Population projection 2020-2070

If current demographic trends are maintained, Spain stands to gain almost one million inhabitants in the next 15 years, and more than three million by 2070

The population aged 65 and over would account for 26.5% of the total in 2035.

Comunidad de Madrid and Cataluña would register the greatest population growths, while Castilla y León and Galicia would present the greatest decreases.

COVID-19's Effect on 2020-2070 Population Projections

Added to the uncertainty generally surrounding population projections is the impact of COVID-19, which necessitates a rethinking of some of the hypotheses for future evolution. Specifically, for these projections, the excess mortality observed through July 2020 has been taken into account, as well as the decrease experienced in immigration and emigration in recent months.

Under these conditions, the effect of COVID-19 taken into account for hypotheses was:

- A decrease in migratory movements abroad is projected, meaning that the trend of recent years will be broken. The migratory balance in 2020 would be positive, but very low. From 2021 onwards, a gradual recovery is projected, though it will fail to reach the levels observed in previous years. This means that population will grow more slowly during the first years of the projection than anticipated in previous projections.

- Mortality is projected to be affected only during 2020. The year 2021 is projected to have a normal mortality rate.

- No impact is projected on births, since there is thus far no evidence of such impact. Neither are any additional hypotheses regarding internal migrations introduced. Beyond the slowdown observed in 2020, the evidence is insufficient to establish new hypotheses regarding changes in residence between provinces.

Population projections show the evolution that the population of Spain would follow if current demographic trends were maintained. They do not constitute a prediction, in the sense that they do not aim to determine the most likely evolution.

In this new edition of the projections, a consultation in the form of a survey was conducted with demographers throughout Spain in order to establish hypotheses for future behaviour of demographic parameters (see methodological note).

The most notable part of this survey consists of projecting Spain's foreign migratory balance. According to the experts consulted, this should increase in a sustained manner, leading to population growth throughout projected period (except, perhaps, circumstantially in 2020).

Spain's population would reach 50.6 million people in 2070

According to the projections published today, in the next 15 years Spain could gain 954,497 inhabitants (2.0%), exceeding 48 million people in 2035. In 2070, the population would reach 50.6 million, with an increase of 3.2 million people.

The progressive and uninterrupted increase in deaths, always higher than the number of births, will give rise to a negative natural increase during the entire projected period. This negative vegetative balance will be exceeded by the positive migratory balance, causing a population increase throughout the projected period. The increase in population will, therefore, be exclusively the product of international migration.

This would mean that the population born in Spain will decrease, changing from representing 85.2% of the total today, to representing 66.8% within 50 years.

Projection of the population in Spain 2020-2070
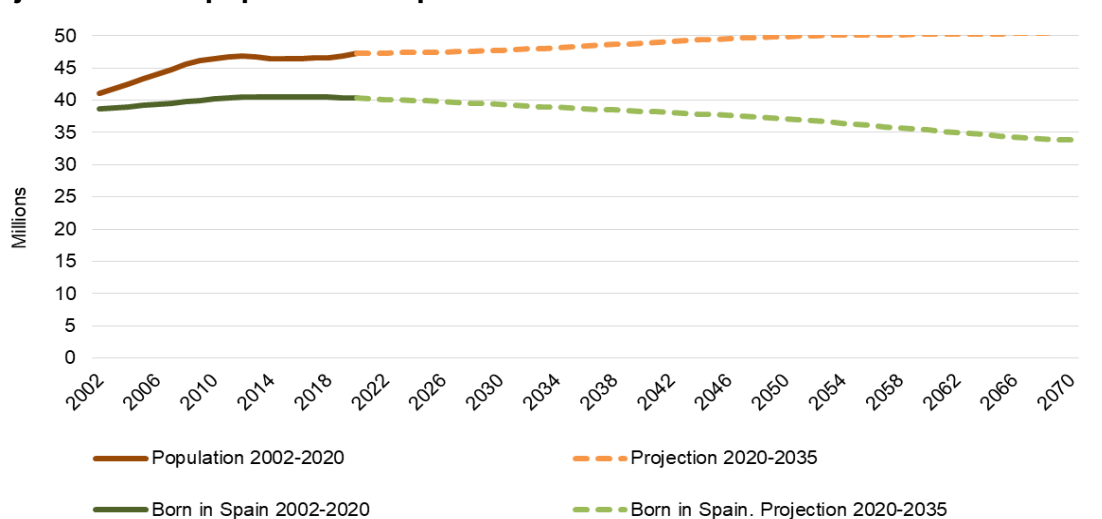
Projection of the population in Spain 2020-2070

| Year | Population as of 1st January | | Population Growth (*) | |
	Total population	Born in Spain	Absolute	Relative (%)
2014	46,512,199	40,553,891	-62,634	-0.13
2015	46,449,565	40,558,357	-9,466	-0.02
2016	46,440,099	40,521,758	86,940	0.19
2017	46,527,039	40,502,516	131,408	0.28
2018	46,658,447	40,459,614	278,613	0.60
2019	46,937,060	40,398,099	392,921	0.84
2020	47,329,981	40,334,334	-3,024	-0.01
2021	47,326,958	40,229,931	26,633	0.06
2022	47,353,590	40,153,754	28,364	0.06
2023	47,381,955	40,069,489	31,321	0.07
2024	47,413,275	39,978,424	36,609	0.08
2025	47,449,884	39,881,665	59,825	0.13
2030	47,749,007	39,348,489	107,094	0.22
2035	48,284,479	38,806,879	124,128	0.26
2040	48,905,120	38,302,001	116,138	0.24
2045	49,485,811	37,771,235	84,969	0.17
2050	49,910,653	37,108,939	44,973	0.09
2055	50,135,516	36,279,858	18,545	0.04
2060	50,228,241	35,356,557	20,613	0.04
2065	50,331,306	34,481,021	51,701	0.10
2070	50,589,811	33,794,071		

(*) 2014-2019: Definitive Population Figures.
From 2025, average annual grow th of the quinquennium (t,t+5).

Annual growth of the population in Spain (2002-2019) and projected (2020-2069)
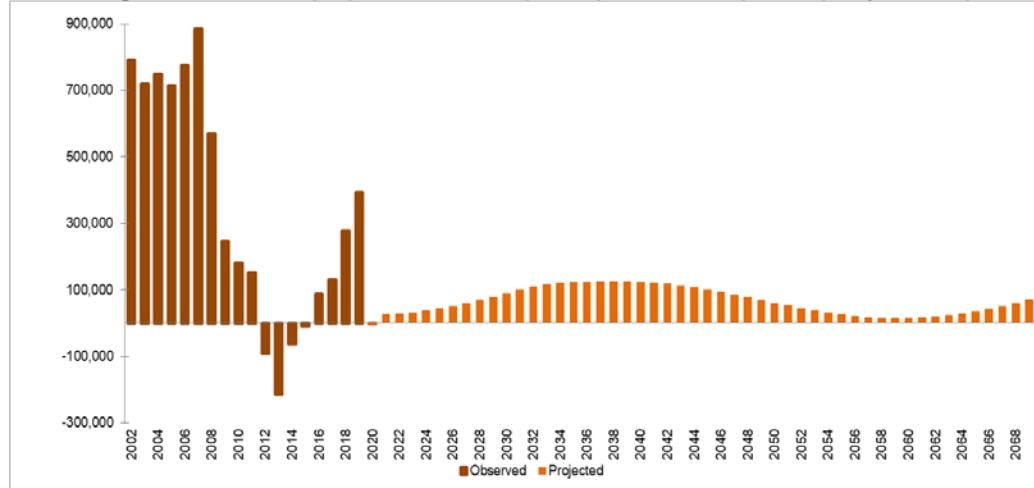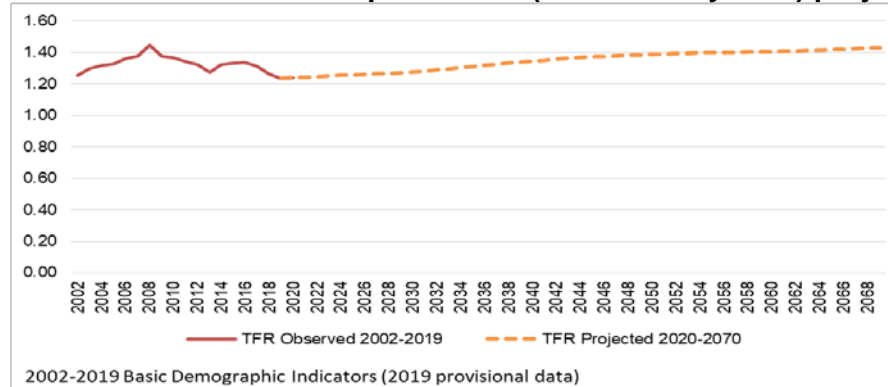

Births

The number of births will continue to decline though 2027, continuing the trend that began in 2009.

However, as of 2028, births could begin to increase, due to the arrival of increasingly numerous generations to the ages of highest fertility. Specifically, those born from the second half of the 90s onwards. Despite this, births will always be below deaths.

The number of births is projected assuming that women's fertility maintains a slight but progressive upward trend. Thus, the average number of children per woman would be 1.31 in 2034, compared to 1.23 today.

Mean number of children per woman (Total Fertility Rate) projected 2020-2070

2002-2019 Basic Demographic Indicators (2019 provisional data)

Deaths

The effect of COVID-19 is reflected in a short-term decrease in life expectancy at birth in 2020, which is estimated to fall by 0.9 years for men and 0.8 years for women. This temporary decline will recover in 2021.

Life expectancy at birth would reach 85.8 years for men and 90.0 years for women in 2069, with a gain of 4.9 and 3.8 years, respectively, compared to current values.

For its part, life expectancy for people aged 65 in 2069 would be 22.5 years for men (3.8 more than at present) and 26.3 for women (3.6 more).

Projection of Life expectancy at birth moment and at 65 years

Years	Life expectancy at birth		Life expectancy at 65 years old	
	Men	Women	Men	Women
2015	79.92	85.41	18.79	22.65
2016	80.31	85.84	19.14	23.05
2017	80.37	85.73	19.12	22.97
2018	80.46	85.85	19.22	23.07
2019	80.87	86.22	19.54	23.42
2020	80.01	85.44	18.72	22.71
2021	80.96	86.22	19.55	23.36
2024	81.49	86.56	19.87	23.62
2029	82.31	87.11	20.37	24.03
2034	83.03	87.62	20.81	24.41
2039	83.66	88.09	21.20	24.77
2044	84.19	88.50	21.54	25.09
2049	84.65	88.88	21.82	25.38
2054	85.03	89.22	22.06	25.65
2059	85.34	89.52	22.25	25.88
2064	85.60	89.78	22.41	26.09
2069	85.81	90.00	22.55	26.26

2015-2019: Basic Demographic Indicators (2019 provisional data)

Life expectancy observed (1991-2019) and projected (2020-2069)
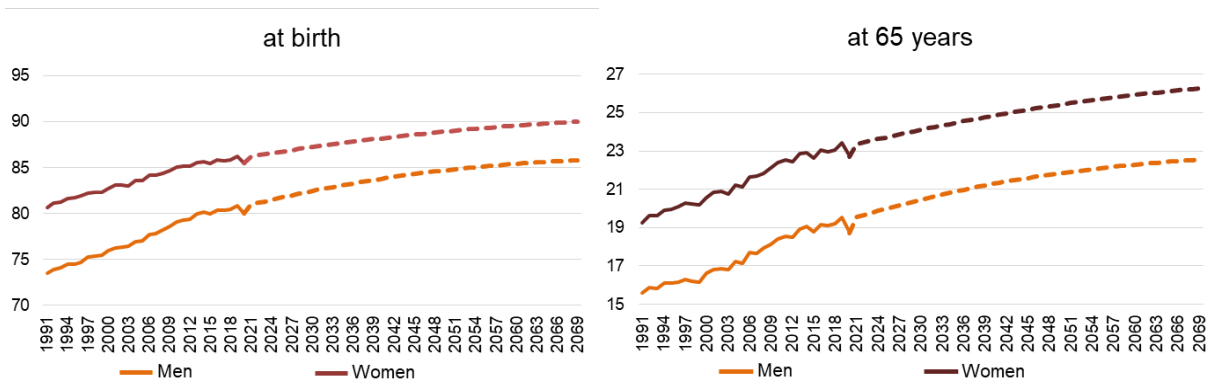
Despite the longer life expectancy, the number of deaths would continue to grow, reaching a peak in 2063. For the year 2020, the projection estimates a total of 466,583 deaths, compared to 415,070 in 2019.

On the other hand, in 2034 there would be 482,132 deaths among residents in Spain. The year 2069 would see 641,867.

Natural increase (births minus deaths)

Given the decline in the birth rate and the increase in deaths, in Spain there will always be more deaths than births (growth or negative vegetative balance) during the next 15 years.

This vegetative balance would reach its lowest value around 2060, and would recover slightly thereafter.

Natural increase of the population in Spain (2020-2069)
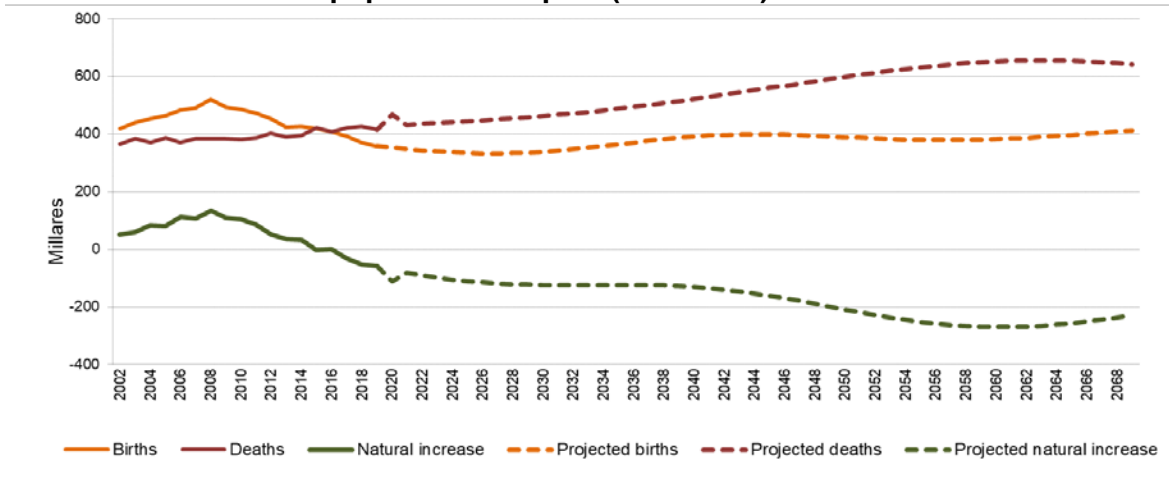
Projected natural increase of the population in Spain (2020-2069)

Years	Births	Deaths	Natural Increase
2015	418,432	420,408	-1,976
2016	408,734	408,231	503
2017	391,265	422,037	-30,772
2018	370,827	425,153	-54,326
2019	357,924	415,070	-57,146
2020	353,988	466,583	-112,595
2021	348,055	430,994	-82,938
2022	342,946	434,571	-91,625
2023	338,826	437,912	-99,086
2024	335,696	441,143	-105,448
2025-2029	333,196	450,921	-117,725
2030-2034	347,087	471,701	-124,614
2035-2039	375,570	501,070	-125,500
2040-2044	395,888	537,093	-141,205
2045-2049	395,483	575,571	-180,089
2050-2054	384,361	612,160	-227,799
2055-2059	379,069	641,009	-261,941
2060-2064	386,630	654,217	-267,587
2065-2069	404,290	648,504	-244,213

Source: 2015-2019, Vital Statistics (provisional data in 2019). From 2025 to 2069 average annual data of the quinquennium are offered.

Migratory growth

According to provisional data, Spain reached a level of 748,759 immigrations in 2019, while 297,368 people left the country to reside abroad. This migratory balance, of more than 450,000 people, would thus consolidate the positive trend that began in 2016.

However, due to the effects of COVID-19, and with the information available at the time these projections were closed, it is estimated that the migratory balance will decrease significantly in 2020, to 110,000 people. A similar migratory balance is projected in 2021, slightly increasing from that year onwards and thereby allowing for a net population gain due to the migrations of almost 2.7 million people through 2034.

The long-term trend would be for a constant growth in the migratory balance, which will produce a net population increasee of 12.2 million people through 2069.

Projected foreign migration of the population of Spain (2020-2069)
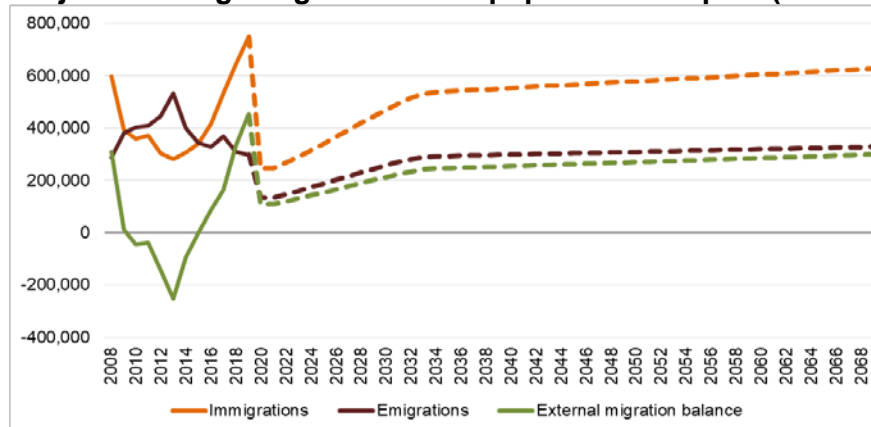
Projected foreign migrations in Spain (2020-2069)

Year	Immigrations	Emigrations	External migration balance
2015	342,114	343,875	-1,761
2016	414,746	327,325	87,422
2017	532,132	368,860	163,272
2018	643,684	309,526	334,158
2019	748,759	297,368	451,391
2020	245,219	135,648	109,571
2021	245,219	135,648	109,571
2022	267,741	147,752	119,989
2023	290,263	159,856	130,407
2024	315,555	173,498	142,057
2025-2029	392,651	215,101	177,550
2030-2034	509,914	278,206	231,708
2035-2039	545,714	296,086	249,628
2040-2044	558,571	301,229	257,343
2045-2049	571,429	306,371	265,057
2050-2054	584,286	311,514	272,772
2055-2059	597,143	316,657	280,486
2060-2064	610,000	321,800	288,200
2065-2069	622,857	326,943	295,914

Source: 2015-2019, Migracion Statistics (2019 provisional). From 2025 to 2069 average annual data of the quinquennium are offered.

Population structure by age and aging

The projection also shows the aging process of the resident population in Spain.

If the current demographic trend continues, the largest age group as of January 1, 2020, which are those people born between 1970-1979 (that is, people between 40 and 49 years old), would remain the largest group in 2050 (with ages between 70 and 79 years).

In the projection's final years there will be a certain rejuvenation of the population as the generations of those born in the 70s of the 20th century, with greater fertility, pass away. The most numerous groups on January 1, 2070 would thus be those born between 2005 and 2014, whose ages would be between 55 and 64 years.

The population between 20 and 64 years of age, which currently accounts for 60.8% of the total, would represent 51.9% of the total in 2050. It will partially recover in 2070, to 54.4%.

Population Pyramids of Spain (years 2020, 2050 and 2070)
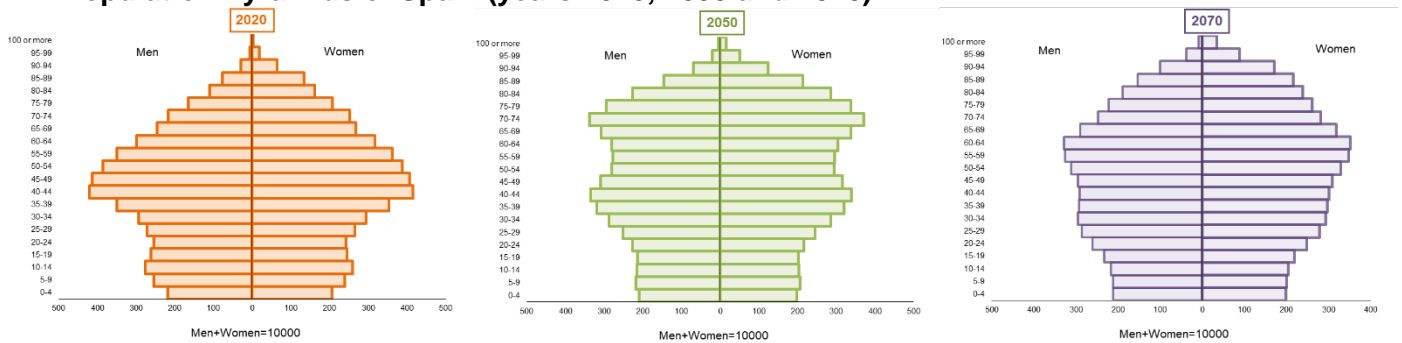
The percentage of the population aged 65 and over, which currently stands at 19.6% of the total population, would reach a maximum of 31.4% in 2050. From then on it would begin to descend.

Proportion of people over a certain age

Years	65 and over years (%)	70 and over years (%)	80 and over years (%)	100 and over years (%)
2016	18.7	13.7	6.0	0.02
2017	19.0	13.9	6.1	0.02
2018	19.2	14.0	6.2	0.02
2019	19.4	14.3	6.1	0.02
2020	19.6	14.4	6.0	0.03
2025	21.5	15.6	6.5	0.05
2030	24.0	17.3	7.4	0.07
2035	26.5	19.4	8.1	0.10
2040	28.8	21.4	9.1	0.11
2045	30.9	23.4	10.4	0.15
2050	31.4	25.0	11.6	0.20
2055	31.0	25.3	12.6	0.24
2060	30.1	24.6	13.5	0.30
2065	29.1	23.5	13.3	0.37
2070	28.6	22.5	12.4	0.43

Source 2016-2019, Basic Demographic Indicators. (2020 provisional)

On the other hand, and if current trends were to continue, the dependency ratio (quotient, as a percentage, between the population aged under 16 or over 64 and the population aged 16 to 64) would also reach a maximum around 2050 (81.1%), and will gradually decrease thereafter, to 72.2% in 2070.

The centenarian population (those who are 100 years old or older) would increase from 12,551 people today to 217,344 at the end of the projected period (2070).

Projected dependency rates

Year	Over 64 years old (%)	Under 16 years old (%)	Total (under 16 and over 64 years old) (%)
2016	28.7	24.7	53.4
2017	29.2	24.7	53.8
2018	29.6	24.6	54.2
2019	29.9	24.4	54.3
2020	30.2	24.0	54.2
2025	33.5	21.8	55.3
2030	38.0	20.1	58.1
2035	43.2	19.7	62.9
2040	49.1	21.0	70.1
2045	54.9	22.9	77.8
2050	56.9	24.1	81.1
2055	55.7	24.1	79.8
2060	53.1	23.5	76.6
2065	50.4	22.8	73.2
2070	49.2	22.9	72.2

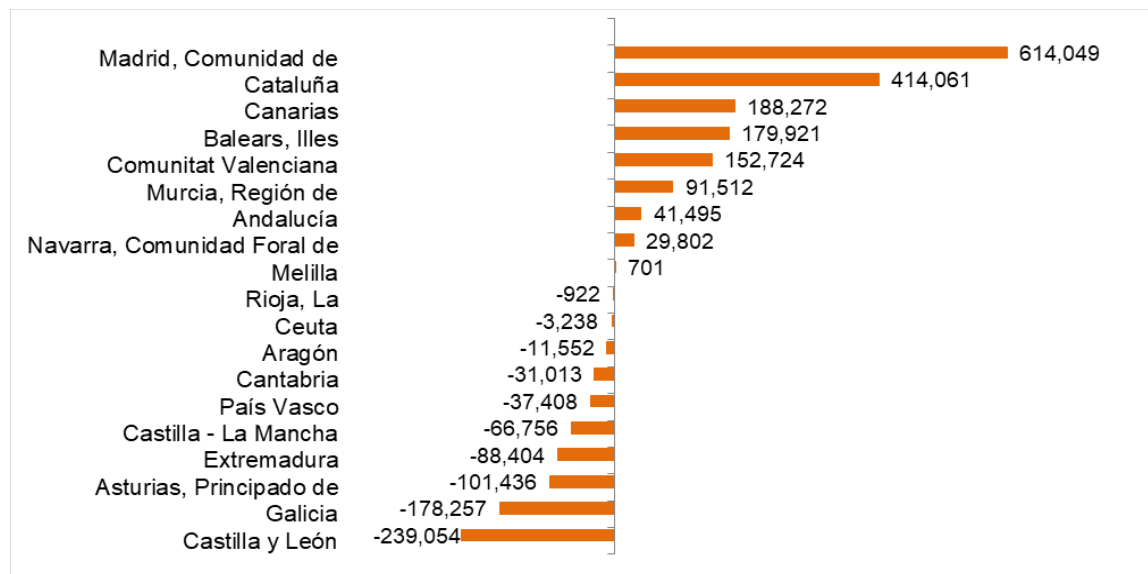Source 2016-2019, Basic Demographic Indicators.

(2020 provisional)

Population projections by Autonomous Community

If current demographic trends are maintained, distinct evolutions will be observed over the next 15 years by autonomous community. There would thus be population increases in eight and decreases in the other nine.
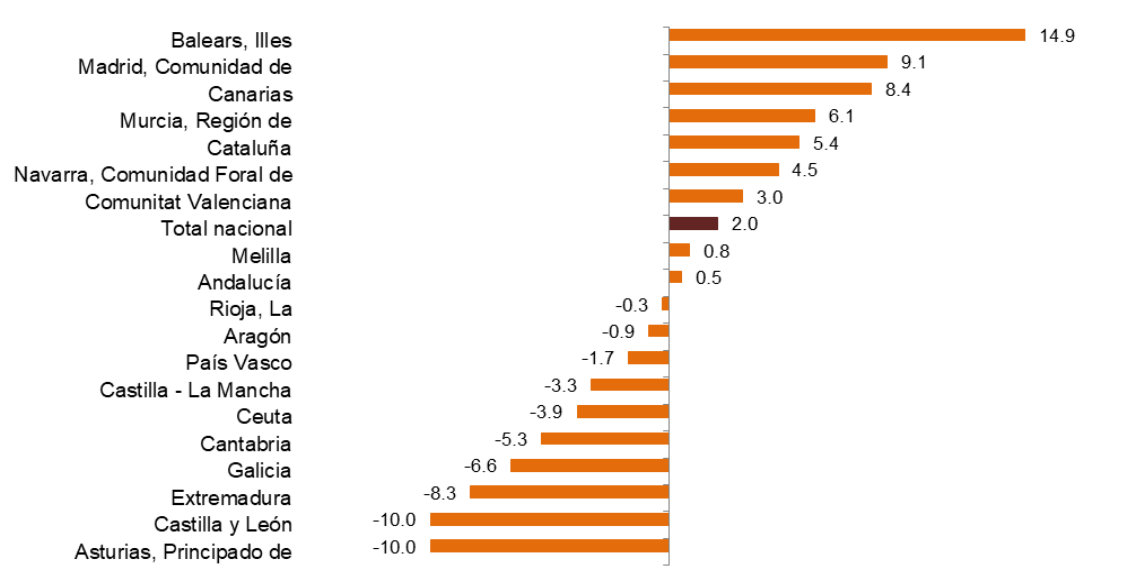
The largest relative increases were recorded in Illes Balears (14.9%), Comunidad de Madrid (9.1%) and Canarias (8.4%).

On the contrary, the most significant decreases would be recorded in Principado de Asturias (-10.0%), Castilla y León (-10.0%) and Extremadura (-8.3%).

Absolute projected population growth, by Autonomous Communities (2020-2035)

Autonomous Community	Value
Madrid, Comunidad de	614,049
Cataluña	414,061
Canarias	188,272
Balears, Illes	179,921
Comunitat Valenciana	152,724
Murcia, Región de	91,512
Andalucía	41,495
Navarra, Comunidad Foral de	29,802
Melilla	701
Rioja, La	-922
Ceuta	-3,238
Aragón	-11,552
Cantabria	-31,013
País Vasco	-37,408
Castilla - La Mancha	-66,756
Extremadura	-88,404
Asturias, Principado de	-101,436
Galicia	-178,257
Castilla y León	-239,054

Relative projected population growth, by Autonomous Communities (2020-2035)

Autonomous Community	Value
Balears, Illes	14.9
Madrid, Comunidad de	9.1
Canarias	8.4
Murcia, Región de	6.1
Cataluña	5.4
Navarra, Comunidad Foral de	4.5
Comunitat Valenciana	3.0
Total nacional	2.0
Melilla	0.8
Andalucía	0.5
Rioja, La	-0.3
Aragón	-0.9
País Vasco	-1.7
Castilla - La Mancha	-3.3
Ceuta	-3.9
Cantabria	-5.3
Galicia	-6.6
Extremadura	-8.3
Castilla y León	-10.0
Asturias, Principado de	-10.0

Projected population growth by Autonomous Community

	Population as of 1st January		Growth	
	2020(*)	2035	Absolut	Relative (%)
Total nacional	47,329,981	48,284,479	954,497	2.0
Andalucía	8,476,718	8,518,213	41,495	0.5
Aragón	1,330,445	1,318,893	-11,552	-0.9
Asturias, Principado de	1,018,775	917,339	-101,436	-10.0
Balears, Illes	1,210,750	1,390,671	179,921	14.9
Canarias	2,237,309	2,425,581	188,272	8.4
Cantabria	582,357	551,343	-31,013	-5.3
Castilla y León	2,401,230	2,162,176	-239,054	-10.0
Castilla - La Mancha	2,045,384	1,978,628	-66,756	-3.3
Cataluña	7,652,069	8,066,130	414,061	5.4
Comunitat Valenciana	5,028,650	5,181,374	152,724	3.0
Extremadura	1,061,768	973,364	-88,404	-8.3
Galicia	2,702,244	2,523,987	-178,257	-6.6
Madrid, Comunidad de	6,747,425	7,361,474	614,049	9.1
Murcia, Región de	1,504,607	1,596,120	91,512	6.1
Navarra, Comunidad Foral de	656,487	686,289	29,802	4.5
País Vasco	2,189,310	2,151,902	-37,408	-1.7
Rioja, La	315,926	315,004	-922	-0.3
Ceuta	84,032	80,794	-3,238	-3.9
Melilla	84,496	85,197	701	0.8

(*) Provisional data

In the Autonomous Cities of Ceuta and Melilla, as well as in Región de Murcia and Illes Balears, the cumulative number of births would exceed the number of deaths in the next 15 years.

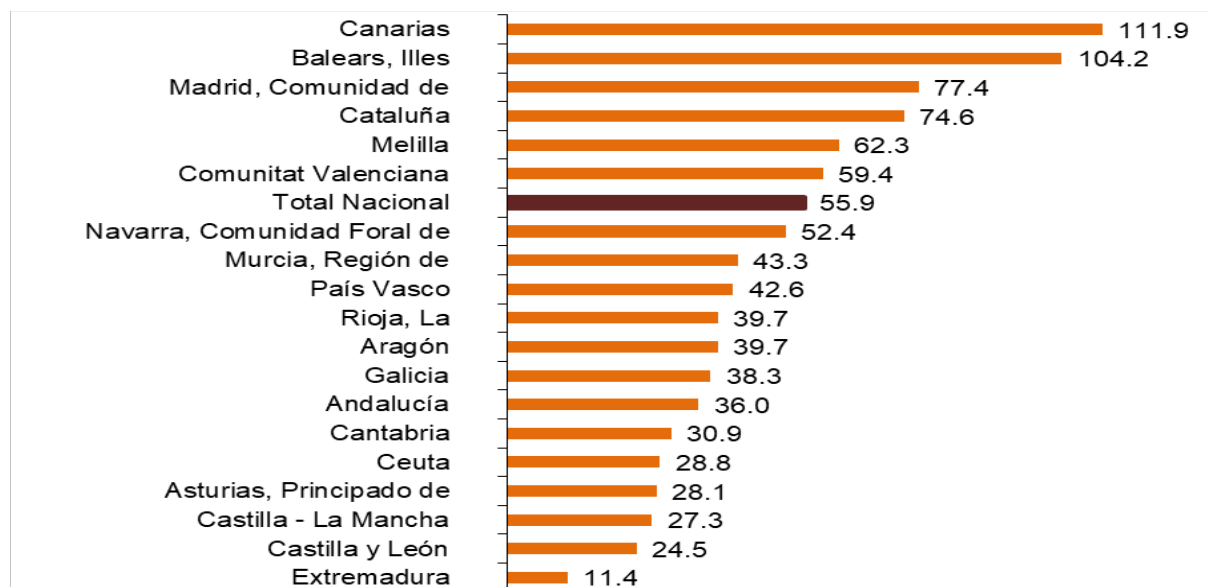## Projected vegetative balance (2020-2034) per thousand inhabitants

Autonomous Community	Value
Melilla	112.8
Ceuta	39.8
Murcia, Región de	18.7
Balears, Illes	3.5
Madrid, Comunidad de	-3.0
Cataluña	-19.0
Navarra, Comunidad Foral de	-19.4
Andalucía	-21.5
Canarias	-34.3
Total nacional	-35.7
Comunitat Valenciana	-38.3
Castilla - La Mancha	-50.0
Rioja, La	-52.4
Aragón	-57.2
País Vasco	-58.2
Extremadura	-66.7
Cantabria	-88.6
Castilla y León	-110.4
Galicia	-110.6
Asturias, Principado de	-133.7
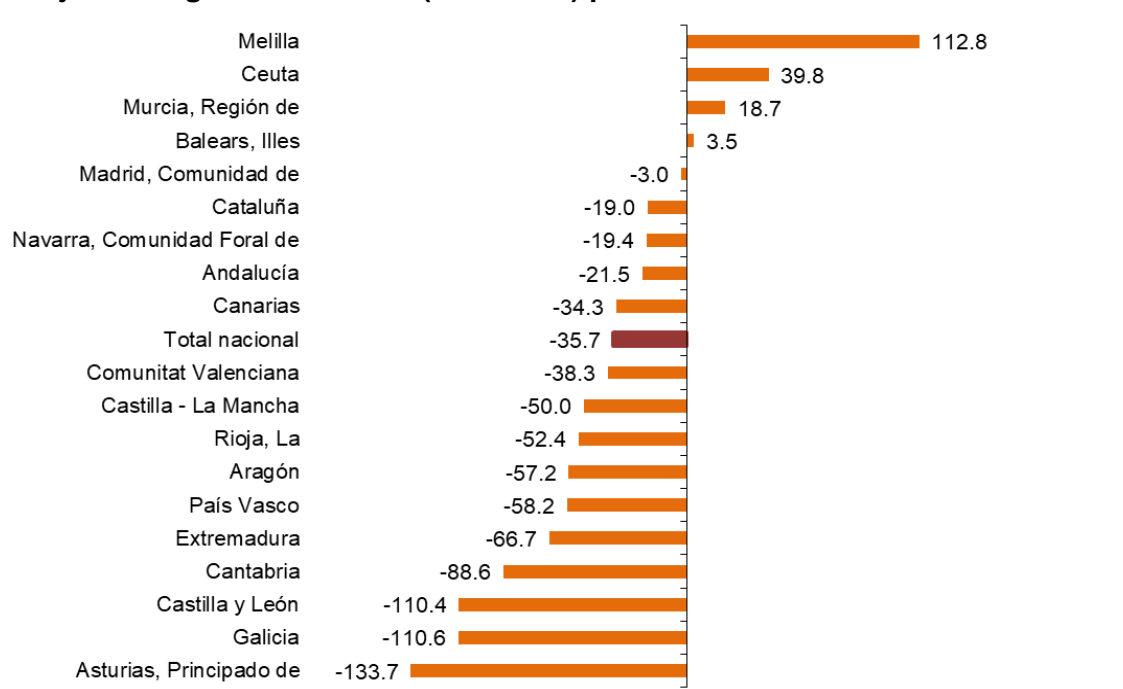
Projected vegetative balance, by AC

	2019	2024	2029	2034
Total nacional	-57,146	-105,448	-123,105	-123,980
Andalucía	-1,297	-9,963	-14,721	-16,801
Aragón	-3,965	-5,033	-5,162	-4,919
Asturias, Principado de	-7,741	-8,561	-8,746	-8,886
Balears, Illes	1,654	558	-48	-182
Canarias	-1,546	-4,434	-6,066	-7,371
Cantabria	-2,486	-3,178	-3,535	-3,730
Castilla y León	-14,299	-16,514	-16,907	-16,974
Castilla - La Mancha	-4,151	-6,199	-6,851	-7,097
Cataluña	-2,503	-9,647	-10,767	-8,434
Comunitat Valenciana	-6,756	-12,136	-14,403	-14,478
Extremadura	-3,595	-4,335	-4,679	-4,946
Galicia	-15,631	-18,856	-20,053	-20,324
Madrid, Comunidad de	8,400	210	-2,504	-2,221
Murcia, Región de	2,781	2,021	1,569	1,879
Navarra, Comunidad Foral de	-187	-862	-963	-755
País Vasco	-6,152	-8,331	-8,915	-8,444
Rioja, La	-736	-1,011	-1,182	-1,224
Ceuta	305	216	213	223
Melilla	759	607	613	703

Source (2019): Vital Statistics (provisional data)

If current trends were to continue, the international migration balance between 2020 and 2034, in relative terms to its size, would be positive in all Autonomous Communities, especially in Canarias and Illes Balears.

Projected foreign migratory balance (2020-2034) per thousand inhabitants

Canarias	111.9
Balears, Illes	104.2
Madrid, Comunidad de	77.4
Cataluña	74.6
Melilla	62.3
Comunitat Valenciana	59.4
Total Nacional	55.9
Navarra, Comunidad Foral de	52.4
Murcia, Región de	43.3
País Vasco	42.6
Rioja, La	39.7
Aragón	39.7
Galicia	38.3
Andalucía	36.0
Cantabria	30.9
Ceuta	28.8
Asturias, Principado de	28.1
Castilla - La Mancha	27.3
Castilla y León	24.5
Extremadura	11.4

Projected foreign migratory balance, by AC

	2019	2024	2029	2034
Total nacional	451,391	142,057	201,541	245,000
Andalucía	53,048	16,167	23,256	28,612
Aragón	12,251	2,750	3,969	4,934
Asturias, Principado de	4,673	1,365	2,106	2,682
Balears, Illes	19,074	7,347	10,118	12,055
Canarias	31,489	14,120	19,486	23,239
Cantabria	2,941	890	1,347	1,705
Castilla y León	10,835	2,757	4,299	5,580
Castilla - La Mancha	13,986	2,793	4,184	5,342
Cataluña	90,918	31,631	43,873	52,490
Comunitat Valenciana	57,220	16,136	22,805	27,822
Extremadura	2,529	549	914	1,227
Galicia	16,866	5,116	7,695	9,629
Madrid, Comunidad de	93,128	28,970	41,274	49,968
Murcia, Región de	14,946	3,614	5,040	6,118
Navarra, Comunidad Foral de	6,347	1,899	2,641	3,174
País Vasco	17,813	4,921	6,990	8,485
Rioja, La	2,499	654	949	1,182
Ceuta	115	116	186	239
Melilla	713	262	410	516

Source (2019): Migration Statistics (provisional)

As regards internal migration, Illes Balears, Comunidad de Madrid and Comunidad Foral de Navarra and would be the territories that, relative to their size, would attract the most population from the rest of Spain.

Conversely, the Autonomous Cities of Ceuta and Melilla, Extremadura and Castilla y León, and Castilla-La Mancha, would have the most negative inter-regional migratory balances.

Projected inter-regional migratory balance (2020-2034) per thousand inhabitants

Region	Value
Balears, Illes	31.6
Madrid, Comunidad de	13.2
Navarra, Comunidad Foral de	11.6
Rioja, La	9.9
Comunitat Valenciana	9.1
Aragón	9.0
Galicia	4.5
Canarias	4.0
Cantabria	3.3
Asturias, Principado de	1.2
País Vasco	-1.5
Cataluña	-2.4
Murcia, Región de	-2.8
Andalucía	-9.6
Castilla - La Mancha	-10.4
Castilla y León	-18.5
Extremadura	-31.4
Ceuta	-108.4
Melilla	-168.1

ProjectediInter-regional migratory balance, by AC

	2019	2024	2029	2034
Andalucía	-2,272	-5,703	-5,237	-4,742
Aragón	1,619	731	825	943
Asturias, Principado de	-326	-8	172	312
Balears, Illes	1,837	2,819	2,609	2,383
Canarias	556	617	605	549
Cantabria	278	88	150	226
Castilla y León	-2,945	-3,391	-2,270	-1,430
Castilla - La Mancha	729	-1,823	-1,076	-378
Cataluña	-2,586	-825	-1,679	-2,345
Comunitat Valenciana	3,363	3,052	3,112	3,305
Extremadura	-2,561	-2,395	-1,909	-1,509
Galicia	676	531	977	1,342
Madrid, Comunidad de	4,442	7,320	5,186	3,297
Murcia, Región de	-757	-220	-342	-406
Navarra, Comunidad Foral de	398	579	446	375
País Vasco	-178	-28	-337	-660
Rioja, La	605	197	208	239
Ceuta	-1,214	-601	-566	-570
Melilla	-1,664	-940	-876	-930

Source (2019): Migration Statistics (provisional)

Data Review and Update

The data published today update the 2018-2068 population projections, the results of which are no longer representative.

ANEXO

Sensitivity analysis of the results of the Population Projections in the face of changes in the initial hypotheses.

As in the Population Projections published two years ago, this edition of the projections has carried out a sensitivity analysis of the published results in the face of changes in the initial hypotheses for the period 2020-2070.

This exercise is intended, in line with the trend of other reference statistical offices (Canada, Holland, Italy, France or New Zealand) and international organisations (Eurostat, United Nations), to help society to better interpret the true meaning of projections, which is not to predict the future, but to simulate what would happen under certain conditions that reflect the current demographic situation. The fact of providing two extreme scenarios helps to understand that the central projection is within an uncertainty interval.

To this end, various simulations have been carried out, at national level only, based on a slight modification of the hypotheses for the projected period. Of the four demographic areas (fertility, mortality, emigration and immigration) involved in projection calculation, simulations were carried out for the hypotheses regarding fertility, emigration and immigration, as obtained from the survey of demography experts. Since it is considered the most stable phenomenon over time, making variations regarding mortality is not thought necessary.

Other scenarios may be constructed from the variation of the values provided by consulting the experts.

Two scenarios have been constructed by modifying the fertility parameters:

- High scenario: for 2069, we establish a Short-term Fertility Indicator (SFI) twice the standard deviation higher than the one established in the central scenario.

- Low scenario: for 2069, we establish a SFI twice the standard deviation lower than the one established in the central scenario.

Likewise, by modifying the parameters of the international migratory balance, two other scenarios have been established:

- High scenario. The inflows of immigrants for the year 2069 increase by 10% and the inflows of emigrants for the same year fall by 10%. For the intervening years an interpolation is carried out in the same way as in the central scenario.

- Low scenario. The inflows of migrants are reduced by 10% in 2069 and outflows of migrants in the same year are increased by 10%. For the intervening years an interpolation is carried out in the same way as in the central scenario.

The following are the results of the projections according to the different scenarios for the next 50 years.

1. Fertility

The SFI in 2069 would range from 1.08 children per woman (low scenario) to 1.78 children per woman (high scenario). The number of births expected for the year 2069 would take values between 281,910 and 560,679.

The number of births in the high scenario would reach a minimum in 2023 and thereafter would increase slightly. In the low scenario the minimum number of births would be registered in the year 2027.

Finally, the population figure would be between 47,049,762 inhabitants in the low scenario and 54,239,688 in the high scenario.

Evolution of projected TFR according to fertility scenarios (2020-2069)
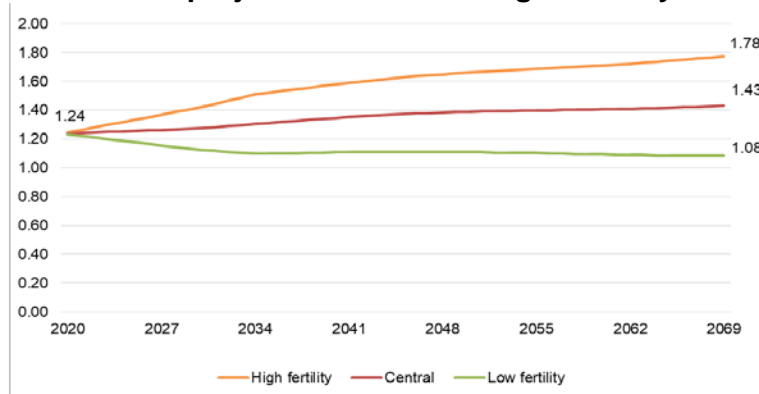
Evolution of projected births according to fertility scenarios (2020-2069)
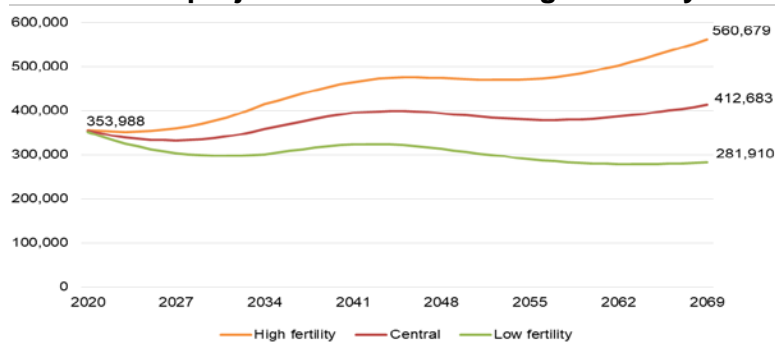
Evolution of projected population according to fertility scenarios (2020-2070)
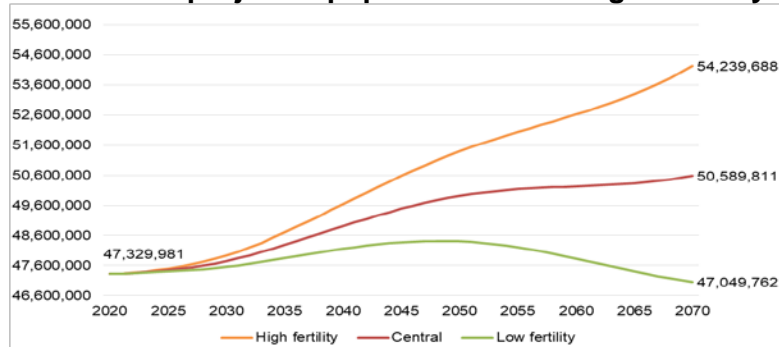
2 External Migration Balance

In the central scenario, the migratory balance would reach 299,000 in the year 2069. Keeping with the other hypotheses, a change in the migratory balance in the high scenario would result in an increase to 394,700, while in the low scenario it would decrease to 203,300 immigrants.

The population figure of the various migration scenarios would be between 46,438,270 and 54,756,279 inhabitants.

Evolution of external migration balance according to different scenarios (2020-2069)
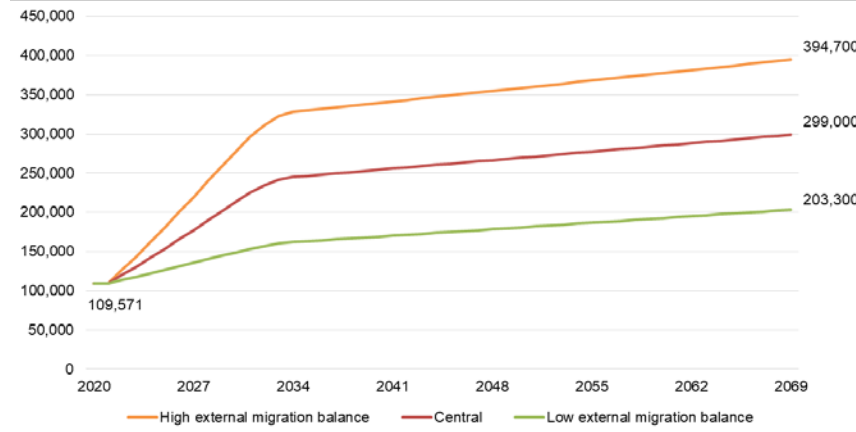
Evolution of projected population according to different scenarios of external migration balance (2020-2070)
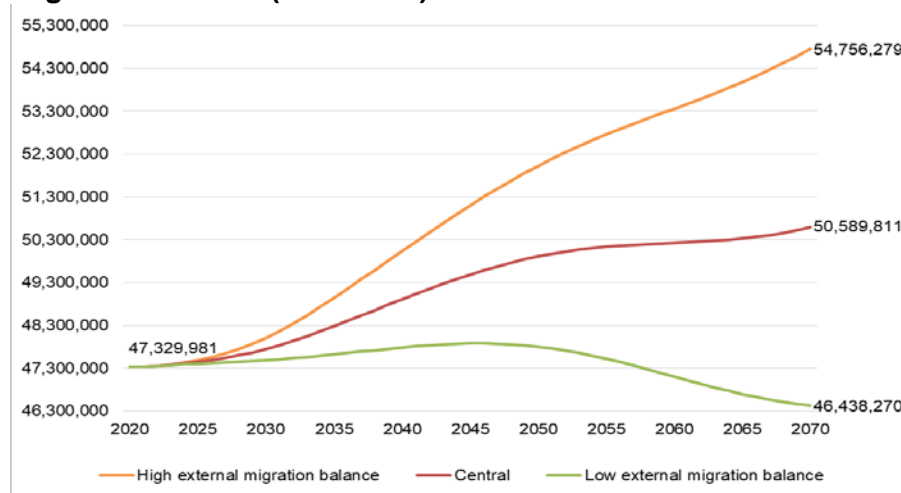
3. Combined effect of hypothesis change on fertility and migratory balance

When combining the different scenarios for both fertility and migratory balance, we can observe that, over the next 50 years, the population could oscillate between 43,088,791 inhabitants (with the lowest scenario) and 58,598,034 (for the highest). The difference between extreme scenarios is thus slightly higher than 15.5 million people.

Evolution of projected population according to combination of different fertility and migration balance scenarios (2020-2070)
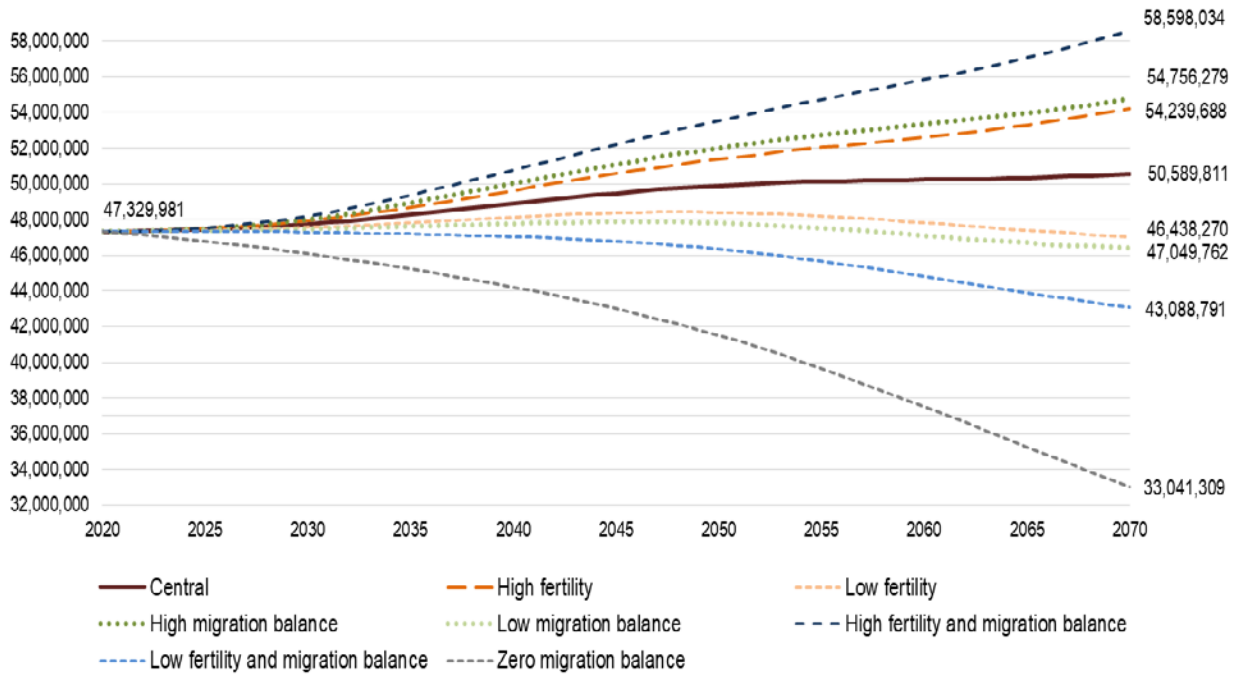
Methodological note

The Population Projections for Spain constitute a statistical simulation of the size and demographic structure of the population that would reside in Spain in the next 50 years, and in its Autonomous Communities and provinces in the next 15 years.

Its results show the effect that the recently observed evolution of fertility, mortality and migrations would have. **They are not intended to predict the evolution of the population** but to determine what the evolution of the population would look like if current trends were maintained. For this reason, they are sensitive to changes in the current demographic situation, especially migration, which is the most volatile component of population dynamics.

As was the case for the Population Projections published two years ago, the main projection hypotheses were submitted to a consultation in the form of a **survey among demographers throughout Spain**. This survey was carried out in May 2020 and since then reference values have been obtained for the parameters necessary for the estimation at 15 and 50 years ahead: short-term fertility index, average age at maternity, life expectancy at birth and levels of emigration and immigration. The results of this survey are available in the methodology document.

Fertility is projected for the next 50 years by adjusting the calendar of observed and projected fertility through a Beta probability distribution of the parameters Short-term Fertility Indicator (SFI), Average Age at Maternity (AMM) and variance of the AMM (Var_AMM) . The values of the SFI and the AAM of each of the years of the projective period, which are necessary to adjust the corresponding fertility curve, are obtained by linear interpolation between the last observed value, the provisional 2019 data, and the arithmetic mean of the values given by the survey for the years 2034 and 2069, respectively.

The Var_AAM for each of the years of the projective period will be considered constant and equal to the value of the last year observed, which corresponds to provisional figures for 2019.

The projection of the incidence of mortality in Spain for the next 50 years is carried out on the basis of a projection based on the general level synthesised by the life expectancy at birth given by the aforementioned survey and mortality tables are subsequently derived in accordance with these values through the use of standard tables.

In the case of external migration, the results are projected by making a transition between the values assigned to different years. The external migration flows for the years 2020 and 2021 have been established equivalent to the estimated flows according to the Migration Statistics for the first half of 2020, and the external migration flows set for the years 2034 and 2069 are the values resulting from the consultation with demography experts. In absolute value, the variation of the foreign migration flows that determine the migration balance scenarios was 10%, rather than the 5% in the previous edition. This is because the pandemic has created greater levels of uncertainty.

The general calculation methodology is based on the classical components method. The application of this method responds to the following scheme: starting from the resident population in a certain geographical area and from the retrospective observation of each of the basic demographic components (mortality, fertility and migration), the aim is to obtain the resident population at a later date under the hypothesis established on the future of these three phenomena, which determine their growth and age structure.

The components method has been applied in accordance with a multi-regional projection model that allows total consistency of results at all territorial levels considered and the necessary coherence between demographic flows and population stocks.

Reference date of the results

Population stocks: 01 January 2020 to 01 January 2070

Demographic flows: annual data from 2020 to 2069

Operation Type: synthesis and analysis statistics, prepared from results from different sources on past and present demographic evolution.

Population scope: Population residing in the national territory.

Geographical scope: national, Autonomous Communities and Cities and provinces.

Reference period for the results: population data are provided as at 1 January of the following 15 years for provinces and Autonomous Communities and for the following 50 years at the national level.

Disaggregation variables: sex, age and generation, both for population stocks as well as for demographic events.

Frequency of dissemination: biennial since 2014.
For more information you can access the methodology at:

https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176953&menu=metodologia&idp=1254735572981

And the standardized methodological report in:

https://www.ine.es/dynt3/metadatos/en/RespuestaDatos.html?oe=30278

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Population projection 2020-2070 (19/19)