Pension reform and fiscal policy: some (tentative) lessons from Chile

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Chilean pension system is interesting for several reasons:

- Individual capital accounts managed by the private sector, functioning for 28 years: data and research (Corbo and Smidt-Hebbel, 2003, Gill et al., 2005).
- Social and political support.
- Benchmark for many emerging (and industrialized) economies.
- On-going second-generation reform, focused on the solidarity pillar.
- Favre et al. (2006), Comisión Marcel and many others.

→ Fiscal cost of structural pension reform are high and persistent, but affordable **if ...**

OUTLINE

1. The promise and outcome of pension reform.

2. On-going reform: strengthening the redistributive pillar.

3. On the exportability of the Chilean model.

4. Concluding remarks.

Macroeconomic benefits, plus fiscal consolidation.

- The main goal of pension reform is to achieve ‘adequate, affordable, sustainable and robust pensions, while at the same time contributing to economic development’ (Holzman and Hinz, 2005).

- Some macroeconomic benefits are expected from structural pension reform (i.e. DC individual capital accounts vs. DB pay-as-you-go schemes):
  - higher (formal) employment.
  - higher domestic savings and investment rates.
  - financial deepening and faster TFP growth.
  - fiscal consolidation: long-term fiscal savings outpace short-run fiscal costs (´transition costs’).

Defining the transition deficit.

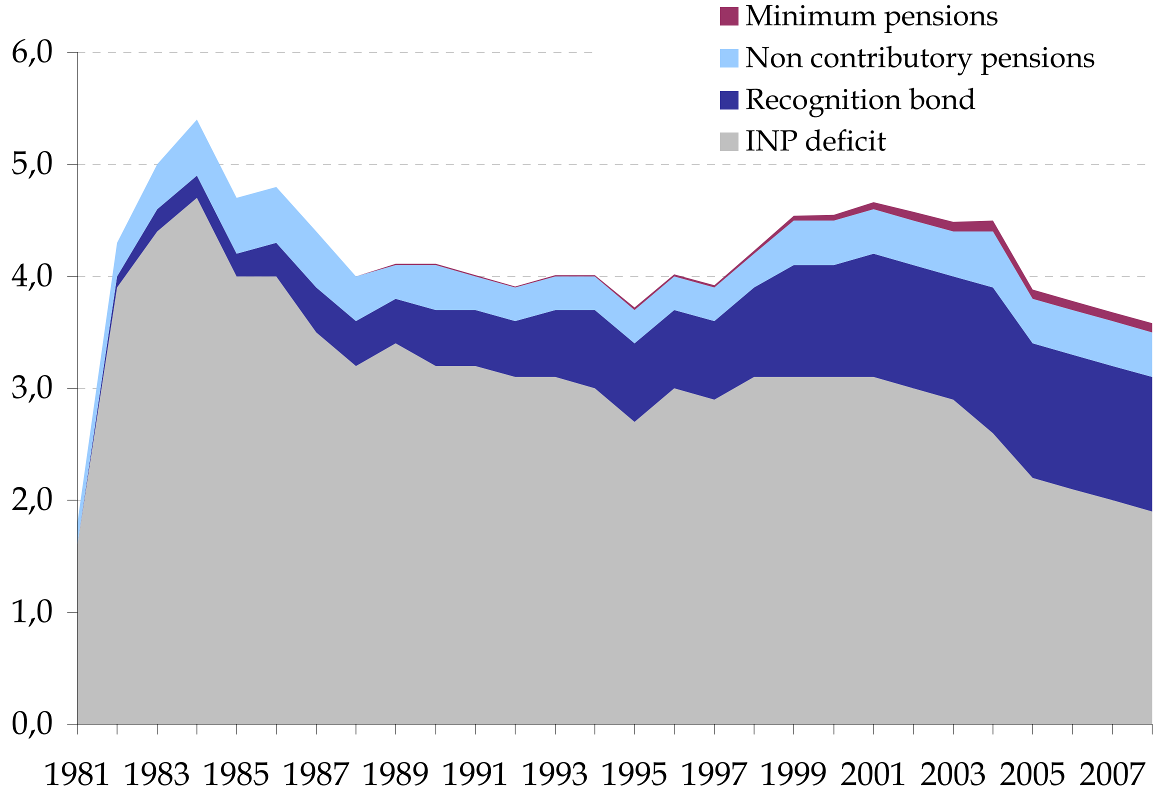
- The 'transition costs' include various items:

  - deficit of the old DB pay-as-you-go system (open or closed).
  - accrued pension rights of affiliates who switch from the old to the new pension system (if existing).
  - contributory minimum pensions (in the new scheme vs. the old one).
  - minimum non-contributory pensions (in the new scheme vs. the old one).
  - others…

- Structural pension reform in Latin America has varied significantly (Mesa-Lago, 2004), and quantifying these items, even on a national basis, is not straightforward.

The transition cost in backward-looking numbers.

Figure 2. Transition deficit of the Chilean civil pension system
(GDP share)



The Chilean pension reform shows that fiscal costs are:

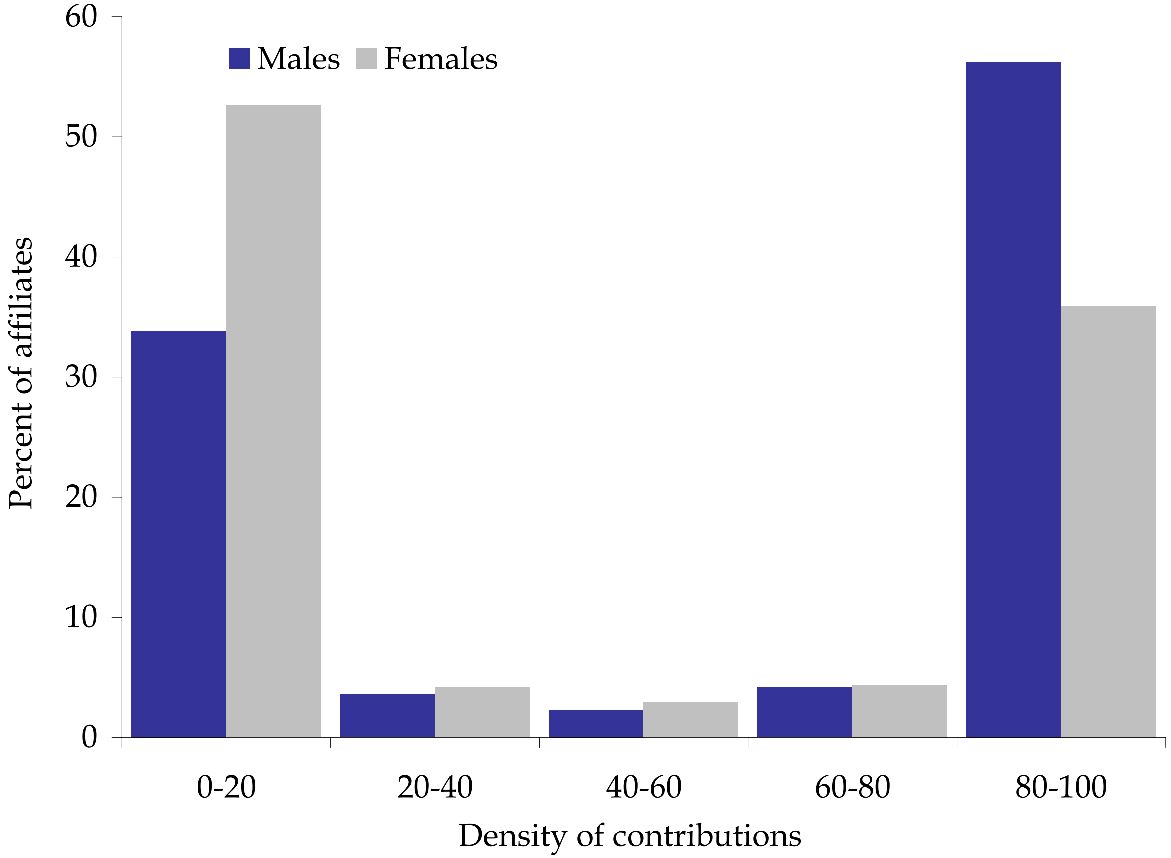
-high (4 p.p, of potential GDP per year).

- persistent (since 1981).

- heterogeneous (nature and timing): INP, Recognition Bonds, minimum pensions.

Looking forward.

Figure 4. Density of contributions by gender in Chile, 2004-2006



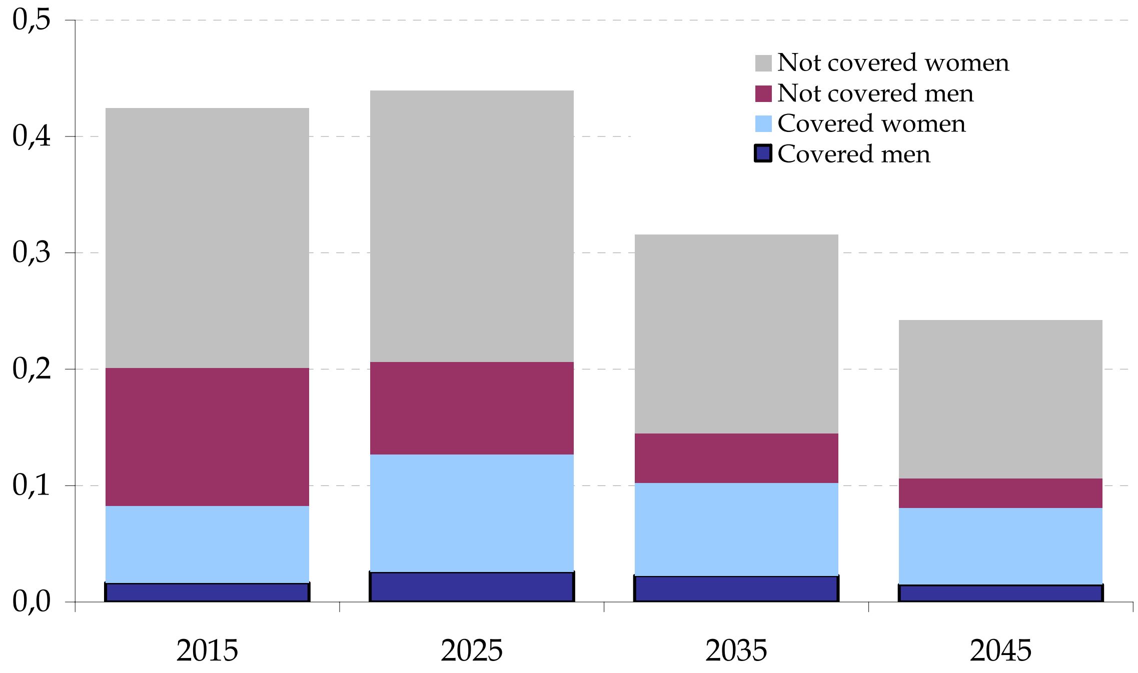
Chile shares a general trend in emerging economies:

precarious insertion of many people into the labor market, with frequent flows between the formal sector, the informal sector and unemployment

Looking forward: insufficient coverage (‘affordable but not adequate’)...

Figure 5. Projection of minimun pension beneficiaries in Chile

(No reform scenario, percentage of pensioners with pension rights < minimum pension)

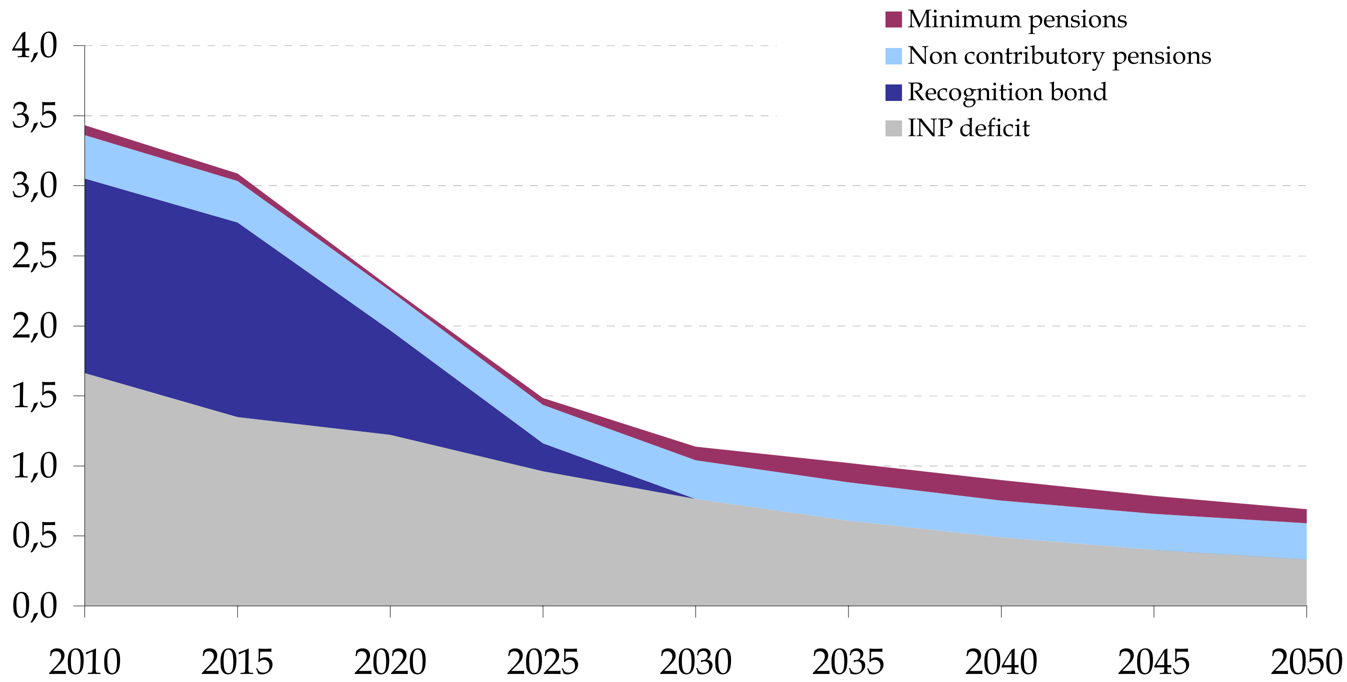


- Actuarial-macro model, 2005-2050, based on public data: 19 cohorts, differentiated by 5 densities of contribution, gender and salary (Favre et al., 2006).
- Includes the main institutional features (RB, official disability and mortality tables, tariffs and fees, phase-out).

Many affiliates would not accrue pension rights above the minimum, and would not qualify either for contributory benefits (mostly women; Berstein et al., 2005).

Looking forward: ... but significant fiscal leeway.

Figure 6. Projection of the transition deficit of the Chilean civil pension system
(No reform scenario, GDP share)



The overall transition deficit would decrease down to 2.3 per cent in 2020 and 1.5 per cent in 2025: exhaustion of RB and the gradual decrease of the INP deficit (i.e. ‘pure’ transition cost).

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The government has enacted an ambitious second generation reform.

Table 2. Chilean pension system. Diagnosis and reform

Diagnostic	Law 20.255 (March 2008)
Poverty risk at old-age (coverage)	New redistributive pillar (SPS)
Low density of contribution among self-employed	Gradual compulsory contribution Fiscal advantages (same as dependent)
Low projected replacement rates for women	Public contributions in case of maternity
Low competition	Auctioning for new affiliates (based on fees) Join bidding for survivors and diability insurance

Goals: strengthening the first pillar (minimum pensions), raising coverage and density of contributions, increasing gender equality, improving competition and reducing costs, and generating better conditions for investment (Consejo Asesor Presidencial para la Reforma Previsional, 2006)

The new SPS in theory: old-age and disability progressive benefits.

Figure 7. Reformed old-age pension system in Chile

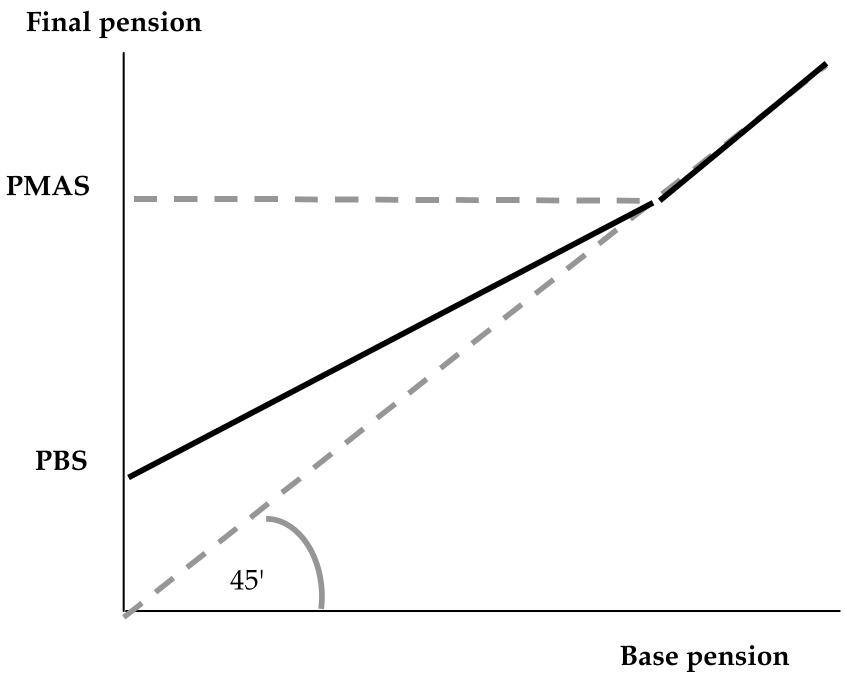
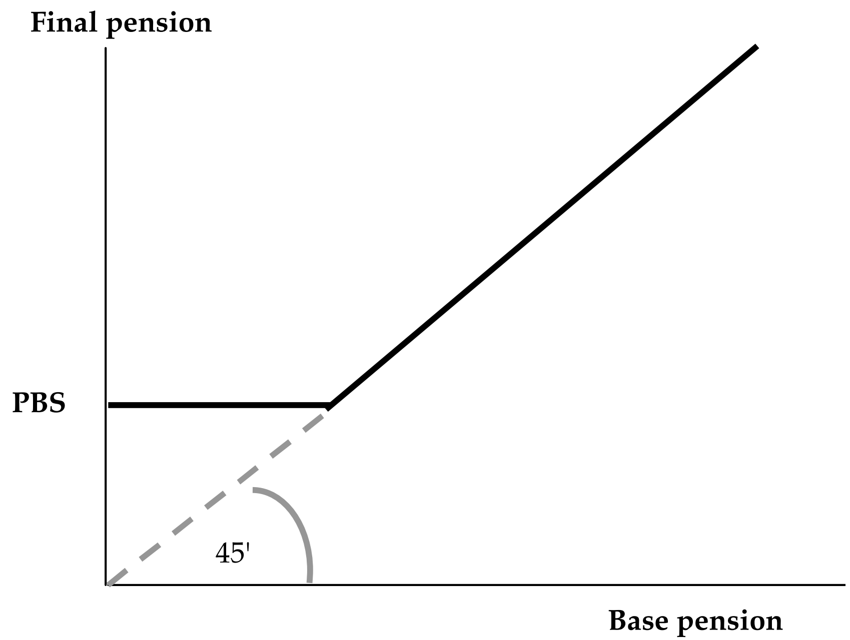


Figure 8. Reformed disability pension system in Chile



The new redistributive pillar SPS (*Sistema de Pensiones Solidarias*) strengthens old-age and disability pensions for middle- and low-income citizens, based on two new benefits: APS (complementary to accrued benefits) and PBS (lump sum).

The new SPS: significant and persistent fiscal effort...

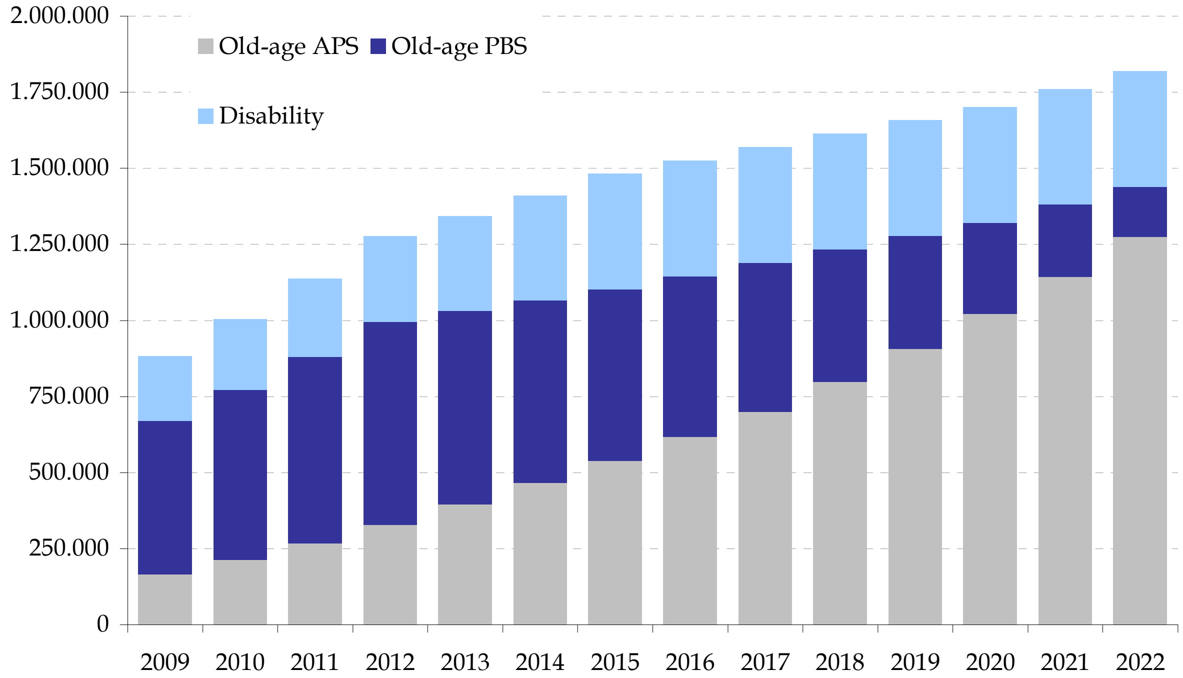
Figure 9. Projection of the expenditure of the solidarity pillar in Chile
(Reform vs no reform scenarios, GDP share)

- Actuarial simulation 2008-2022 based on public data. Affiliates are ‘regular’ (100 per cent) or ‘informal’ contributors (20 per cent), differentiated by gender and salary.
- The main macro and technical assumptions are in line with official projections (Arenas et al., 2008).

Significant additional fiscal cost (0.7 p.p. of GDP on average 2008-2022; official estimate 1.0 p.p. Arenas et al., 2008), but i) good timing (RB is close to peak)…

The new SPS: ... with a extraordinary and necessary social impact.

Figure 10. Projection of beneficiaries of the new solidarity pillar in Chile
(Persons)



… and ii) significant social impact (higher coverage). According to our projections, in 2022 1.8 million people would benefit from the SPS (mainly old-age APS, 1.3 M).

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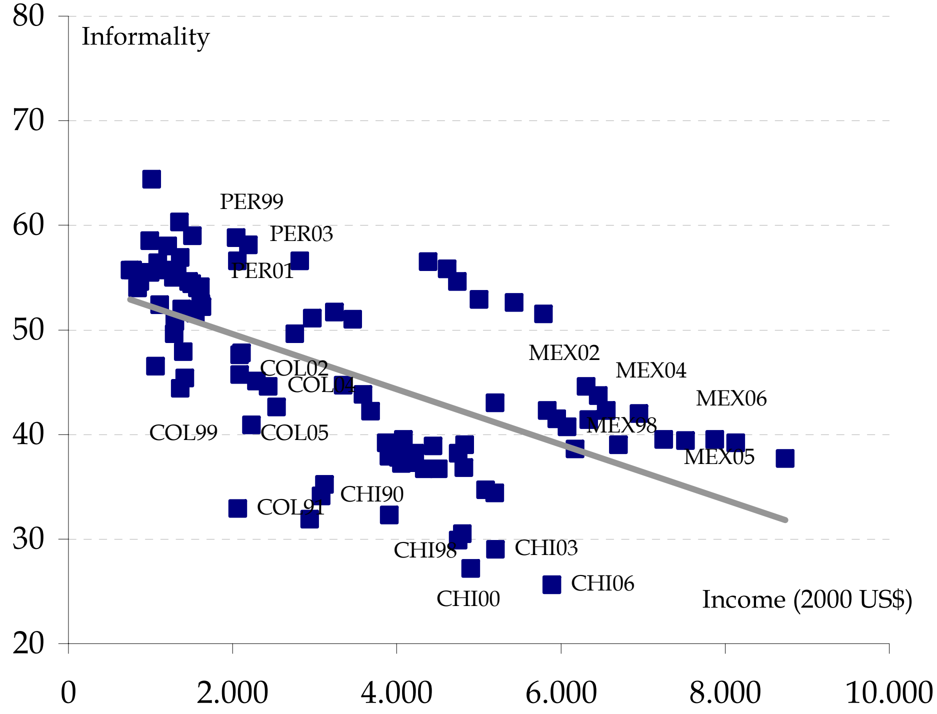
Institutions and issues to be considered: Informality.

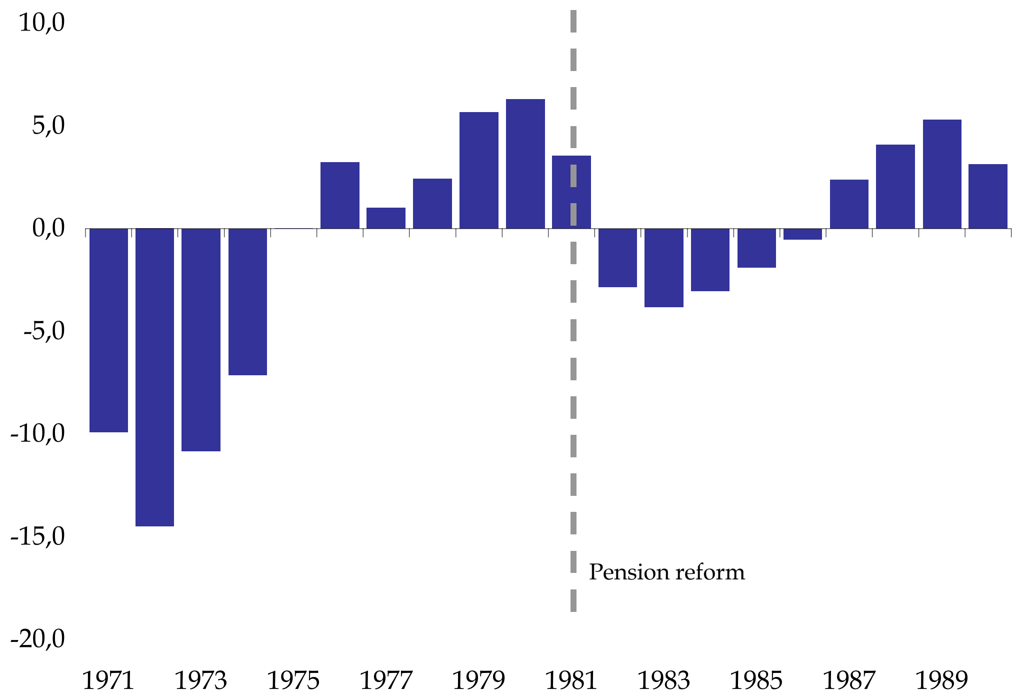
Figure 12. Informality and GDP per capita in LAC
(1990-2007, percentage of urban workers)



Public and market institutions are crucial, especially to elude a vicious interaction solidarity pillar-contributions-labour market informality.

Institutions and issues to be considered: Fiscal policy and others.

Figure 3. Central government net lending in Chile
(Cash, GDP share)

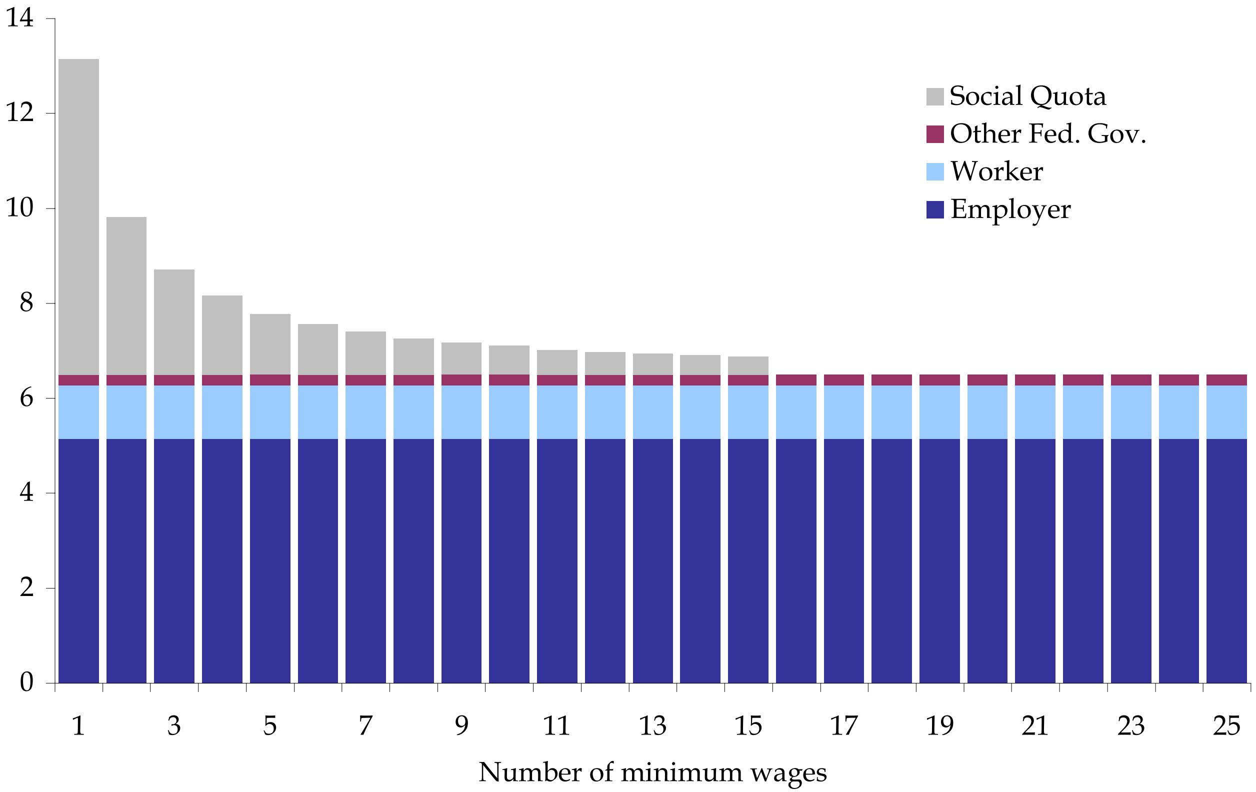


Fiscal consolidation prior to the reform is key: macroeconomic benefits, and for second generation reforms (in the right way). Other: gradual financial reform, social preferences, etc (Barr and Diamond, 2006).

Pension reform and coverage in Latin America: 'work in progress'.

Mandatory contributions for retirement insurance in Mexico

(percentage of worker's income)



Extending coverage in Latin American reformed schemes (CO, MEX, PER) is limited by:

-fragmentation of pension schemes (MEX)

- informality (all).

- not mandatory for independents (MEX, PER)

- **fiscal cost** (all)

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1. The main rationale behind structural pension reform in Latin America has been its long-term **fiscal benefits** (lower implicit debt), plus some related macroeconomic benefits (formal employment, capital and financial deepening).

2. Chile is especially interesting for several reasons:

- Individual capital accounts managed by the private sector since 1981.
- Social and political support.
- Benchmark for many emerging and industrialized economies.
- On-going second-generation reform, including the solidarity pillar.

3. Chilean pension and macroeconomic outcomes are supported by fiscal orthodoxy (**fiscal consolidation** in the late 70s), and **good public and market institutions**. The on-going second generation reform is fiscally affordable, and would make the system 'socially adequate and sustainable'.

4. The reform agenda is not closed, especially for other Latin American economies (Colombia, Peru and Mexico).

- Mandatory and/or opt-out schemes for independents and informal.
- Solidarity pillar. Relaxation of eligibility criteria vs. (dis)incentives.
- Contribution rates. Evaluation of rates and taxable income.
- Disability and survivors benefits. DB/DC, and administrative control.
- Pension funds portfolio. Infrastructures, default allocation.
- Competition, fees and financial knowledge.

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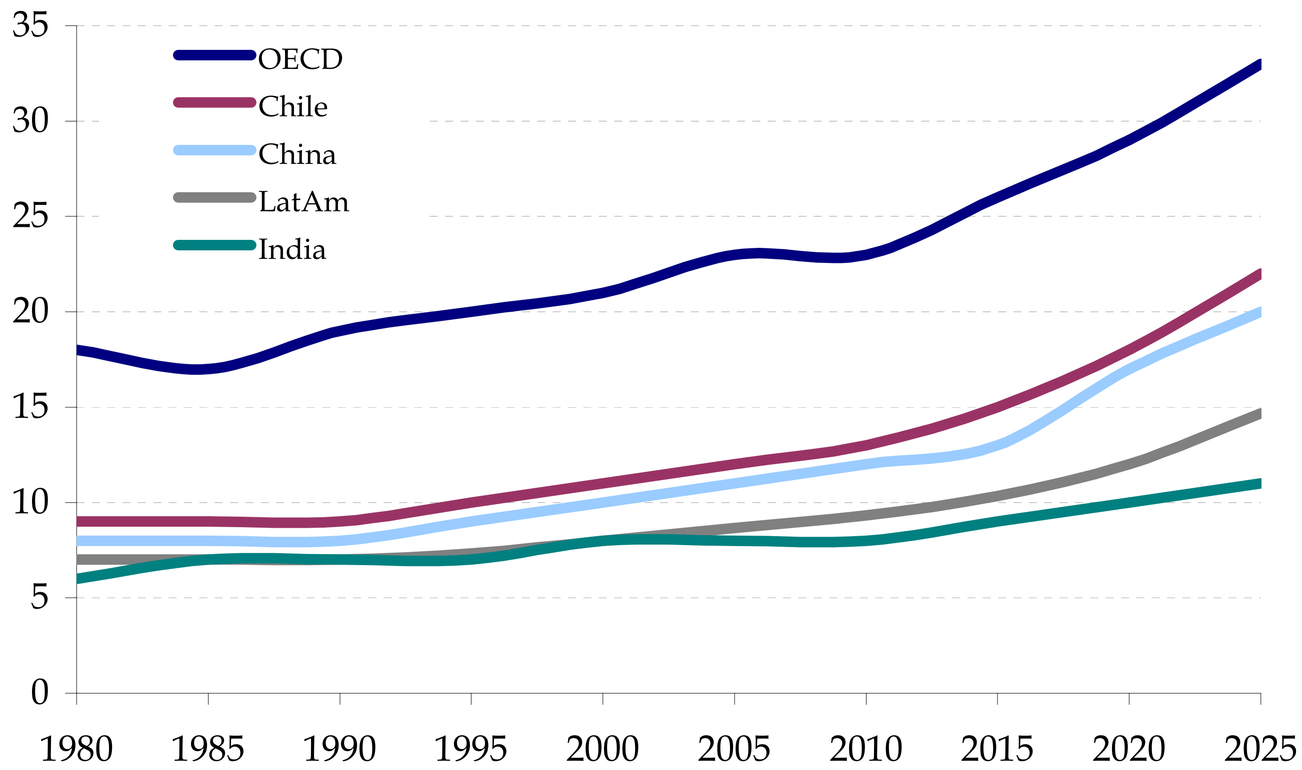
Figure 1. Old-age dependency ratio, 1980-2025

(L+65/L15-64)



Note: LatAm is the simple average of Colombia, Mexico and Peru

Source: United Nations. World Population Prospects: The 2006 Revision

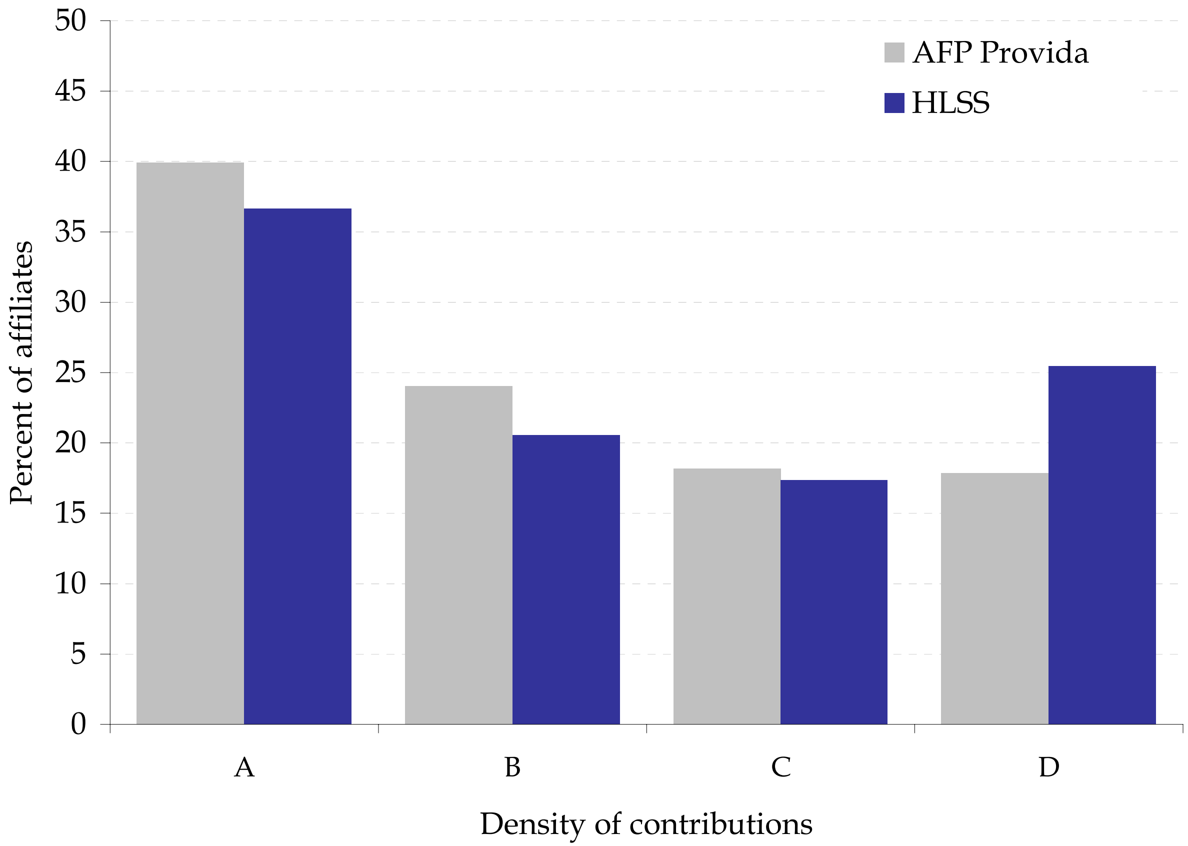
Table A1. Fiscal expenditure in pensions in Chile
(GDP share)

Year	Old system deficit		Recognition	Minimum	PASIS	**Total**
	Civil	Military	Bonds	Pensions	(non contributory)	
1981	1,6	2,0	0,0	0,0	0,2	3,8
1984	4,7	2,2	0,2	0,0	0,5	7,6
1990	3,2	1,3	0,5	0,0	0,4	5,4
1995	2,7	1,2	0,7	0,0	0,3	4,9
2000	3,1	1,3	1,1	0,1	0,4	6,0
2005	2,2	1,3	1,2	0,1	0,4	5,2
2008	1,9	1,3	1,2	0,1	0,4	4,9

Note: The figure for the civilian deficit in the old system includes 0,3 p.p. in minimum pensions, Valdés (2006)

Source: National Budget Office

Figure A1. Categories of affiliates by density of contributions in Chile



Note: 'A' affiliate contribute over 80 percent of the time, 'B' between 60 and 80 percent, 'C' between 40 and 60 percent, and 'D' under 40 percent.

Source: 2002 Social Protection Survey and AFP Provida (data up to 2004)

Annex

Table A2. Projection of replacement rates of Chilean pension system
(Percentage over last 10 salaries, by cohorts, densities, salaries and sex)

	2010		2025		2050	
	Men	Women	Men	Women	Men	Women
A	111,7	78,0	69,9	36,5	67,8	50,3
A1	106,5	72,2	89,6	46,9	128,5	79,8
A2	112,6	78,2	62,7	35,3	102,9	67,5
A3	112,6	74,7	68,9	36,4	67,6	44,7
A4	112,6	76,5	67,3	35,5	66,4	44,4
A5	112,6	82,9	66,8	35,8	63,1	44,4
B	52,7	36,7	39,5	16,4	39,3	23,6
C	46,3	30,0	25,7	9,0	29,2	17,8
D	4,8	3,4	15,5	5,2	12,1	7,0
E1					69,4	42,8
E2					59,6	38,9
E3					40,0	26,5
E4					39,0	26,2
E5					37,5	26,2
F					32,7	17,0
Average	54,9	38,6	45,8	17,9	44,3	26,7
Total average		44,9		29,0		33,8

Source: Favre et al. (2006)

Table A3. Projection of the pension level in Chile
(Monthly pension, 2004 Chilean pesos)

	2010		2025		2050	
	Men	Women	Men	Women	Men	Women
A1	1.107	750	930	487	1.336	829
A2	768	515	652	337	1.070	701
A3	365	250	323	176	588	401
A4	210	143	182	96	333	222
A5	121	79	104	50	182	114
B	198	140	214	91	408	245
C	173	115	140	50	303	185
D	18	13	84	29	126	73
E1					721	445
E2					619	404
E3					348	238
E4					196	131
E5					108	67
F					339	176
Average	206	146	244	83	320	204
Minimum pension		77		94		121

Source: Favre et al. (2006)

Table A4. Projection of fiscal expenditure in civil pensions in Chile

(No reform scenario, GDP share)

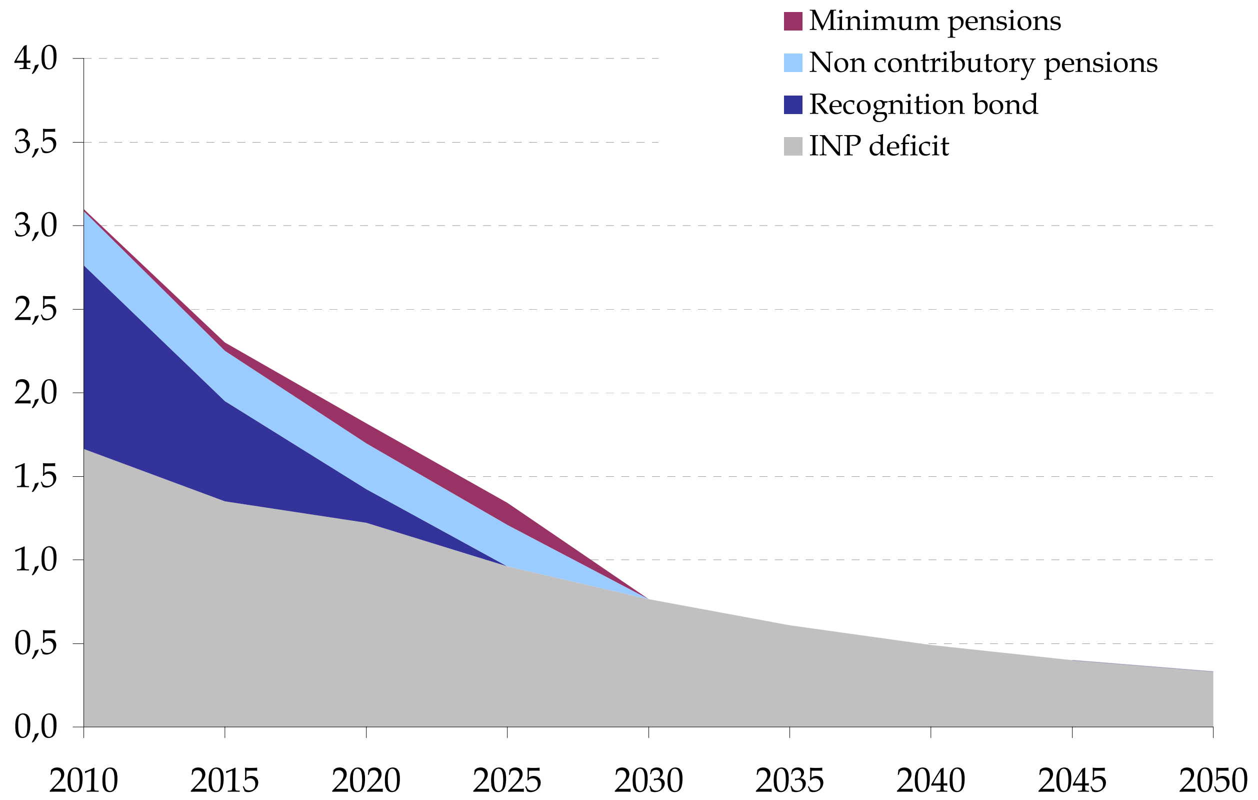
Year	Old system deficit	Recognition Bonds	Minimum Pensions	PASIS (non contributory)	**Total**
2010	1,7	1,4	0,1	0,3	3,4
2015	1,3	1,4	0,1	0,3	3,1
2020	1,2	0,7	0,0	0,3	2,3
2025	1,0	0,2	0,1	0,3	1,5
2030	0,8	---	0,1	0,3	1,1
2035	0,6	---	0,1	0,3	1,0
2040	0,5	---	0,1	0,3	0,9
2045	0,4	---	0,1	0,3	0,8
2050	0,3	---	0,1	0,3	0,7

Source: Favre et al. (2006)

Annex

Official' projection of the transition deficit in Chile

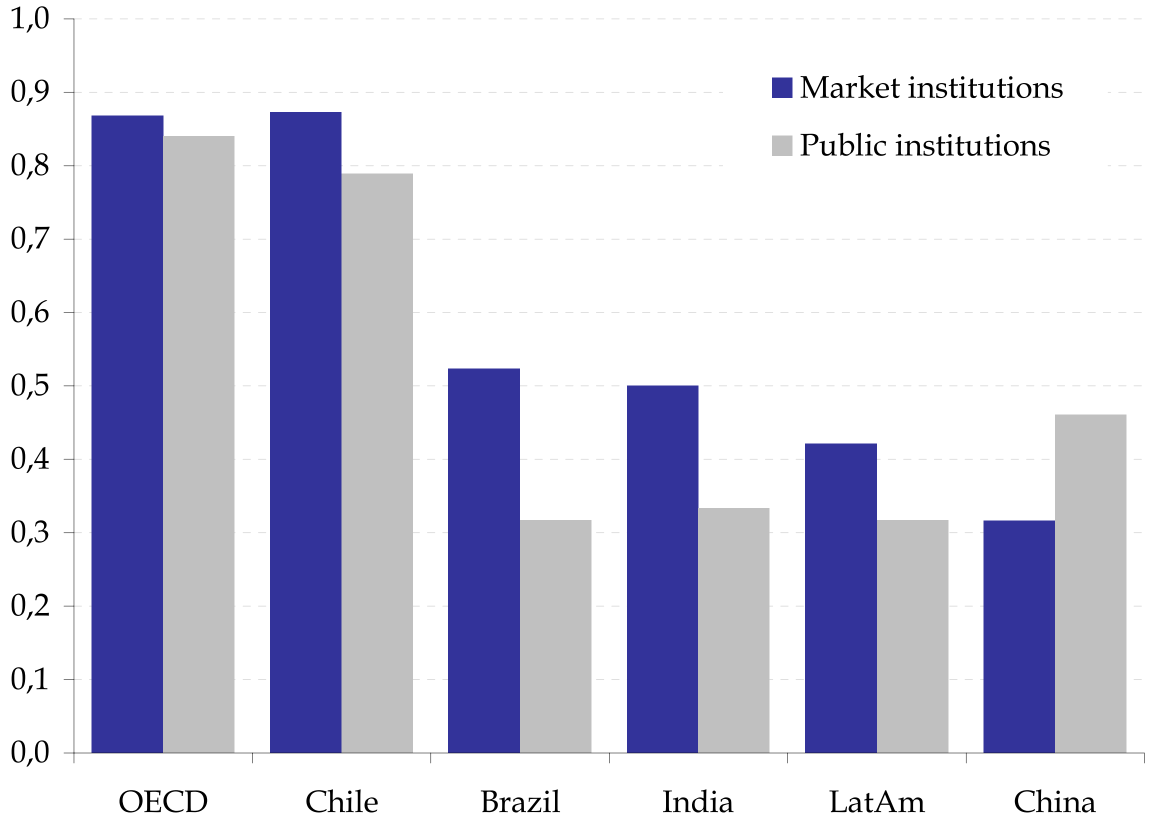
(No reform scenario, GDP share)



Source: Arenas and Gana (2005), Favre et al. (2006) and Arenas et al. (2008)

Figure 11. Market and public institutions rankings

(Doing Business 2009, Governance 2007, Best = 1.0)



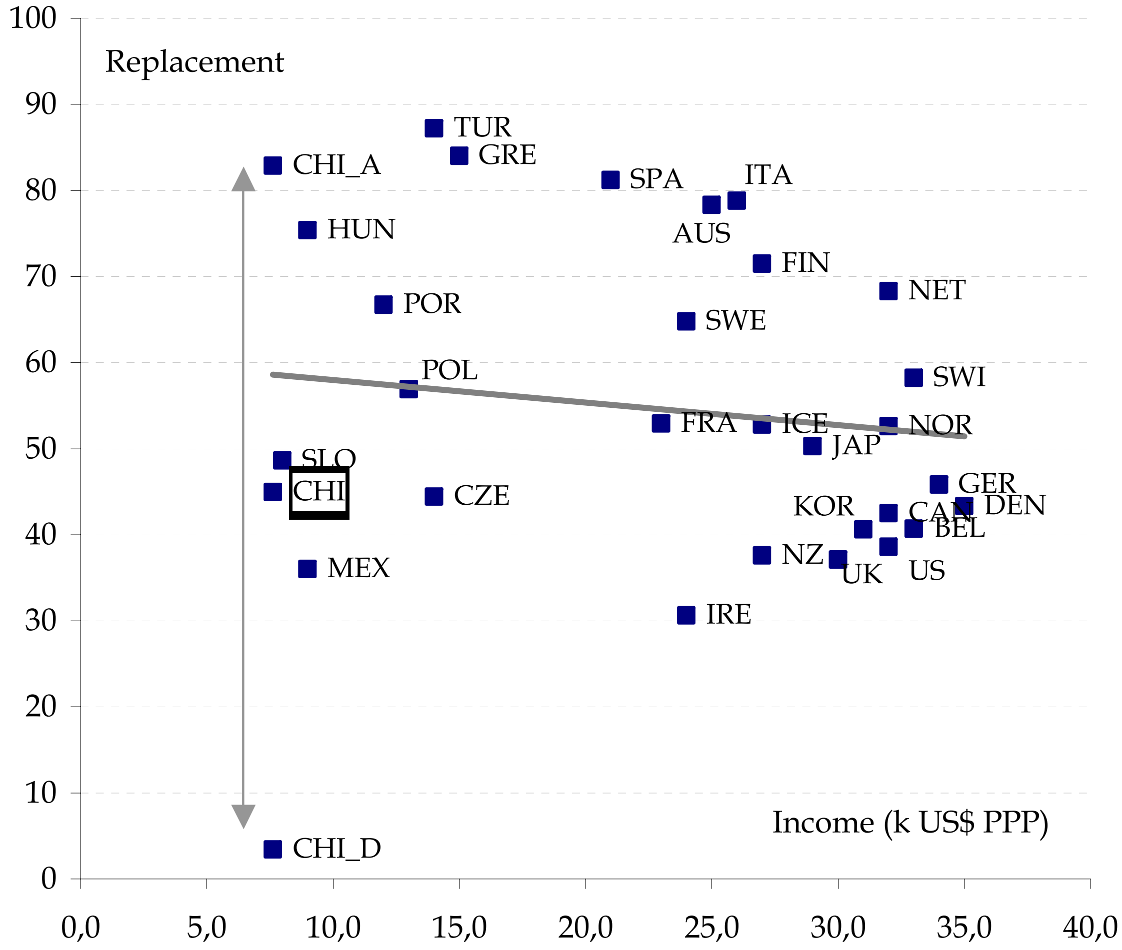
Note: LatAm is the simple average of Colombia, Mexico and Peru

Source: World Bank and own elaboration

Annex

Figure A2. Replacement rate and GDP pc in OECD and Chile

(Percent of pre-retirement gross earnings)



Source: OECD and Favre et al. (2006)

Structural pension reforms in Latin America.

	System	Contribution	Benefit	Regime	Administration
Structural reforms					
Sustitutive					
Chile, May 1981 Bolivia, May 1997 Mexico, Sep 1997 El Salvador, May 1998 Dominican Rep, 2003 Nicaragua, Postponed	Private	DC	Not defined	Individual account	Private
Parallel					
Peru, June 1993 Colombia, April 1994	Public / Private	Not defined / DC	DB / Not defined	PAYG / Individual	Public / Private
Mixed					
Argentina, July 1994 Uruguay, April 1996 Costa Rica, May 2001 Ecuador, Postponed	Public + Private	Not defined + DC	DB + Not defined /	PAYG + Individual	Public / Multiple

Source: Mesa-Lago (2004)

On the benefits of portfolio allocation default options. Chile.

- From 56/51 years (men/women), affiliates cannot chose Fund A (40-80 per cent in equities).
- Pensioners cannot choose Funds A and B.
- Default options decrease the equity composition of the portfolio as the affiliate ages (from B to D).

Affiliates by pension multi-fund in Chile, 2008

	Under 20	+20 -25	+25 -30	+30 -35	+35 -40	+40 -45	+45 -50	+50 -55	Over 55
Fund A	8,7%	21,1%	18,4%	15,1%	12,6%	11,1%	8,3%	4,0%	0,7%
Fund B	7,6%	18,1%	22,0%	23,6%	21,7%	2,2%	1,4%	1,6%	1,7%
Fund C	0,1%	0,6%	1,1%	1,5%	22,4%	26,9%	23,8%	16,4%	7,2%
Fund D	0,0%	0,1%	0,5%	0,9%	1,1%	1,3%	1,3%	27,1%	67,7%
Fund E	0,3%	1,8%	5,9%	10,2%	12,9%	15,1%	15,4%	14,2%	24,2%

Source: SAFP