

# A New Rule for Public Pensions

Few if any socio-political topics prey on the mind as much as financial security in old age. Few if any offer such a fertile electoral battleground. In our author's view, however, perceived truth is a poor foundation on which to base pension security. Instead, he lays out the facts and their consequences.

TEXT **AXEL BÖRSCH-SUPAN**

In 2015, around 30 percent of the working population across all age groups in Germany stated that they expected to receive no more than a basic public pension – that is, social assistance in old age or its equivalent. By last year, the press was reporting that as much as 50 percent of the population will face poverty in old age. This year, the competent minister has spoken of a “slippery slope” on which

easy to forecast. Half of the approximately 30 percent of the working population who stated in 2015 that they had only social assistance to look forward to were actually entitled to a far higher pension – they just didn't know it. And the forecast of a 50 percent poverty rate in old age was the product of two serious errors in reasoning. First, it was incorrectly assumed that young people with little or no current earnings (such as trainees and students) would remain poor in old age. And second, those who don't receive a public pension (such as civil servants and housewives), were also classed as poor even if they actually receive a generous income, especially in a household context. After correcting these errors, the forecast dropped to around 5 percent.

So is it possible to employ scientific methods and sober analysis to stem the agitation regularly prompted by the emotive issue of pensions? Let us try.

The public pension is a pay-as-you-go system in which the contributions paid by younger people are immediately disbursed to their older counterparts. Leaving aside a relatively small reserve of at most one and a half months' disbursements, the idea of a well-

Working or retired: The point at which people no longer have to work is one of the main points of dispute in pension policy.

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## The false forecast of a 50 percent poverty rate in old age was founded on two errors in reasoning

the level of pensions is heading downhill unchecked, such that it's time to draw a line to make it stop. Such statements naturally trigger emotions.

The German pension system, in particular, is highly rule driven, and makes for very dry reading. In addition, the factors that determine long-term pension development generally change slowly and steadily, with the result that future pensions are quite



filled pension fund is absurd. What is paid out always equals what is paid in; nothing is left over. This is the first important mechanism of the German public pension system – and it's a problematic one. Demographic change means that the number of elderly is increasing while the number of younger people is declining. Hence, pension expenditures will rise while contributions will fall. But more on that later.

The second important mechanism involves the way in which contributions and benefits are split between individuals. The rule here in Germany is that contributions up to a certain upper limit (the contribution ceiling) are strictly proportional to earned income, and the pension benefits paid, in turn, are strictly proportional to the contributions paid over

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## The deluge of young refugees won't compensate for the birth deficit

the recipient's lifetime. This second fundamental mechanism underlying the German pension system is also not without its problems, since those with low earnings during their working life will receive a low pension when they retire.

Each individual's share of the funds paid out by the pension system is equal to the proportion they paid in on average over their working lives. This equivalence contrasts with a progressive income tax and the many other redistribution mechanisms inherent in our tax and transfer system. In other countries, such as Switzerland and the US, this proportionality doesn't apply. Instead, the poorer receive a disproportionately high, and the richer a disproportionately low, pension. On the other hand, in both of these countries, there is a far lesser degree of redistribution via taxes on income.

We therefore need to tackle two major issues that nourish people's fears and anxieties surrounding pensions: the threat of poverty in old age, and demographic change. Let us first address the latter.

As already described, the age structure of Germany's population is currently changing drastically: there will be more and more older people, and fewer and fewer younger ones. There are three causes of this. First, there were significantly more births per year in the 1960s than in the decades before or since. The annual cohorts of the baby boom years have a very strong influence on various averages in our country, from savings and consumption habits to age in general. As the baby boom generation ages, the average German population ages with them.

The second cause lies in the fact that we are living longer thanks to improved health. Life expectancy in 1960 was 69; 50 years later, it had risen to 80 – an increase of more than two years per decade. This is due in part to advances in medicine, but also to improved working conditions, the reduction in environmental hazards and – so far at least – a healthier diet.

The third cause is the decline of the birth rate since the 1970s. Since there have been far fewer births in recent decades than would have been needed to maintain a constant population, we now lack, relative to the preceding generation, around a third of the young people needed to finance our pensions.

Two points are worth noting. For one thing, the forecast for the number of young people whose task it will be to finance our pensions over the next, say, 25 to 30 years is highly reliable. These people have already been born. And it is a trivial matter to forecast the future age of any given cohort. On the other hand, changes in birth and death rates affect only a limited number of cohorts. Demographic development through 2045, looking a generation ahead, is therefore largely a matter of facts that are no longer open to change. Only with very long-term forecasts does accuracy become blurred. Secondly, even the recent deluge of young refugees will only minimally reduce the birth deficit, since even these massive flows are small in comparison with a shortage of one third of a generation.

How does one compensate for the burden placed on the public pension system by an aging population? Given the scale of the demographic challenge,



it would be unwise to respond with but a single socio-political countermeasure. What is needed instead is a package of measures oriented toward the individual causes. This is precisely what I meant when I referred above to a scientific approach based on sober analysis.

The first cause is beyond changing. The rapid progression from baby boom to the effects of birth control is historic fact. We must therefore accept the consequences while doing what we can to limit the damage. This is achieved through the sustainability factor introduced in 2005, which distributes the demographic burden about equally between the older and younger generations by raising contribution rates and lowering pension benefits by around the same percentage as the demographic burden increases. It was a wise decision to introduce this mechanism as a fixed rule in the law, thus protecting it from the changing moods and electoral panic attacks of politicians.

However, the sustainability factor has made it more difficult to calculate pensions in Germany, making the whole system less transparent. Whereas everyone understands what it means when the contribution rate rises, there is great uncertainty as to what it means when the so-called “pension level” falls. This is due to the misleading term “pension level”, which actually defines, not a level, but a proportion – namely the average pension divided by the average earned income subject to social security insurance contributions. In Anglo-Saxon terms, it is more like the replacement rate rather than the level of a benefit.

The sustainability factor will lower this replacement rate by around half of a percentage point per year through 2045. So pension benefits will rise by one half of one percent less than wages. Since, however, long-term average wages are increasing by around 1.5 percent per year after adjusting for purchasing power, one whole percentage point remains for pension benefits to rise in terms of purchasing power. The part of demographic change precipitated by the switch from baby boom to baby bust can therefore be financed through growth, without eat-

ing into the very substance of pension benefits. On the contrary, this substance can continue to grow by around one percent per year. Taking average inflation into account, pension benefits will no longer rise by 3 percent, but still by around 2.5 percent in an average year.

As to the second cause of demographic change, there is no desire for change. Rather, it is a great gift for us to remain healthier longer and live longer lives.

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## Since 1957, the time for which pensions are paid has more than doubled

So far, increased lifespans have been reflected almost exclusively in the extended – substantially extended – time for which pensions are drawn: since the introduction of the pay-as-you-go system in 1957, this time has more than doubled from nine to currently 20 years. If the retirement age were to remain unchanged, it would increase by a further seven years by 2045. However, pay-as-you-go funded pension systems can remain stable only if the ratio of working life to life in retirement also remains unchanged.

As a first step in this direction, the retirement age is due to increase gradually over the next 13 years, from age 65 to age 67. It's worth noting that this increase is one year less than the anticipated increase in life expectancy over this period. So the “retirement at 67” rule also implies that pension benefits will be paid for an extra year. Behind the two-to-one ratio – the retirement age pushed back two years and pensions paid for an extra one year – lies the wise decision to preserve the proportions of life itself. At present, after an average working life of about 40 years, we draw our pensions for a further approximately 20 years. So an extra year of retirement must be funded by two years of work.

It would also be prudent to preserve these proportions after 2030 – ideally on the basis of a fixed rule



so they don't fall prey to clientelism. The appropriate soberly analytical step would therefore be to introduce, post-2030, a dynamic two-to-one rule by which either increases in life expectancy are divided at regular intervals into two parts of longer time spent working and one part of longer time spent receiving a retirement pension; or – what we don't hope to see – by which reductions in life expectancy are equally automatically compensated for by a two-to-one reduction in employment time and retirement time.

A dynamic retirement age of this kind is the still-missing counterpart to the dynamic wage adjustment introduced in 1957 and the dynamic adjustment with respect to the increasing dependency ratio by means of the sustainability factor introduced in 2005. 2030 is still some way away, so there is no need for immediate action. However, people must be made aware of changes in pension law at an early stage so that they can plan their lives accordingly.

Only the third cause of demographic change has the potential for eradication, at least in theory. Practical politics has yet to find a way to turn the higher birth rate so often wished for into reality. Despite a variety of family policy measures backed by per capita funding almost as high as that in France, a country renowned in this respect, the birth rate has been stagnating for decades. Whether the recent, still modest increase will become a long-term trend remains to be seen – but even a long-term rise would take at least around 20 years to have any effect on pensions, when the first of these children begin their working lives.

As for which measures one might recommend to politicians in order to raise the birth rate in Germany, science is somewhat at a loss. For every measure that works well in one country, there are conflicting examples elsewhere. Scientists are, however, united in the belief that if one is effectively unable to increase the quantity of children, one should at least invest in the quality of education so that the few children may be all the more innovative and productive. And on this point internationally, as various educational surveys show, we in Germany languish in mediocrity.

The second major issue in the pension debate is the threat of poverty in old age. Currently, the pov-

erty rate among the elderly – defined as the proportion of over-65-year-olds receiving only the basic retirement benefit – a kind of social assistance in old age – stands at around 3 percent. Every such individ-

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## Demographic change can be funded through growth

ual is one too many, certainly; but the proportion is substantially lower than in the population as a whole (around 9 percent) or indeed among single parents (almost 25 percent).

The fear of poverty in old age is based on two developments that present a risk to the level of pension payments. These are, on the one hand, the pension reforms that are intended to stabilize the German pension system but that – as described above – are reducing the growth of pension benefits and increasing the retirement age; while on the other hand there has been an increase in the number of people whose employment circumstances allow for only very low or even zero public pension insurance contributions.

The fear that each reduction in the growth rate of pension benefits increases poverty in old age is based on the aforementioned misunderstanding of what “pension level” means. The purchasing power of pensions will continue to increase, rendering poverty all the less likely.

It's the increase in the retirement age that is more trenchant. It is an undisputed tenet among social scientists and epidemiologists that health correlates strongly with income; any differences of opinion relate solely to the weighting to be applied to the diverse reasons for this. People who have low earnings in their working lives and are therefore at risk of poverty in old age often also have physically more strenuous occupations and substantially poorer health. Many of them will be unable to carry on working up to a higher retirement age.

Unfortunately, this also correlates with the second development that will intensify the problem of

poverty in old age, because these people are often in precarious employment with low pension entitlements. The data here shows clear patterns that could be used as a basis for targeted countermeasures. A retirement age that increases dynamically in line with average life expectancy demands clear exceptions for those whose earning capacity is reduced on health grounds. The current disability pensions are insufficient. The long-term unemployed currently drop out of the pension insurance system and are therefore also at risk of poverty in old age.

A third well-defined group at risk of post-retirement poverty comprises those who are self-employed and who currently also have no social safety net. They should be mandated to enroll in social insurance after a certain qualifying period.

So the pension issue can be considered on a well-founded scientific basis. Causes and problems can be isolated and analyzed individually. Demographic change is fortunately happening at a snail's pace, and is equally fortunately paralleled by better health and a longer lifespan. Consequently, it can largely be financed through growth rather than through reducing benefits – that is, through increasing productivity and wages as well as through longer lives. From the socio-economic data available at the individual level here in Germany, problem groups can readily be identified, allowing targeted countermeasures to be developed without opening the floodgates, as would happen with a general increase in the pension level.

The social value of socio-political research lies in its empirical foundation. The collection of socio-economic and epidemiological data, for example, sheds light on the correlation patterns between wealth and health, poverty and reduced life expectancy, and facilitates the identification of many of their causes, allowing us through sober analysis to highlight problem areas for the benefit of politicians and to recommend suitable countermeasures – also at election time. ◀

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## THE AUTHOR

**Axel Börsch-Supan**, born in 1954, studied economics and mathematics before being awarded a doctorate from MIT in Cambridge (USA) in 1984. He worked as an Assistant Professor at Harvard University until 1987. Back in Germany, he initially taught at the Universities of Dortmund and Mannheim. Since January 2011, Axel Börsch-Supan has been a Director at the Max Planck Institute for Social Law and Social Policy, where he heads the Munich Center for the Economics of Aging. Axel Börsch-Supan is also coordinating the Survey of Health, Ageing and Retirement in Europe, a pan-European interdisciplinary project to survey the issue of aging. He has also been a member of the Committee of Experts on Demographic Change, set up by the German Federal Government, since 2011.