax and allow transiting between the standard and monotax regime (Box 2.6).

Paraguay's tax regime for small enterprises does not accommodate independent workers' frequent job changes and limited administrative capacity. Indeed, only 12% of independent workers have their business registered (*Registro Único de Contribuyente*) and issue invoices (DGEEC, 2017). Independent workers benefiting from the tax regime for small enterprises (*Impuesto a la Renta del Pequeño Contribuyente*) still need to determine their revenues and pay a 10% tax on their real or presumed revenues (equal to 30% of the annual sales), whichever is lower. However, not all independent workers record their transactions, especially microenterprises active in the informal economy.

Box 2.6. Uruguay's simplified tax regime for small independent workers

Uruguay owes its high social security coverage among independent workers (the highest in Latin America; Figure 2.4 Panel C), to a large extent, to the introduction of the monotax (*Monotributo*). Independent workers paying the monotax are entitled to the standard social security benefits, except the unemployment benefit, and can voluntarily contribute to health insurance.

The monotax regime is open to micro and small enterprises with a maximum of one employee (three during harvesting period in case of agricultural businesses), an office surface area smaller than 15m², assets and revenues up to a set amount (changing annually) and providing products and services to the end consumer.

The Uruguayan Social Security Institute collects the monotax and transfers the fraction corresponding to taxes to the tax authority. The monotax is a flat rate contribution for all independent workers replacing all national taxes and social security contributions. Newly contributing micro and small enterprises pay a reduced rate in the first few years, gradually increasing to 100% after the third year. This gradual phasing-in of the contribution rate incentivizes entrepreneurs to start contributing and helps enterprises to ease into the transition.

After a reform in 2007 – making affiliation easier by eliminating previous restrictions, such as place of the activity, type of activity and maximum billing – the number of contributors increased sharply reaching more than 30% of all micro and small enterprises.

Source: Cetrángolo et al. (2014), Duran-Valverde (2014).

A high minimum wage represents a barrier to accessing social security

A high minimum wage limits many Paraguayans' possibilities to contribute to the social security system. Pension funds do not accept contributions that are based on an income below the minimum wage (Law 4.933/13). Yet, 45.4% of the working population earn below the minimum wage, among own-account workers this figure even reaches 65.7% (Figure 2.21 Panel A). This makes it impossible for them to contribute to social security. A regional comparison shows that Paraguay has one of the highest shares of workers earning below the minimum wage (Figure 2.21 Panel B). Paraguay's minimum wages in relation to the median wage places the country at the top end of a regional comparison. This impacts social security affiliation, as social security coverage and the level of the minimum wage are negatively correlated in Latin America: coverage rates decrease with high minimum wages-average wage ratios (Navarro and Ortiz, 2014).

The combination of contribution rules and a high minimum wage drives contribution costs up. According to national legislation, the monthly social security contributions for independent workers cannot be below PYG 255 386 (13% of the 2016 minimum wage). For half of the independent workers this represents more than 21.5% of their income (own calculations based on EPH). For poor workers in the first income decile, contributions would even represent 88% of their income, which is higher than the theoretical cost for poor workers in Latin American countries (72% of the worker's wage) (OECD, 2018). In response to this, countries, like Panama, take the minimum pension as minimum earnings for contribution calculation purposes – the minimum pension is below the minimum wage.

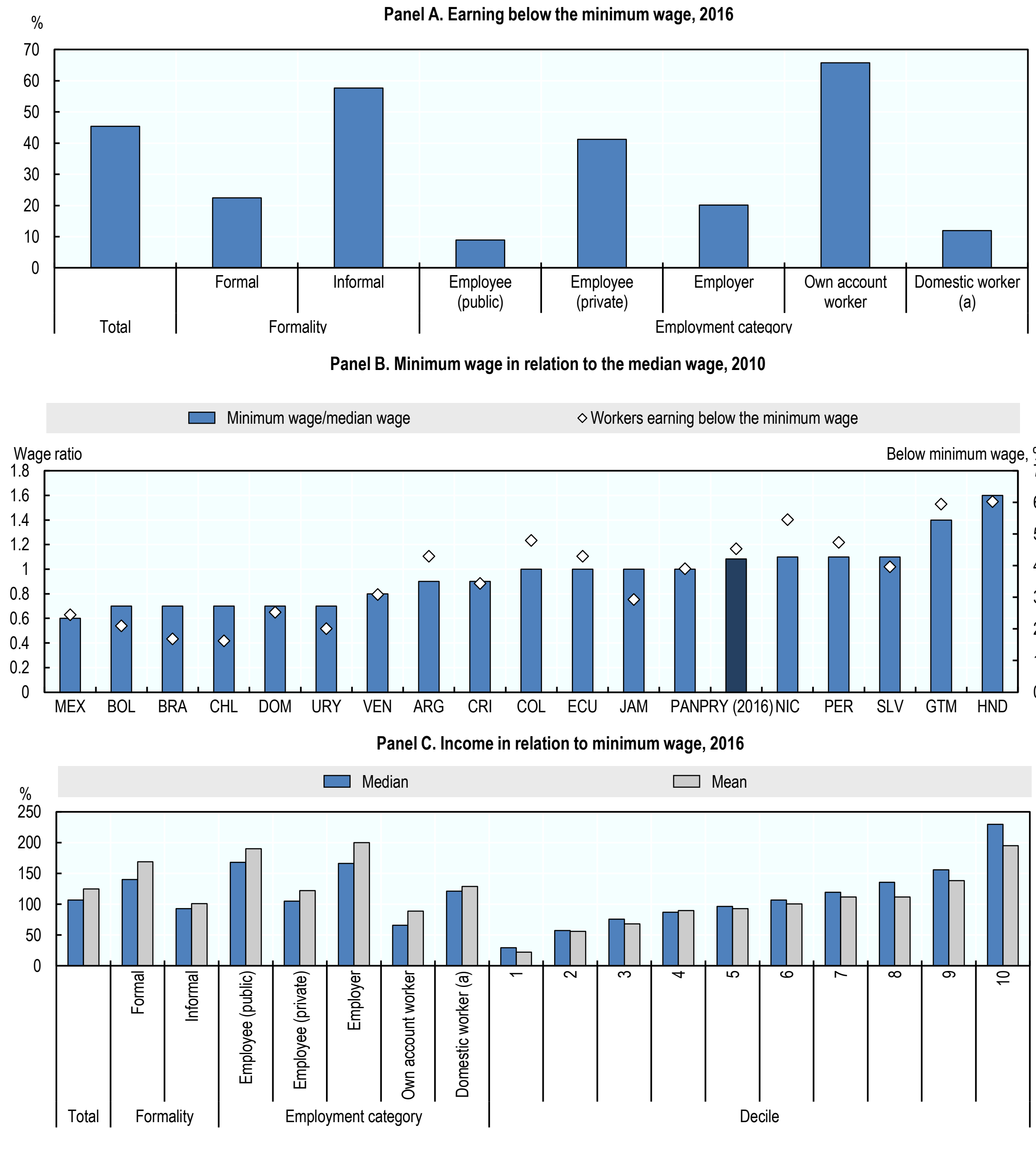
Overall, Paraguayans' median and mean labour income is centred on the minimum wage. However, only workers situated higher than the sixth decile earn comfortably above the minimum wage; workers in the bottom deciles earn well below the minimum wage while workers in the centre of the income distribution earn close to the minimum wage (Figure 2.21 Panel C). Supporting social security contributions of workers situated in the fourth, fifth and sixth decile could help them to access social security (see subsequent section).

For the self-employed, low and unstable income is a major reason for not contributing to social security. According to the accounts of self-employed, 64.4% do not contribute to social security because of low and instable income (Figure 2.22). Indeed, the median and average income of own-account workers is well below the minimum wage (Figure 2.21 Panel B). Few have the financial leeway to contribute to social security. Taking the prevalence of individual savings (savings accounts, long-term deposits, savings funds, stocks, and other) as a proxy for the ability and inclination to defer consumption, few have the financial ability to defer consumption. In fact, among the self-employed only 9.6% currently save (STP, 2015). Only 21.7% of the self-employed report that they do not contribute to social security because there is no obligation to do so. This could be interpreted as being in support of the assertion made by Navarro and Ortiz (2014) whereby 57% of independent workers would like to contribute to social security if they could.

Dependent workers' perception is that low social security affiliation rates are due to evasion rather than low wages. Inspection and supervision are important to wage workers' affiliation with social security. While one in five wage employees report that they avoid contributing to social security because their income is low and unstable, evasion is a bigger concern. Two in five wage employees report that they do not contribute to social security because their employers are unwilling to register them with social security (Figure 2.22). In response to this, Paraguay needs to strengthen systems of inspection and supervision.

Figure 2.21. Many earn below the comparatively high minimum wage

Workers' income in relation to the minimum wage



Note: The analysis includes only income from their full-time, main job. (a) The minimum wage for domestic workers is 60% of the standard minimum wage. Compared to the standard minimum wage, 77.4% of domestic workers earn less than this figure.

Source: Panel A and B: Own calculations based on the Permanent Household Survey of Paraguay (DGEEC, 2017). Panel C: Paraguay own calculation based on the Permanent Household Survey of Paraguay (DGEEC, 2017); other countries Bosch, Melguizo and Pagés (2013).

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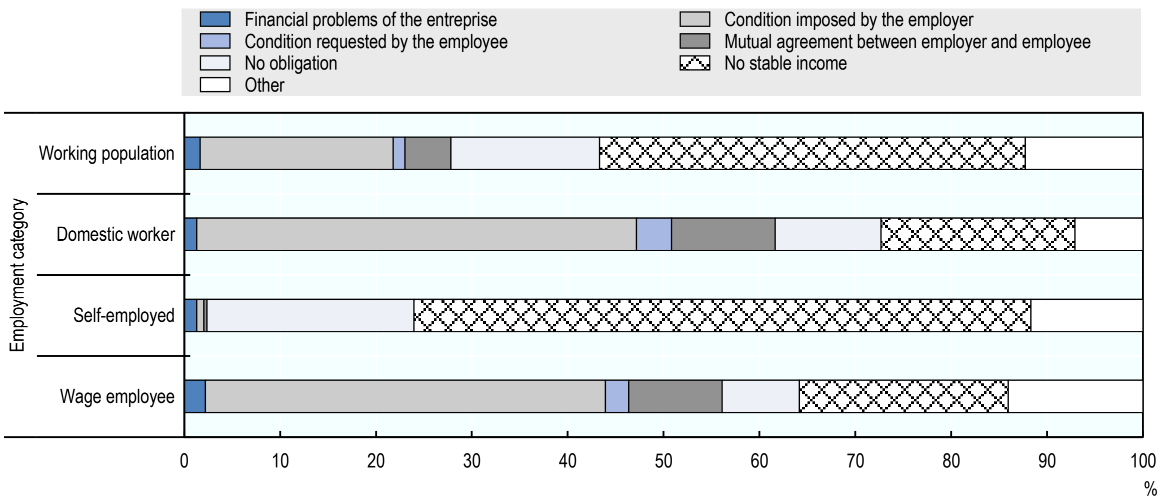
Figure 2.22. Most do not contribute to a social security scheme because of unstable income

Self-reported reasons for not contributing to a social security scheme, as a percentage



Source: Own calculations on ELPS (STP, 2016).

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Subsidising contributions can remedy low affiliation rates of independent workers

Paraguay can learn from other countries' experiences in matching contributions. Several countries with low social security coverage rates, especially among independent workers, are moving towards matching contributions. Most experiences are recent and are principally from countries with defined contribution systems. The Colombian example and Dominican plan are particular good examples. Colombia's subsidised voluntary old-age saving scheme is a good example of a policy respecting independent workers' needs (Box 2.7). However, combining voluntary old-age saving schemes with Paraguay's defined benefit system is difficult; if copied by Paraguay it could create a parallel system for independent workers, which is best avoided (Stuart, Samman and Hunt, 2018). To avoid creating a parallel system such voluntary old-age saving scheme could be introduced in Paraguay as the third tier of an integrated pension system. The Dominican Republic's envisioned subsidised contributory scheme is an example of how to keep independent workers within the standard social security system and could be applied as well in a defined benefit system, such as Paraguay's (Box 2.8).

Matching contributions have to be carefully designed. While matching contributions can be a way to support workers in the centre of the income distributions, who have a stable yet low income above the minimum wage, experience suggests that such policies need to be designed with care (Carranza, Melguizo and Tuesta, 2017). Poorly-designed matching contributions policies could trap independent workers in a subsidised regime and reduce the incentive to bear social security costs autonomously and thus create parallel systems. The period during which independent workers can benefit from matching contributions should be limited and their economic situation regularly monitored.

In response to independent workers' volatile and infrequent income, Colombia introduced in 2015 a subsidised voluntary old-age saving scheme (*Beneficios Económicos Periódicos* [BEPS]). The contributions made by poor and vulnerable independent workers earning below the minimum wage can be irregular and lower than pension contributions within the General Pension System. Both tend to be a barrier for independent workers to contribute to a traditional social security scheme (Navarro, 2016).

Box 2.7. Reducing old-age poverty risks for poor workers

Colombia's subsidised voluntary old-age saving scheme

The General Pension System in Colombia is mainly based on a compulsory contributory pillar where two schemes coexist and compete: a public defined-benefit (DB) scheme and a private defined-contribution (DC) scheme. The former is administered by the State through Colpensiones, while the latter is managed by private pension funds (AFPs for their acronym in Spanish).

Depending on the scheme, workers are entitled to a pension benefit once they meet some minimum requirements. While within the DB scheme workers must reach the statutory retirement age and a minimum contributory period of 1 300 weeks, within the DC scheme workers only need to reach a minimum amount of individual savings enough to ensure a pension higher than 110% of a monthly minimum wage. Contributors within the DC scheme who are not able to reach the minimum amount of savings, but have reached the statutory retirement age and have contributed for at least 1 150 weeks, are entitled to a minimum pension guarantee. By law, the monthly minimum pension is equal to the legal minimum wage. Although this ensures a basic income for those who manage to retire, such a tie creates rigidities that leave out a large part of the population that is not able to satisfy the requirements for receiving a minimum pension. In both schemes, those who are not able to meet the requirements receive a refund. For this reason, the system tends to disadvantage low-income workers, mostly informal, as they typically earn few and irregularly, preventing them to meet the minimum requirements.

In response to independent workers' volatile and infrequent income, and given the restrictions set by Colombian law regarding minimum pensions, the government introduced in 2015 a subsidised voluntary old age saving scheme (*Beneficios Económicos Periódicos* [BEPS]). In this scheme, the state tops up retired workers' accumulated savings and returns with a subsidy of 20%. The contributions made by workers earning below the minimum wage can be irregular, allowing overcoming barriers for independent workers to contribute to a traditional social security scheme (Navarro, 2016). BEPS' subsidised bimonthly benefit is capped at 85% of the minimum wage. Thus, in principle, it allows for a contributory old age scheme without the minimum wage constraint, as these bimonthly benefits are not a pension from a legal point of view.

The Colombian system allows individuals to transit easily between BEPS and General Pension System when needed. In 2018, the third year after launching BEPS, more than 1 million poor workers saved with BEPS and 5 300 receive a pension (Colpensiones, 2018). However, creating the right incentives to raise workers' voluntary saving levels in BEPS remains a challenge.

Source: Bosch, M. et al. (2015), *Diagnóstico del sistema previsional colombiano y opciones de reforma* and OECD (2015), *Pension Policy Notes Colombia*.

The Dominican Republic envisions subsidising independent workers' contribution to make up for the missing employers' contributions. Under this scheme, which has yet to be implemented, the state would contribute to independent workers' social security with a subsidy equal to the contribution of what employers pay for their dependent workers (Lavigne, 2013). National legislation stipulates that the subsidised scheme should function identically to the standard contributory scheme, once it is fully rolled out. Currently, this subsided system offers basic healthcare and childcare facilities to independent workers and could be extended to include benefits for occupational injuries (SISALRIL, 2018). Such a matching scheme can be costly when the number of independent workers is high and it represents de facto a subsidy for independent employment, but it allows to transit between dependent and independent employment while remaining in the social security system.

Box 2.8. Subsidising contributions could be cheaper than granting *Adulto Mayor*

Given the low number of independent workers contributing to social security, the government could consider subsidising independent workers' contributions. The most effective way would be to target those individuals who are capable of setting aside additional savings (Hu and Stewart, 2009), which, in Paraguay, would include independent workers earning close to the minimum wage (Figure 2.21 Panel C).

We assume a hypothetical scenario, in which the government would subsidise independent workers' contributions to the current system. Like in the planned Dominican system, the government would match contributions at the level of the missing employers' contribution (i.e. 7.6% of the minimum wage plus 0.5% for administrative costs with no contributions to the IPS health fund).

Subsidising contributions up to a maximum of 180 months (15 years) would be cheaper for the government than paying the *Adulto Mayor* benefit for more than 60 months (4.9 years). Indeed, the current life expectancy at age 65 is an additional 17 years. The net present value of paying *Adulto Mayor* for 17 years (assuming an average inflation equal to the last 15 years: 6.2%) equals 31 times the annual minimum wage. The present value of matching 180 months of contributions equals 23 times the annual minimum wage. Hence, the government could save PYG 188 million (8 times the annual minimum wage) per beneficiary, or even more if it has to subsidise less than 180 months of contribution. While subsidising contributions can increase the number of contributory pension recipients it can also generate liabilities for the IPS health branch as it may add a higher risk population to the health fund's pool.

Source: Own calculations on ELPS (STP, 2016). The life expectancy at age 65 stems from OECD/IDB/World Bank (2014). The average inflation of 2003-16 is based on World Bank (2018b).

Peru recently introduced a subsidised pension regime for micro-entrepreneurs (*Sistema de Pensiones Sociales* [SPS]): micro-entrepreneurs contributing up to 4% of the minimum wage into personal accounts to the SPS benefit from a matching contribution deposited by the state. At age 65 and 300 months of contributions, micro-entrepreneurs receive a pension benefit calculated on the basis of the personal accounts' development (Navarro, 2016). While granting micro-entrepreneurs the possibility of obtaining a pension benefit, it creates a parallel system which is generally not advisable (OECD, 2016).

Mexico reformed in 2009 its 'Social Contribution' to prevent affiliates of the defined contribution scheme from discontinuing contributions. The 'Social Contribution' consists of a government subsidy of up to 5.5% of the minimum wage in Mexico City for affiliates earning less than 15 times the minimum wage. The value of the state's matching contribution decreases incrementally, i.e. multiples of the minimum wage (Carranza, Melguizo and Tuesta, 2012). To qualify for the 'Social Contribution' the worker had to be contributing to the defined contribution pension system; thus its main object is not to attract new affiliates, but prevent affiliates from ceasing contributions due to low income.

Expanding social protection needs financial commitment

Paraguay's ambition to expand social protection coverage needs to be financed. Expanding social protection requires mobilising resources, especially for social assistance which is not financed by contributions. In the foreseeable future, the bottom deciles will hardly be able to contribute to social security. Their low income and heavy reliance on agriculture make regular social security contributions unrealistic and will thus need to be covered by social assistance. Covering the whole target population of Paraguay's flagship social assistance programmes would demand at least doubling current expenditure levels.

Domestic resource mobilisation is crucial for a sustainable expansion of social protection. More workers need to contribute to social security, and tax revenues need to increase to finance social assistance. Paraguay took important steps to expand the tax base and collection, but further efforts are needed to respond to the growing demand for goods and services provided by the state, such as social protection.

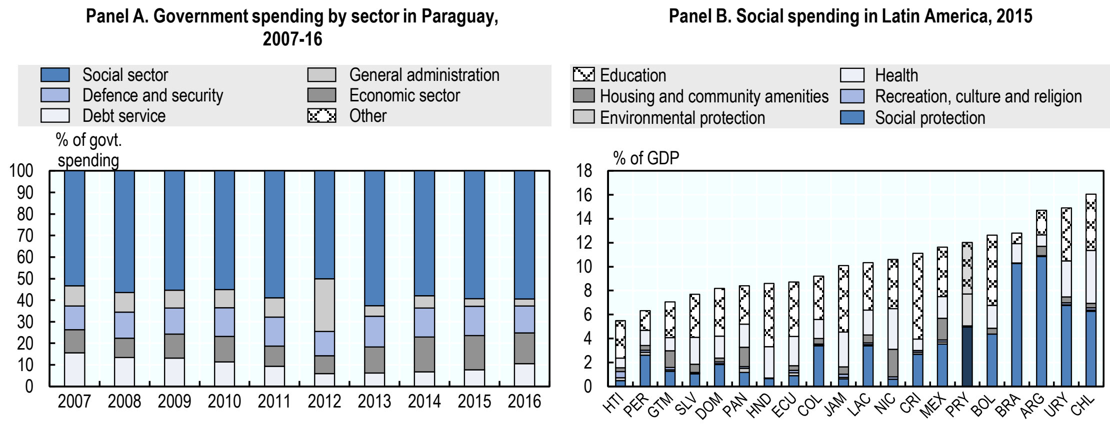
Social expenditure needs to be reviewed

Social expenditure as a whole is high. Paraguay spends more than half of its government budget on the social sector. This share has been steadily increasing from 53.3% in 2007 to 59.4% in 2016 (Figure 2.23 Panel A). This importance given to social expenditure (12% of GDP) places Paraguay among the top spenders in the region and above the Latin American average (Figure 2.23 Panel B). Nonetheless, social protection expenditure is below countries with a more developed safety net such as Argentina, Brazil, Chile and Uruguay.

Social protection expenditure increased slowly but surely. Expenditure on social security increased from 2.7% of GDP in 2007 to 3.6% in 2016, reflecting the aforementioned increasing number of affiliates (Figure 2.24 Panel A). Based on Serafini's (2016) findings this review calculates the social assistance expenditure on non-contributory pensions, conditional and unconditional cash transfers. Following this definition, social assistance expenditure increased from 0.7% of GDP in 2007 to 1.2% in 2016.

Figure 2.23. Paraguay's social expenditure is above the Latin American average

Government and social spending in Paraguay and Latin America

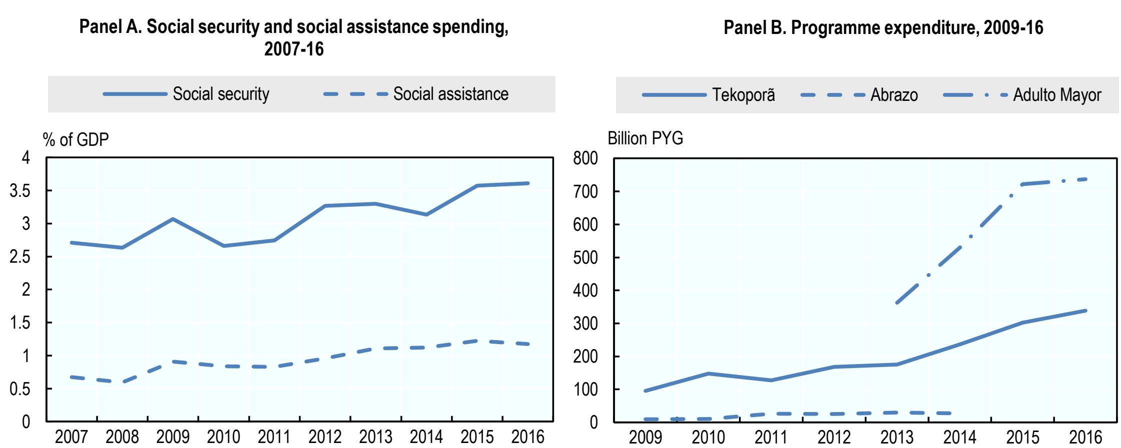


Note: All panels consider only the spending of the central government. Panel A: Paraguay defines the social sector as expenditure on health, social assistance, social security, education and culture, science and technology, labour relations, housing and community services. Panel B: The average for Latin America is the simple average of the 19 countries in the figure. 2014 for Jamaica and Panama.
Source: Own elaboration based on the expenditure database BOOST (MH, 2018). Panel B: CEPALSTAT (2018).

StatLink https://doi.org/10.1787/888933822900

Figure 2.24. Social protection expenditure is on the rise

Social security and social assistance spending, 2007-16



Note: Social security spending is measured as the social expenditure of the IPS, Caja de la ANDE, Caja Bancaria, Caja Municipal and Caja Fiscal. Social assistance expenditure is measured by the spending on non-contributory pensions (Adulto Mayor, pensions for veterans and merit pensions) and other cash transfers proxied by the social expenditure of the Instituto Paraguayo del Indígena, Dirección Beneficencia y Ayuda Social and of the Presidency, the latter includes spending from the Secretaría de Acción Social (*Tekoporã*), Secretaría Nacional de la Niñez y la Adolescencia (*Abrazo*), Secretaría Técnica de Planificación del Desarrollo Económico y Social (*Sembrando Oportunidades*), Secretaría de Emergencia Nacional, Secretaría de Derechos Humanos de las Personas con Discapacidad.
Source: Own elaboration based on the expenditure database BOOST (MH, 2018).

StatLink https://doi.org/10.1787/888933822919

Expenditure for the major flagship programmes is insufficient to cover the whole target population. Expenditure for *Tekoporã* and *Adulto Mayor* increased strongly during the initial phase, but has reached plateaued in recent years (Figure 2.24 Panel B). Expenditure would have to increase substantially versus current levels to cover the whole target population of Paraguay's flagship social assistance programmes. Providing all poor families with children with the *Tekoporã* benefit would have cost 0.5% of GDP in 2016 as opposed to the actual 0.2%. Granting all poor elderly the *Adulto Mayor* benefit would have cost 1% of GDP as opposed to the actual 0.7% (own elaboration based on EPH, 2016; Bruno, 2017; MH, 2018). This assumes perfect targeting; however, in practice there are important inclusion errors (see Figure 2.6 Panel B and Figure 2.15 Panel B respectively). With current inclusion errors factored in, the costs of full coverage of *Tekoporã* would be 0.7% of GDP and 1.4% of GDP for *Adulto Mayor*.

Reviewing expenditures can help to free up resources that could be used to finance the expansion of *Tekoporã* and *Adulto Mayor*. Streamlining income generation support programmes for family business and farms, which reach a paltry 10% of rural households with agricultural activities but cost 0.41% of GDP in 2014, can create additional fiscal space (own calculations based on Serafini, 2016). The continuous reduction in expenditure for pensions for veteran and survivors (0.13% of GDP in 2016) will free up resources that should be used to finance an expansion of *Adulto Mayor* (own elaboration based on MH, 2018).

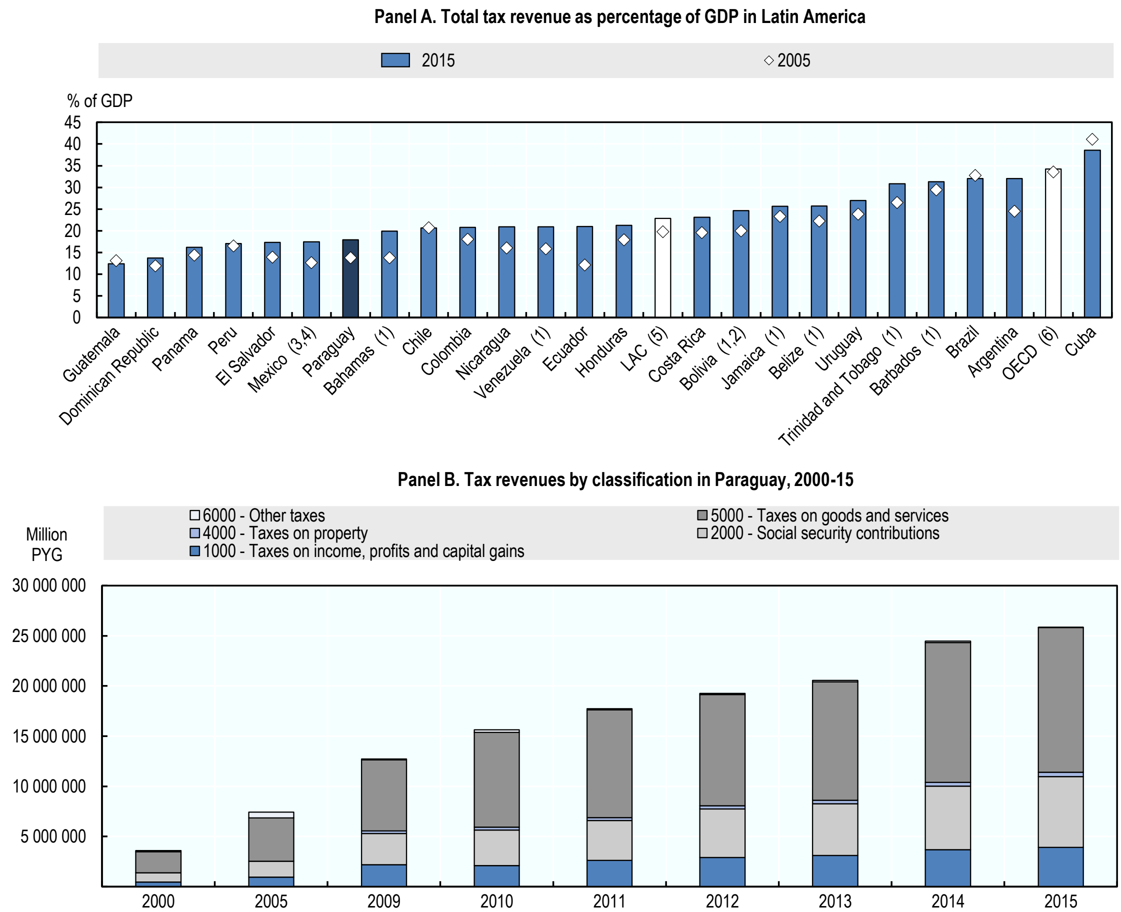
Tax levels and collection need to reflect the growing demand for state services

Paraguay collects little taxes. Among Latin American countries Paraguay has one of the lowest tax-to-GDP ratio, it is considerably below the regional average and half the OECD average (Figure 2.25 Panel A). While tax evasion is high, low tax rates are also a principal reason for this low ratio. Paraguay has the lowest tax rates in the region: the corporate tax rate does not exceed 10%, taxes on personal income are a flat rate of 10% and VAT is a maximum 10% (Borda and Caballero, 2018). In fact, households pay a mere 1% of what they earn in income tax (Gímenez et al., 2017).

Yet, tax revenues, especially from VAT, have actually increased in recent years. The increase in the tax-to-GDP ratio from 2005 to 2015 is above the Latin American average. This increase is principally due to higher revenues from taxes on goods and services (Figure 2.25 Panel B). VAT is the largest revenue source for Paraguay and above the Latin American and OECD average (OECD/ECLAC/CIAT/IDB, 2017). Tax revenues from goods and services (including VAT) increased thanks to a reform that broadened the VAT base and improved tax collection; VAT rates, however, remain low and loopholes are prevalent (ibid).

Figure 2.25. Tax revenues increased, but remain low

Tax revenues as a percentage of GDP and by tax classification



Note: A. Total tax revenues include revenues at the national and subnational level and social security contributions.

1. The data are estimated for the following countries: Bahamas (social security contributions for 2015), Barbados (social security contributions for 2015), Belize (social security contributions from 2013 onward), Bolivia (social security contributions from 2013 onward), Jamaica (environmental levy for years 2014 and 2015), Trinidad and Tobago (local property taxes for 2015) and Venezuela (social security contributions from 2011 onward)..
2. Excludes revenues from hydrocarbon production.
3. Revenue in Latin America and the Caribbean and revenue in OECD countries included fees levied on hydrocarbon production at the federal level. From the data provided for revenue in OECD countries (2016) and for this publication, revenues from hydrocarbon production have been excluded from tax revenues and are instead treated as non-tax revenues.
4. The data are estimated for 2015 including expected revenues for state and local governments.
5. Represents a group of 24 Latin American and Caribbean countries, the average is calculated using calendar year data, except for Bahamas and Trinidad and Tobago where fiscal year data are used. Chile and Mexico are also part of the OECD (35) group.
6. Calculated by applying the unweighted average percentage change for 2015 in the 32 countries providing data for that year to the overall average tax-to-GDP ratio in 2014.

Source: Based on OECD/ECLAC/CIAT/IDB (2017).

StatLink https://doi.org/10.1787/888933822938

Paraguay's tax code has a range of exemptions and deductions, some favouring high-income earners. Interest and returns on capital gains and deposits in national financial institutions, pensions and inheritances are exempt from personal income tax; enterprises' gains from stock trading are exempt from corporate income tax (IRACIS) (Box 2.9). Personal and family expenditures such as education, health, clothing, housing and leisure activities can be reduced, impacting the already high floor for personal income taxes. The intention of these numerous exemptions and deductibles is to encourage formalisation, but they complicate tax declarations and reduce revenues significantly. Tax exemptions for the corporate and personal income, VAT and import tariffs cost an estimated 1.7% of GDP in 2016 (CIAT/SET/GIZ, 2015).

Tax revenues are additionally undermined by high evasion. Only 48.2% of households in the top decile and 23.7% of households in the ninth decile pay personal income taxes. Among the remaining households, less than 20% pay personal income taxes (Gímenez et al., 2017). Despite VAT reforms, evasion remains high (30.9% in 2014) and above the Latin American average (25.9%) (Borda and Caballero, 2018).

Box 2.9. Taxing financial transactions in Brazil for social protection

Taxes on financial transactions can be an easy and equitable revenue source for social protection. Such taxes levied on banking institutions can be implemented and monitored easily thanks to electronic records. It is extremely difficult to evade such taxes. Financial transaction taxes are also collected from informal workers who evade payroll contributions. Moreover, it is a progressive tax as the rich tend to rely more on banks.

Brazil collected such a tax on financial transactions between 1997 and 2007. Each financial transaction was taxed at a maximum rate of 0.38%, which was automatically deducted from accounts held by financial institutions. Revenues from the financial transaction tax (*Contribuição "Provisória" por Movimentação Financeira*) financed public health, social insurance, Bolsa Familia and other social purposes. In 2007, the revenues from the financial transaction tax exceeded the total cost of *Bolsa Família*. After mounting pressure from the financial sector, the financial transaction tax was abolished in 2007. However, the tax returned for a brief period (2009-13) and there is an ongoing debate on whether to reintroduce the tax for social justice reasons.

Source: Ortiz, Cummins and Karunanethy (2017).

Policy recommendations

Box 2.10. Policy recommendations towards social protection for all in Paraguay

1. Expand social security coverage:

1.1. Put in place a strategy to expand coverage of social security.

- Strengthen inspection and supervision systems to fight evasion.

- Assist employers in registering employees. Associate inspection and supervision with an information campaigns and counselling.
- Follow up on affiliates who cease to contribute. When possible support their re-integration into the system. Analyse and learn from the reasons for ceasing to contribute.
- Approve the strategy to inform the general public of the benefits of social security on a regular basis.

1.2. Improve incentives for formalisation and social security contributions.

- Review the minimum wage:
  - Review the level of the minimum wage and introduce a mechanism to determine its future fluctuation, linking it to productivity and prices.
  - Consider taking the minimum pension as minimum earnings for contribution calculation purposes.
- Put a more attractive system for independent workers in place:
  - Allow voluntary contribution to the health system.
  - Allow flexible contributions for independent workers. This may include irregular contributions in terms of amount and frequency.
  - Make contributions payment easier. This could be in form of a monotax or automatic deductions (e.g. with utility bills).
  - Consider matching contributions for independent workers with low income.

2. Reform to establish an integrated social protection system:

2.1. Protect against all contingencies:

- Introduce unemployment insurance.
- Introduce child benefits for non-poor formal sector workers.

2.2. Review social expenditure:

- Define social assistance expenditure according to international standards.
- Increase the budget for flagship social assistance programmes.
- Review expenditure of programmes with little impact and high costs due to programme fragmentation.

2.3. Broaden tax collection:

- Decrease tax exemptions.
- Improve tax collection and fight evasion.
- Increase tax rates to reflect the growing demand for state services.
- Earmark specific revenues for the financing of social protection.

2.4. Integrate the contributory and non-contributory pensions into a multi-pillar pension system:

- Transform *Adulto Mayor* into a basic pension within an integrated system
  - Improve the targeting of *Adulto Mayor*.
  - Revise the *Adulto Mayor* law to set a fixed benefit value or at least include a ceiling.
  - Allow a combination of contributory and non-contributory pensions. Phase *Adulto Mayor* out with the value of the contributory pension benefits favouring recipients with a meagre pension.
- Create an integrated mandatory, defined benefit pension system.
  - Explore the possibility of establishing a single statutory social security provider for private sector workers to reduce administrative costs and increase economies of scale.
  - Explore the possibility of integrating the social security system for public and private sector workers.
- Create a voluntary savings mechanism.
  - Provide tax incentives for savings plans cashed out at retirement age.
  - Increase trust in private pension funds and private savings plans by closely regulating them.
  - Consider transforming closed pension providers into occupational savings plans.

3. Improve the governance of social protection:

3.1. Improve co-ordination of social assistance programmes and agencies:

- Re-establish the co-ordination at ministerial level through the Social Cabinet or assign to another agency the role of system co-ordinator.
- Facilitate exchange of information between agencies.
- Align targeting mechanisms.
- Have joint staff on the ground to ease the engagement with beneficiaries, referrals and reduce costs.
- Integrate the number of social assistance programmes with similar objectives, especially programmes supporting small entrepreneurs and farms.

3.2. Integrate monitoring and evaluation processes into the design of social assistance programmes and policies to ensure rigorous assessments of results and the identification of potential improvements.

3.3. Supervise and regulate pension providers:

- Create a supervisory body for pension providers:
  - Furnish the supervisory body with the necessary financial and human

resources.

- Ensure impartiality of the supervisory body and auditors by detaching their payment from the audited institution.

- Set guidelines for investments of pension funds:
  - Set ceilings for levels of investment by category.
  - Enforce diversification of investments.

3.4. Improve the internal governance of pension providers:

- Digitalise the registry of contributions, contributors and beneficiaries in all pension funds.
- Standardise financial reports submitted to the Ministry of Finance (and other institutions).
- Clearly separate the management of the IPS pension and health branches.
- Revise the law limiting IPS's independence in managing its real estate investments.
- Transform the Caja Fiscal into an independent institution.

4. Establish a more coherent, fair and inclusive pension system

4.1. Improve equity in the pension system:

- Set the retirement age to be the same across all schemes: the retirement age should be periodically revised taking longevity, labour force participation and other socio-economic factors into account. This mechanism should set out the stepwise increase in the retirement age to be predictable for affiliates.
- Unify the basis for benefit calculation (earnings measure), including for independent workers.
- Standardise replacement and accrual rates.
- Ensure all pension benefits are indexed.

4.2. Strengthen the link between benefits and contributions:

- Raise number of years used to calculate the pension benefit (earnings measure).
- Set a uniform ceiling for any pension benefit:
  - This ceiling can be a multiple of the minimum wage and should take the financial soundness of the system into consideration.
- Revise the benefit level:
  - Adjust the pension benefit level to reflect the decreasing contributors-per-pensioner ratio.
  - Reduce incentives for early retirement. This can be achieved by significantly reducing benefit levels.

- Adjust contribution rates:
  - Contribution rates should be revised on a regular basis. The revision should be based on actuarial studies, demographic developments, the economic situation, the ratio between pensioners and contributors and the financial soundness of each scheme.
  - Collect contributions on end-of-year bonuses or cease to pay out end-of-year pension benefits. Every benefit payment has to be backed by a contribution.

4.3. Improve portability:

- Establish a mechanism to transfer contributions and entitlements between pension providers (as long as the system remains fragmented). This mechanism should grant a single pension, instead of the current procedure of granting partial pensions from all the systems the affiliate contributed to.

Notes

[1] The law creating *Adulto Mayor* (3728/09) only specifies a minimum for the benefit (25% of the minimum wage), but no maximum. This leaves the possibility of arbitrary and unfunded increases of the benefit amount.

[2] The direct taxes included in this analysis are IRP, IRPC, IRACIS and IRAGRO.

[3] The legislation does not stipulate a maximum number of years of contributions that can be settled with this method.

[4] The IPS pension scheme pays old-age, survivors and disability pensions. The IPS health scheme pays the sickness, maternity and occupational injury benefits.

[5] In recent years, pension benefits have been stable; the fluctuation in the replacement rate stems from changes in the net income of current workers.

[6] The benefit value of *Adulto Mayor* is equivalent to 20.9% of the economy-wide average earnings, if income from self-employment is included in the comparison.

[7] The efficiency in managing assets cannot be calculated for the IPS and Caja Fiscal. The IPS does not have a separate accounting between their management costs for the pension and health scheme. IPS's total administrative costs (pension and health) accounted for 5.6% of total contributions (pensions and health) in 2016. The Caja Fiscal is part of the Ministry of Hacienda and thus does not publish figures on its management costs.

[8] The Caja Bancaria is additionally supervised by the authority in charge of banking supervision (*Superintendencia de Bancos*).

[9] The 2003 reform of the Caja Fiscal separated programmes and funds and implemented parametric changes to avert its financial collapse.

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Annex 2.A. Overview of social security and pension schemes

Annex Table 2.A.1. Overview of social security schemes by eligibility group

Contingency	Benefit	Institution	Agency	Target group	Coverage (2016)	Participation	Introduced	Financed by
Government official								
Death	Death of income earner	General Directorate on non-contributory pensions	Ministry of Finance	Survivors of police and military personnel	237 228			General budget
Disability	Invalidity pension	Caja Fiscal	General Directorate on Pensions, Ministry of Finance	Public officials	237 228	Compulsory	1909	Contributions
Old age	Old-age pension	Caja Fiscal	General Directorate on Pensions, Ministry of Finance	Public officials	237 228	Compulsory	1909	Contributions
Health	Medical care	Health agencies of the Armed Forces and Police		Military personnel, police personnel and dependants		Universal		General budget
	Medical care	Pre-paid private insurance	Agencies with contracted plans	State employees and officials		Occupation-based		General budget
	Medical care	Private insurance	All other agencies	State employees and officials		Voluntary		Private contributions

Annex Table 2.A.1 *(cont.)*

Contingency	Benefit	Institution	Agency	Target group	Coverage (2016)	Participation	Introduced	Financed by
Formal sector workers								
Maternity	Maternity cash benefit	Social Security Institute (IPS) + small closed pension schemes	MTESS	Private sector employees	743 852[b]	Compulsory	1942	Contributions
Disability	Invalidity pension	Social Security Institute (IPS) + small closed pension schemes	MTESS	Private sector employees	555 844[b]	Compulsory	1943	Contributions
Sickness	Income in sickness	Social Security Institute (IPS) + small closed pension schemes	MTESS	Private sector employees	743 852[b]	Compulsory	1944	Contributions
Occupational injury	Occupational injury and sickness cash benefit	Social Security Institute (IPS) + small closed pension schemes	MTESS	Private sector employees	743 852[b]	Compulsory	1943	Contributions
Death	Survivor pension	Social Security Institute (IPS) + small closed pension schemes	MTESS	Children (minor or disabled) and partner of insured private sector employee	555 844[b]	Compulsory	1944	Contributions
Health	Medical care	Social Security Institute (IPS)	MSPBS	Private sector employees	743 852[b]	Compulsory	1943	Contributions
Old age	Pensions	Social Security Institute (IPS) + small closed pension schemes	MTESS	Private sector employees	555 844[b]	Compulsory	1943	Contributions
	Pensions	Private pension providers (e.g. Caja Mutual de Cooperativistas, Caja Médica, Caja de Profesores de la UCA)	MTESS		30 000[b]	Voluntary		Contributions

Annex Table 2.A.1 *(cont.)*

Informal sector workers								
Disability	Invalidity pension	Social Security Institute (IPS)	MTESS	Private sector employees	518c	Voluntary	2011	Contributions
Death	Survivor pension	Social Security Institute (IPS)	MTESS	Children (minor or disabled) and partner of insured private sector employee	518c	Voluntary	2011	Contributions
Health	Medical care	Public Hospitals	MSPBS, UNA	Universal		Universal		Tax revenues
Old age	Pensions	Social Security Institute (IPS)	MTESS	Private sector employees	518c	Voluntary	2011	Contributions

Annex Table 2.A.1 *(cont.)*

People living in poverty								
Childhood	Allowance (*Tekoporã*)	Secretariat for Social Action (SAS)	Presidency	Children, adolescents, people with disability, indigenous people	685 578 people[d]	Means-tested (Ficha Hogar – SAS)	2005	Tax revenues
Childhood	Allowance (*Abrazo*)	National Secretariat for Children and Adolescents (SNNA)	Presidency	Working children, street children	10 784 children and adolescents	Means-tested (Ficha Social – SNNA)	2005	Tax revenues
Poverty	Productive investment (*Tenonderã*)	Secretariat for Social Action (SAS)	Presidency	Tekoporã beneficiaries with family businesses	5 856 families	Means-tested (Ficha Hogar – SAS)	2014	Tax revenues
Poverty	Productive investment (*Familia por Familia*)	Secretaría Técnica de Planificación (STP)	Presidency	Families with agricultural businesses	776 families	Means-tested (Ficha Social)	2014	Tax revenues
Poverty	Productive investment (Proyecto de Inclusión de la Agricultura Familiar en Cadenas de Valor)	MAG	MAG	Families with agricultural businesses in selected regions, vulnerable farmers, indigenous population	14 500 families (goal)	Targeted	2012	Loan (IFAD)
Poverty	Productive investment (Proyecto de Desarrollo Rural Sostenible)	MAG	MAG	Small or indigenous farmers	29 600 (2016)	Regional targeting	2008	Loan (World Bank)
Health	Medical care	Public Hospitals	MSPBS, UNA	Universal		Universal		Tax revenues
Old age	Allowance (*Adulto Mayor*)	General Directorate on non-contributory pensions	Ministry of Finance	Poor elderly aged 65 or above	162 130[e]	Means-tested (FIcha Hogar – Adultos Mayores)	2010	Tax revenues
Food	Programa Alimentario Nutricional Integral (PANI)	Direccion de Nutricion y Programas Alimentarios, Instituto Nacional de Alimentacion y Nutricion (INAN)	MSPBS	Children and mothers	113 709 (2016)	Means-tested	2005	Tax revenues
Food	Seguridad Alimentaria Nutricional	Secretaría Técnica de Planificación (STP)	Presidency	Indigenous population, for mothers with children below age 5	20 000	Means-tested (Ficha Social)		Tax revenues

Note: MTESS = Ministry of Labour and Social Security. MSPBS = Ministry of Health and Social Well-being. MAG = Ministry of Agriculture.
Source: Own elaboration a. b. IPS (2017), c. Data received by IPS, d. OECD (2018), e. MH (2017).

Annex Table 2.A.2. Public contributory pension schemes in Paraguay

		IPS	Caja Fiscal: Military	Caja Fiscal: Police	Caja Fiscal: Teachers and university professors	Caja Fiscal: Central Administration and judicial personnel	Caja Bancaria	Caja Municipal	Caja Parlamentaria	Caja Ferroviaria	Caja de la ANDE[b]	Caja de Itaipu Binacional
Target group		Private sector	Public sector employees				Banking sector	Local government	Members of Parliament	Railways	Electricity utility	Itaipu
Contributors		531 725	36 350		93 529	107 349	12 762	7 629	125	4	3 914	348
Pensioners		52 532	15 472		24 842	15 141	2 741	1 500	196	471	1 634	442
Contribution rate (% of salary)	Employers'	14	0	0	0	0	17	10	7	10	5+12	15
	Employees'	9	16	16	16	16	11	10	20	10	5+6	6
Standard pension	Benefit (% of salary)	100	Starting at 50[a]	Starting at 30[a]	Starting at 83[a]	Starting at 47[a]	100	Starting at 45[a]	80	100	66.7+42.5	80
	Earnings measure (nominal)	Last 3 years	Last five years				Last 4 years	Last 2 years	Last month	Last 2 years	Last 3 years	Last 3 years
	Retirement age	60	no	no	no	62	60	55	55	50	60	60
	Min. annuities	25	15	10	25[c]	20	30	15	15	25	20	10
Proportional retirement	Benefit (% of salary)	60				Starting at 20		Starting at 40	60		Proportion of standard pension	Proportion of standard pension
	Retirement age	65	n.a	n.a.	n.a.	62	n.a.	50	55	40	60	60
	Min. annuities	15				10		20	10	15	15	5

Note: Contributors and Pensioners: 2016 data for IPS, Caja Fiscal, Caja Bancaria, Caja Ferroviaria, Caja ANDE and Caja Itaipu; 2013 data for Caja Parlamentaria; 2011 data for Caja Municipal. a. The pension benefit increases with annuities, reaching a maximum of 100%; b. The Caja de la ANDE is a complementary system, Employers and employees contribute each 5% to the Caja de la ANDE and respectively 12% and 6% to the IPS; c. Each child counts as an additional annuity for female teachers

Source: Navarro and Ortiz (2014), MTESS (2017), MTESS (2016), Caja ANDE (2017), Dirección General de Jubilaciones y Pensiones (Ministry of Finance) www.hacienda.gov.py/web-hacienda/jubilaciones (accessed on february 2018).

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