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Friedrich L. Sell

The Portuguese Dilemma of Unstable Pensions

Portugal's high public debt, its weak economic growth and its great attractiveness for foreign tourists are legend. Less well known is its unstable system of public pensions. This article addresses the underlying economic and political reasons, such as poor labour productivity, low real wages, insufficient immigration of trained people and the failure to find alternative ways of financing retirement. NextGenerationEU will effectively soften Portugal's macroeconomic budget constraints, but it carries the risk of further postponement of necessary policy changes and reforms.

The future of the Economic and Monetary Union as it stands now seems more insecure than ever. In times of soaring inflation, it becomes more and more difficult for the European Central Bank (ECB) to support the cohesion of the monetary union. The reason for this is not so much the alleged fragmentation of the European capital markets (König, 2022), but the extremely high indebtedness of a number of southern European member countries. Note that, contrary to what occurred in 2012 when Mario Draghi gave his famous speech in London, no ECB official has promised in 2022 to do "whatever it takes" to contain the furious actual inflation despite the fact that price stability is the highest statutory priority for the ECB. The ECB itself faces a dilemma: Raising interest rates quickly and significantly may help to fight inflation, but it also threatens the liquidity and solvency of countries like Italy, Spain, Greece and Portugal.

Portugal is of special interest here, because it is an excellent example of a small open economy burdened with a difficult economic puzzle. This puzzle – against the background of non-sustainable public debt – has its origin in three simultaneous challenges: low productivity of labour, accompanied by insufficient immigration of skilled workers and the failure to find alternative ways of

financing retirement, resulting in an unstable public pensions system.

Portugal, a member of the EU and of the eurozone like Germany, competes with Germany because it is one of the most attractive European countries to highly qualified/skilled foreign immigrants. The advantage in productivity and hence in real wages that Germany has compared to Portugal is something that cannot be ignored because these are some of the major pull factors of immigration. As a matter of fact, Portugal faces the phenomenon of "transitory immigration," i.e. a labour force that uses Portugal as the gateway to Europe but has no intention to stay. Instead, Germany is more often its preferred destination.

(Minimum) wages and productivity

Let us begin our analysis with the productivity of labour. It is fair to say that the level of (real) wages is intimately linked to the productivity of labour. The latter, in turn, is primarily a function of physical and/or of digital innovative investment, of the evolution of human capital and of technological progress. Portugal is a typical example of a country that intends to fight low-level wages with the instrument of minimum wages. These countries, however, cannot rule out the following: if they fall short of the respective marginal productivity of labour under competition, they create an excess demand for labour. If, by contrast, they exceed the respective marginal productivity of labour, they tend to destroy jobs. In more economically advanced European economies, like Germany, one may observe an additional effect: solo self-employment emerges due to professionals – not being directly affected by minimum wages – leaving firms that are confronted with higher (minimum wage-induced) labour costs (Gregory and Zierahn, 2022). If minimum wages are accompanied by monopsonies or oligopsonies in the la-

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bour market, they may create additional employment, but at the cost of severe market imperfections (Sell and Ruf, 2016). This is what studies conducted by Card and Krueger (1994) in the USA of the 1990s have already revealed and what later studies in other countries and different time periods have confirmed.

In February 2022, the minimum wage in Portugal amounted to €4.25 per hour. This is less than half of the actual minimum wage in Germany: €9.82 per hour (Statista, 2022a). The hourly minimum wage in the EU ranges from €2 in Bulgaria to €13.05 in Luxembourg.

The ratio of the amount of labour that is being used to generate one unit of GDP is one of the most widely used measures of labour productivity. International organisations like the OECD compute labour productivity by dividing an economy's GDP by the number of hours worked. This indicator expresses the value (measured in euros) that is created per unit of hours worked. This figure seems to be more accurate than measures comparing output to the number of workers. In 2020, Portugal's GDP per hour worked was 73% of the respective EU value and only 66% of that of the euro area countries. More concerning than the gap itself is the fact that it has been widening in recent times, such that productivity in Portugal has increased much less than in the other European economies. Specifically, labour productivity in Portugal has increased by only 20% since 2000, compared to 29% in the OECD and 24% in the EU (Correia, 2022).

The pension system in Portugal

Productivity growth that is too low impedes a natural growth of real wages. The latter, however, is the prerequisite for an acceptable size of pensions. This argument applies to every single pension contributor in the social system. On a macro level, additional constraints have to be respected. For example, the relation between the active labour force and the retired labour force must exceed a certain quota. In other words: the so-called "dependency ratio" must be stabilised at a sustainable level. If not, the pension contribution rate for the active labour force will necessarily rise to unacceptable levels, *ceteris paribus*.

The so-called age dependency ratio (measured as a percentage of the working-age population) in Portugal was reported to be 56.29% in 2021. This figure corresponds to the World Bank set of development indicators, which was compiled from officially recognised sources of the respective countries. Note that the age dependency ratio is the ratio of dependents – that is people younger than 15 or older than 64 – to the working-age population (Trading Economics, 2022). By comparison, the dependency ratio in Ger-

many was 55.38% in 2020. The Portuguese dependency ratio is slightly higher.

A sustainable system of pensions, however, has to consider numerous constraints: The lower the birth rate and the higher the life expectancy of the retired labour force, the higher the pressure for policymakers to either lower the level of pension payments and/or to raise the pension contribution rate and/or the retirement age, *ceteris paribus*. This task is more than painful for politicians as it tends to endanger the likelihood for their re-election, given the fact that an increasing share of the electorate exceeds the age of 60 years. This applies to Portuguese politicians in particular.

The birth rate for Portugal in 2020 was 7.768 births per 1,000 people, representing a 0.44% decline from 2019 (Macrotrends, 2022). The birth rate for Portugal in 2019 was 7.802 births per 1,000 people, a 0.43% decline from 2018. Only these few numbers signal a dangerous downward trend. In 2020, the birth rate for Germany was 9.5 births per 1,000 people (Macrotrends, 2022a). Germany's birth rate, which is also much too low by the criterion of a sustainable public pension system, hence exceeds the Portuguese by 22.3%. The comparative pressure on the Portuguese pension system is significantly higher in this respect.

Life expectancy at birth in Portugal was reported at 80.98 years in 2020. The life expectancy for Germany in 2020 was 81.41 years, a 0.19% increase from 2019. The life expectancy for Germany in 2019 was 81.26 years, a 0.19% increase from 2018. In this case, Germany reveals a positive trend, which makes it somewhat more difficult to satisfy the promises of its public pension system, *ceteris paribus*. When using the year 2020 as a reference, German life expectancy exceeds the Portuguese by only 0.5%. The comparative pressure on the German pension system is therefore only slightly higher in this respect.

What about the actual level of pension payments, the size of the pension contribution rate, and the average age of retirement in Portugal? The Portuguese pension is an earnings-related, social security contribution-based pension. This covers everyone in the Portuguese workforce who makes a certain amount of contributions (Expatica, 2022). The minimum contribution-based pension rate is €286.76 per month with 15-20 years of contributions. It increases to €316.45 per month with 20-30 years of contributions. Finally, it increases to €395.57 per month with contributions for 31 years or more (Expatica, 2022). The Portuguese state pension links payments to life expectancy and indexes them to consumer price index changes. It also covers self-employed workers, as long as they have made the necessary contributions

while they have been working (Expatica, 2022). Indexing the pension rate to the average life expectancy in the country makes sense and is a policy that is also pursued by Germany and other European countries. An indexation of the pension rate to the consumer price index, however, is a problematic instrument which is often associated with the phenomenon of inertial inflation (Sell, 1990).

The Portuguese social security contribution (*Taxa Social Única*), includes the payments to the public pension and draws on around 11% of an employee's wage in 2020. Employers contribute an additional 23.75%, making a total of 34.75%. This includes contributions towards survivor and disability pensions. For public sector workers, pension contributions amount to a minimum of 3%. The contribution rate for those who are self-employed is 29.6% of earnings (Expatica, 2022). The German contribution rate to the public pension system alone amounts to 18.6% in 2020 of which each party (employers, employees) bear a share of 50%. Total social security contribution in Germany amounts to 38.65% of wages. The much larger share paid by employers in Portugal (23.75/34.75 = 68.3%) in comparison to Germany (50%) makes labour more expensive and has a deterrent impact on employment. A higher share for employees, in turn, would additionally dampen their net wages and fuel the already flourishing shadow economy in Portugal (König, 2022).

The average effective age of retirement in Portugal was 68.5 years for men and 65.4 years for women in 2019. Formally, one reaches the statutory retirement age in Portugal at 65.2 in 2019 (Vrublevskaia, 2021; Auswandern Handbuch, 2022). The average effective age of retirement in Germany in 2019 was 64 years for men and 63.6 years for women (Statista, 2022b), the statutory retirement age was 65.5.

This striking difference is worth analysing in more detail: Table 1 shows effective and statutory retirement age in 12 European countries, 11 of which are EU member states. In the Baltic countries, Iceland, Sweden and Portugal (highlighted in green), the effective age of retirement is higher than the statutory retirement age. The corresponding absolute years of difference are listed in the last column. The opposite holds for the founding members of the EU: Germany, France, Italy and the Benelux countries (highlighted in grey).

What are the implications? The first group of countries live with an overly stressed system of public pensions: older people cannot afford an adequate living standard on the public pension rate, with the exception of Sweden. The second group of countries lives with public pen-

Table 1
Effective vs. statutory retirement age in selected European countries, 2019

Country	Effective retirement age (men/women)	Statutory retirement age	Absolute difference
Portugal	68.5/65.4	65.2	3.3/0.2
Iceland	68.1/65.9	67.0	1.1/1.1
Estonia	65.5/65.7	63.3	2.2/2.4
Latvia	65.7/64.7	62.8	2.9/1.9
Lithuania	64.3/63.0	63.6/61.9	0.7/1.1
Sweden	66.4/65.4	65.0	1.4/0.4
Germany	64.0/63.6	65.5	-1.5/-1.9
France	60.8/60.8	63.3	-2.5/-2.5
Italy	63.3/61.5	67.0/66.6	-3.7/-5.1
Belgium	61.6/60.5	65.0	-3.6/-4.5
Netherlands	65.2/62.5	65.8	-0.3/-3.3
Luxembourg	60.5/61.3	62.0	-1.5/-0.7

Source: Auswandern Handbuch (2022); own calculations.

sions, which, though deeply in need of reforms as well, still encompass “water in the system”:¹ one could easily improve at least the liquidity and solvency of the pension system by getting the average age of retirement much closer (from below) to the statutory age of retirement. It is more challenging to address the low birth rate, poor immigration and the distressed labour productivity in the country.

Alternatives to public pensions

Private savings

Private savings outside of the public system of pensions may in principle lead to private monetary wealth old-age insurance contracts which can complement the pension rate after retirement. But how much savings can workers afford when earning only low wages during their lifetime? In a number of OECD countries, federal government expenditures based on tax income are being used to financially support the system of public pensions. Higher taxation is a means to collect more of these funds, but at the cost of diminishing disposable income, and hence, of private savings.

The savings rate of Portuguese households reached an all-time low in 2019: it was 6.5% of gross disposable in-

¹ This notion is borrowed from the theory and policy of international trade, where “water in the tariffs” symbolises existing tariff redundancy. See Amelung and Sell (1991) for details.

come, which contrasts with the euro area average of 11.9%. From 2000 to 2019, the net household saving rate in Germany fluctuated between 9% and 11%. In 2019, net household savings as a share of total disposable income in Germany was 10.87%. The Portuguese capacity to complement public pension payments by drawing on privately accumulated wealth/insurance contracts – as measured by the yearly voluntary amount of savings as a percentage of disposable income – is hence only 67.2% of Germany’s capacity.

Inversely, it is not a good idea to grant tax benefits to European retired (foreign) non-habitual residents, once they spend more than six months a year in Portugal. Portugal’s tax-free pension scheme allows foreigners to take pension income under favourable tax arrangements. First introduced in 2009, the scheme has proved quite popular among retired foreign residents, with a report in February 2019 claiming that 9,589 pensioners benefitted from it. Those granted non-habitual residents status receive a tax exemption on all forms of taxable income they receive from abroad. This includes pensions and lump-sum withdrawals for up to ten years (Expatica, 2022). However, this money must and will be collected by the Portuguese government from other sources, and, most likely, with the wrong incidence (with regressive distributional effects).

Immigration

In a globalised world, immigration of (preferably skilled) workers can help to broaden the contribution base of the domestic pension system. But here, Portugal competes with other European countries like Germany, for example, which may be more attractive to potential immigrants. Higher real wages is only one pull factor, but still a very important one.

Net immigration in Portugal amounted to 41,274 persons in 2020, while the equivalent figure in 2021 in Germany was 329,000. We find a population size in Germany of roughly 83,200,100 and of 10,196,707 in Portugal. Hence, in both countries, immigration flows in relation to the respective population size are equal and amount to roughly 4%. However, given the fact that it is more difficult for Portugal to organise a sustainable contribution base in its pension system than Germany, this immigration ratio should be much higher in Portugal than in Germany.

Public debt

Last but not least one may question the alternative to incurring higher domestic debt in order to subsidise the public system of pensions. This is not a good idea either.

Table 2

NextGenerationEU: Selected net recipients and contributors

Country	Total grant, gross (million euros)	Net (% of GDP)	Net per capita (euros)
Portugal	16,519	4.9	1,011
Latvia	2,422	4.9	842
Lithuania	2,818	2.9	571
Italy	84,781	1.8	547
Estonia	1,470	2.1	493
France	44,790	-1.1	-388
Belgium	6,381	-1.5	-649
Germany	30,114	-2.0	-848
Netherlands	6,966	-1.9	-958
Sweden	3,906	-1.9	-963
Luxembourg	258	-2.4	-2,843

Note: NGEU grants (in current prices), including the Recovery and Resilience Facility, ReactEU, Just Transition Fund and European Agricultural Fund for Rural Development.

Source: König (2022), own calculations.

Souring interest rates on Portuguese government bonds will either force the ECB to intervene with its new controversial purchase programme dedicated to government bonds of southern European member countries (Transmission Protection Instrument), or will plunge the eurozone into a new major existential crisis. König (2022, 12-13) reports that an increase of the interest rate on public debt by just two percentage points would raise the overall debt quota of Portugal by 20 percentage points up to the year 2030. Debt sustainability would then be in severe danger. Unfortunately, no big relief can be expected from economic growth of the Portuguese economy – addressing for a moment the famous formula $g > r$ (Piketty, 2014) – which in principle can successfully dampen the debt quota.

It is obvious that the pension systems burden the fiscal stance of European countries in a quite different manner: expenditures related to pensions amount to 11.6% of GDP on average in the eurozone, to about 10% in Germany, but to more than 13.5% in Portugal (OECD 2021, 199) in 2017. Therefore, countries have rather different interests to either ease the load of serving their public debt and/or to find new funds which may soften their macroeconomic budget constraints. The recent NextGenerationEU programme (see Table 2) seems to be one from which Portugal and the Baltic countries (highlighted in green; Spain is not considered here) profit most as net recipients. By

contrast, the founding countries of the EU (highlighted in grey), with the exception of Italy, but including Sweden, appear to be the largest net contributors.

Policy conclusions

Portugal suffers from three specific “diseases” which negatively affect the sustainability of its pension system: the population is getting too old on average, there are too few new births and labour productivity is distressed. Immigration of the young and qualified could soften the problem, but it will only happen if real wages in Portugal become attractive enough. The latter, in turn, assumes a rising productivity of labour as the result of innovative investment activities and a campaign to raise domestic human capital, too.

As a consequence, Portugal is in need of both family and birth oriented social policies and of opportunities for innovative investment incentivised by the national government.

It is highly doubtful whether Portugal’s current policy towards non-habitual residents of providing tax subsidies once they spend more than six months a year in the country meets its economic needs. If tax subsidies are a suitable policy instrument at all – public finance gives them a chance only if there are observed positive external effects – then they should be directed at young Portuguese couples who ultimately decide the size of the next generation, i.e. the birth rate.

If the recently launched NextGenerationEU programme is to be meaningful, it should demand that net recipient countries steer these funds into projects that primarily benefit future, not present generations. The criteria used so far (unemployment rate, inverse of GDP per capita and population share in the EU) for the determination of country-specific grants are not in line with this philosophy (König, 2022, 19).

The ECB, by the way, has had an ambiguous role in the reform process of European countries in the past: as studies of Heinemann and Birkholz (2022) and of König (2022) demonstrate, the large purchase programmes of sovereign debt have tended to curb the enthusiasm for fixing the necessary decisions of domestic policies.

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