



## CHALLENGES FOR SPANISH PENSIONS IN THE EARLY 21<sup>ST</sup> CENTURY

J. IGNACIO CONDE-RUIZ<sup>1</sup> AND CLARA I. GONZÁLEZ<sup>2</sup>

### Spain faces an intense ageing process

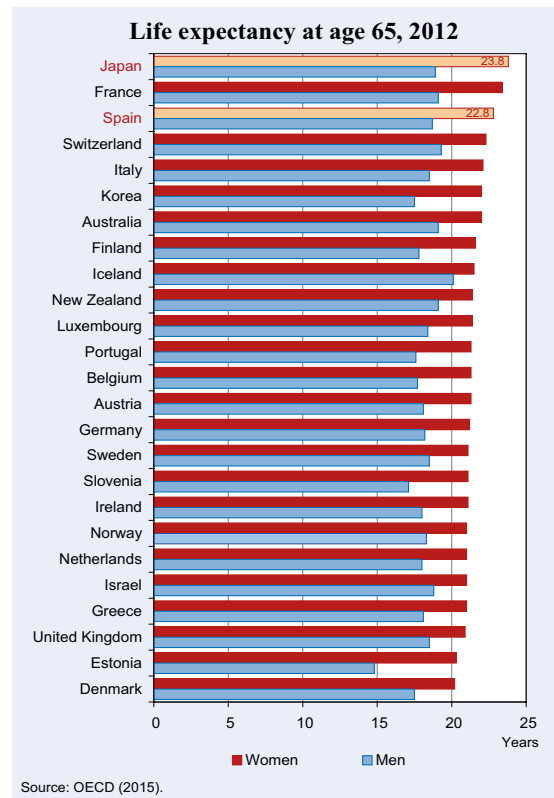
The Spanish pension system is currently undergoing a process of change and reform. At the moment it is a Pay-As-You-Go, contributory and defined benefit system, although with the 2013 reform, it is moving towards a defined contribution model. In the last century some changes in the key parameters of the system were introduced, but the most important reforms took place in 2011 and 2013. In 2011 two crucial elements were changed: the extension of the number of years taken into account to calculate the pension, and the increase in the retirement age. This second change was relevant for Spain because the pension age had not been amended since the year it was established in 1919. The importance of the reform of 2013 lies in the introduction of an automatic link between the initial pension and the evolution of life expectancy. This new element will turn the system into a defined contribution model. In addition, the 2013 reform introduces a new pension revaluation index. The purpose of these reforms is to adapt the system to an ageing population. Although all developed countries face this challenge, the process will be more severe in Spain than in other countries. In the next forty years there will be 8.7 million fewer people between 16 and 66 years old and, at the same time, there will be an increase of eight million people over 67 years of age (according to the population projections released by the Spanish National Statistics Institute).

There are three reasons why this ageing process will be more intense in Spain. The first is rising life expectancy,

both at birth and at age 65. At 85.5 years, Spanish women have the world's highest life expectancy at birth, second only to Japan. Moreover, Spain is the third country with the highest life expectancy at 65 of 22.8 years (Figure 1). This number is expected to continue rising as mortality rates among the elderly continue to decrease. The second reason is that the fertility rate in Spain is one of the lowest of all developed countries. In 2013 a woman of childbearing age had an average of 1.27 children compared to an average of 1.55 children in the European Union (28 countries, Figure 2). Although Spain's ageing population has already been noticed, the third reason is that it is lagging behind other industrialised countries.<sup>3</sup> This delay is due to the high immigration flows that Spain experienced in the first decade of this century. Spain received nearly four million foreigners

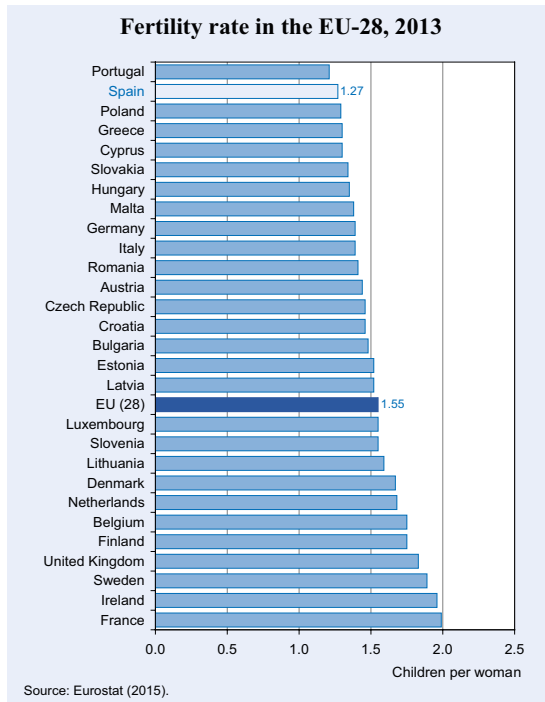
<sup>3</sup> See Conde-Ruiz and González (2010) for a more detailed international comparison.

Figure 1



<sup>1</sup> Universidad Complutense de Madrid and Fundación de Estudios de Economía Aplicada (FEDEA).  
<sup>2</sup> Fundación de Estudios de Economía Aplicada (FEDEA).

Figure 2



of an average age younger than that of the Spanish population during this period. And the most populous generation, the baby boomers born between 1957 and 1975, is going to reach retirement age later than in other developed countries.

These three reasons show that Spain's ageing process will be even more severe than that of other countries in the next decade; and this will be reflected in a higher dependency ratio<sup>4</sup> in the future. The value of this variable will increase from 26.8 percent to about 75 percent in the next fifty years, compared to the European Union average of 50 percent in the year 2060 (Figure 3). In Spain, the dependency ratio is currently much lower than in other European countries, while its pension expenditure is slightly above ten percent of its GDP. However, since there is a positive relationship between the dependency ratio and pension expenditure and forecasts indicate that the dependency ratio will increase, pension expenditure will inevitably also go up. In order to alleviate this expected increase in pension expenditure two reforms were approved in Spain in 2011 and 2013.

#### The 2011 reform: a good reform that did not go far enough

From 2000 until the beginning of the economic crisis Spain attracted a large number of foreigners (600,000

<sup>4</sup> Dependency ratio is measured as the ratio of the population aged over 65 years among the working-age population aged 16-64 years.

new arrivals per year between 2000 and 2007 on average), which was largely due to the real-estate boom. This meant that the immigrant population increased fivefold within a very short space of time.<sup>5</sup> The significant increase in employment led to surpluses in the Social Security system, reaching a maximum of 1.4 percent of GDP in 2007. However, the economic crisis accelerated Spain's entry into deficit that was expected by the middle of the next decade.

In 2011 the government approved changes to the pension system by modifying two fundamental parameters: the calculation period and the retirement age.<sup>6</sup> The law will be implemented gradually starting in 2013, so that by 2027 the following changes will be fully incorporated:

- The extension of pension calculation period: it will be based on the last twenty-five years as opposed to the last fifteen years, i.e. the contribution bases<sup>7</sup> of the twenty-five years prior to retirement will be taken into account in the benefit formula.
- The raising of the retirement age from 65 to 67 years: this represents the most significant change because the retirement age of 65 was established in the 1919. However, those workers with the equivalent or more than 38 years and 6 months of contributions may take retirement at age 65. At the same time, the early pension age was increased from 61 to 63 years for those who have worked for at least 33 years.<sup>8</sup>

According to our calculations,<sup>9</sup> the 2011 reform obtained a saving of almost one third of the expected increase in pension expenditure over the next forty years (equivalent to three percentage points of GDP).<sup>10</sup> This result is in line with the projections published by Spain's Ministry of Economy and Finance, the Bank of Spain and other academic works.<sup>11</sup>

<sup>5</sup> See González, Conde-Ruiz and Boldrin (2009) for an analysis of the impact of the migration phenomenon on the Spanish pension system.

<sup>6</sup> The number of years of contributions required to receive full benefit increased from 35 to 37 years.

<sup>7</sup> The contribution base is the wage earned, but it is subject to the existence of a floor and a ceiling. In Spain a minimum of 15 years of contribution are required before individuals are entitled to a retirement pension. Eligible individuals receive an old age pension benefit equal to the product of a reference wage and a replacement rate. The reference wage is the weighted average of the contribution bases over the fifteen years prior to retirement until the reform in 2011.

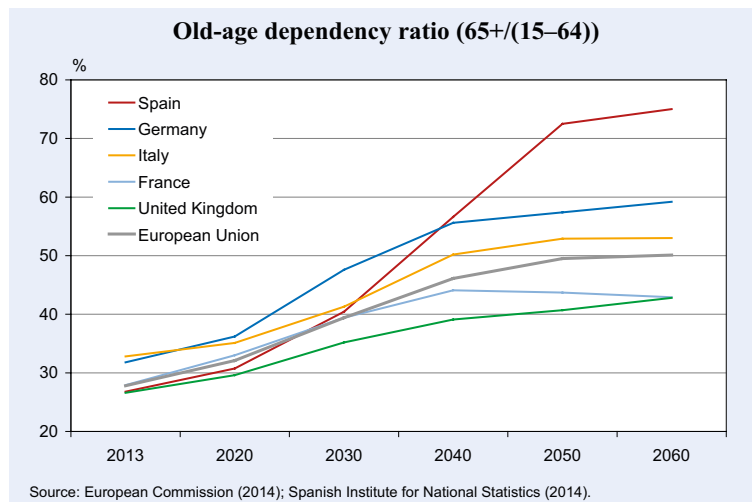
<sup>8</sup> With the exception of involuntary retirement due to extraordinary circumstances arising from the economic crisis.

<sup>9</sup> See González (2013) and Conde-Ruiz and González (2013) for the detailed methodology used to obtain these results.

<sup>10</sup> Without the reforms, pension expenditure would have grown from more than 10.1 percent of GDP in 2010 to 19 percent of GDP in 2050 (Conde-Ruiz and González 2013).

<sup>11</sup> MEH (2011), Banco de España (2011), de la Fuente and Doménech (2013), Díaz-Gimenez and Díaz-Saavedra (2011).

Figure 3



It is important to note the relevance of the 2011 reform because it introduced changes to the pension system that seemed difficult for society to accept. The increase in the years of contributions in the benefit formula reinforces the link between contributions and benefits. The increase of the retirement age is the most significant change because it was established in 1919 and always had seemed a difficult factor to change. However, it is worth noting that the adoption of this reform achieved great social consensus – it was agreed under the Social Dialogue, i.e. between the Government, Trade Unions and Employer's Organisations.

### 2013 reform: from a defined benefit to a defined contribution system

The 2011 reform was very relevant, but is only able to address a third of the future system's sustainability problem. Due to the ageing of the population, the structural deficit of the pension system will remain crucial in the coming decades. This prompted the introduction of the sustainability factor in the 2013 reform. The government created a committee of independent pension experts who were given the task of developing the so-called sustainability factor.<sup>12</sup> The experts proposed a reform that would allow the system to address the problem of longevity, as well as macroeconomic fiscal imbalances.<sup>13</sup> The changes proposed will change the pension system from a defined benefit system to a defined

<sup>12</sup> The 2011 pension reform proposed the adjustment of the relevant parameters of the pension system to reflect changes in life expectancy every five years, but it was not fully defined.

<sup>13</sup> See Conde-Ruiz (2014) for a fuller description of the experts' proposal.

contribution system. The 2013 reform also introduced a new pension indexation rule. In late 2013, the Spanish government approved this new sustainability factor, based on the experts' proposal.

### 2013 reform: the sustainability factor

The 2013 reform defined and established the so-called sustainability factor linking the initial pensions to the increase in life expectancy of 67-year-old retirees. It will be introduced as of 2019 and will be revised every five years. With its introduction,

Spain joined the group of countries (Finland, Denmark, France, Greece, Italy, Portugal, Poland and Latvia) with a defined benefit system that takes into account the evolution of life expectancy in its pension system. Other countries like Sweden, Hungary, Germany and Japan have included variables such as GDP and salary in addition to the shift in life expectancy.

This factor seeks to achieve a greater actuarial balance between pensions and contributions paid during working life. The main goal is to offer the same treatment to people with the same employment history who retire at the same age, but at different times. Because they belong to different generations, they have different life expectancies, so they will obtain a different pension amount over a different number of years. The sustainability factor would mean that a person who retires,<sup>14</sup> for example in 2025, who has the same contributory history as another person today, will receive an initial pension that is approximately three percent lower than his/her present-day counterpart. If the dependency ratio reached 46 percent in 2050<sup>15</sup> with full employment (employment rate of 73 percent), we calculate that the effects of the 2011 reform and the sustainability factor of the 2013 reform could lead to a pension expenditure of approximately 16 percent of GDP in 2050 (Table 1).<sup>16</sup> In other words, despite these two important reforms the effect of the ageing population is so severe that the system will still have a significant structural deficit.

<sup>14</sup> According to the life expectancy projections of Spain's Ministry of Employment and Social Security.

<sup>15</sup> This dependency ratio is calculated considering a more optimistic demographic scenario than the last projections released by the Spanish National Statistics Institute, developed in Conde-Ruiz and González (2013).

<sup>16</sup> See Conde-Ruiz (2014).

### 2013 reform: a new index for revaluing pensions

Since 1997 the growth of pensions in Spain was linked to the evolution of prices via the Consumer Price Index (CPI) (i.e. price indexation). This changed with the 2013 reform. As of 2014 the annual increase in contributory pensions is linked to a new index that takes into account the total budget constraint of the pension system, i.e. the balance between revenue and expenditure.<sup>17</sup> The law also set an upper and lower limit for growth in pensions; so that if there were a deficit in the system, pensions would only rise by 0.25 percent and if there were a surplus, pensions might increase in line with the CPI plus an extra 0.5 percent. The introduction of a minimum rate guarantees that pensions grow in nominal terms. However, even if pensions only increase 0.25 percent in nominal terms, projections show that the structural deficit will persist. Therefore, for as long as the inflation rate is higher than 0.25 percent, pensions will decrease in real terms.

The calculations show that for decades, revenue would be insufficient to cover pension expenditure and pensions would rise by only 0.25 percent in nominal terms. This means that pensions will essentially remain frozen for a very long period of time. In other words, this system would provide a pension that, after 20 years from the date of retirement, could buy between 30 and 40 percent fewer goods or services than in the year of retirement.<sup>18</sup> So the burden of the adjustment of the system would fall on pensioners, who would have to manage their consumption with a pension decreasing in real terms. Everybody understands that the current situation of the Spanish pension system is politically unsustainable.

<sup>17</sup> To avoid the effects of an economic cycle, the values of an 11-year period are taken into account in the formula, incorporating past, present and future evolution of these variables in terms of both revenue and expenditure.

<sup>18</sup> Sánchez-Martín (2014) and Díaz-Giménez and Díaz-Saavedra (2014) have found similar results.

### Concluding remarks

The latest two pension reforms approved in Spain have led to very significant changes to its pension system. The 2011 reform involved the modification of two of the most important parameters of the system; extending the calculation period and increasing the retirement age, elements that had previously seemed impossible to change. These changes will reduce pension expenditure, but do not solve the difficulties faced by the Spanish pension system due to the ageing of its population. The 2013 reform involved major changes introducing two automatic instruments: the link of the initial pension to the shift in life expectancy and the revaluation of pensions based on the evolution of revenue and the expenditure of the system. These reforms are very important firstly because they change the Spanish pension system from a defined benefit pension scheme to a defined contribution one, and secondly because they link the annual revaluation of pensions to the balance of the Social Security system.

However, the Spanish pension system still faces a number of challenges. The changes mentioned address the problem of an ageing population. However, public pension expenditure will continue to increase in the decades ahead due to the retirement of the baby boom generation. At the same time, it is estimated that revenues will remain more or less constant at around ten percent of GDP, so the system's deficit will continue to rise even when Spain pulls out of the economic crisis (i.e. it has a structural deficit). The cap for the revaluation index implies constant nominal growth in pensions of 0.25 percent for as long as the system has a deficit. This will result in the loss of purchasing power on the part of pensioners when inflation is higher than 0.25 percent. In other words, it will amount to a quasi-freezing of pensions. As this system is not politically or economically sustainable, the Spanish pension system will soon face

**Table 1**

**Pension reforms in Spain and their impact on expenditure**

	2012	2050		
		Without reforms	2011 reform	With sustainability factor
Old-age dependency ratio	0.26	0.52	0.46	0.46
Labour market factor	1.78	1.36	1.36	1.36
Institutional factor	0.22	0.29	0.28	0.26
Generosity	0.19	0.23	0.21	0.20
Expenditure (% GDP)	10.1	20.5	17.3	16.0

Note: The old-age dependency ratio in 2011 reform and with sustainability factor has been calculated  $(67+/(16-66))$  and employment rate is between 16-66 years old. Demographic scenario used in Conde-Ruiz and González (2013), it is more optimistic than INE.

Source: The authors.

the need to make changes again.<sup>19</sup> Spanish society will have to decide between one of two options: to either turn the current system into a purely redistributive pension system (a Beveridgean-type system) or to maintain or reinforce the contributory element of the current system, and consolidate its current Bismarckian model. The decision is not trivial and both systems are based on a different philosophy.

A Beveridgean pension system aims to guarantee a minimum pension, but it requires lower contributions, leaving room for the middle classes to complement their pensions with private savings. Countries with this pension system (UK, Ireland, Denmark, Canada or United States of America)<sup>20</sup> have a wider use and a higher development of private pension plans. Beveridgean systems are associated with lower public pension expenditure in relation to the country's GDP than Bismarckian systems (six percent vs. ten percent of GDP). The Bismarckian type of pension system, however, was designed to provide more adequate pensions to all workers and is characterized by a close link between previous earnings and retirement benefit. Countries with this type of pension system include Germany, Spain, Portugal, Italy or France among others.

The first option, namely changing the system to a purely redistributive pension system, would imply the gradual reduction of pensions that are above the average pension, where all workers would end up receiving the same pension when they retire.<sup>21</sup> However, in our opinion it would make more sense to strengthen the contributory element of the current Spanish pension system, so that individual pensions reflect the actuarial equivalence with workers' individual contributions. Those workers who contribute most would earn a higher pension although the average pension compared to wages would decrease. Such a change would be similar to models introduced in Sweden, Italy, Norway, Latvia and Poland, all countries that have taken this concept a step further by introducing a Notional Defined Contribution system (and maintaining Pay-As-You-Go financing). This pension model allows the introduction of automatic adjustment elements, a flexible retirement age and the actuarial balance between contributions and pensions.

<sup>19</sup> See Conde-Ruiz (2014) for more detailed arguments related to this question and the consequences of the 2013 reform.

<sup>20</sup> Classification following Disney (2004).

<sup>21</sup> In Spain, the existence of an upper cap for the contribution base, which is growing at a faster rate than the maximum possible pension, could break the link between pensions and contributions, ultimately giving all workers the same pension. This phenomenon was called the "Silent Pension Reform" by Spanish expert economists. See Conde-Ruiz and González (2014) for a quantitative analysis of its impact on the Spanish pension system.

Workers' contributions are accumulated in a personal account that earns a notional rate of return. Finally, the pension formula is based on the accumulated contributions in an individual's account at the time of retirement.

Therefore, despite the importance of the 2011 and the 2013 reforms, the debate on pensions in Spain is ongoing. On the one hand, the quasi freezing of pensions is not politically sustainable, and on the other hand financial sustainability will force a drop in the average pension in relation to the average wage. Spain needs to decide which pension system it prefers: to move towards a Beveridgean pension system or to reinforce the contributory element and consolidate its current Bismarckian model. This decision is very important as it will allow workers to adapt their savings and employment decisions to best fit their future needs.

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