Employment Effect of a Means-Tested Program: Evidence from a Pension Reform in Chile

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Introduction

- I study the employment effects of a 2008 policy reform of the Chilean pension system in the presence of information frictions concerning eligibility criteria. The reform generates alternative incentives on workers depending on their pension balance and contribution history.
- I estimate the labor supply responses using a unique database that combines monthly administrative records with a representative panel survey. Using a difference-in-differences approach, I find that on average, the reform increased labor force participation and hours worked for men aged 60-64.
- People who were eligible for benefits before the reform, face higher benefits (income effect) and lower implicit tax (substitution effect). Both effects go in opposite directions and labor supply can increase or decrease.
- Workers who are only eligible post-2008, face both higher benefits (income effect) and implicit tax (substitution effect). Both effects move in the same direction, decreasing labor supply. However, I find positive labor responses.
- To understand this result, I look at individuals' level of understanding of the pension system by comparing **actual** and **perceived** data.
- I show that **people make labor decisions according to their perceived incentives, which do not always coincide with the actual ones.**

Data and Empirical Approach

- The data set comes from merging a nationally representative panel survey, the Social Protection Survey (SPS) with the Affiliate Pension History (APH), a complete administrative record for workers in the formal sector
- The SPS has six rounds. In each wave, household heads **self-report** information **if contributed to pension system**, and **pension savings**. The APH contains information about number of years of contributions to the pension system, and pension savings since 1981.
- I adopt a difference-in-differences (DID) approach with multiple time periods using **Callaway and Sant'Anna**'s estimator [1].
- Control group: Armed Forces. Military workers have their own pension system and, on average, claim benefits at age 45. Although some later might work as civilians and contribute to the fully funded pension system, they are not eligible for a pension supplement (neither pre-reform nor post-reform).

Results

- The reform caused men aged 60-64 years to increase their labor supply. I find no positive significant effects for younger male or female workers.
- I document that the reform has heterogeneous effects on workers depending on their **pension balance** and **contribution history**.
- I find zero or negative impacts on labor supply for people who would have been eligible for benefits before the reform.
- Among male workers who are only eligible post-2008, I find positive effects on hours worked and labor force participation. The positive impacts are surprising because, contradict standard theory, where both income and substitution effects move in the same direction, decreasing labor supply.
- To understand this result, I look at individuals' pension knowledge. People underestimate their pension assets (see Figure 1) and overestimate their contribution rate, which reduces the implicit tax (substitution effect).
- I develop a three-period model to rationalize my empirical findings. I show that for those who **underestimate** their **pension wealth** (see Figure 2) , and **overestimate** their pension **contribution rate** the labor supply increases.

Figures

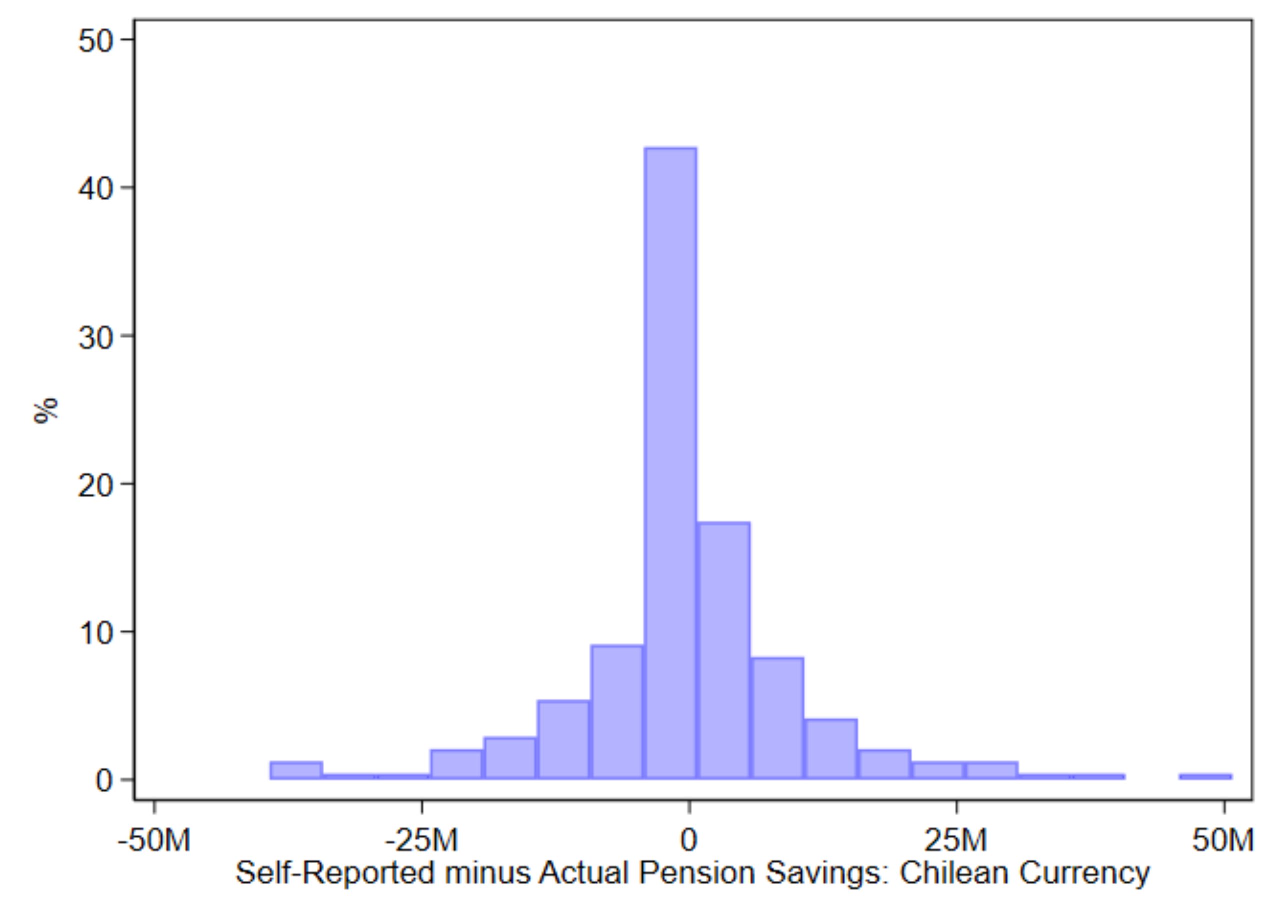

Figure 1. Self-reported minus actual pension savings for males aged 60-64, pre reform. Figures in Chilean currency.

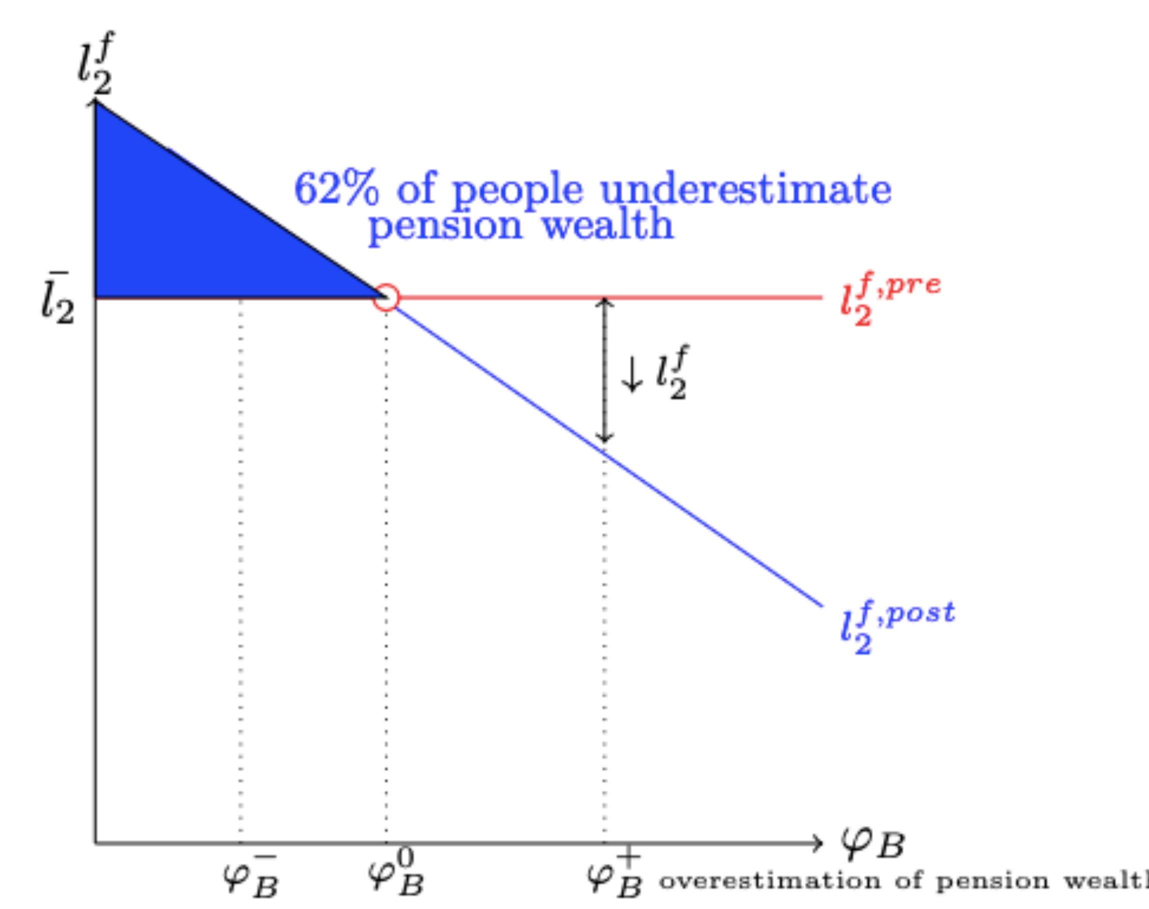

Figure 2. Overestimation of pension wealth and labor supply response.

Conclusions

- This paper studies a pension reform in the presence of information frictions concerning eligibility criteria.
- Most people would expect a decreased labor supply after the reform, because of additional income.
- By constructing **people's perceptions**, I find that workers who fail to predict their pension savings, and contribution work more than before.
- To rationalize these results, I construct a three-period model, concluding that misperceptions of pension savings and contribution rate can generate positive changes in the labor supply.

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References

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