

DEMOGRAPHIC CHALLENGES IN A CATALONIA OF EIGHT MILLION PEOPLE

Tensions in the Social Security system? Affiliation, benefits and pensions: Catalonia 2005-2023

Pau Miret



Protest by the "iaioflautas" collective, born within the 15M movement, to demand decent living conditions. Barcelona, May 12, 2013. Photography by Rober Astorgano

Ageing as a burden on the pension system

One of the pillars of the welfare state in our country is the Social Security system, which during the 21st century in Spain has separated the health sphere (financed entirely by taxes) from the labour sphere, which is self-financed through compulsory contributions and provides both unemployment benefits and contributory pensions. It is therefore a closed system, which receives and distributes contributions, with any surplus going to what is commonly known as the "pension fund". Only in the event of a deficit can this piggy bank be used, or if no savings are left, an extraordinary loan must be requested from the general State budget.

One of the reasons given for the possible collapse of the system is ageing, as it hinders the entry of new contributors due to falling birth rates and inflates the number of pensioners due to the arrival of generations with large numbers of people with long life expectancies. However, the contribution of migration and the effect of the economic situation should also be analysed: recessions reduce demographic power by triggering unemployment and pushing older people into early retirement because of the impossibility of finding a new job.

Yet ageing is not the only spectre employed to call for raising the standard retirement age to ensure the sustainability of the publicly managed pension system. First of all, it should be remembered that the Social Security system is based on contributions; thus, only those who have previously contributed to it are entitled to receive unemployment benefit or a pension, with the amount received dependant on these contributions. Secondly, it is a transfer-based system, so whoever contributes today maintains today's unemployment benefits and pensions. In this scheme, ageing would lead to, firstly, a progressive fall in the contributing population and, secondly, a gradual rise in the number of people receiving pensions; thus the system would become demographically unsustainable. This article studies the trend in these two large opposing populations in the Social Security contributions systems - the contributing population and the population receiving a pension - in Catalonia between 2005 and 2023 and diagnoses the medium-term effect of ageing in both aspects, i.e. the fall in birth rates and longer life expectancies.

There is no denying that ageing is close to our hearts. As a matter of fact, I have recently been informed at the gym of a significant reduction to my membership fee because I am now a senior citizen. I have grown old with my generation, one of the largest in the history of Catalonia; this is why they call us "boomers" and accuse us of endangering the pension system with superlative life expectancy and minuscule fertility rates. Demographic patterns that experts say can only lead to the collapse of the pension system, unless there is a rise in the retirement age in line with life expectancy, because there is little confidence in birth rates increasing, the other factor that experts believe could save the system.

In order to prove or disprove this overwhelming dynamic, let us carry out a demographic analysis of the pension system in Catalonia. The data source is a sample of 4% of the records held by the Social Security, which includes two corners of the square: contributions from work affiliation and contributory pensions. This source is known as the Continuous Sample of Working Lives (MCVL), which uses data from 2005 to 2023. From it, we can identify the population resident in Catalonia that: (1) paid contributions through work affiliation, either as self-employed or salaried workers; (2) contributed while receiving unemployment benefit; or (3) received a contributory pension. By calculating the ratio of the latter two groups to the first, we obtain the pension system dependency ratio, i.e. an indicator in which the numerator contains those who receive unemployment benefit or a contributory pension and the denominator includes those who actively contribute to the Social Security system through their work affiliation. Paraphrasing what is known as the overall dependency ratio, [1] we define the Social Security dependency ratio as the measure of the burden of the population receiving unemployment benefit or a contributory pension on the population contributing to it.

Labour affiliation: the more we contribute, the better!

Let us first describe the demographic power, i.e. the population in or looking for employment. This population rose from 3.5 million people in 2005 to 3,855,000 before the recession in 2009, and remained at this level until the explosion that started in 2023, which has been projected to exceed 4.2 million people. But this is not the figure that interests us

here.

Indeed, the demographic strength of the publicly managed pension system lies in the population that pays Social Security contributions. The first step in assessing the damage that ageing may be doing to the system is to see its evolution in absolute numbers (Figure 1). A distinction must be made between those who pay contributions, as they are in formal employment (either salaried or self-employed), and those who do so because they receive unemployment benefit. In the latter case, the contribution is withheld by the institution paying the benefit, the Social Security system. Having set out these preliminary observations, we can now study the daily trend in contributions from population affiliated through employment (not those on unemployment benefit) and resident in Catalonia between 2005 and 2023, identifying the proportion of women and non-Spanish nationals, with the aim of measuring the extent to which the incorporation of women and the contribution of migration has succeeded in offsetting for the negative impact of ageing on the pension system or the extent to which there is a lack of contributing population.

The first point to note is the qualitative leap that Order PRE/140/2005, of 2 February 2005,[2] allowing the regularisation of foreign nationals in irregular labour situations [3] and which led to a sudden jump in this group from 8% to 12% of the population and the number of labour affiliates in the Social Security system to soar to well above 3 million. Thus, at the beginning of August 2008, the number of contributors reached 3.5 million, largely due to net migratory growth, but also due to a slight increase in the proportion of women, from 42% to 43%.

However, this volume of contributors plummeted at the end of November 2008: at the beginning of November 2011 the figure had fallen below 3 million due solely to the impact of the recession, which lasted until February 2014. It should be added that the drop was particularly marked in male affiliation, as the proportion of female affiliation increased slightly, from 44% to 47%, a percentage that continued up to the end of the period observed. The jump in female affiliation in the contributory sphere was mainly during the economic crisis and did not subsequently exceed the ceiling reached at that time, hence we can state that female participation is not a compensating factor for the possible negative effect of ageing on the contributory foundations of the pension system.

Suddenly, the economic recovery combined with the European Central Bank's policy change [4] swelled labour affiliation in Catalonia once more, reaching a peak of almost 3,375,000 people at the beginning of August 2019. This rise was caused exclusively by improvements in the labour market, as the relative presence of neither women nor immigrants increased. The recovery was halted by the upheaval of the lockdown imposed to combat COVID-19, from which we do not emerge until mid-2021. After the pandemic, the presence of foreign nationals rose from 15% to 19%.



Thus, we can conclude that the Catalan system of reproduction in the labour market, [5] in which migration plays a key role, remains in force today. All things considered, ageing has not affected the fundamentals of the pension system by placing too great a burden on its

demographic contribution base, because since spring 2023 it has reached and maintained a record high of over 3.5 million contributors. What would have happened if the birth rate had increased (thus reducing ageing) is speculation, the answer to which is unclear. However, it should be borne in mind that during this period, the unemployment rate in Catalonia has remained at around 9%, and one of the possible effects of larger generations could be a rise in unemployment, especially among young people entering the labour market for the first time.

As mentioned above, we calculate unemployment benefits separately because, although they contribute towards future retirement pensions, they are not a direct contribution from employment, but a deduction from the corresponding unemployment benefit made by the State. Figure 1 also shows the trend in the population receiving this benefits. With the recession at the end of 2008, the population on unemployment benefit rose to over half a million; however, as it is a time-limited benefit (paid for a maximum of two years if six or more years of contributions have been paid), the stock remained fairly constant until the economic recovery of 2014 managed to reduce its volume. However, since mid-2018, the number of people on unemployment benefit has remained at just above 250,000. Unemployment benefits are therefore not a cause of stress on the Social Security system and obviously have nothing to do with ageing.

Ageing and pensioners

If contributions are increasing thanks to the larger foreign population and unemployment does not put too much strain on the system, as it is only paid for a limited time, the focus of blame for the perceived strain on the system must therefore lie in the large population receiving a contributory pension. Indeed, the number of pensioners has more than doubled, from just over 770,000 in 2005 to over 1.5 million in 2023 (Figure 2). This number only dropped due to excess mortality among the pensioner population due to COVID-19.



If we distinguish by type of pension, placing emphasis on the main one (should there be several), we find this is the retirement pension, and the proportion this type of pension represents has been increasing, from 54% in mid-2005 to 60% since the end of 2016. Next there is the disability pension, which is received when a contributor declares they unable to continue working in their job or find another job requiring their skills and abilities. Over the same period (2005-2016), disability benefits have decreased slightly, from 23% to 20%. In other words, today in Catalonia, one pensioner in five receives a disability pension because he or she is unable to remain in active employment. Not all these cases involve work-related accidents, but to some extent this data indicates that the working population in Catalonia is not in good health. In conclusion, 80% of the pensioner population receives a retirement or disability pension.

In third place, the proportion of widows' and widowers' pensions has steadily declined, from 16% to 12%. There is no need to consider these as a type of pension threatening to seriously unbalance the pension system, nor is the pension for orphan (or for family

members), which, despite a reduction of 2 percentage points, account for 8% of the total number of pensioners.

Dependency ratio in the pension system: when will the collapse caused by unsustainability occur?

The four pyramids in Figure 3 show the average number of months in 2023 in which: the population in Catalonia contributed proportionally to Social Security in employment (top left); were receiving unemployment benefit (top right); were receiving a retirement or disability pension, on a one-off basis or combined with another type of pension (bottom left); or were receiving a pension for widowhood or for family members (bottom right). This is an exhaustive and mutually exclusive categorisation, since someone in one category cannot be in another at the same time.

It should be stressed that both sides of the balance are clearly demographically shaped, because their volume is linked to birth and life expectancy, with the addition of compensatory migration. Thus, in 2023, the largest group of contributors were aged between 46 and 48; i.e. the population born between 1975 and 1977, during the peak of the baby boom in Catalonia, the largest native population in the history of the country. This is a matter of generation, not age. We should also remember that the base of the contributor pyramid would be substantially wider if the bloated youth unemployment rate, currently standing at above 20% (compared to 7% for the over-25s), could be reduced. It is therefore clear that the trend in the contribution population has an exclusively economic cause, and little to do with demographic potential, and even less to do with ageing.

However, unemployment benefit does not follow the same generational logic, as it is largely limited by biographical behaviour – by age – as there is an increase in growth around the age of 60 that does not match the varying size of different cohorts. It seems possible that the reason for this strange concentration lies in the difficulties of older people who have lost their jobs in finding another one. Hence they continue to receive unemployment benefit or allowance while waiting to reach the standard retirement age.

The logic behind widow's pensions is also different, as it has a clear gender pattern, given that almost all recipients are women. We would also like to note the surprisingly young age structure of people receiving a widow's pension as formal income from the Social Security system, because it has a bimodal distribution and shows a widening not only among very old women, but also those around the age of 60: women who receive a widow's pension but not a disability pension.

However, neither unemployment benefits nor widows' or widowers' pensions, nor pensions for family members, are nowadays sufficiently large to be a cause for concern in balancing the pension system. Moreover, they have little or nothing to do with the suspected culprit of the collapse of the system, namely ageing.





In stark contrast, the number of people receiving a retirement pension is of particular concern, as it is of considerable size and can be reliably predicted to continue its meteoric rise. However, we would like to stress that this explosion in the number of pensioners is not due to population ageing in terms of age structure, but to the arrival at the standard retirement age of increasingly large generations, having accumulated years of contributions, a process that will not stop in the next 15 to 20 years unless there is another dramatic event such as the last pandemic. There is nothing to be done: we have to live with this projection. In this demographic context, raising contributions among the boomer generations to alleviate the imbalance they produce now and in the future is a technically appropriate and necessary policy, but it is not up to demography to say whether this will be enough. Nevertheless, this discipline can state that nothing would change if another baby boom were to occur.

From all this information, we can calculate the Social Security dependency ratio, either the general one (those receiving in relation to those contributing) or a specific one, which calculates the ratio between people receiving a retirement or disability pension and the contributing population (Figure 4).

We thus conclude that it is economic recovery that has stabilised the overall dependency ratio at 0.5 (one person receives a benefit or pension for every two who contribute) or the lower ratio of 0.3, i.e. one person receives a retirement or disability pension for every three who contribute to the Social Security system. This dependency ratio will only remain stable if the contributing population continues to increase at the same rate, because there is little we can do to prevent the growth of the pensioner population. The only way forward is to fight unemployment and job insecurity and to allow the necessary labour immigration. Promoting the birth rate is an ideological attitude and completely ineffective as a means of maintaining a balanced pension system.



REFERENCES

- 1 — The Statistical Institute of Catalonia (IDESCAT). Demographic and territorial indicators. “Methodology”. “Definitions”. Further information on [IDESCAT website](#).
- 2 — Order PRE/140/2005 of 2 February, Official State Gazette (Boletín Oficial del Estado), no. 29, pp. 3709-3723. [Available online](#).
- 3 — Domingo, A.; Recaño, J. (2007). “Perfil demográfico de la población extranjera en España”. In: Aja, E.; Arango, J. (Eds.). *La inmigración en España 2006. Anuario de inmigración y políticas de inmigración*. Barcelona: CIDOB Foundation, pp. 20-43. [Available online](#).
- 4 — Miret, P. (2024). “El empleo en la base del modelo social: edad, sexo y territorio”. In: Domingo, A. (Ed.). *La coartada demográfica y el discurso de la involución en España*. Barcelona: Icaria Editorial, pp. 217-246.

5 — CAabré, A. (1999). *El sistema català de reproducció*. Barcelona: Proa.

Pau Miret

Pau Miret is a sociologist. He studied at the Autonomous University of Barcelona and holds a PhD in Sociology from the National Distance Education University (UNED). He is currently a researcher at the Centre for Demographic Studies (CED). His research focuses on the demographic analysis of the labor market, particularly in relation to unpaid care work, labor mobility, and the evolution of educational attainment within the active population. He was part of the Marie Skłodowska-Curie program at the Cathie Marsh Institute for Social Research at the University of Manchester and at the Department of Social Statistics and Demography at the University of Southampton. He has also contributed to research activities in the Department of Geography at the Autonomous University of Barcelona under the Ramón y Cajal program.