Indicators of Pension Benefits of Social Security State-plans in Mexico

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Introduction. Old-age pension benefits of state-plans in Mexico

• Public sector workers: civil servants and other public sector employees in the military, education, publicly owned enterprises, etc
  ➢ Separate pension schemes, not as studied as national pension schemes
  ➢ Why? i) stable and attractive career; ii) shift cost of remunerating public servants into the future; iii) retire older civil servants in a politically, socially acceptable way

• Public sector old-age pension plans (Palacios and Whitehouse, 2006)
  ➢ Tend to offer more generous pensions
  ➢ Have lower funding and have higher liabilities
  ➢ Are becoming a large fiscal burden which may threaten the operation of other public programs, especially in countries with a low tax base

  ➢ Lack of information for properly assessing the magnitude of public debt
  ➢ Pension plans in actuarial deficit
Old-age pension benefits of state-plans in Mexico

-AIM: examine Indicators of adequacy and financial sustainability for monitoring purposes, across states

• Replacement rate
  – Value of pension in relation to an earnings measure
    • Do pensioners have acceptable standards of living with respect to their last salary?

• Pension wealth
  – Present value of expected pension benefits
    • An approximation of the debt incurred by a state pension plan at statutory pensionable age
Types of pension plans across states in Mexico

-Mexico has 32 states. Most of them have pension plans for public sector workers of the DB type (CONSAR 2012, Camara de Diputados 2010)

• DB (defined benefit).
  – Most states across the country

• DC (defined contribution).
  – Sinaloa, Coahuila (education), Nuevo Leon, Baja California Sur, Quintana Roo

• Mixed (combine DB and DC components).
  – Jalisco, Edo. de Mexico, Aguascalientes
States by region and type of pension plan for public sector workers

-Not exhaustive list of pension plans,
-Valid as from 2010, according to CONSAR and Camara de Diputados
Methodology. Modeling prospective pension benefits

-Baseline scenario. Calculations inspired by OECD pension models

• Single worker

• Enters labor market in 2011 at age=20

• Makes uninterrupted contributions until reaching the statutory pensionable age
  
  – For example, career length = 40 if pensionable age=60,
    
    • Not modeled: benefits of dependants, invalidity and survivorship benefits

• Examine variation across the distribution of salaries
  
  – Low salary=0.5 times the average salary in the country- sample (data from Encuesta Nacional de Empleo, ENOE 2011)
  
  – High salary=5 times the average salary
Assumptions

-Standard set of assumptions to control for economic conditions; this allows to focus on institutional differences at the state level

- Price inflation; 4% per year
- Real salary growth: 1% per year
- Real minimum salary growth: 0.25% per year
- Real return after administrative charges on funded DC pensions: 3.5% per year
- Discount rate for actuarial calculations: 3% per year
- Mortality rates: At the national level: United Nations. At the state level: own calculations of life expectancy based on projections by CONAPO.
Results. Replacement rates:
Value of pension in relation to last salary

Average replacement rate (calculated using net pension and net salary) in Mexico

• Is 79% (across states, salaries and gender)
  – On average women have lower rates (78) than men (80)
  – States with DB and mixed (DB and DC elements) pension plans have higher average replacement rates than countries with DC regimes
    • DB: 87 (most states)
    • Mixed: 101 (Aguascalientes, Estado de Mexico, Jalisco)
    • DC: 50 (Sinaloa, Coahuila-ed, Nuevo Leon, Baja California Sur, Quintana Roo)
Replacement Rates for the **Average-salaried** in Mexico

Average salaried workers in the public sector receive replacement rates averaging 86%.
Replacement Rates across the Salary Distribution, Males, Central

Edo Mex: mixed
DB: capped pension, DC:capped pensionable salary

Values around 100%
Replacement Rates across the Salary Distribution, Males, East

Individual salary, multiple of mean for men

Pue: pension capped
Replacement Rates across the Salary Distribution, Males, **West**

Individual salary, multiple mean for men

- Colima
- Jalisco
- Michoacan
- Nayarit
Results. Pension Wealth: Present value of pension benefits paid until death

Calculation of pension wealth requires information on expected mortality by age and rules on pension indexation

- In DC regimes benefits are annuitized
- Unless specifications of national legislations are different, we indexed pensions to prices, annually

- Average pension wealth (across states, salaries and gender) is 16.4 times the annual salary
  - Women have higher pension wealth (17.2) than men (15.3) because of higher life expectancy, although they may have lower wages
Average salaried workers in the public sector receive average pension wealth of **18.2** (17.5 for males and 18.9 for females)
Comparing results in the baseline and alternative scenarios

-Alternative scenario
  -The minimum number of contributed years are met in order to be eligible to claim the old-age pension, at pensionable age (example: required number of contributed years=30 and pensionable age=65; we assume the age of entry=35)

-Baseline scenario
  -Uninterrupted labor market careers from the age of 20, until reaching the pensionable age (here, number of contributed years=45)

This exercise has the purpose of looking at variations in the indicators with respect to the length of the labor career
Differences in replacement rates; males

Baseline-OECD assumptions: age at entry = 20 until reaching pensionable age

Alternative-min number of contributed years, at pensionable age (age at entry > 20)
Differences in pension wealth; males

Baseline

alternative
Conclusions

• Simulation of old age pension benefits:
  • individuals assumed to begin work at age 20
  • until they reach the statutory pensionable age

• Average replacement rate in Mexican states is found to be around 79%
  – A person can expect to work for about 40 years to receive almost 80% of the pre-retirement salary
  – In LAC the average worker in the private sector expects a replacement rate of about 49% (CISS 2011)
  – In Mexico, social security for private sector workers provides a replacement rate of about 40% (CISS 2011)

• Average pension wealth is 16.4 times the annual salary of public sector workers
  – Indication of average cost of paying the pension promise across states
Thank you

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