IMPLEMENTATION OF A SYSTEM OF INDIVIDUAL CAPITALIZATION ACCOUNTS IN SPAIN

Objective

The aim of this work is to analyse the hypothetical consequences of implementing a System of Individual Capitalization Accounts in Spain. This possibility was introduced in the latest National Reform Programme delivered to the European Commission by the Spanish Government. In order to assess the measure and its potential benefits for the Spanish Pension System, a model based on the Austrian Severance Pay scheme has been developed and simulated.

Introduction

The Spanish Pension System has to face important challenges that will place great strain on the system. Spain, among all developed countries, has to tackle the threats originated from population ageing.

The population pyramids presented in Figure 1 show that the Spanish population is expected to age significantly. The fall in the birth rate (Figure 2) together with the increase of life expectancy (Figure 3) have changed the structure of the Spanish population. As it can be observed, the base of the pyramids narrows progressively over time, whereas the top widens. Cohorts between 44 and 64 years who are also known as "Baby boomers" are putting strain in the system. The conjunction of these trends will cause old-dependency rates to rise over time (Figure 4), compromising this way the self-funding feature of the Spanish Pension Scheme.

In recent years, all European Countries have undertaken different measures to tackle the challenges triggered by population ageing. For the Spanish case, two main reforms were undertaken in 2011 and 2013. Due to the implementation of these reforms, replacement rates are projected to decrease progressively over time.

Figure 1 Population pyramids

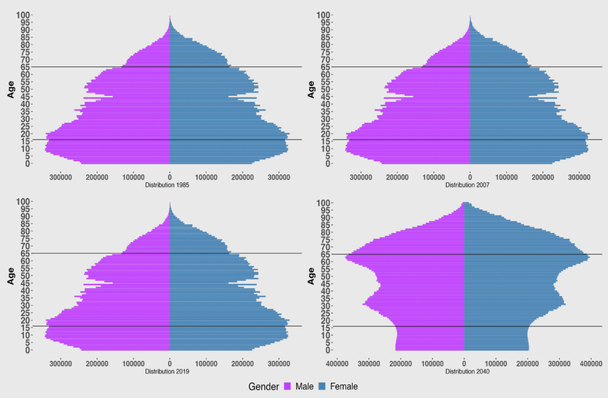


Figure 2: Total fertility rate

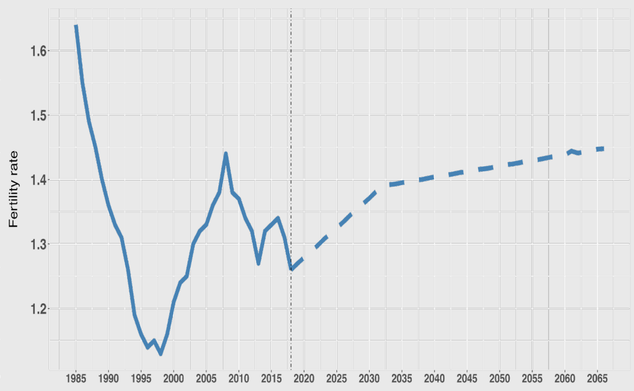


Figure 3: Lifespan at 65 years

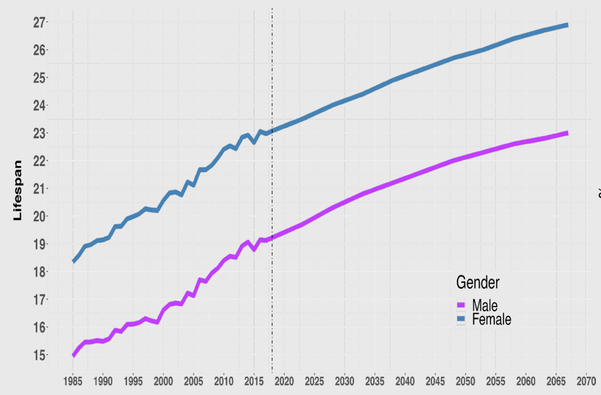
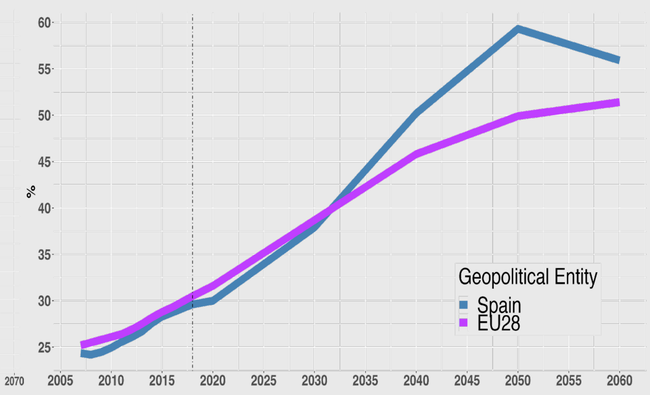


Figure 4: Old–age dependency ratio



Methodology

The study uses data from the Continuous Sample of Working Histories of Social Security of 2018 (Muestra Continua de Vidas Laborales, MCVL).

The MCVL was filtered obtaining a final sample of 211.164 individuals. Spanish individuals that were younger than 67 years and had contributed uninterruptedly for the last 3 years to the General System were selected.

The employment history of all individuals present in the sample was simulated. Labour market transition probabilities extracted from the Labour Force Survey were employed to carry out the simulation.

The reconstruction and projection of the annual contribution flows for the individuals selected was conducted. For this purpose, the average annual contribution of the previous 3 years was determined for all individuals. Then, we assumed that contributions were going to grow parallel to labour productivity.

The accumulation process of the individuals' funds until retirement was assessed. 3 different scenarios were considered, they differ in the contribution rate employed (1.53% in scenario I, 3% in scenario II, and 5% in scenario III).

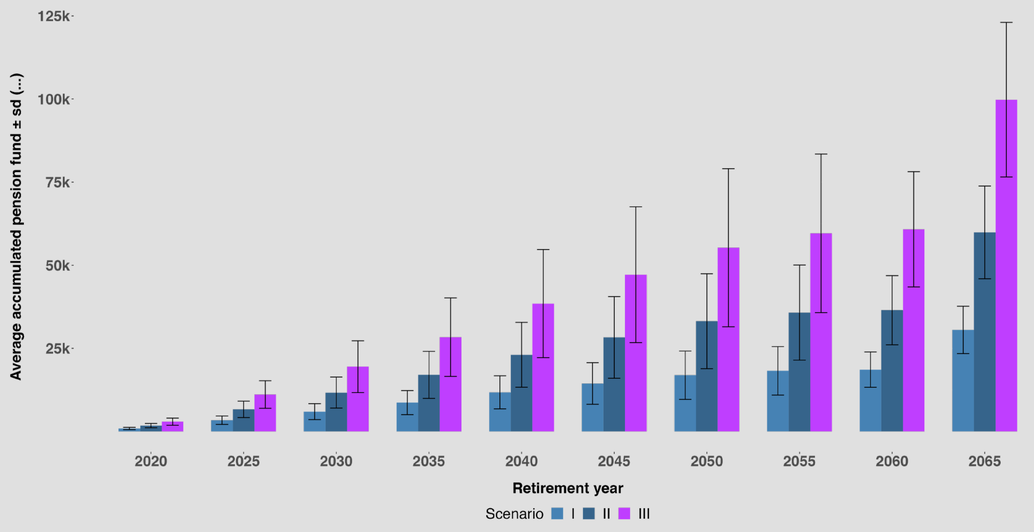
The final pension entitlement was estimated. To this effect, an annual rate of return of 2% was assumed.

Results

Table 1: Simulation results

	Scenario I				Scenario II				Scenario III			
	Mean	**Median**	**Min**	**Max**	**Mean**	**Median**	**Min**	**Max**	**Mean**	**Median**	**Min**	**Max**
2019	447.48	411.24	194.93	750.43	877.42	806.36	382.22	1471.44	1462.36	1343.93	637.04	2452.39
2020	899.88	827.28	213.54	1533.49	1764.47	1622.12	418.71	3006.85	2940.77	2703.54	697.85	5011.41
2025	3395.01	3143.02	240.36	5780.71	6656.89	6162.79	471.29	11334.73	11094.82	10271.31	785.49	18891.22
2030	5964.15	5474.31	298.53	10726.43	11694.41	10733.93	585.35	21032.21	19490.68	17889.89	975.59	35053.68
2035	8680.41	7965.07	234.94	16272.82	17020.42	15617.78	460.67	31907.49	28367.37	26029.64	767.78	53179.15
2040	11765.89	10798.30	256.10	22765.46	23070.37	21173.16	502.15	44638.17	38450.62	35288.58	836.92	74396.94
2045	14426.62	12978.91	692.69	30398.74	28287.49	25448.84	1358.21	59605.38	47145.81	42414.73	2263.68	99342.30
2050	16914.63	15292.46	599.45	36415.48	33165.94	29985.21	1175.38	71402.90	55276.56	49975.35	1958.97	119004.84
2055	18233.78	16597.54	2216.79	45304.55	35752.50	32544.19	4346.64	88832.44	59587.50	54240.32	7244.40	148054.07
2060	18603.51	18326.71	3752.49	39819.43	36477.47	35934.72	7357.82	78077.31	60795.79	59891.21	12263.03	130128.86
2065	30535.28	30535.28	25506.29	35564.28	59873.10	59873.10	50012.33	69733.87	99788.50	99788.50	83353.88	116223.12

Figure 5: Accumulation process



Conclusions

- Implementing the mechanism in its original form, i.e. impeding or restricting withdraws, together with the use of high contribution rates (3% to 5%) could help to offset the negative consequences of recent and future reforms (decline of replacement rates).
- The contribution rate applied in the first scenario (same contribution rate than the Austrian model) is clearly insufficient in the short run and in the long run.
- Both the capacity of the mechanism to smooth consumption during the retirement period and compensate the projected decline of replacement rates improves as time goes by.

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