

What does the retirement of the baby boomers mean for economic growth?

As noted in other articles of this Dossier,¹ the retirement of a generation as numerous as the baby boomers will result in the relative growth of the elderly population in the coming decades. This, in turn, will lead to an increase in the dependency ratios: according to projections by the National Statistics Institute, the number of people over 65 years of age in Spain will surpass 50% of the working-age population (16-64 years of age) by the mid-2040s, representing 20 pps more than in 2022.

This pronounced ageing of the population will have significant ramifications not only for how our societies are structured, but also for our economies.

Firstly, unless there are significant changes in the employment rates among the older population, a decrease in the working-age population² will reduce the number of workers and, therefore, the total GDP of the economy. Also, some economists have documented that the productivity of the labour force, i.e. GDP per worker, could also be negatively affected by an ageing population.³

Secondly, population ageing has an impact on the behavioural patterns of economic agents: the consumption of longer-lived cohorts tends to be more skewed towards health spending at the expense of other items, while their investments tend to exhibit greater risk aversion.⁴

Another important channel for the impact of population ageing is through the public accounts. In particular, if a higher proportion of the population is elderly, there tends to be higher structural public spending (e.g. health, pensions and care).⁵ If corrective measures are not introduced, the result would be a structural deterioration of the budget deficit and an increase in public debt.

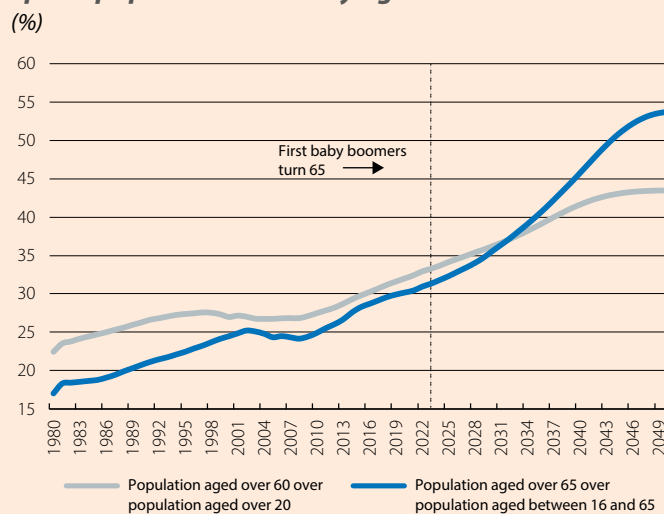
It is important to clarify that the magnitude of these macroeconomic effects of population ageing will depend on other dynamic and idiosyncratic factors, such as consumption habits in each country, the productivity of the economy both on aggregate and by age group, the willingness of the population to delay retirement, as well as factors associated with the quality of public services and the characteristics of the Social Security system.

Population ageing means less growth, but how much are we talking about?

As we set out in the other articles of this Dossier, starting this year and for the next 17 we will witness the retirement of the baby boom generation, and the impact this will have on economic growth will not be small. As we estimated in a previous CaixaBank Research article,⁶ when the population ages by 1%, as measured using the ratio of people aged 60 years or more over those aged 20 years or more, GDP per capita falls by 0.39%. In other words, the so-called «elasticity of economic growth with respect to population ageing» is -0.39 . In the case of Portugal, the model results in an elasticity of -0.51 . These results are similar to those of other countries, such as -0.55 in the case of the US.⁷

To estimate the cost of population ageing in Spain in the future, it must be borne in mind that in the next 20 years, according to the demographic projections of the National Statistics Institute, the population ratio of people aged 60 years or more over those aged 20 years or more will increase in Spain by 10 pps. Combining these demographic projections with our estimate for the elasticity of economic growth with respect to population ageing, we find that population ageing due to the retirement of the baby boomers will reduce GDP growth per capita by 0.5 pps per year over the next two decades, assuming all other factors remain constant.⁸

Spain: population ratios by age



Source: CaixaBank Research, based on the National Statistics Institute's population projections.

1. See in particular «[Reforming the pension system: in search of sustainability](#)» in this same Dossier.

2. Specifically, the latest projections of the National Statistics Institute indicate that the working-age population in Spain, counting the cohorts between 16 and 64 years of age, will decrease by more than one million people between 2023 and 2050.

3. See M. Poplawski-Ribeiro (2020), «Labour force ageing and productivity growth», Applied Economic Letters, vol. 27, nº 6, IMF.

4. The empirical evidence also suggests that population ageing results in a lower natural interest rate and thus alters the capacity of monetary policy to respond to economic developments. See K. Bodnár and C. Nerlich (2022), «The Macroeconomic and fiscal impact of population ageing», ECB.

5. The European Commission estimates that fiscal spending linked to population ageing will increase from 24% of GDP in 2019 to 27% of GDP by 2040. See «The 2021 Ageing Report: Economic and Budgetary Projections for the EU Member States (2019-2070)», European Commission (2021).

6. See E. Llorens and J. Mestres (2020), «[El impacto del envejecimiento en el crecimiento económico de España: un enfoque regional](#)», CaixaBank Research, Working Paper 01/20 (content available in Spanish).

7. See N. Maestas, K. Mullen and D. Powell (2016), «The effect of population aging on economic growth, the labor force and productivity». NBER Working Paper Series.

8. The 10-pp increase in this population ratio is equivalent to an increase of 30%.

Looking further ahead, the demographic projections suggest that the impact of the retirement of the millennial generation, or even generation Z, will be much smaller in scale given that those generations are substantially less numerous than the baby boom generation.

But... are we really in a world of *ceteris paribus*?

Predictions of a negative macroeconomic impact of population ageing, and of the retirement of the baby boomers in particular, are based on projections of a decline in the workforce, which in turn depends on three major factors: (i) the expected natural growth of the population (births minus deaths), (ii) net migration flows and (iii) the employment rate (ratio of people in employment over the working-age population).

The demographic projections of the National Statistics Institute assume that, in line with what has been observed in recent years, the natural growth rate will remain in negative territory

throughout the forecast horizon, at around –100,000 people per year on average up until the end of the 2040s, when it is expected to exceed –200,000 individuals. On the other hand, they predict positive net migration flows of around 450,000 people per year in the next decade and of 250,000 people per year between 2030 and 2040.

With these latest demographic projections of the National Statistics Institute,⁹ and assuming that the employment rate remains constant in the coming decades at around today's 63%, we built a first scenario for the future population and labour force (scenario 1) using a simple long-term economic growth accounting model.¹⁰ We find that the contribution of the labour force to GDP growth would turn negative from 2033 onwards. Indeed, it is precisely during the 2030s that we will see the biggest negative impact on the labour force resulting from the retirement of the baby boomers materialise.

In the second chart, we can see how changes in the assumptions could, as a whole, mitigate the projection of a negative contribution to growth of the labour factor. Such assumption changes could include greater net immigration flows, or they could be labour policies that manage to raise the employment rate through, for instance, a higher labour participation rate among older people and the vulnerable (by implementing measures which boost inclusion and reintegration into the labour force or reforms that seek to raise the effective retirement age). Thus, in scenario 2, which is the most adverse (without migration flows and keeping the employment rate constant), the contribution of the labour force to growth would become negative immediately. In contrast, the contribution would be only very slightly negative for some years in the 2040s in scenario 3, which includes high immigration (it uses alternative projections by the National Statistics Institute with around 60,000 more net migrants per year between 2023 and 2045 compared to scenario 1) and a higher employment rate (a gradual increase from 63% in 2023 to 70% in 2045, +7 pps versus scenario 1 and in line with the projections of the *2021 Ageing Report*). Thus, the average contribution of the labour force to GDP growth in the period 2027-2045 would be –0.15 pps in scenario 1, –0.83 pps in scenario 2, and +0.24 pps in scenario 3. This compares with an average contribution of the labour factor to GDP growth of +0.1 pps for the period 2027-2050 in the baseline forecast scenario recently used by the AIReF in its assessment of the pension reform.¹¹

These estimates are subject to considerable uncertainty and should also be framed within the estimates for the potential growth of the Spanish economy, which depend on the expected growth of the labour force and of productivity. As an example, the AIReF estimates that potential GDP growth will be around 1.3% in the coming decades, below that expected by the Ministry of Inclusion, Social Security and Migration (1.9%) and similar to that projected by the European Commission (1.2%).

Another key element to keep in mind when analysing the macroeconomic impact of the retirement of the baby boomers will be how the labour factor interacts with the other factors of production and with technological changes. After all, technological advances could prove to be the decisive factor which more than offsets the negative impact of the reduced labour force by increasing the output generated by each available worker.

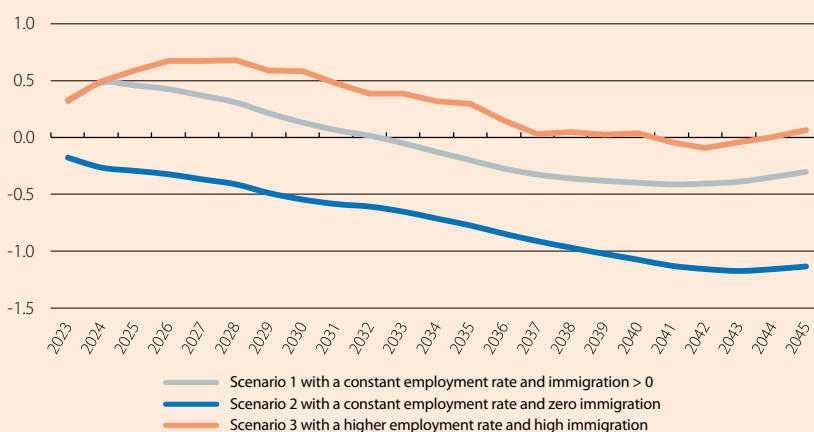
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9. The Ministry of Inclusion, Social Security and Migration takes these National Statistics Institute demographic projections as the basis for its latest analysis on pension spending discussed in the article «Reforming the pension system: in search of sustainability» in this same report.

10. See J. Mestres (2019), «El envejecimiento de la población española y su impacto macroeconómico», Spanish Economy Papers, nº 161, Funcas (content available in Spanish).

11. See «Opinión sobre la sostenibilidad de las administraciones públicas a largo plazo: la incidencia de la demografía», Opinión 1/23, AIReF (content available in Spanish).

Spain: contribution of the change in the labour force to GDP (pps)



Notes: Contribution of the change in the labour force to economic growth within the framework of the growth accounting, assuming that wage incomes represent the same percentage of GDP as they did in the period 2000-2018. Scenario 1 incorporates the population forecasts according to the National Statistics Institute and a constant employment rate. The alternative scenarios incorporate forecasts with no immigration (scenario 2) and with high immigration (scenario 3) according to the National Statistics Institute. The increase in the employment rate in scenario 3 consists of the baseline scenario from the 2021 Ageing Report.

Source: CaixaBank Research, based on data from the National Statistics Institute, the 2021 Ageing Report (European Commission) and The Conference Board.