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Abstract Chile pioneered in Latin America not only the introduction of social security pensions, but the structural reform that privatized them and a process of "re-reform" implementing key improvements. A Presidential Commission in Chile, appointed in 2014 to evaluate reform progress and remaining problems in the pension system, released its report in September 2015. In light of the Commission's findings, the article assesses Chile's compliance with International Labour Organization social security guiding principles: social dialogue, universal coverage, equal treatment, social solidarity, gender equity, adequacy of benefits, efficiency and affordable administrative cost, social participation in management, state role and supervision, and financial sustainability. The exercise follows three stages: the structural reform (1981–2008), the re-reform (2008–2015), and the Presidential Commission proposals (2015).

Keywords Chile, pension scheme, social security reform, ILO Convention

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Introduction

Chile pioneered the introduction of social security pensions in Latin America. It also initiated the 1980 structural reform that privatized public pensions and influenced World Bank policies and the adoption of similar reforms in eleven countries in Latin America and others in Central and Eastern Europe. Such reforms endured design problems and made many promises that were unfulfilled. In 2008, Chile similarly pioneered a "re-reform" that achieved substantial improvements, but left key shortcomings. In 2014, a Presidential Commission, in which the authors were members, was appointed to elaborate on the reform progress attained as well as remaining problems and to develop proposals to address these. The Commission released its report in September 2015, and President Michelle Bachelet entrusted a Ministerial Committee to study the proposed changes for legislative action.

Building on the abundant literature on Chilean social security, this article aims to conduct a thorough and integrated evaluation of the three reforms and their effects: the structural reform (1981–2008), the re-reform (2008–2015), and the Presidential Commission diagnosis and proposals (2014–2015). To tackle this task, the article focuses on Chile's compliance with ten social security guiding principles shaped by the International Labour Organization (ILO) and supported by the International Social Security Association (ISSA) (ILO and ISSA, 2001), which embody the good governance and design of a pension system (Mesa-Lago, 2012a): i) social dialogue, ii) universal coverage, iii) uniform treatment, iv) social solidarity, v) gender equity, vi) adequacy of benefits, vii) efficiency and affordable administrative cost, viii) social participation in management, ix) state role and supervision, and x) financial (actuarial) sustainability. For each of the principles, we summarize their content, assess the impact of the structural reform and its flaws, appraise the improvements made by the re-reform and identify extant drawbacks, and abridge the most relevant recommendations of the Presidential Commission to confront the remaining challenges by a future, second re-reform.[1]

Compliance with social security principles

Social dialogue

The ILO recommends social dialogue among workers, employers and government when debating a pension reform, to procure inputs, maximize consensus on proposed changes and legitimize the process (ILO, 2002).

Most of the structural reforms that privatized[2] the former public pensions in eleven Latin America countries between 1980 and 2002 were approved without prior social dialogue, provoking questions regarding system design issues and legitimacy. Chile's dictatorial regime enacted its influential reform without a democratically-elected congress, and did so in a context of disbanded political parties, banned or controlled trade unions and no public discussion. Reformers claimed that the public system was bankrupt, inefficient and financially unsustainable, and that the private system would improve coverage, efficiency and benefits, reduce administrative costs and be financially sustainable in the long term.

In 2006, President Michelle Bachelet appointed an advisory commission with l5 representatives to collect views from social actors, study the system's flaws and propose changes to correct them; 90 per cent of that commission's recommendations were incorporated in the law enacted in 2008.

In her second term, President Bachelet appointed in 2014 a Presidential Commission comprising 24 members, national and international, with diverse views. A process of "citizen participation" saw over 2,500 people debating key pension issues at regional dialogues and public hearings, while an opinion survey was also undertaken (CAPSP, 2015a, 2015b). After 16 months of work, the Commission elaborated three re-reform global proposals and approved 58 recommendations.

Universal coverage

The 2001 ILO International Labour Conference (ILC) asserted: "The state has a priority role in the facilitation, promotion and extension of social security coverage … to those not covered by existing systems … including women, self-employed, employees of microenterprises, the elderly, and home workers". "Support for vulnerable groups in the informal economy should be financed by society as a whole" (ILO, 2002).

Coverage of the labour force fell from 73 per cent in 1973 to 64 per cent in 1980 (year of the reform) and to 29 per cent in 1982. Coverage grew to 61.2 per cent in 2007 (the year before the re-reform), but still below the 1980 level. Affiliates who contributed declined from 73.6 per cent to 54.6 per cent in the period 1990–2008. Pension coverage of those aged 65+ shrank from 73.6 per cent to 63.9 per cent between 1990 and 2003, but has since risen (Table 1).

The re-reform mandated the coverage of all self-employed workers starting in 2012, with a contribution rising gradually from 10 per cent of 40 per cent taxable income to 10 per cent of 100 per cent of their taxable income by 2016. As an affiliation incentive, self-employed workers became eligible for family allowances, employment-risks protection, and pension benefits added by the re-reform. Previously-excluded unpaid family workers and housewives were allowed to join voluntarily. A state subsidy was granted to employers of low-income young workers. Coverage among the poor was extended by a non-contributory pension.

***insert Table 1

1. When no specific source is cited, readers are directed to Mesa-Lago (2012b).
2 . Structural reforms transformed publicly-managed defined benefit pensions, PAYG or partially funded, into pensions that were privately-managed, defined contribution and fully-funded (Mesa-Lago, 2014).

Table1. *Pension coverage of the labour force (based on contributors) and population aged 65+, 1973–2013*

Years	Labour force (%)	Population aged 65+ (%)
1973	73.0[a]	
1980	64.0	
1982	29.0	
1990	46.8	73.6
1992	51.8	66.5
1994	51.8	68.2
1996	55.7	65.9
1998	53.4	62.2
2000	52.9	63.7
2003	55.8	63.9
2006	61.1	79.0
2007	61.2	
2008	62.8	
2009	60.3	84.0
2010	60.3	
2011	63.6	84.0
2012	63.8	
2013	64.8	83.5

Sources: Mesa-Lago (2012b); CASEN (2013), FIAP (2014); CAPSP (2015b).

Labour force coverage grew from 61.2 per cent to 64.8 per cent across 2007–2013, the highest level since 1980, and the third highest in Latin America. Affiliates to the system increased by 22 per cent across 2009–2013 (FIAP, 2014; Arroyo, 2015). Female coverage augmented by 10 per cent. The share of self-employed workers in total contributors climbed from 4 per cent to 20 per cent in the period 2008–2014, but only 22 per cent to 33 per cent of those with taxable income contributed in 2013 (CASEN, 2013). Elderly coverage by contributory and non-contributory pensions jumped to 84 per cent in 2009-2013, 6 percentage points higher than in 2006, placing Chile in the top five countries in the region, mostly due to the inclusion of women by the extension of the non-contributory pension. Without the latter, elderly poverty incidence would have been 2.1 percentage points higher.[3]

Despite the re-reform advances, a third of the labour force still lacks contributory coverage because of evasion or lack of affiliation (two-thirds are self-employed). Female coverage is much lower than male coverage; 9 per cent of all females are in household employment and half of these do not contribute. Elderly coverage stagnated from 2011 to 2013; voluntary affiliates are only 0.2 per cent of total affiliates; the youth employment subsidy covers only 3.6 per cent of those eligible; unpaid family workers, employees without a contract and small employers represent 12 per cent of the employed labour force and lack coverage (SP, 2014b; CAPSP, 2015b).

The Presidential Commission recommendations to address these flaws are to: expand access to the Basic Solidarity Pension (*Pensión Básica Solidaria* – PBS) to 80 per cent of the poorest households or universalize access with an income test; make adjustments to the gradual incorporation of the self-employed; increase fines imposed on employers that retain and fail to transfer contributions; create a more rapid judicial procedure for the execution of sanctions; and establish a special entity to coordinate all policies to promote affiliation and contributions (CAPSP, 2015b).

Equal treatment

According to the ILO, "equal treatment is a guiding principle of social security" (Greber, 1997), and should be enforced in pension programmes for powerful groups where entitlement conditions and/or benefits are more generous than in the general system (unless justified by factors such as physically-demanding or dangerous work). Such generosity is mostly state financed; in other words,

3. Chile's population poverty incidence was 7.8 per cent in 2013, the third-lowest in the region (ECLAC, 2014; poverty is measured by the cost-of-basic-needs method).

it is subsidized by the general population, including insured persons with less generous entitlement conditions and benefits and also the uninsured.

The structural reform integrated a number of separate pension schemes into a unified agency with standardized entitlement conditions. The military government who implemented the structural reform proclaimed it would be superior to the public system – but the armed forces and police force were excluded and maintain their separate defined benefit schemes, with better entitlement conditions and pensions than those in the general system. These are 90 per cent subsidized by the state at a cost of 0.9 per cent of GDP per annum. This cost can be compared with the cost of the entire re-reform: 0.47 per cent of GDP (CAPSP, 2015b). Legislative attempts and social pressures so far have failed to correct such inequality.

The Presidential Commission asked that the armed forces and police force schemes have the same treatment and contributions as the rest of the labour force, which implies an elimination or reduction of the fiscal subsidy, and establishing adequate contributions from their members and the state as employer (CAPSP, 2015b).

Social solidarity

The 2001 ILC noted: "In pensions systems with defined benefits based on pay-as-you-go (PAYG), the risk is collectively assumed but in systems of individual saving accounts (fully funded), persons assume the risk. While this option exists, it should not weaken solidarity systems which spread risks throughout all members" (ILO, 2002).

Private systems normally lack endogenous social solidarity because the individual account belongs to the insured and there is no solidarity between generations, genders and income groups. The little social solidarity that Chile had was state provided: payment to complete the minimum pension, financing of non-contributory pensions (PASIS) – but restricted by quotas, waiting lists and available fiscal resources – and recognition of previous contributions to the public system.

The re-reform created two state-financed "solidarity pensions":

- A "basic solidarity pension" (PBS) for old age and disability, for affiliates without the right to a minimum pension or to PASIS; the PBS was initially granted to 40 per cent and later to 60 per cent of the poorest homes, without any pension, aged 65+, and living in the country for 20 years[4];
- A "solidarity contribution to pensions" (APS) replaces gradually the minimum pension and supplements low contributory pensions for those aged 65+. The APS decreases in tandem with increases in the contributory pension amount, and entitlement ends when the contributory pension exceeds a cap, with progressive effects. Entitlement conditions for the APS are similar to those for the PBS.

Attanasio, Meghir and Otero (2011) show that solidarity pensions have created a small disincentive to work formally, but conclude that the welfare benefits exceed such negative effect. The contributory private system continues to lack endogenous solidarity, whereas state-financed exogenous solidarity does not yet fill the subsisting gaps in employment coverage, gender equity and benefits adequacy.

Several Presidential Commission proposals have positive effects on social solidarity, such as extending the PBS' coverage to all the poor or making access universal. Twelve countries in the region have non-contributory pensions, out of which eleven are targeted on the poor; only Bolivia has a universal pension, which is extended also to beneficiaries of contributory pensions, but the benefit level is low (USD 38 a month). Universal provision would cost more in Chile because the PBS amount is 3.5 times greater than the benefit in Bolivia. Filgueira and Espíndola (2015) estimate that universalization of the PBS would cost an additional 0.11 per cent of GDP, while the targeting

4. Progress in elderly protection through PBS has been significant (Table 1; CAPSP, 2015b).

on all the poor would cost an additional 0.04 per cent of GDP. Other proposals that improve social solidarity are discussed later.

Gender equity

The 2001 ILC asserted: “Social security should promote and be based on the principle of gender equality.” Women should be paid for their work in raising children and providing care for other relatives (ILO, 2002).

Gender inequalities are caused by: i) the labour market (e.g. women are paid lower wages than men for the same work and have more part-time, temporary or informal jobs); ii) the pension system (e.g. lower coverage rates for women than men, the retirement age for women is five years lower than that for men, and gender-differentiated mortality tables); iii) demographic factors (e.g. six years longer life expectancy for women); and iv) cultural aspects (men often do not undertake household chores, increasing women’s workload). Inequalities caused by the pension system were aggravated by the structural reform and the private system. While 69 per cent of elderly men were pension beneficiaries, only 54 per cent of women were (Rofman and Oliveri, 2012). Women’s pensions were lower than men’s due to: interrupted labour market histories to raise children or care for sick elderly relatives, lower contribution density than men (42 per cent and 61 per cent, respectively), and pensions calculated based on individual account funds and gender-differentiated mortality tables. Characteristically, with a lower individual fund value and greater life expectancy than men, the annuities of women are lower than for men, and female replacement rates were on average 38 per cent of the rates for males. Men lacked the right to a survivorship pension on the death of an insured wife.

The re-reform improved gender equity. Mothers affiliated to the private system, regardless of their income, receive a maternity voucher per child born alive; the voucher is deposited in the mother’s individual account, accruing an annual return, and is made effective at retirement. The disability and survivors insurance premium was equalized for both genders, but as women face lower risks and use this insurance less, the remaining amount of the premium paid by women is assigned to their individual accounts (0.15 per cent of the fee in 2013). In case of divorce, a judge can decide to divide funds, accumulated during marriage in the individual accounts, between the spouses, capped at 50 per cent. Housewives can affiliate voluntarily and receive contributions paid on their behalf by their partners. Husbands are now eligible for a survivor pension.

Female labour force participation rose from 40.9 per cent to 45.6 per cent across 2006–2013. Pension coverage for elderly women jumped from 74 per cent to 83 per cent, approaching the 84 per cent coverage rate for men (CASEN, 2013). The solidarity pension distribution favours women: concerning the PBS for old age, women’s share grew from 59 per cent to 72 per cent across 2009–2014 (the average PBS benefit for women was 4 per cent above that for men) and 91 per cent of APS beneficiaries were women. In 2014, 399,532 women had received the maternity voucher. The gender gap in the replacement rate decreased 6 percentage points from 2008 to 2011. Regarding the splitting of individual accounts in case of divorce, 1,683 transfers of funds were completed by 2014, 95 per cent benefited wives and 5 per cent husbands (SP, 2015a).

Notwithstanding the progress achieved, women continue to be substantially discriminated against. The World Economic Forum’s Gender Inequality Index ranked Chile 125th (out of 136 countries) concerning equal payment for the same work (Montecinos, 2015). The gender gap in labour participation is 25 percentage points (CASEN, 2013). The replacement rate for women is 41 per cent of men’s; while the pension average for women is 43 per cent of men’s (SP, 2014a, 2014b). Sex-differentiated mortality tables remain in use.

The Presidential Commission proposed to: implement unisex mortality tables; assign half of the contributions to the individual accounts to the legal or common spouse; in case of divorce, equally divide the fund accumulated during marriage between the spouses; compensate unpaid work when caring for the elderly or incapacitated; increase the number of child day-care centres and improve access to these; and equalize retirement ages at age 65, starting with those born after 1970 (CAPSP, 2015b). Concerning the latter, women's effective retirement age is 64.8 years, compared to the legal retirement age of 60.

Adequacy of benefits

The ILO Convention concerning Invalidity, Old-Age and Survivors' Benefits, 1967 (No. 128), set the pension minimum replacement rate at 45 per cent for an average earner with 30 years of contributions. Pensions should be adjusted to the cost of living. State-financed non-contributory pensions for the needy should be granted according to available resources. The ILO's Recommendation concerning National Floors of Social Protection, No. 202 (2012), set basic income security for the elderly at least equal to the national minimum (ILO, 2012).

A means-tested non-contributory pension (PASIS), which existed prior to the structural reform, has continued with a cap on the number of beneficiaries, with waiting lists for access, and is subordinated to available fiscal funds. The structural reform increased to 20 years the contributions needed in previous public schemes to grant a minimum pension and guaranteed it to those in the private system whose individual accounts were insufficient to finance it. The minimum pension averaged 62 per cent of the minimum wage in 2007 and projections suggested that 35 per cent of men and 60 per cent of women would eventually receive it. Some insured lacked both the right to a minimum pension (falling short of the required contribution years) and to a non-contributory pension (failing the means test, or due to a lack of public funds). Contributory pensions were automatically indexed to the UF.[5]

The re-reform helped affiliates who did not qualify for a minimum or non-contributory pension. The monthly PBS in 2015 was USD 132, which is 79 per cent higher than the PASIS; it was increased by 50 per cent across the period 2008–2015, and is annually adjusted to the consumer price index (CPI). The average real contributory pension increased 83 per cent, an increase that has favoured most the lowest-income beneficiaries (CASEN, 2006, 2013). In 2015, on average, the value of the APS represented 79 per cent of total old-age pension income, and 92 per cent of disability benefit income (the cap was USD 428 a month); APS is adjusted to the CPI. The number of PBS and APS beneficiaries doubled in the period 2008–2014, reaching 1.24 million. Elderly poverty decreased by 2.7 percentage points. The PBS was paid to 96 per cent of the 60 per cent poorest families, but was incorrectly paid to 4 per cent among the 30 per cent with the highest income, leading to the suspension of benefits for 0.2 per cent of beneficiaries and the development of a new more efficient means-test method (CCP, 2011; CUSP, 2011; SP, 2014b, 2015a). A voluntary collective savings programme was created with contributions negotiated between employers and employees or paid by employers only, with deferred tax payment. However, few companies are taking part in this programme, and takeup is particularly low among middle-income insured.

The ILO and the Organisation for Economic Co-operation and Development (OECD) have set a minimum replacement rate (RR) of 45 per cent applied to the average salary during the insured active life. The *Comisión Asesora Presidencial sobre el Sistema de Pensiones* (CAPSP) originally estimated average RR that were, with few exceptions, above such a minimum, but found significant segmentation among pensioners and decided that using the median was more informative. CAPSP (2015b) estimated that the self-financed (individual savings) median replacement rate taking into account earnings from the last ten years before retirement was 34 per cent for all pensioners across 2007–2014 (Table 2). Pensioners with high contribution densities showed a median RR reaching 46 per cent; while those with low density achieved only 4 per cent. There were also significant differences by gender. The median RR for men was 48 per cent, while for women it was only 24 per cent. The APS significantly increased the median RR to 45 per cent for all pensioners; 60 per cent for men and 31 per cent for women; highlighting the important role of the state.

5. UF (*Unidad de Fomento)* is a monetary unit automatically adjusted to CPI.

***insert Table 2*

Table 2. *Median replacement rates (RR), ten last salaries; 2007–2014 and projected 2025–2035*

	Total	Men	Women
RR (2007-2014)			
Without APS (self-financed)	34	48	24
With APS	45	60	31
Projected RR (2025-2035)			
Without APS (self-financed)	15	24	8
With APS	37	41	34

Sources: CAPSP (2015b).

CAPSP (2015b) also projected the RR for workers whose entire working lives would be under the reformed system. For this purpose, simulated future profiles of earnings and labour force participation were used to estimate the accumulated pension savings balances and benefits obtained under the parameters of the system under the 2008 re-reform. The resulting median RR are lower than the ones discussed before: for self-financed pensions, 15 per cent (25 per cent for men; 8 per cent for women). Adding the APS, the median RR are higher: 37 per cent for all pensioners (41 per cent for men; 34 per cent for women).

The Presidential Commission recommended to: increase by 20 per cent the value of the PBS and APS; raise the contribution rate (and thus the amount deposited) [Authors: the first mention of the "deposit". In English, it is ambiguous. Do you mean: the value of the monthly retirement savings placed in the IA?] from 10 per cent to 14 per cent, with 4 per cent charged to the employer; augment by 50 per cent the cap on taxable income; eliminate the programmed pension (which is selected by the vast majority of pensioners); and further improve the targeting mechanism and review it every three years (CAPSP, 2015b). Other improvements are listed in the sections on Gender equity and Efficiency and reasonable administrative costs.

Efficiency and reasonable administrative costs

The 2001 ILC affirmed that "schemes should be managed in a sound and transparent manner with administrative costs as low as practicable" (ILO, 2002).

In 1979, the government unified the separate pension schemes existing prior to the reform into the National Institute of Pensions (*Instituto de Normalización Previsional* – INP), except for the armed forces and the police force. The private system, starting in 1981, was (and is) managed by pension fund management companies (*Administradoras de fondos de pensiones* – AFPs) that charge fees as a percentage of the taxable income for administering the old-age pension, as well as a fixed fee with regressive effects. The premium to cover disability and survival risks was collected by the AFP and transferred to commercial insurance companies. Market competition did not work out as expected: the number of AFPs dropped from 21 to 5 from 1994 to 2008, the concentration of contributors in the three major AFPs jumped from 67.1 per cent to 86.4 per cent, and freedom to select an AFP was restricted. Despite the structural reform's assertion that administrative costs would decrease due to competition and private administration, the average fee increased from 2.44 per cent to 2.68 per cent across 1981–2008 (Table 3). Inefficiency and high managerial costs threaten to reduce future pensions: fees charged in the private system take a quarter of affiliates' deposits placed in individual accounts (OECD, 2013).

The re-reform produced measures to stimulate competition and reduce administrative costs: a) a biennial bidding process was introduced, where new entrants to the labour force are allocated to the AFP with the lowest fees; the new affiliates must remain with the allocated AFP for two years, but can then switch to another AFP charging lower net fees (the reduced fee is also charged to affiliates in the bid-winning AFP); b) the elimination of the fixed fee with regressive effects; and c) the replacement of the individual bidding process undertaken by each AFP to choose the commercial insurance company responsible for disability and survivor risks by a process of universal collective bidding.

*****insert Table 3**

Table 3. *Administrative costs of the private system, 1981 and 2007–2014*

Years	Cost (% of taxable income)			Total costs/
	Old-age fee [a]	Dis. & surv. premium[b]	Total	deposit (%)[c]
1981			2.44	24.4
2007	1.71	0.73	2.40	24.4
2008	1.74	0.94	2.68	26.8
2009	1.55	1.87[d]	3.42	33.8
2010	1.49	1.49	2.98	29.8
2011	1.48	1.49	2.97	29.7
2012	1.41	1.26	2.67	26.7
2013	1.39	1.26	2.65	26.5
2014	1.14	2.40	2.40	24.0

[a] Net fee paid to the AFP.
[b] Disability and survival premium to the insurance company.
[c] The deposit is 10% of taxable income.
[d] In 2009, the same premium for men and women paid by the employers increased the rate, but it declined later.

Sources: Mesa-Lago (2012b) updated with CAPSP (2015b).

The number of AFPs increased from 5 in 2008 to 6 in 2011. The concentration of affiliates in the top three funds decreased 19.8 per cent in the period 2001–2013 and by 2.9 per cent based on the value of the administered funds, but still 70 per cent are affiliated to the largest three AFPs. Due to the biennial bidding process, the net fee declined from 1.74 per cent in 2008 to 1.14 per cent in 2014. In January 2014, the bid was won by an AFP offering a net fee of 0.47 per cent. Conversely, the average premium rose from 2.68 per cent to 3.42 per cent in the years 2008 and 2009 because the abolished fixed commission was excluded from the previous averages, and it is now added as a variable cost; furthermore, coverage on disability and survivors insurance was expanded. Due to bidding, the premium fell to 1.26 per cent in the period 2012–2014, but this is still higher than in 2008. The discount (net contribution plus premium) on the deposit descended from 27 per cent to 24 per cent across 2008–2014, but which is still deemed to be too high (Table 3; CAPSP, 2015b).

Despite progress, weak competition and high administrative costs persist. About 19 per cent of the affiliates had benefited from the net fee reduction in 2014, but the large majority have not switched to the lowest-fee AFP, and remain affiliated to the three most expensive – neither the fee nor the returns have a direct link to services provided by the costliest AFP – which may be explained by affiliates' lack of knowledge or inertia, marketing and transfer costs. The only fee authorized is a fixed percentage on the taxable salary of each contributor to an AFP, which generates incentives to incorporate high-income affiliates. The average AFP profit rose from 26.5 per cent to 31.3 per cent in 2012–2013; the net fees for operational expenses represent between 60 per cent and 75 per cent of these profit earnings (CAPSP, 2015b; Sojo, 2014). In the 2014 opinion survey, 79 per cent of the interviewees supported a state-owned AFP, and 69 per cent would opt to affiliate to it (CAPSP, 2015a).

The Commission approved proposals to improve competition and cut costs, involving to: establish a public AFP with the same operating rules as the other AFPs; extend the current bidding process to win first-time affiliates also to a fraction of existing affiliates; allow entry of not-for-profit entities; transfer to the AFP the financial intermediary's commission for investments currently charged to affiliates; and introduce collective bidding for annuities (CAPSP, 2015b).

Social participation in management

Social participation in management is a principle that complements democracy and helps systems to reflect the needs and aspirations of the insured and beneficiaries (ILO, 2000). The 2001 ILC recommended the effective participation of, and a key role for, social interlocutors in policy development, through bipartite or tripartite organs (ILO, 2001).

Before the structural reform, most pension funds had tripartite participation in their administration. The reform eliminated social participation in the AFPs and the Superintendence (the pension system's supervisory body), although workers are the owners of their pension funds.

To alleviate the lack of social participation, the re-reform created a Commission of Users (CUSP), consisting of five different members, each one representing one of the following five groups: workers, pensioners, INP insured, scholars and AFPs. Representatives assess performance, monitor execution of re-reform goals, and publish annual evaluation reports. A state-financed Pension Education Fund was established to disclose information and educate the general public on pension matters, as do advisory centres that respond to questions from the public and help the insured to claim benefits and select AFPs, multifunds and pension options (CUSP, 2011).

The CUSP is a consultative body and its recommendations are not mandatory. Lack of knowledge about the pension system persists. The opinion survey of 2014 indicated that between 44 per cent and 51 per cent of those surveyed lack adequate knowledge of key elements of the system across all ages and educational and income levels – an obstacle to more active involvement. The least known elements are the fee charged and the APS (11 per cent and 12 per cent of those surveyed, respectively) (CAPSP, 2015a). The Pension Education Fund (PEF) has not lived up to expectations: the available information is too technical and not tailored for different educational levels; one of the Fund's still unmet goals has been to promote school courses providing information on the pension system.

The Presidential Commission made a number of recommendations to: allow workers' participation in the Board of Directors; expand the functions of CUSP and a Technical Consultation Council; introduce programmes in the Pension Education Fund to educate students, workers, trade union members and employers, and also to determine the population segment to be targeted, set specific goals and indicators to evaluate PEF performance; and fund pilot education programmes by a public institution. AFPs should develop pension educational activities to be approved by a government-appointed committee (CAPSP, 2015b).

State role and supervision

The ILO Social Security (Minimum Standards) Convention, No. 102 (1952) defines that, regardless of the type of administration chosen, the state must be responsible for the good management of institutions and services to ensure the protection guaranteed in ILO instruments.

Under privatization, the state was supposed to play a subsidiary role to the market but, actually, the state has had a key role in Chile, where 98 per cent of the insured are in the private system: affiliation and contributions are mandatory for salaried employees; the government regulates, supervises and guarantees the system; and finances the fiscal cost of the transition (see next section). Fragmentation resulted from multiple supervising entities: the AFP Superintendence, an autonomous technical agency supervised the private system, while the Social Security Superintendence and the INP oversaw the remaining public system. The armed forces and police force schemes are not under state supervision, except for general auditing.

The re-reform considerably widened the role of the state, which grants and finances solidarity pensions and the maternity voucher, improves social solidarity and gender equity, promotes competition, consolidates supervision and guarantees the financial strength of future benefits. A more systemic structure linked contributory and non-contributory pensions. The AFP Superintendence was replaced by a unified Pension Superintendence, which oversees the private and public pension systems (excluding the armed forces and police force), the new solidarity pensions, and the advising centres.[6] The INP became the Institute of Social Pensions (*Instituto de Previsión Social* – IPS) to administer the solidarity benefits (the AFP administration of minimum pensions ceased). The waiting time in the advising centres was reduced from one hour to 15

6. See also (in Spanish) <http://www.safp.cl/apps/boletinEstadistico/>.

minutes. The general satisfaction index was 89 per cent and the adequate service index 96 per cent; a "single register" serves all types of pensions, making the service more agile (CUSP, 2011). Powers of the Pension Undersecretary were strengthened to better support the effective design of social security policies and to monitor the re-reform.

As already noted, Presidential Commission proposals strengthen the state's role in the pension system: extending coverage of the labour force and the elderly through increasing coverage under the PBS; proposing the integration of the armed force and police force pension schemes; improving pension levels; closing the gender gap; further broadening social solidarity; creating a public AFP and promoting more competition between AFPs to reduce administrative costs; and guaranteeing financial sustainability of the pension system (CAPSP, 2015b).

Financial sustainability

According to ILO Convention No. 102 (1952): "the state must ensure that actuarial studies and estimates are periodically done to maintain financial equilibrium and … before any modifications in benefits, contributions and taxes ... [b]enefits and administrative expenses must be financed collectively through contributions, taxes or both ... Total contributions paid by the insured should not exceed 50 per cent of total resources devoted to protection," the rest to be financed by employers and/or the state.

The structural reform abolished the employers' contribution and shifted the responsibility to workers who pay 10 per cent of their taxable income (deposited in the individual accounts), as well as the commission and premium, thus infringing the ILO norm that the workers' share should not exceed 50 per cent of the total contribution. The value of capital accumulated in individual accounts increased from 3.9 per cent to 64.4 per cent of GDP from 1982 to 2007, but decreased to 52.8 per cent in 2008 due to the global financial crisis. The average annual real rate of return since the inception of the system steadily declined from 20.6 per cent to 8.8 per cent. The portfolio composition by investment instrument gradually diversified from 1981 to 2008: investments shrank in public debt from 42 per cent to 14 per cent and in financial institutions from 55 per cent to 30 per cent, whereas they rose from 2 per cent to 27 per cent in stocks and from zero to 28 per cent in foreign instruments. In 2008, 55 per cent of the portfolio was concentrated in domestic enterprises and foreign instruments, whose return that year dropped sharply due to the global financial crisis (Table 4).

****insert Table 4

Table 4. *Accumulated capital in the fund, Real return on capital, Portfolio composition by financial instruments and Fiscal cost of the transition of the private pension system, 1982–2013.[a] [Can we have a more concise title for this Table?]*

Pension Fund Performance and fiscal costs of the transition in the private system, 1982-2013[a]

Year	Accumulated capital		Real return (%)		Portfolio composition by instrument (%)				Fiscal cost (% GDP) [e]
	USD millions	% GDP	From the inception [b]	Last year	Public debt	Financial institutions [c]	Enterprises [d]	Foreign	
1982	600	3.9	20.6	28.5	26.0	73.3	0.6	0.0	6.4
1984	1,200	7.7	16.6	3.6	42.0	55.6	1.8	0.0	7.6
1999	3,501	5.3	11.3	16.3	34.6	33.2	12.4	13.4	5.9
2000	3,886	59.8	10.9	4.4	35.7	35.1	11.6	10.9	6.0
2001	3,461	55.0	10.7	6.7	35.0	32.5	10.6	13.1	6.0
2002	3,515	55.8	10.3	3.0	30.0	34.2	9.9	16.2	5.9
2003	4,690	64.5	10.3	10.6	24.7	26.3	14.5	23.7	5.8
2004	6,799	59.1	10.2	8.9	18.7	28.5	15.7	26.8	5.5
2005	74,750	59.4	10.0	4.6	16.4	28.9	14.7	30.2	
2006	88,632	61.0	10.2	15.8	13.1	26.3	17.0	32.0	
2007	111,037	64.4	10.0	5.0	7.8	30.3	14.5	35.6	
2008	74,313	52.8	8.8	-18.9	14.3	29.7	13.8	28.5	
2009	118,053	61.3	9.2	22.5	9.7	18.9	13.9	43.9	
2010	124,726	61.9	9.3	12,0	10.0	16.6	14.6	45.0	
2011	134,962	57.9	8.8	-3.8	21.5	17.5	24.5	36.4	3.5
2012	162,016	59.4	8.7	4.6	21.4	17.9	22.0	38.2	
2013	162,988	61.2	8.5	4.7	21.4	17.4	18.6	42.3	
2014	165,432	69.5	8.6	9.0	21.4	17.6	16.8	44.0	

[a] All at 31 December.
[b] Annual average since inception of the system until the end of every year.
[c] Includes mortgage bonds, bank deposits, and financial bonds.
[d] Includes shares, bonds, investment funds and commercial effects.
[e] Total cost includes operational deficit, recognition bond, minimum pension, non-contributory pension, and armed forces deficit.

Sources: Accumulated capital and portfolio distribution (SP, 2015b, 2015c); annual real rate of return and GDP (Banco Central de Chile, 2015a, 2015b); fiscal cost 1982-2004 (Arenas de Mesa and Mesa-Lago, 2006) and 2011 (CAPSP, 2015b).

In 2002, multifunds were introduced permitting the insured to choose between five portfolios (A to E in terms of declining risk) with different risk exposure. (An insured person when close to retirement age (10 years before) should move retirement savings toward a less risky portfolio, to avoid potential losses to their accounts.) During the global crisis, the rate of return was negative, especially in the riskier funds: -45 per cent in A, -34 per cent in B, -23 per cent in C, -12 per cent in D and -1 per cent in E; in 2008, those who shifted from high to low [Authors: high to low; ok?] risk instruments, lost a large part of their pension (CUSP, 2011). In 2013, the multifunds distribution of affiliates by portfolio risk was: 51 per cent in the riskiest funds (A and B), 35 per cent in the intermediate (C and D) and 14 per cent in the most conservative (E). Out of total affiliates that pursued an active strategy of changing funds in the period 2008–2013, 80 per cent had lower returns than those that were assigned by default to a more conservative fund; and 90 per cent had a worse return than those who stayed in fund C (intermediate risk). The active investment strategy, therefore, generates lower returns. These are additional indications of lack of knowledge and the need for financial education (CAPSP, 2015b).

The state finances all transition costs: the operational deficit resulting from closing the public system, the recognition bond for previous contributions to the former public scheme, the differential cost of the minimum pension, the non-contributory pension, and the armed forces and police force pension "deficit". Contrary to original projections, transition costs were 5.5 per cent of GDP in 2004; excluding the last three elements in the previous list, it was 2.2 per cent.[7] The state also

7. The fiscal cost of the transition as percentage of GDP comes from a series constructed until 2003 that included all five components of transition costs. A new series since 2004 and going back to 1981 gives lower total costs because it

guarantees pensions in case of AFP bankruptcy. Such costs are financed by the population through taxes (particularly the value added tax), which includes the poor and others who are not covered, provoking regressive effects. Contrary to other reforms in Latin America, Chile was able to finance its high transition costs because of substantial fiscal annual surpluses.

Table 4 shows significant improvement in the period 2008–2014 in the fund value, absolute and relative to GDP, setting new records in both. The average real annual capital return since the inception of the system grew from 8.8 per cent to 9.3 per cent in 2008–2010, but afterwards fell, and in 2014 was 8.6 per cent, lower than in 2008. The average return improved with the recovery, from -18.9 per cent in 2008 to 22.5 per cent in 2009, but turned negative in 2011 (-3.8%) then recovered to 9 per cent in 2012–2014.The economic recovery, worldwide low interest rates, and volatile capital markets contributed to this performance. The portfolio composition in the period has been marked by an increase of 16 percentage points in foreign instruments, whereas investment in domestic financial institutions dropped 12 percentage points.

Employers receive a fiscal stimulus to contribute voluntarily to their employees' individual accounts, but in 2014 only 14,430 insured (0.04 per cent of the total) had such employer support. Employers fail to collect contributions from 6.6 per cent of their employees, and many employees reported contributions were not transferred to the AFPs. Although 80 per cent of the debt from declared-but-unpaid contributions is recovered within the first three months of being accrued, the stock of the debt relative to the total fund rose from 1.1 per cent to 1.6 per cent across 2011–2013. About 13.6 per cent of the debt was not recovered in the same year it was generated; the financial penalty imposed on employers who have evaded payment of contributions is only 0.75 UF per worker, which is very low (CAPSP, 2015b). Policies to cope with evasion problems were recommended by a Ministry of Finance study in 2014.

The total fiscal cost/GDP in 2012 came from: 1.9 per cent (operational deficit, recognition bond and minimum pension), 0.74 per cent (re-reform), and 0.90 per cent (armed forces and police force deficit); the total of 3.5 per cent was a reduction from 5 per cent in 2004 due to the decline of all cost components. The cost of the structural reform alone is projected to be 2.7 per cent of GDP in 2025 and should not disappear until 2050, thus taking 70 years to be fully paid off, longer than the original projections (CAPSP, 2015b). The new benefits/structures associated with the re-reform are financed through general taxes and savings deriving from the ending or reduction of obligations.

The long-term financial sustainability of the re-reform is ensured by: a) a solidarity PAYG pension fund with a reserve to finance new benefits; b) triennial actuarial studies of the fund and solidarity system that allocate fiscal funds according to the budget law, and elaborates annual reports on needed resources; c) quinquennial actuarial studies to assess the effects of demographic, financial and behavioural variables of affiliates upon RR and financial needs; d) an advisory board of experts monitors the solidarity pension, its fiscal impact, sustainability and the need for possible adjustment; and e) the Commission of Users annually evaluates the financial status (CCP, 2011, 2013; CUSP, 2011, 2012, 2014). The first actuarial study in 2010 showed that the system will fulfil its obligations until 2030 (CCP, 2011). The second in 2013 confirmed the fund's sustainability in all scenarios (even in one of extreme crisis), as contributions (on average) exceed pension costs.

The re-reform shifted to the employer the 0.8 per cent premium to cover disability and survivor risks, but the worker still pays 11.4 per cent of monthly covered earnings (deposited in the individual account and net fee) or 93.4 per cent of the total contribution amount, well above the 50 per cent of the total contribution set by the ILO. Citizens' dialogue strongly supported the tripartite contribution whereas the 2014 opinion survey had shown that 51 per cent of respondents favoured employers paying part of the old-age contribution (CAPSP, 2015a). The average real net

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excludes solidarity pensions, minimum pensions and the deficit of the armed forces and police force schemes.

rate of return of investment has declined over the lifetime of the system. In 2014, 44 per cent of the portfolio was invested abroad, an unprecedented level that highlights a dangerous level of concentration abroad and the low dynamism of the domestic stock market (there are insufficient national instruments to absorb funds with a value equivalent to 69.5 per cent of Chilean GDP). Continuing world financial uncertainties suggest that more caution is needed as regards investments in foreign assets.

The Presidential Commission proposals deal with some of the above problems, to: develop new instruments of productive domestic investment, especially those that benefit small- and medium-sized enterprises; allow a greater share of investment in real assets (e.g. investment funds), and find new ways to contain the difficulties caused by the lack of market evaluation of such assets; raise the cap set on taxable income to increase revenue (with a progressive effect on distribution); impose on employers a contribution of 4 per cent (workers would still pay a 11.4 per cent contribution); increase the period before the legal retirement age (from ten to 20 years) after which investments should be shifted from higher-risk to lower-risk instruments; eliminate multifunds A and E to reduce excessive choice for insured persons without financial education; strengthen the attributes of the Technical Council on Investment; increase the currently low financial penalties for employers that withhold workers' contributions and fail to transfer them; strengthen the Ministry of Labour and Social Security's capacity in all matters related to the declaration of contribution payments, supervision and the delivery of pensions (CAPSP, 2015b).

Conclusions

Chile's 2008 re-reform – proceeded by social dialogue – significantly improved the social security guiding principles that had been badly eroded by structural reform/privatization: in six years, labour force coverage rose from 62.8 per cent to 64.8 per cent, coverage of the self-employed rose from 4 per cent to 20 per cent, the coverage of women rose by 10 per cent, and coverage of the elderly population rose from 79 per cent to 83.5 per cent (Table 1; CAPSP, 2015b). Two new solidarity pensions (PBS and APS) reduced poverty, doubled the number of beneficiaries, improved pension levels and had progressive effects on distribution; employers now pay the disability and survivors premium; a maternity voucher is deposited in mothers' individual accounts for each child born alive; in case of divorce, up to 50 per cent of the fund accumulated during marriage can be transferred from one spouse to the other; the PBS real amount has increased 50 per cent while the average pension has grown by 83 per cent, favouring lowest-income pensioners; the periodic bidding process has led to cuts in the average net commission from 1.74 per cent to 1.14 per cent of wages (0.47 per cent in the AFP with the lowest fees); and a Commission of Users with wide representation annually assesses performance and the achievement of re-reform goals; the state's role has been strengthened and supervision unified; the total fund value increased across 2008–2014, from 52.8 per cent to 69.5 per cent of GDP, 47 per cent above the pre-crisis level.

Despite the progress achieved, serious problems persist: 35 per cent of the labour force (particularly the self-employed) and 16 per cent of the elderly are uncovered; the privileged and heavily-subsidized (90 per cent) armed forces and police force schemes continue; the solidarity pillar has not yet filled lacunas in coverage, gender equity and inter-generational equity; 39 per cent of women are uncovered, their replacement rate is 41 per cent of that of men, their average pension amount is 43 per cent of that of men, and gender-differentiated mortality tables diminish female pensions; 68 per cent of pensions with a solidarity component are lower than the poverty line; 81 per cent of affiliates have not switched to the AFP with the lowest fees and remain affiliated to the most expensive three; 44–51 per cent of insured lack adequate knowledge of key system elements; tripartite participation in pension administration is still absent; despite a decline, employers' evasion is still important and fines are very low; employers do not contribute to the old-age scheme (one of two countries in the region); the rate of return of investment shows a declining trend, 44 per cent of the portfolio is concentrated on domestic stocks and foreign instruments, and 80–90 per cent of affiliates that pursued an active strategy to move among multifunds have a lower rate of return than those who are either assigned by default to the least risky fund or are in one of intermediate risk.

In 2015, the Presidential Commission, after an unprecedented process of social and technical dialogue, approved 58 specific recommendations, with a majority of members' votes, to cope with many of the identified flaws (most of them documented by a survey of affiliates); such proposals were summarized in each of the ten social security principles analysed in this study. In addition, the Commission voted on three global models to re-reform the current system: A) substantially strengthen the solidarity pillar and significantly modify the individual capitalization pillar to correct many of its flaws; B) create a mixed three-pillar system: the non-contributory basic pension, an intermediate social insurance pillar, and the individual capitalization pillar;[8] and C) return to a pure PAYG system. Models A and B respectively received 12 and 11 votes, whereas Model C received one vote only and was considered financially unsustainable. The Minister of Finance calculated that the cost of implementing the 58 proposals will be 0.4 per cent of GDP, and is assessing the financial cost and sustainability of models A and B (CAPSP, 2015b). A Committee of Ministers has been entrusted with the study of the two models most voted for, as well as the 58 proposals, to decide which to submit to executive and legislative powers. Whatever the outcome, Chile will move forward in improving its pension system.

8. Current and future affiliates would be assigned to pillars 2 and 3, based on their income; those with lower income will be in pillar 2 only, and those with higher incomes will be in pillars 2 and 3.

Bibliography

Arenas de Mesa, A. and C. Mesa-Lago. 2006. "The structural pension reform in Chile: Effects, comparisons with other Latin American reforms and lessons," in *Oxford Review of Economic Policy*, Vol. 22, No.1.

Arroyo, C. 2015. "Cotizantes con sueldos mensuales de $1 millón o más alcanzan casi el 20% del sistema AFP," *El Mercurio*, Santiago, February 18.

Attanasio, O., Meghir, C., and Otero, A. 2011. *Pensiones, Trabajo e Informalidad: Impacto de la Reforma Previsional de Chile de 2008.* Santiago, DIPRES.

Banco Central de Chile. 2015a. *Producto interno bruto, trimestral, precios corrientes. Año 2008-2014.* Santiago, Banco Central de Chile <http://www.bcentral.cl/estadisticas-economicas/series-indicadores/index_aeg.htm>. (accessed on 20.03.2015).

Banco Central de Chile. 2015b. *Rentabilidad real mensual deflactada por U.F. Años 1982-2014.* Santiago, Banco Central de Chile http://www.bcentral.cl/estadisticas-economicas/series-indicadores/index_aeg.htm (accessed on 20.03.2015).

CASEN. 2013. *Encuesta de Caracterización Socioeconómica 2013*. Santiago, Ministerio de Desarrollo Social; http://www.ministeriodesarrollosocial.gob.cl/resultadis-encuesta-casen-2013/.

CAPSP. 2015a. *Encuesta de percepción del sistema de pensiones en Chile*. Santiago, Comisión Asesora Presidencial sobre el Sistema de Pensiones.

CAPSP. 2015b. *Informe Final*. Santiago, Comisión Asesora Presidencial sobre el Sistema de Pensiones, September 15.

CCP. 2011. *Informe anual: Segundo informe enero 2010-julio 2011.* Santiago, Consejo Consultivo Previsional – Subsecretaría de Previsión Social.

CCP. 2013. *Informe anual: Tercer informe agosto 2011-diciembre 2012.* Santiago, Consejo Consultivo Previsional – Subsecretaría de Previsión Social.

CUSP. 2011. *Segundo informe agosto 2011.* Santiago, Comisión de Usuarios del Sistema de Pensiones Santiago – Subsecretaría de Previsión Social.

CUSP. 2012. *Tercer informe anual.* Comisión de Usuarios del Sistema de Pensiones – Subsecretaría de Previsión Social, Santiago.

CUSP. 2014. *Cuarto informe annual.* Santiago, Comisión de Usuarios del Sistema de Pensiones – Subsecretaría de Previsión Social. <http://www.previsionsocial.gob.cl/cu/> (accessed on 20.03.2015).

ECLAC. 2014. *Social Panorama of Latin America 2014.* Santiago, Economic Commission for Latin America and the Caribbean.

FIAP. 2014. *Informe Trimestral No. 35, 31.12.2013*. Santiago, Federación Internacional de Administradoras de Fondos de Pensiones.

Filgueira, F.; Espíndola, E. 2015. *Toward a system of basic cash transfers for children and older persons: An estimation of efforts, impacts and possibilities in Latin America.* Santiago, ECLAC – Social Development Division.

Greber, P-Y. 1997. *An operational framework: The guiding principles of social security*. Geneva, International Labour Organization.

ILO. 2000. *World labour report 2000: Income security and social protection in a changing world.* Geneva, International Labour Organization.

ILO. 2002. *Social security: A new consensus.* Geneva, International Labour Organization.

ILO. 2012. *Social security for all. The strategy of the ILO: Establishing social protection floors and integral social security systems.* Geneva, International Labour Organization.

ILO; ISSA. 2001. *Social security principles.* Geneva, International Labour Organization and International Social Security Association.

Mesa-Lago, C. 2012a. *Reassembling social security: A survey of pension and health care reforms in Latin America.* Oxford, Oxford University Press (second edition).

Mesa-Lago, C. 2012b. "Chile" in C. Mesa-Lago (ed.), *Re-reforms of privatized pensions systems*, Munich, Zeitschrift für ausländisches und internationales Arbeits- und Sozialrecht.

Mesa-Lago, C. 2014. *Reversing pension privatization: The experience of Argentina, Bolivia, Chile and Hungary* (ESS Working Paper No. 44). Geneva, ILO.

Montecinos, V. 2015. "Pensiones y educación: Reformas conectadas. Santiago, 2nd Meeting of the Presidential Commission (power point presentation).

Observatorio Social, Ministerio de Desarrollo Social. 2006, 2009, 2011. *Encuesta CASEN 2006, 2009 and 2011*. http://observatorio.ministeriodesarrollosocial.gob.cl/casen/casen_obj.php .

OECD. 2013. *Pensions at a glance 2013.* Paris, Organization of Economic Cooperation and Development.

Rofman, R.; Oliveri, M. L. 2012. *Pension coverage in Latin America: Concepts and indicators* (Social Protection and Labour Paper, No. 1217). Washington DC, World Bank.

Sojo, A. 2014. *El sistema contributivo de pensiones como locus de rivalidad y de un nuevo pacto social en Chile (*Serie Políticas Sociales, 211). Santiago, Economic Commission for Latin America and the Caribbean.

SP. 2011. *Esquema de Multifondos en Chile* (Documento de Trabajo, No. 43). Santiago, Superintendencia de Pensiones <http://spensiones.cl/portal/informes/581/articles-8006_pdf.pedf> .

SP. 2014a. *Centro de Estadísticas*. Santiago, Superintendencia de Pensiones <www.spensiones.cl>.

SP. 2014b. *Seguimiento de la reforma previsional, enero-junio 2014.* Santiago, Superintendencia de Pensiones.

SP. 2015a. *Séptimo informe de seguimiento de la reforma previsional*. *Primer semestre de 2014.* Santiago , Superintendencia de Pensiones. <http://www.spensiones.cl/portal/informes/581/articles-10628_recurso_1.pdf>. (accessed on 20.03.2015).

SP. 2015b. *Evolución de la inversión de los fondos de pensiones por sector institucional e instrumentos financieros (anuales).* Santiago, Superintendencia de Pensiones <https://www.spensiones.cl/safpstats/stats/.sc.php?_cid=46> (accessed on 20.03.2015).

SP. 2015c. *Valor de los fondos de Pensiones (anuales).* Santiago, Superintendencia de Pensiones <http://www.spensiones.cl/safpstats/stats/.sc.php?_cid=46> (accessed on 20.03.2015).

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