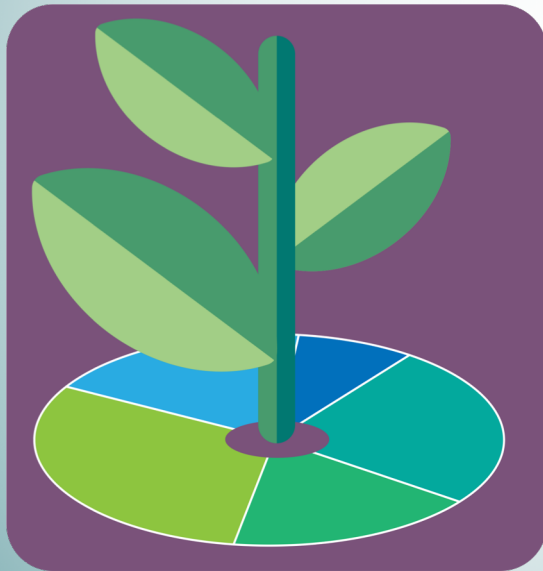# Economics of Social Expenditure

CHAPTER III. ECONOMIC ANALYSIS OF THE EXPENDITURE ON MONETARY BENEFITS

3.1 Public Expenditure on Monetary Benefits: Pensions

David Cantarero Prieto

Paloma Lanza León

Javier Isaac Lera Torres

DPT. OF ECONOMICS

Index

Motivation:

Fundamental Objectives

1. Income Substitution Programs

2. Social Security as a pension manager. Social Security System (in Spain)

3. The problems of Social Security: its crises and its reform

Economics of Social Expenditure

1. Income Substitution Programs (I)

There are 2 main programs of economic benefits:
Income substitution programs and Fight against poverty programs

INCOME SUBSTITUTION PROGRAMS

- **There are <u>3 main programs</u> of Economic Benefits: PENSIONS, TEMPORARY WORK DISABILITY, AND UNEMPLOYMENT.**

A) *PENSION PROGRAMS*

- Like in other countries, in Spain, it is the most important social economic program (*pension spending around 13% of GDP and 42% of public spending*).
- Long-term periodic economic benefits to replace, at least partially, the ability to generate labor income that the worker has lost. Contributive or not.

3

1. Income Substitution Programs (II)

Types of pensions:

1. *RETIREMENT*: They are received due to advanced age (when leaving the labor market).

2. *WIDOWHOOD, ORPHANDOOD OR IN FAVOR OF RELATIVES/FAMILLY:* They conceive the family as a basic unit of consumption and try to maintain their income.

3. *DISABILITY:* To people who were permanently disabled to carry out their usual jobs.

- Pension programs are managed by "INSS"-**National Institute of Social Security**. *For some public officials, they are also managed by the Passive Class Regime of the State and Public Mutual Societies (like MUFACE or MUGEJU) outside the INSS.*

1. Income Substitution Programs (III)

- Until 1990, only those who, in active life, had contributed for at least 15 years benefited from the previulsy mentioned pensions. But, it was modified with Law 26/1990, **non-contributory pensions**, which extended the right to benefit to those who, despite not having contributed, reached retirement age and did not have sufficient income.

- Now they are *economic benefits that are recognized for those citizens who, being in a situation of protectable need, lack sufficient resources for their subsistence in the legally established terms, even when they have never contributed or for long enough to reach the contributory level benefits.* They are **disability and retirement pensions**.

- Today they are financed with contributions from the State and are managed by the **Autonomous Communities** (and by the *IMSERSO-Institute for the Elderly and Social Services* in Ceuta and Melilla). That is, the recognition of whoever receives them is carried out by the Autonomous Communities but their financing is via General State Budgets.

EXAPLE FOR CANTABRIA:
https://www.serviciossocialescantabria.org/index.php?page=pensiones-no-contributivas-de-jubilacion

5

1. Income Substitution Programs (IV)

Evolution of spending on pensions as a percentage of gross domestic product in the EU countries

Selection ▭   Format ▬

Row (41/max. 2 500)

Geopolitical entity (reporting) [41/41] ⊕

41 values displayed ▼ ✛

Column (12/max. 2 000)

Time [12/12] ⊕

12 values displayed ▼ ✛

Time frequency: **Annual**   Unit of measure: **Percentage of gross domestic pr...**   ESSPROS-means-testing: **Total**   ESSPROS-pension type: **Total**

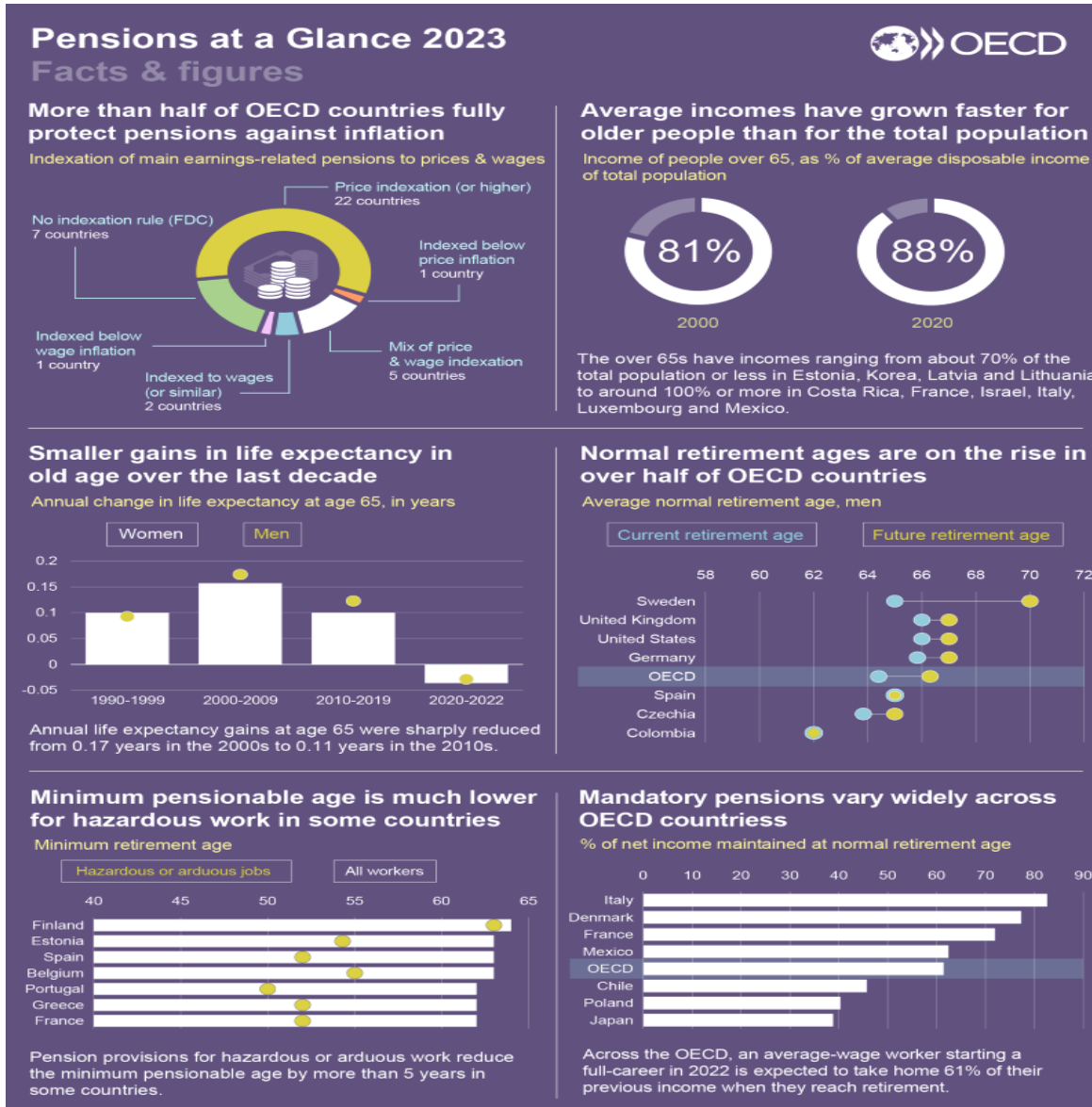**Expenditure on pensions** (online data code: tps00103)
Source of data: Eurostat

⊞ Table   ⤳ Line   ▥ Bar   ⚑ Map

TIME / GEO	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
European Union - 27 countries (from 2020)	12.8	12.8	13.0	13.3	13.2	13.1	13.0	12.8 (p)	12.7 (p)	12.7 (p)	13.6 (p)	12.9 (p)
Euro area – 20 countries (from 2023)	13.0	13.0	13.3	13.6	13.5	13.4	13.3	13.1 (p)	13.1 (p)	13.1 (p)	14.1 (p)	13.3 (p)
Euro area - 19 countries (2015-2022)	13.0	13.1	13.4	13.6	13.5	13.4	13.3	13.1 (p)	13.1 (p)	13.1 (p)	14.1 (p)	13.4 (p)
Belgium	11.8	12.0	11.9	12.3	12.3	12.5	12.3	12.4	12.6	12.6	13.6	:
Bulgaria	8.7	8.1	8.0	8.6	8.7	8.5	8.3	8.0	7.8	7.5	8.1	7.8
Czechia	8.8	9.1	9.3	9.2	8.9	8.6	8.4	8.2	8.1	8.3	9.3	8.9
Denmark	12.6	12.8	12.7	13.7	14.0	13.5	12.6	12.6	12.5	12.6	12.9	11.8
Germany	12.4	11.9	11.9	11.8	11.7	11.8	11.8	11.7	11.8	11.9	12.7	12.2 (p)
Estonia	8.7	7.8	7.6	7.6	7.5	8.0	7.9	7.6	7.7	7.8	8.7	8.1
Ireland	8.1	7.9	8.2	8.1	7.6	5.8	5.7	5.5	5.2	5.1	5.0	4.5
Greece	14.9	16.7	17.9	16.8	17.3	17.7	17.6	16.7 (p)	16.1 (p)	16.0 (p)	17.7 (p)	16.4 (p)
Spain	10.6	11.1	11.9	12.6	12.8	12.6	12.6	12.4	12.6	12.7 (p)	14.5 (p)	13.9 (p)
France	14.4	14.5	14.8	15.1	15.1	15.1	15.1	14.9	14.9	14.7	15.8	14.9 (p)
Croatia	10.4	10.2	10.4	10.6	10.7	10.5	10.2	10.0	10.0	9.8	11.0	9.8
Italy	15.4	15.4	16.0	16.5	16.4	16.4	16.0	15.8	15.8	15.9 (p)	17.6 (p)	16.3 (p)
Cyprus	7.1	7.5	8.1	9.3	10.0	10.1	9.8	9.3	9.1	8.8	9.4	8.8
Latvia	10.1	8.9	8.2	8.2	7.9	7.7	7.5	7.4	7.4	7.5 (p)	8.2 (p)	7.9
Lithuania	8.4	7.6	7.6	7.2	7.0	6.8	6.8	6.7	7.0	7.0	7.4 (p)	7.1 (p)
Luxembourg	8.7	9.0	9.1	9.2	9.2	9.2	9.2	9.5	9.5	9.7	10.2	9.6
Hungary	10.6	10.7	9.3	9.4	8.9	8.5 (b)	8.4	8.0	7.6	7.2	7.5	7.0
Malta	9.1	8.9	9.0	8.5	8.0	7.2	7.3	6.8	6.5	6.1	6.9	6.4
Netherlands	12.1	12.5	12.8	13.0	13.0	12.8	12.8	12.5	12.2	12.0	12.8	12.1
Austria	14.5	14.2	14.4	14.7	14.8	14.6	14.3	14.1	13.9	14.1	15.4	15.0
Poland	11.9	11.4	11.6	12.1	11.9	11.6	11.5	11.0	11.0	10.9	11.4	10.8
Portugal	13.7	14.4	14.5	15.7	15.6	14.9	14.6	14.2	13.8	13.7	15.0	14.2
Romania	9.1	8.7	8.3	8.4	8.2	8.1	8.1	8.1	7.9	7.8	8.9	8.8
Slovenia	11.0	11.2	11.3	11.5	11.2	10.9	10.6	10.1	9.8	9.6	10.5 (p)	10.0 (p)
Slovakia	8.1	8.0	8.1	8.4	8.7	8.5	8.5	8.5	8.4	8.3	8.8	8.5
Finland	12.1	11.9	12.4	12.9	13.3	13.2	13.4	13.3	13.3	13.3	13.9	13.4
Sweden	11.4	11.2	11.6	12.0	11.6	11.2	11.3	11.1	10.9	10.7	11.2	10.6 (p)
Iceland	7.2	8.0	8.2	8.3	8.7	8.5	8.8	9.7	9.9	10.4	12.3	11.5
Liechtenstein	:	:	:	:	:	:	:	:	:	:	:	:
Norway	8.3	8.4	8.6	8.8	9.3	10.2	10.8	10.6	10.4	10.9	11.8	10.3
Switzerland	11.0	11.2	11.3	11.3	11.4	11.6	11.7	11.8	11.6	11.7	12.3	11.8
United Kingdom	11.2	11.2	11.5	11.3	11.2	11.2	10.7	11.0	10.9 (p)	:	:	:
Bosnia and Herzegovina	:	:	:	9.6	10.0	9.7	9.5	9.2	9.1	9.2	9.9	9.1
Montenegro	:	:	:	:	:	:	9.7	9.2	8.8	8.4	10.0	8.5 (p)
North Macedonia	:	:	:	:	:	8.0	8.0	8.3	:	:	:	:
Albania	:	:	:	:	:	:	:	:	6.4 (p)	6.6 (p)	6.8 (p)	6.8 (p)
Serbia	12.2	11.8	12.5	12.1	12.3	11.4	11.0	10.5	10.3	10.1	10.4	9.5
Türkiye	7.4	7.1	7.3 (b)	7.1	7.1	7.1	7.6	7.2	7.2	7.5	7.3	6.0

Special value:
(:) not available

SOURCE: Eurostat Expenditure on pensions [TPS00103]

6

1. Income Substitution Programs (V)

Pensions at a Glance 2023
Facts & figures

OECD

More than half of OECD countries fully protect pensions against inflation
Indexation of main earnings-related pensions to prices & wages

- Price indexation (or higher) 22 countries
- No indexation rule (FDC) 7 countries
- Indexed below price inflation 1 country
- Indexed below wage inflation 1 country
- Indexed to wages (or similar) 2 countries
- Mix of price & wage indexation 5 countries

Average incomes have grown faster for older people than for the total population
Income of people over 65, as % of average disposable income of total population

81% 2000
88% 2020

The over 65s have incomes ranging from about 70% of the total population or less in Estonia, Korea, Latvia and Lithuania to around 100% or more in Costa Rica, France, Israel, Italy, Luxembourg and Mexico.

Smaller gains in life expectancy in old age over the last decade
Annual change in life expectancy at age 65, in years

Women | Men

Annual life expectancy gains at age 65 were sharply reduced from 0.17 years in the 2000s to 0.11 years in the 2010s.

Normal retirement ages are on the rise in over half of OECD countries
Average normal retirement age, men

Current retirement age | Future retirement age

Sweden, United Kingdom, United States, Germany, OECD, Spain, Czechia, Colombia

Minimum pensionable age is much lower for hazardous work in some countries
Minimum retirement age

Hazardous or arduous jobs | All workers

Finland, Estonia, Spain, Belgium, Portugal, Greece, France

Pension provisions for hazardous or arduous work reduce the minimum pensionable age by more than 5 years in some countries.

Mandatory pensions vary widely across OECD countriess
% of net income maintained at normal retirement age

Italy, Denmark, France, Mexico, OECD, Chile, Poland, Japan

Across the OECD, an average-wage worker starting a full-career in 2022 is expected to take home 61% of their previous income when they reach retirement.

SOURCE: https://www.oecd.org/publications/oecd-pensions-at-a-glance-19991363.htm

7

Economics of Social Expenditure

1. Income Substitution Programs (VI)

LATEST DATA FOR SPAIN (February 27, 2024): some general Figures.

- The monthly payroll of **contributory Social Security benefits** stood at 12,668 million euros.

- **The average pension of the system is €1,250.7 per month (*5% more than a year ago thanks to the revaluation carried out at the beginning of the year*).** This amount, includes the different types of pension (*retirement, permanent disability, widowhood, orphanhood and in favor of relatives/FAMILY*).

- **The system's average retirement pension, is €1,437.1.** By schemes, the average retirement pension from the General Scheme is 1,597.4 euros per month, while the lowest is registered by the Self-Employed Scheme, at 959.7 euros/month.

1. Income Substitution Programs (VII)

PENSIONS IN FORCE ON FEBRUARY 1, 2024 according to Social Security regime by type of pension

REGIME	PENSION CLASS								
	Total pensions			Permanent disability			Retirement		
	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)
Total system	**10,128,762**	**12,668,173,200.53**	**1,250.71**	**943,561**	**1,095,925,465.28**	**1,161.48**	**6,450,811**	**9,270,704,076.18**	**1,437.14**
General	7,514,155	10,262,670,702.35	1,365.78	724,713	857,089,465.95	1,182.66	4,750,068	7,587,550,352.80	1,597.36
Self-employed	1,986,952	1,714,806,325.47	863.03	110,826	98,037,664.56	884.61	1,338,425	1,284,535,025.78	959.74
Sea workers	117,381	150,303,855.83	1,280.48	6,451	7,635,973.81	1,183.69	65,031	103,516,555.49	1,591.80
Coal mining	58,769	129,192,611.62	2,198.31	1,773	3,444,321.70	1,942.65	34,655	96,879,507.12	2,795.54
Work accidents	202,465	258,466,513.53	1,276.60	85,292	113,518,625.58	1,330.94	56,127	84,754,081.34	1,510.04
Occupational diseases	32,200	48,998,153.14	1,521.68	11,544	14,734,415.06	1,276.37	10,470	20,089,576.25	1,918.78
SOVI	216,840	103,735,038.59	478.39	2,962	1,464,998.62	494.60	196,035	93,378,977.40	476.34

REGIME	Widowhood			Orphanhood			Family favor		
	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)
Total system	**2,348,534**	**2,097,509,337.33**	**893.11**	**340,382**	**170,464,097.99**	**500.80**	**45,474**	**33,570,223.75**	**738.23**
General	1,746,357	1,658,819,164.43	949.87	259,988	133,833,618.66	514.77	33,029	25,378,100.51	768.36
Self-employed	465,291	300,800,013.37	646.48	62,528	25,826,957.21	413.05	9,882	5,606,664.55	567.36
Sea workers	39,896	35,232,854.86	883.12	4,744	2,921,299.45	615.79	1,259	997,172.22	792.04
Coal mining	19,832	26,373,523.83	1,329.85	1,859	1,706,742.06	918.10	650	788,516.91	1,213.10
Work accidents	50,338	54,476,063.48	1,082.21	10,250	5,206,771.53	507.98	458	510,971.60	1,115.66
Occupational diseases	8,977	12,916,654.79	1,438.86	1,013	968,709.08	956.28	196	288,797.96	1,473.46
SOVI	17,843	8,891,062.57	498.29	-	-	-	-	-	-

1. Income Substitution Programs (VIII)

PENSIONS IN FORCE ON FEBRUARY 1, 2024 according to autonomous community and province by Social Security regime and type of pension

TOTAL SYSTEM

AUTONOMOUS COMMUNITY AND PROVINCE	PENSION CLASS																	
	Total pensions			Permanent disability			Retirement			Widowhood			Orphanhood			Family Favor		
	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)	Number	Amount(€)	Middle P.(€/month)
Total system	10,128,762	12,668,173,200.53	1,250.71	943,561	1,095,925,465.28	1,161.48	6,450,811	9,270,704,076.18	1,437.14	2,348,534	2,097,509,337.33	893.11	340,382	170,464,097.99	500.80	45,474	33,570,223.75	738.23
Andalusia	1,652,664	1,850,187,209.89	1,119.52	202,054	216,309,946.69	1,070.56	975,832	1,267,459,963.26	1,298.85	393,085	324,964,997.96	826.70	69,570	32,928,344.18	473.31	12,123	8,523,957.80	703.12
Aragon	311,217	412,199,040.95	1,324.47	21,111	25,739,993.81	1,219.27	206,843	312,225,447.84	1,509.48	73,033	68,730,430.37	941.09	9,397	4,853,435.57	516.49	833	649,733.36	779.99
Asturias (Principality of)	299,881	438,503,145.15	1,462.26	25,684	33,868,597.51	1,318.67	186,107	318,151,252.08	1,709.51	77,405	79,221,843.57	1,023.47	8,715	5,302,878.99	608.48	1,970	1,958,573.00	994.20
Balearic Islands	206,398	240,667,885.63	1,166.04	17,243	18,781,223.54	1,089.21	137,927	182,804,761.58	1,325.37	45,155	36,408,424.12	806.30	5,955	2,587,491.32	434.51	118	85,985.07	728.69
Canary Islands	358,587	407,754,985.44	1,137.12	51,318	56,455,749.77	1,100.12	205,369	272,113,772.31	1,325.00	82,915	69,614,978.05	839.59	16,450	7,759,337.09	471.69	2,535	1,811,148.22	714.46
Cantabria	145,573	192,277,364.07	1,320.83	12,679	15,364,095.95	1,211.78	92,011	140,402,382.56	1,525.93	34,967	32,887,520.92	940.53	4,561	2,512,701.20	550.91	1,355	1,110,663.44	819.68
Castilla la Mancha	389,845	452,905,042.96	1,161.76	44,100	47,231,876.69	1,071.02	233,185	312,721,461.75	1,341.09	95,218	83,860,089.49	880.72	14,717	7,330,025.21	498.07	2,625	1,761,589.82	671.08
Castile and León	623,266	778,631,480.35	1,249.28	45,578	52,781,093.11	1,158.04	405,427	579,982,672.69	1,430.55	149,303	132,650,829.32	888.47	19,068	10,300,701.73	540.21	3,890	2,916,183.50	749.66
Catalonia	1,778,714	2,313,610,213.15	1,300.72	156,646	200,214,222.47	1,278.13	1,179,967	1,732,594,540.86	1,468.34	390,216	354,696,016.72	908.97	50,525	24,998,035.06	494.77	1,360	1,107,398.04	814.26
Valencian Community	1,038,741	1,198,336,298.37	1,153.64	93,688	103,883,696.76	1,108.83	660,151	870,256,395.16	1,318.27	244,733	204,624,301.29	836.11	37,540	17,669,430.04	470.68	2,629	1,902,475.12	723.65
Estremadura	237,356	249,303,496.53	1,050.34	27,496	27,256,329.99	991.28	139,091	167,733,213.31	1,205.92	59,324	48,326,172.81	814.61	9,344	4,618,614.32	494.29	2,101	1,369,166.10	651.67
Galicia	774,986	829,608,290.06	1,070.48	73,259	77,281,263.15	1,054.90	487,732	597,024,090.22	1,224.08	183,927	139,314,774.26	757.45	23,227	11,515,446.85	495.78	6,841	4,472,715.58	653.81
Madrid (Com. of)	1,240,459	1,805,245,820.89	1,455.30	87,400	109,863,585.73	1,257.02	841,951	1,395,869,842.10	1,657.90	272,568	277,938,376.89	1,019.70	35,813	19,263,981.29	537.90	2,727	2,310,034.88	847.10
Murcia (Region of)	259,989	288,151,042.31	1,108.32	29,262	30,683,997.77	1,048.60	155,223	199,975,931.79	1,288.31	62,104	51,018,298.27	821.50	11,876	5,426,701.61	456.95	1,524	1,046,112.87	686.43
Navarra (Foral Com. of)	143,926	206,377,523.35	1,433.91	9,980	13,734,968.22	1,376.25	99,484	160,680,648.42	1,615.14	29,832	29,402,499.98	985.60	4,253	2,254,730.30	530.15	377	304,676.43	808.16
Basque Country	576,248	891,753,895.74	1,547.52	39,259	58,076,909.71	1,479.33	385,049	676,828,415.11	1,757.77	133,908	145,239,969.47	1,084.63	15,812	9,550,570.95	604.01	2,220	2,058,030.50	927.04
Rioja (La)	73,149	90,587,395.36	1,238.40	4,561	5,464,771.61	1,198.15	50,471	69,960,542.23	1,386.15	15,944	14,070,349.91	882.49	1,998	968,219.19	484.59	175	123,512.42	705.79
Ceuta	9,083	11,520,124.43	1,268.32	976	1,292,485.42	1,324.27	4,653	7,342,235.01	1,577.96	2,639	2,526,781.05	957.48	769	319,560.14	415.55	46	39,062.81	849.19
Melilla	8,680	10,552,945.90	1,215.78	1,267	1,640,657.38	1,294.92	4,338	6,576,507.90	1,516.02	2,258	2,012,682.88	891.36	792	303,892.95	383.70	25	19,204.79	768.19

SOURCE: Social Security: Statistics → DATA FOR FEBRUARY 2024 BY REGIONS AND PROVINCES: https://www.seg-social.es/wps/portal/wss/internet/EstadisticasPresupuestosEstudios/Estadisticas/EST23/EST24

1. Income Substitution Programs (IX)

B) *TEMPORARY WORK DISABILITY PROGRAM (TWD):*

- Substitute income for people who are disabled to work.
- A certain period is set to measure TWD and, after that, they must become permanently disabled or work normally.

C) *UNEMPLOYMENT BENEFITS PROGRAM:* → **Topic 3.2.**
- They replace income lost by the individual when he/she loses his job (eg. labor force adjustment plan).

- w_0 = *Reservation Wage*: Minimum wage that the individual is willing to accept to work.
- w^* = *Benefit/payment:* The benefit received will be less than the reservation wage ($w^* \leq w_0$).
- (w^*/w)*100: *Unemployment replacement rate.*

- To eliminate disincentives to work, reduce replacement rate, duration of benefit, or both.

1. Income Substitution Programs (X)

C) *UNEMPLOYMENT BENEFITS PROGRAM:*
For Spain limited duration. 2 components.

CONTRIBUTIVE BENEFITS
- Contribute a minimum of 12 months and get unemployed.
- Period of contributory benefits: 2 months for every 6 full contributors, with a maximum of 2 years.
- Maximum and minimum amounts.

NON-CONTRIBUTIVE BENEFITS ("requirement of lack of income").
- Heterogeneus situations: because they exhausted the contributory part, age, family responsibilities, etc.
- Max time payment: 30 months. Since 2002, >52 years will be extended up to the legal age to be entitled to a contributory retirement pension (Law 35/2002, gradual and flexible retirement).
- 80% - 125% IPREM (600 euros per month and 7,200 per year in 2024). https://www.iprem.com.es/; https://www.sepe.es/HomeSepe/Personas/distributiva-prestaciones/Cuantias-anuales.html

1. Income Substitution Programs (XI)

- Since 2005, the **<u>interprofessional minimum wage</u>** was separated from social benefits and the **Multiple Effects Public Income Indicator (IPREM) was created** from RD-Law 3/2004 in addition to Employment Law 56/2003 and reform in 2010.

- There are also more programs of economic benefits that give certain income to workers against **possible defaults by insolvent companies** (FOGASA) or single payments in the event of special contingencies.

- Autonomous Communities have been implementing **plans to fight poverty since 1988** to **guarantee minimum income to families without sufficient resources**. Example: Basic Social Income in Cantabria according to its Social Services law since 2007 (*80% IPREM which is equivalent to (around) 450 euros per month per person, which can be increased depending on the number of members of the receiving unit up to a maximum amount equivalent to 125% IPREM*).

- Outside the public sphere there are other aids (Red Cross, NGO,...).

Year	IPREM	IPREM Annual	IPREM Annual
	Monthly	(12 payments)	(14 payments)
2023 → 2024	600,00 €	7.200,00 €	8.400,00 €
2022	579,02 €	6.948,24 €	8.106,28 €
2021	564,90 €	6.778,80 €	7.908,60 €
2020	537,84 €	6.454,03 €	7.519,59 €
2019	537,84 €	6.454,03 €	7.519,59 €
2018	537,84 €	6.454,03 €	7.519,59 €
2017	537,84 €	6.454,03 €	7.519,59 €
2016	532,51 €	6.390,13 €	7.455,14 €
2015	532,51 €	6.390,13 €	7.455,14 €
2014	532,51 €	6.390,13 €	7.455,14 €
2013	532,51 €	6.390,13 €	7.455,14 €
2012	532,51 €	6.390,13 €	7.455,14 €
2011	532,51 €	6.390,13 €	7.455,14 €
2010	532,51 €	6.390,13 €	7.455,14 €

1. Income Substitution Programs (XII)

- **OBLIGATION TO PARTICIPATE IN THESE PROGRAMS**

1. *Public sector (State) paternalism*. Valid for a certain part of the population ("myopic"). The individual is not able to see all the advantages of these benefits.

2. *Poverty*. The situation of poverty generates negative externalities. To solve it, the Public Sector sets them as mandatory.

3. *Information asymmetry problems*. *Example: Unemployment insurance (adverse selection and moral hazard). If we let the market act by itself, the benefits would not be provided. Only people at higher risk would want these benefits (adverse selection) or those who can modify their conditions to receive the benefit (moral hazard).*

- **For these reasons, a <u>mandatory participation</u> is established (workers and employers) with previous periodic payments: <u>SOCIAL QUOTES.</u>**
- **Similar to private insurance policies, managed by the Public Sector, are <u>*Social Insurances.*</u>**

14

1. Income Substitution Programs (XIII)

PUBLIC NATURE OF INCOME SUBSTITUTION PROGRAMS

1. There is no private agent willing to cover **_SOCIAL RISKS_**: unemployment (unemployment insurance), ∇GDP, uncertainty about the future evolution of real interest rates (pensions).

2. If it were not public, individual premiums according to insurance contingency possibilities (**_EQUITY_**) $\Rightarrow$ distinguish, for example, between workman or an administrative, or men and women.

3. In practice, pensions are used as a redistributive mechanism (**_EQUITY_**). Problem: It is not clear that they are an adequate redistributive mechanism (breaks the relationship between contribution and pension).

4. **_LOWER TRANSACTION AND ADMINISTRATION COSTS_**
   - Private plans: diversity (even personalized,…), but indirect costs (complexity and more costs for managing many different small programs).
   - Although consumers might prefer cost differentiation to a supposed benefit for uniformity.

15

2. Social Security (SS) as manager of pensions. The Social Security System in Spain (I)

- We look at retirement pensions, by amplitude pensions.

DESIGN OF RETIREMENT PENSION PROGRAMS

- In Spain operation of public pension plans is similar to others (**principle of contributory**).
- Worker of his gross salary $\Rightarrow$ mandatory withholding: SS worker contribution ($\cong 4.7\%$ of the salary).
- Mandatory withholding: business contribution SS per worker ($\cong 23.6\%$ salary).
- Net salary $\cong 28.3\% <$ gross, according to maximum and minimum contribution bases.

- **Why do workers and employers contribute?:** So that both share the cost of SS financing. **Is it achieved?** *Example: employer, if he does not contribute socially, willingness to pay a worker for productivity is 1,000 euros. Employer contributes at SS with 200 euros and, worker productivity is the same as before the contribution, willingness to pay per employer is lower (800 euros).*

- Phenomenon (who really pays social contributions is the worker for lower wages), is **TRASLATION, tax gap!**

2. SS as pension manager. SS system in Spain (II)

- **What is the relationship between contributions *c* and pensions?**

- **Suppose that all pensions are paid exclusively through contributions. Total fund collection of contributions SS = $c \cdot w \cdot L$**

c = quote= contribution
w = average real wage
L = employment level (employed)

A) *CAPITAL FUNDED PENSION SYSTEM ("capitalization")*:
- If the SS invests contributions and pays pensions with principal and yields obtained.
- *r:* market interest rate for risk-free assets (example: 10-year public debt, 1.25%). If public pension system gives annual rate of return = market interest $\Rightarrow$ *actuarially fair.*

B) *PAY-AS-YOU-GO PENSION SYSTEM ("distribution")*:
- If SS uses contributions of active population/workers to pay pensions for retirees, it forces generations of "youths" to transfer resources to "retirees" (Public Sector guarantees pension payment but NOT their level!).

2. SS as pension manager. SS system in Spain (III)

Pay-as-you-go pension system (Spain and most of the EU countries)	Capitalization pension system (USA, Canada…)
1. The individual does not contribute for his own pension, but for that of all those who are currently retired.	1. The individual contributes for his own pension.
2. The contributions-benefits are not linked by a capital fund. Current pensions are financed with what is collected from workers' contributions.	2. The contributions-benefits are linked through a capital fund, since the pension is a reallocation of the individual's income from active to passive periods.
3. It allows paying retirement pensions from the moment the system is created.	3. Many years have to pass to obtain a pension, since large enough reserves must be accumulated to pay pensions.
4. The amounts contributed by the workers determine the actual pensions.	4. The amount contributed by each individual determines his future pension.
5. The system has an implicit return derived from the growth of the contribution base.	5. The system has an explicit return on funds, which is the applicable interest rate.
6. This system implies a kind of tacit commitment whereby the active generations support the retired and trust in return that when they reach retirement age (that is, they too will receive the pension). The State assumes the obligation to ensure the collection of pensions.	6. It does not bind future generations to make an explicit contract because only one generation is involved. Obligation to have personal accounts for each of the contributors.

2. Social Security as pension manager. The Social Security System in Spain (IV)

- **Pay-as-you-go pension system would be *more than actuarially fair* and preferable to capital founded pension system if:**

$$w´ + l´ > r \quad [1]$$

w´ = wage growth rate
l´ = employment growth rate

- If $w´ = (w_t - w_{t-1}) / (w_{t-1}) = 0$ (constant real wages-indexed to inflation) and full employment ($l´ = (L_t - L_{t-1}) / (L_{t-1}) = n´$) and $n´$: population growth rate….. [1] is simplified:

$$n´ > r \text{ and demographics affect the problem}$$

- If [1] is true at all times, **all generations are better off with a pay-as-you-go system (Pareto superior) than with a capitalization one.** But: [1] at some times and not at others, the pay-as-you-go system **would benefit some generations, harming others. The pay-as-you-go system REDISTRIBUTES income between generations** ([1] +probably fulfilled in economies with expansionary cycles with $w´ > 0$; $l´ > 0$)

- Initially, private capitalization was "copied" as in the US, but today most of the public pension systems, including Spain, are **PAY-AS-YOU-GO PENSION SYSTEMS,** although they include different aspects of capitalization.

Economics of Social Expenditure

2. The SS as a pension manager. SS system in Spain (V)

DETERMINATION OF PENSION LEVEL

- **Average pension (related to replacement rate) where J = retirees:**

$P = (c \cdot w \cdot L)/(J)$ [2]
→ *where, w (salary)* and *L (employees)* "independent" of public decisions.

- **Public Sector "without control" over the number of retirees (but can control legal retirement age). They can only act on the type of contribution (c) and *Pension* such that (P^*, c):**

$$c^* = (P^* \cdot J)/(w \cdot L)$$

- **Problem: c^* to finance desired pensions is very high and practice forces c^* *to vary* in all periods (instability and permanent uncertainty). SS Status:**

$D_t = P^* \cdot J_t - c^* \cdot (w_t \cdot L_t) > 0$ (Deficit)
$D_t = P^* \cdot J_t - c^* \cdot (w_t \cdot L_t) = 0$ (Balance)
$D_t = P^* \cdot J_t - c^* \cdot (w_t \cdot L_t) < 0$ (Surplus until 2010)

- **If surplus ⇒ accumulate to SS Reserve Fund**
https://www.seg-social.es/wps/portal/wss/internet/EstadisticasPresupuestosEstudios/FondoReserva/39728/1726/1720

2. SS as pension manager. SS system in Spain (VI)

- **Modern regime SS Spain: since 1978 (Moncloa Pacts and creation of INSALUD, INSS, IMSERSO and INEM) based on generalizing the distribution system by:**

GENERAL REGIME SS
Almost all workers. It pays higher pensions, but it subsidizes special systems such as mining (Δ their pensions).

SPECIAL REGIMENS
Certain types of workers (Self-Employed Workers, agrarians employed by others since they have been self-employed since 2008, coal mining workers, sea workers, home employees, accidents at work and occupational diseases).

- **Diversity of Regimes** ⇒ *The public pension sector taxes and protects different professional groups unequally and inequitably* (the General Regime subsidizes almost all of them).

3. The problems of Social Security: its crises and its reform (I)

Spending on pensions as a percentage of GDP

1. Demographic factors

2. Labour market factors

3. Institutional factors

Dependency ratio

Ratio between the retirement age population and working age population

Occupancy rate (inverse)

Ratio between workers and working age population

Labour share

Wage bill in relation to GDP

Eligibility ratio

Number of pensions over the retirement age population

Coverage rate

Relationship between average pension and average salary

Source: AIREF, DATA. SPENDING ON PENSIONS. Nov. 21
https://www.airef.es/es/gasto-en-pensiones/

3. The problems of Social Security : its crisis and its reform (II)

Population Pyramids of Spain (years 2022, 2052 and 2072)
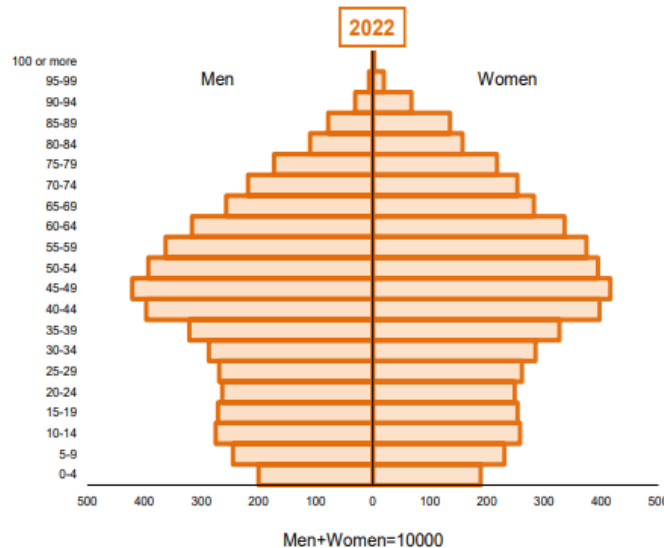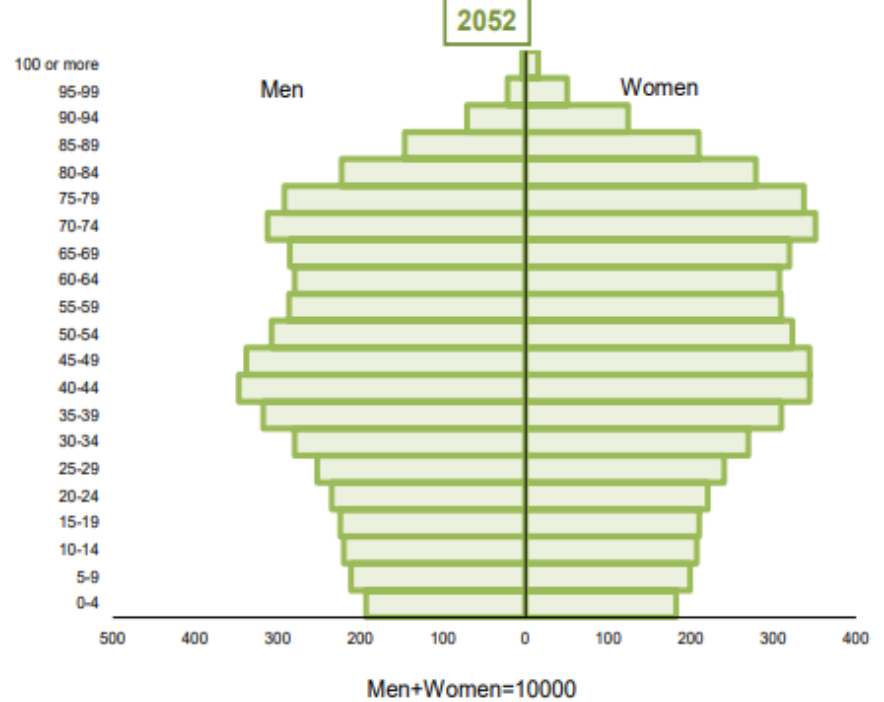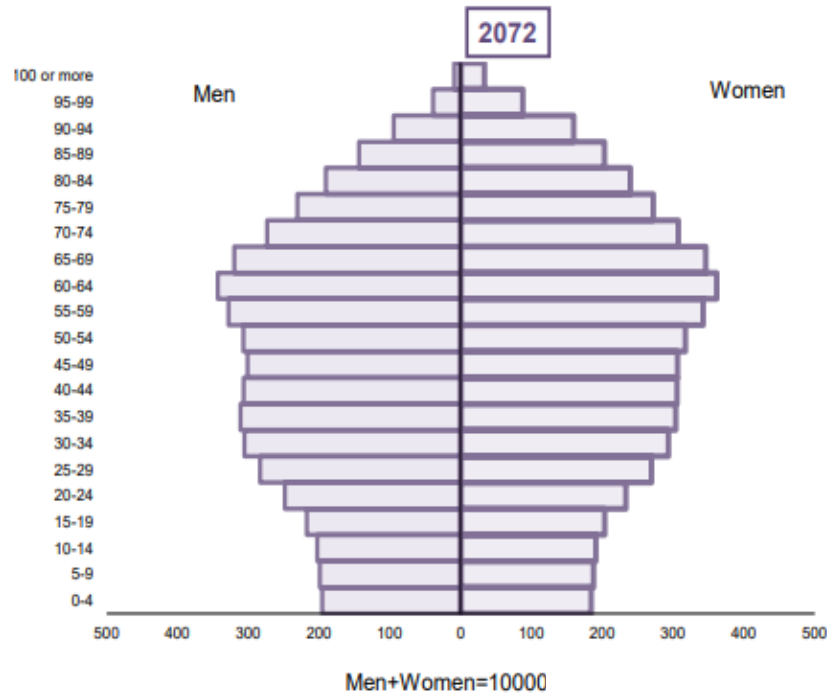
3. The problems of Social Security: its crises and its reform (III)

AIReF | Gasto en pensiones

airef.es/en/pension-expenditure/
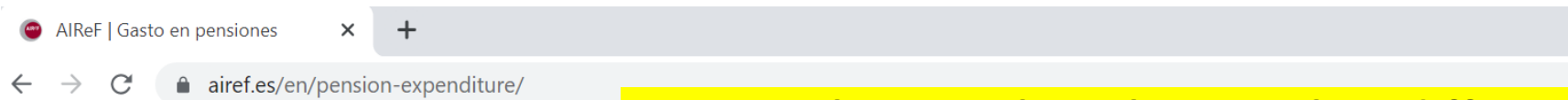
AIReF has a web tool to simulate different PENSION EXPENDITURE scenarios

TECHNICAL DOCUMENT

| SOSTENIBILIDAD | VARIABLES DE GASTO | PRINCIPALES RESULTADOS RELATIVOS A PENSIONES | VARIABLES DEMOGRÁFICAS | VARIABLES MACROEC |
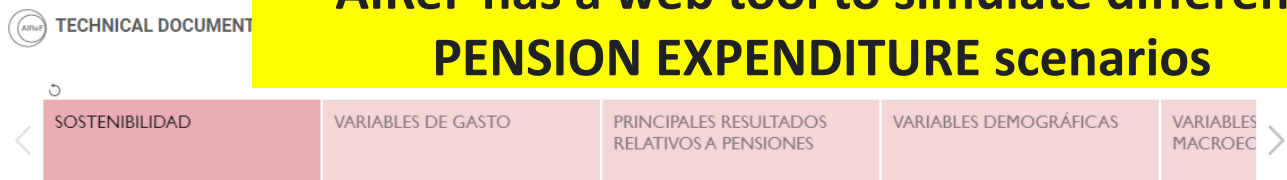
Selección de escenarios

- ⊙ Escenario central
- ○ Mayor edad efectiva de jubilación
- ○ Menor edad efectiva de jubilación
- ○ Incremento cómputo años cotización
- ○ Mayor crecimiento
- ○ Menor crecimiento
- ○ Mayor tensión demográfica
- ○ Menor tensión demográfica
- ○ Ingresos ctes. s/ PIB
- ○ Mayores tipos interés
- ○ Menores tipos interés

Deuda (%PIB)

	2021	2035	2050
Deuda (%PIB)	118,3	109,6	146,3
Ingresos (%PIB)	43,5	43,8	44,7
Gasto (%PIB)	50,4	47,9	52,4
Saldo público (%PIB)	-6,9	-4,1	-7,6
Intereses (%PIB)	2,2	3,5	5,1
Saldo primario (%PIB)	-4,7	-0,7	-2,6
Tipo interés implícito	1,9	3,3	3,7
Poblacion total	47,4	48,8	50,3
Pob. en edad trabajar	31,8	31,5	28,8

Ingresos y gastos (%PIB)

Saldo total y primario (%PIB)

https://www.airef.es/es/gasto-en-pensiones/

3. The problems of Social Security: its crises and its reform (IV)

Economics of Social Expenditure

Key indicators: Spain

		Spain	OECD
Average worker earnings (AW)	EUR	26 934	34 301
	USD	30 764	39 178
Public pension spending	% of GDP	10.9	7.7
Life expectancy	at birth	83.3	80.6
	at age 65	21.3	19.7
Population over age 65	% of working- age population	32.8	30.4

Higher relative income of the 65+ than in most countries

Automatic adjustment mechanisms have been eliminated, and replaced by the "Intergenerational Equity Mechanism"

PENSIONS AT A GLANCE 2021: COUNTRY PROFILES –SPAIN

Conditions for full pensions are loose

In Spain people who have contributed for at least 37.25 years (rising to 38.5 years from 2027) can retire at age 65 with a full pension. This contribution-period condition is loose in international comparison, except for Italy that temporarily has 38 years for Quota-100. Greece and Slovenia will also continue to have a relatively short period of 40 years, while France will have 43 and Germany 45 years. Moreover, the large majority of OECD countries take into account wages throughout the whole career for calculating pension benefit. Within the EU, only France, Slovenia and Spain use 25 years or less.

3. The problems of Social Security: its crises and its reform (VI)

Table 3.6. **Future ages, penalties and bonuses for early, normal and late retirement by type of pension scheme**
For an individual with an uninterrupted career after entering the labour market at age 22 in 2020

		Scheme	Early age	Penalty (p.a.)	Normal age	Bonus (p.a.)			Scheme	Early age	Penalty (p.a.)	Normal age	Bonus (p.a.)
Australia		T	n.a.		67	0.0%	Israel (cont)	(M)	FDC	67			
		FDC	60	..		..		(W)	FDC	62			
Austria		DB, Min	62	5.1%	65	4.2%	Italy		NDC	68	..	71	..
Belgium		DB	n.a.	0.0%	67	0.0%	Japan		Basic, DB	60	6.0%	65	8.4%
		Min	n.a.		67	0.0%	Korea		Basic, DB	60	6.0%	65	7.2%
Canada		Basic	n.a.		65	7.2%	Latvia		NDC, Min, FDC	63	..	65	..
		T	n.a.		65	0.0%	Lithuania		Basic, Points	60	3.8%	65	8.0%
		DB	60	7.2%	65	8.4%	Luxembourg		Basic, DB, Min	62	0.0%	62	0.0%
Chile		Min, T	n.a.		65	0.0%	Mexico		Basic	n.a.		65	
	(M)	FDC	any age & SL	..	65	..			Min	60		65	0.0%
	(W)	FDC	any age & SL	..	60	..			FDC	60 or SL	..		..
Colombia	(M)	DB, Min	n.a.		62		Netherlands		Basic	n.a.		69	0.0%
	(M)	FDC	any age & SL		62				DB (Occ)	sector-specific	..		..
	(W)	DB, Min	n.a.		57		New Zealand		Basic	n.a.		65	0.0%
	(W)	FDC	any age & SL		57		Norway		T	n.a.		67	0.0%
Costa Rica		DB, FDC	n.a.		65	1.6%			NDC	62	..		..
Czech Republic		DB	60	3.6-6% [l]	65	6.0%			FDC (Occ)	62	..		..
		Basic, Min	60	0.0%	65	0.0%	Poland	(M)	NDC, Min	n.a.		65	..
Denmark		Basic, T	n.a.		74	6.9-11.9% [l]		(W)	NDC, Min	n.a.		60	..
		FDC (ATP)	74	..		5.0%	Portugal		DB	25	7.8%	68	0.0-12.0% [l,w,y]
		FDC (Occ)	68	..		..			Min	n.a.		68	0.0%
Estonia		Basic, points	66	5.1%	71	5.6%	Slovak Republic		Points, Min	62 & SL	6.5%	64	6.0%
Finland		DB	65	4.8%	68	4.8%	Slovenia		DB, Min	60	3.6%	62	3.0%
		T	n.a.		68	4.8%	Spain		DB, Min	63	6.0% [y]	65	4.0% [y]
France		DB, Min	62	5.0%	65	5.0%	Sweden		T	n.a.		65	0.0%
		Points	57	4-5.7.0% [l,y]	66	0.0%			NDC, FDC	62	..		..
Germany		Points	65	3.6%	67	6.0%			FDC (Occ)	55	..	65	..
Greece		Basic, DB, NDC	66	6.0%	66	0.0%	Switzerland	(M)	DB, Min	63	6.8%	65	5.2-6.3% [l]
Hungary	(M)	DB, Min	n.a.		65	6.0%		(W)	DB, Min	62	6.8%	64	5.2-6.3% [l]
	(W)	DB, Min	n.a.		62	6.0%		(M)	DB (Occ)	58	2.0-3.0% [l]	65	3.9-4.2% [l]
Iceland		Basic, T	n.a.		67	6.0%		(W)	DB (Occ)	58	2.0-3.0% [l]	64	3.9-4.2% [l]
		FDC (Occ)	65	6.6%	67	6.0%	Turkey	(M)	DB, Min	n.a.		65	0.0%
Ireland		Basic	n.a.		66	0.0%		(W)	DB, Min	n.a.		63	0.0%
Israel	(M)	Basic	n.a.		67	5.0%	United Kingdom		Basic	n.a.		67	5.8%
	(W)	Basic	n.a.		62	5.0%			FDC (Occ)	57		67	
							United States		DB	62	6.7-5.0% [l]	67	8.0%

Note: See statlink.
Source: OECD based on information provided by countries; see "Country Profiles" available at *http://oe.cd/pag*.

3. The problems of Social Security: its crises and its reform (VII)

PENSIONS AT A GLANCE: COUNTRY PROFILES - SPAIN

Spain

Spain:
Pension system in 2022

The Spanish public pension system consists of an earnings-related scheme, with a minimum contributory pension.

Key Indicators: Spain

		Spain	OECD
Average worker earnings (AW)	EUR	28 360	39 152
	USD	29 865	41 228
Public pension spending	% of GDP	11.3	7.7
Life expectancy	at birth	83.9	80.7
	at age 65	86.6	84.6
Population over age 65	% of working- age population	33.4	31.3

Qualifying conditions

The retirement age for a full pension (without actuarial reduction) is 66 years and two months in 2022, increasing to 67 years in 2027. However, the retirement age is reduced to 65 if an individual has at least 37 years and six months of contributions in 2022, increasing to 38.5 years of contributions by 2027. It is necessary to have 15 years of contributions to qualify for a pension benefit.

3. The problems of Social Security: its crises and its reform (VIII)

Annex Table 1.A.1. Pension reform decided between September 2021 and September 2023 |83

	Retirement age	Coverage	Pension benefits	Contributions	Minimum and basic pensions, income and means testing	Taxes and fees	Other
			additional indexation mechanism is introduced, so that pension benefits increase by 5% when the cost-of-living index grows by at least 5% since the previous indexation.				
Slovenia			As of April 2022, a father can claim the bonus for having children if the mother has not yet claimed the right to an early, old-age or disability pension, in mutual agreement. The bonus remains the same at 1.36% accrual per child up to three children. If the mother dies before claiming an early, old-age or disability pension, the father may assert an additional percentage of the assessment.				
Spain	December 2021: From 1 January 2022, the person who delays retirement will receive a bonus of 4% per full year worked after reaching the retirement age, or can opt to receive it as a lump sum which depends on the amount of the initial pension and the period of contributions, or as a combination of both.		November 2021: The revalorisation pension index (IRP) used for pension indexation and the sustainability factor (SF) to be used to adjust new benefit levels but never implemented were removed. As of January 2022, the pensions in the public PAYGO system are automatically adjusted to CPI. If inflation is negative, pensions will remain unchanged. March 2023: - The period on which the	November 2021: As of January 2023, the contribution rate is increased by 0.6 percentage points (0.1 percentage points for workers, 0.5 percentage points for employers) from 2023 to 2032 to finance the Intergenerational Equity Mechanism (MEI), a reserve fund. July 2022: From January 2023, the self-employed can no longer choose their contribution base, which	March 2023: Between 2024 and 2027: - The minimum pension for a pensioner with a dependent spouse will gradually be increased to 60% of median equivalised disposable income for this type of household. Other minimum pensions follow the same evolution. - The safety net benefit for older people will be increased so that for a single individual the benefit will be equal to 45% of median		

3. The problems of Social Security: its crisis and its reform (IX)

STUDIES PROBLEMS ON PENSION DISTRIBUTION AND FINANCIAL VIABILITY ACCORDING TO DEPENDENCY RATE

$$\frac{Exp.pen}{GDP} = \frac{Population \geq 65}{Active\ Population} \times \frac{1}{employment\ rate} \times \frac{number\ pensions}{Population \geq 65} \times \frac{Average\ pension}{GDP\ per\ occupied} \left[employment\ rate = \frac{number\ employees}{Population\ 18-65} \right],$$

$$\text{where from } \frac{exp.pen}{GDP} = \frac{Population \geq 65}{Active\ Population} \times \frac{Average\ pension}{GDP\ per\ occupied}$$

- **Sensitivity of results due to ageing, models, periods and assumptions of economic evolution.**

PROBLEM SOLUTIONS
1. **Replace the pay-as-you-go system by capitalization (virtues and defects), but mandatory contribution. Problem: how is a change from one system to another financed? national accounts…**
2. **Mixed system (distribution and capitalization). Herce *et al*. (1996).**
3. **Use joint measures ∇ growth in pension spending, reduce the forecast deficit. Example European Countries.**

The problem of adequacy of the public pension system is complex.
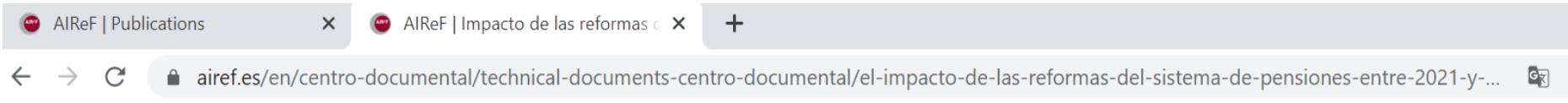- **MIXED SYSTEM NOT UNIVERSAL PANACEA, and development ⇒ study and political debate.**

	Before 1985	1985 Reform	1997 Reform	2011-2013 Reforms	2023 Reform
Reference wages for calculating the pension	LAST 2 YEARS	LAST 8 YEARS	LAST 15 YEARS	LAST 25 YEARS	To determine their regulatory base, pensioners may choose the system that best suits them: • Use the last 25 years of contributions. • Use the last 29 years and discard the two worst years of contribution. Of course, this change will be applied progressively for twelve years between 2026 and 2037. The year 2037 will be the first in which this system is fully in force. Until 2044, each worker will be able to choose the most beneficial. From then on, all retirees will calculate their base with 29 years of contributions, discarding the 24 worst months.
Years to get 100% of the pension	10 YEARS	15 YEARS	35 YEARS	37 YEARS	In 2023, the necessary contribution years are 37 years and 9 months, and in 2027 they will be 38 years and 6 months.
Retirement age	65	65	65	67	In 2023, the legal retirement age is **66 years and 2 months**, although if you have been contributing for 37 years and 9 months or more, the retirement age **remains at 65**. It is important to remember that the retirement age increases progressively year by year, at a rate of 2 months per year, until it reaches **67 years** in 2027, which is when it will be set.
Indexation to the CPI	NO	PARTIALLY	YES	NO	YES
Health included in the Social Contributions	YES	YES	NO	NO	NO

Economics of Social Expenditure

	Before 1985	1985 Reform	1997 Reform	2011-2013 Reforms	2023 Reform
Reference wages for calculating the pension	LAST 2 YEARS	LAST 8 YEARS	LAST 15 YEARS	LAST 25 YEARS	To determine their regulatory base, pensioners may choose the system that best suits them: • Use the last 25 years of contributions. • Use the last 29 years and discard the two worst years of contribution. Of course, this change will be applied progressively for twelve years between 2026 and 2037. The year 2037 will be the first in which this system is fully in force. Until 2044, each worker will be able to choose the most beneficial. From then on, all retirees will calculate their base with 29 years of contributions, discarding the 24 worst months.
Years to get 100% of the pension					In 2023, the necessary contribution years are 37 years and 9 months, and in 2027 they will be 38 years and 6 months.
			65	67	In 2023, the legal retirement age is **66 years and 2 months**, although if you have been contributing for 37 years and 9 months or more, the retirement age **remains at 65**. It is important to remember that the retirement age increases progressively year by year, at a rate of 2 months per year, until it reaches **67 years** in 2027, which is when it will be set.
Indexation to the CPI	NO	PARTIALLY	YES	NO	YES
Health included in the Social Contributions	YES	YES	NO	NO	NO

Solidarity fee: This quota is basically an additional contribution during 2025 and 2024 on the part of the salary that exceeds the maximum base. It will be progressive in three salary brackets.

3. The problems of Social Security: its crisis and its reform (XII)

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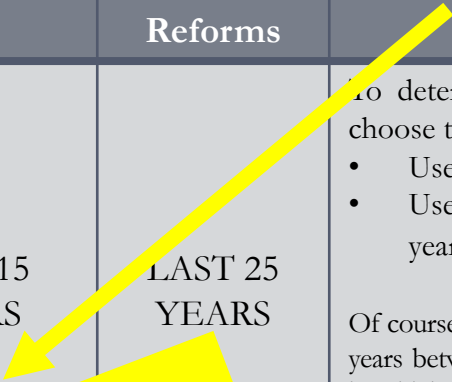
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The impact of pension system reforms between 2021 and 2023

📅 24 March 2023

Law 21/2021 on the guarantee of the purchasing power of pensions and other measures to reinforce the financial and social sustainability of the public pension system modified the system of rewards and punishments in force to date, established the revaluation of pensions with the CPI and repealed the sustainability factor.

AIReF has assessed the impact of each of these measures and has incorporated them into the baseline scenario included in the Opinion on the long-term sustainability of Public Administrations.

📄 TECHNICAL DOCUMENT 'THE IMPACT OF PENSION SYSTEM REFORMS BETWEEN 2021 AND 2023. SPANISH VERSION'.

📄 TABLES AND GRAPHS OF THE TECHNICAL DOCUMENT 'THE IMPACT OF PENSION SYSTEM REFORMS BETWEEN 2021 AND 2023'. SPANISH VERSION.

📄 EXECUTIVE SUMMARY OF THE OPINION ON THE LONG-TERM SUSTAINABILITY OF PUBLIC ADMINISTRATIONS: THE IMPACT OF DEMOGRAPHICS

📄 OPINION ON THE LONG-TERM SUSTAINABILITY OF PUBLIC ADMINISTRATIONS: THE IMPACT OF DEMOGRAPHICS. SPANISH VERSION.

📄 TABLES AND GRAPHS OF THE OPINION ON THE LONG-TERM SUSTAINABILITY OF PUBLIC ADMINISTRATIONS: THE IMPACT OF DEMOGRAPHICS. SPANISH VERSION.

Ver todas las noticias

Últimas noticias:

📋 Cristina Herrero highlights the planning exercise that entails the Recovery Plan

📋 Cristina Herrero receives the Economic and Social Relevance Award from the Economists Association of Alicante

📋 Cristina Herrero highlights the key role of public policy evaluation at AIReF

ACCESS TO ALL DOCUMENTATION PUBLISHED BY AIReF ON SUSTAINABILITY, POPULATION AND PENSION SPENDING. SPANISH VERSION.

https://www.airef.es/en/centro-documental/technical-documents-centro-documental/el-impacto-de-las-reformas-del-sistema-de-pensiones-entre-2021-y-2023/

3. The problems of Social Security: its crisis and its reform (XIII)

EFFECTS OF PUBLIC PENSION RETIREMENT ON SAVINGS AND CAPITAL ACCUMULATION

- **Feldstein (1947):** Effect of public pensions on private wealth or ***WEALTH SUBSTITUTION EFFECT***: ∇SAVINGS.

- **Subject to adjust to desired new private wealth in retirement** ⇒ ∇ Savings in active years in the amount of SS pensions. ∇ PRIVATE WEALTH (and accumulate capital) after introducing pension systems.

- **If the pension system were a capitalization one, not ∇private savings**⇒ **∇national** savings because the Public Sector would invest in contributions to pay future pensions.

  Δ public saving = ∇ private saving ⇒ national saving would not change

- **But *since it is a pay-as-you-go system, Δpublic savings are not given*** (contributions, instead of investing them, are transferred to pensions or consumption of retirees) **and ∇NATIONAL SAVINGS.**

3. The problems of Social Security: its crisis and its reform (XIV)

EFFECTS OF PUBLIC RETIREMENT PENSION ON SAVINGS AND CAPITAL ACCUMULATION

- If the pension system, instead of being actuarially fair, produced a net benefit because pensions > contributions, ∇ private wealth would be even greater.

- **WEALTH SUBSTITUTION EFFECT: public pensions can ∇capital available for productive uses. _2 ways mitigate it_ :**

1) _Non-fixed retirement age, and the public pension system encourages early retirement_ . **Reasons.**

 a) If the pension system is +than actuarially fair, it will be +rich due to public pensions (consuming +leisure and retiring earlier).

b) Public retirement pensions, unlike private plans, are usually incompatible with obtaining work income.

- **Δn^o years retired requires +savings when working to finance consumption (+long retirement). Effect of pensions on savings is _EARLY RETIREMENT EFFECT_ and Δ SAVINGS.**

3. The problems of Social Security: its crisis and its reform (XV)

EFFECTS OF PUBLIC RETIREMENT PENSION ON SAVINGS AND CAPITAL ACCUMULATION

2) *Game of private transfers between generations*
Pay-as-you -go system $\Rightarrow$ young generations finance retirees consumption.

a) Parents $\Rightarrow$ Δ Inheritances to children to offset transfers from the Public Sector obliges "children" to make and loss of productivity due to ∇capital stock of the pay-as-you-go system.

b) Children stop giving private transfers to parents, they dedicate to their own savings.

- **In both final effect: Δprivate wealth or *INHERITANCE EFFECT* ΔSAVINGS.**

- **SUBSTITUTION EFFECT $\Rightarrow \nabla$SAVINGS**
- ***EARLY RETIREMENT EFFECT (OR* EFFECT OF ANTICIPATING RETIREMENT) AND INHERITANCE EFFECT $\Rightarrow \Delta$ SAVINGS**

- **EMPIRICAL EVIDENCE DOES NOT CLARIFY**
  Feldstein (1947) aggregate data USA (1929-71) SS$\Rightarrow \nabla$private savings rate in half. Critics: Munnell (77), Barro (78) say Feldstein did not include the inheritance effect. Others: pensions ∇savings but they lower it. Atkinson (1987) +agnostic.

36

Final summary

- **ECONOMIC BENEFITS OF THE PUBLIC SECTOR: "*Income substitution programs and Fight against poverty programs*".**

- **Mandatory to participate in income substitution programs due to paternalism, externalities and asymmetric information.**

- **Management by Public Systems for social risks, avoid high premiums for workers with +risks, redistributive instrument and lower management cost.**

- **PENSION PROGRAMS: Capital funded pension system and Pay-as-you-go pension system. Main problem in Spain is possible financing crisis. In theory, Pay-as-you-go pension system $\Rightarrow$ 3 effects: substitution, early retirement and inheritance. Contradictory empirical evidence.**

37