

Discussion:  
Heterogenous Effects of Pension Subsidies: Empirical Evidence  
from Chile

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## Motivation and method

- ▶ Impact of 2008 pension reform in Chile on labor market participation and crowding out effect
- ▶ Empirical evidence: administrative and survey data and a DID approach to study the effect of the reform on participation to the formal labor market
- ▶ Life-cycle model to get an estimate of the crowding out effect of the reform on private savings

# Results

- ▶ Empirical results:
    - ▶ show reform led to a decrease in participation in formal labor market of about 10pp
    - ▶ effect is heterogenous wrt financial literacy
  - ▶ Life-cycle model:
    - ▶ allows hyperbolic discounting
    - ▶ is calibrated to replicate drop in participation estimated empirically
    - ▶ returns an estimate of the crowding out elasticity of pension assets
- ✓ Consider writing the paper in this order?

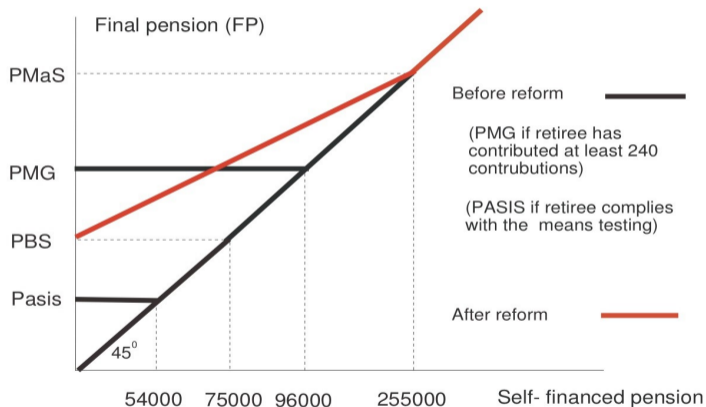
## The 2008 reform in Chile

- ▶ Main goals:
  - ▶ guarantee a minimum level of consumption after retirement, hence preventing old age poverty
  - ▶ promote labor market participation of traditionally low-participating groups (women, young, self-employed)
- ▶ Introduced a more generous flat means-tested welfare pension (PBS) replacing the first (redistributive) tier which was based on a minimum contribution period (PMG) or means-tested PASIS
- ▶ Introduced the APS welfare component as a top up to the second tier pension - again with no minimum contribution period
- ▶ Introduced incentives to participation in the second (and third) pillars directed to women, young workers, self-employed
- ▶ In particular, for women, subsidies on contributions for each child; young workers are also subsidised (starting in 2011) and self-employed participation is compulsory since 2015.

# The 2008 reform in Chile

Figure 1

## Pre and Post Reform First Tier



Source: Attanasio, Meghir, Otero (2011)

## Empirical analysis

- ▶ DID approach used to estimate change in participation following the reform
- ▶ Main findings:
  - ▶ Overall drop in participation by 10pp
  - ▶ Heterogenous response by financial literacy level
- ▶ Could heterogeneity by finlit be a result of the design of the reform (see figure)?
- ▶ What about heterogenous response by gender and age group?
- ▶ As usual in this kind of studies, treated/untreated defined on behaviour before the reform
  - ▶ Would be useful to use the model to study response in labor participation and savings behaviour

# Life-cycle model

- ▶ Life-cycle model:
  - ▶ Calibrated to match average overall drop in participation estimated from data
  - ▶ Used to estimate crowding out elasticity of pension assets at retirement
- ▶ In the model, individuals choose consumption and fraction of formal market time
  - ▶ When not working, they work in the informal market (i.e. participation is always 1)
  - ▶ Retirement is set at minimum legal retirement age
  - ▶ No utility from bequests
- ▶ Risks: health, mortality (only affects pension at retirement)
  - ▶ No income risk, no other risks (e.g. interest rate)

## Life-cycle model - continued

- ✓ Which moments are used in calibration/estimation?
- ✓ How does the model fit the data?
- ✓ The model is quite stylized: what happens if other important and realistic features were included?
- ✓ Is hyperbolic discounting needed to fit the data if model is more realistic?