Challenges for European Welfare States

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Abstract

In the absence of social security reform, current pension entitlements of an aging population exceed future fiscal capacity. However, structural labor market reforms facilitate the transition to sustainable schemes in which a sizeable part of the current generosity of European welfare states can be maintained. In fact, many European states have already taken important steps in this direction. In the end insufficient productive capacities to support the welfare state pose smaller challenges to reform than do time inconsistencies built into the political process of redesigning pension plans.

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Challenges for European Welfare States

Axel H. Börsch-Supan[1]

1. Introduction

The modern welfare state is a great achievement of civilization in the eyes of most observers. Population aging, however, forces us to align current entitlements with future fiscal capacity. This keynote, focused on Europe, shows that this can be done without sacrificing the essence and even most of the current generosity of European welfare states. Population aging poses less of an economic problem in terms of insufficient productive capacity to support the welfare state than a political problem of time inconsistency in adapting the welfare state to a new life-course environment.

Section 2 makes this point by juxtaposing the negative force of demographic aging with the positive countervailing forces of international diversification and structural reform. With an optimistic tone, Section 3 delivers an account of where Europe stands in redesigning the welfare state. On the more pessimistic side, Section 4 sheds light on some of the reasons why the political process of redesigning is so difficult. Section 5 concludes.
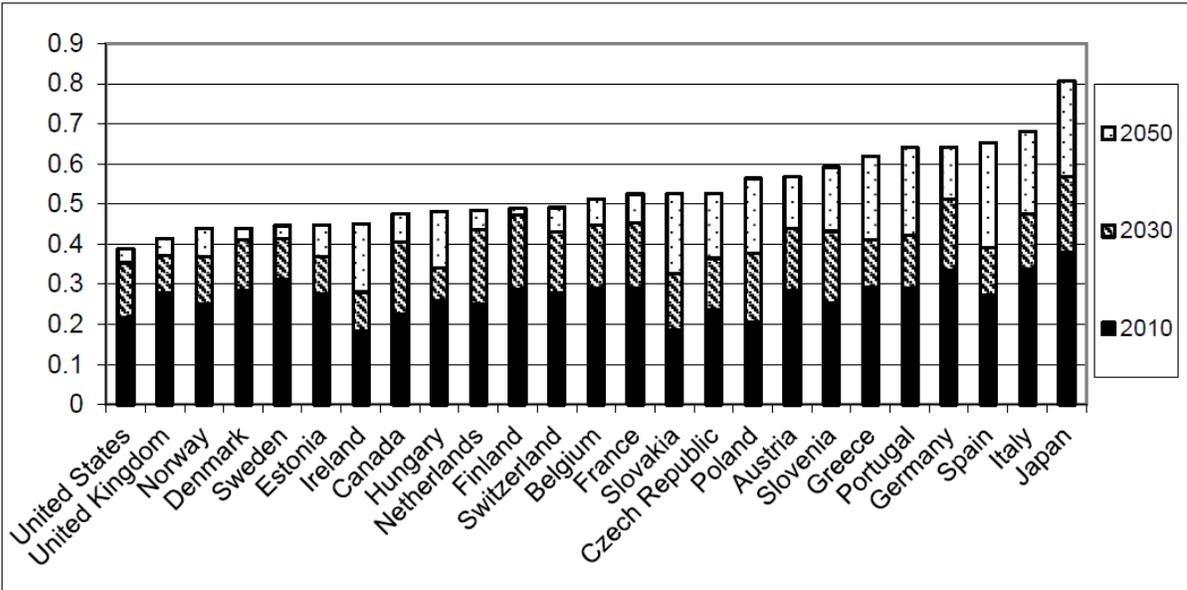
2. The force of aging

Population aging is often expressed in terms of the old-age dependency ratio which relates the share of population older than a given age to the adult population younger than that given age. This ratio is useful as a device to visualize population aging without any kind of adaptation; it is also limited to this purpose as we will see later. Figure 1 presents an example for selected OECD countries, taking age 60 as the pivotal age. There are two lessons to be learned from this well-known figure: first, the level of old-age dependency is rather different across countries. The ratio is with 0.8 about twice as large in the Mediterranean countries, Japan and Germany

than in Scandinavia, the US und the UK where it is closer to 0.4. Switzerland is right in the middle. Second, the change over the coming decades is about the same in all of these countries: the old-age dependency ratio will roughly double between 2010 and 2050. This yields a first measure to express the force of aging. Let us equate individuals at age 60 and older with the beneficiaries of the welfare state, and similarly younger individuals with the contributors to it. Let us also distribute the burden of population aging equally between the young and the old. Since the square root of two is roughly 1.4, the doubling of the old-age dependency then translates into about 40% lower benefits for the old and about 40% higher contributions for the young.

Figure 1: Old-age dependency ratio in selected OECD countries (2010, 2030 and 2050)

Source: Own computations based on OECD and Eurostat demographic projections

A second measure expresses the force of aging in terms of lost economic growth. For given productivity and capital intensity, the economic capacity of a country is roughly proportional to the share of workers in the population. This share is thus often called the "support ratio". In an aging society, there will be fewer workers and more retirees and hence, a lower support ratio. Again assuming a fixed age of retirement and using the OECD/Eurostat demographic projections of Figure 1, productive capacity will develop as shown in Figure 2. Several lessons

emerge from this exercise. First, over more than the next three decades, aging will take away productive capacity. Second, the dynamics are very different between Europe, the US and Japan. While aging is less severe in the US, Europe will recover fast from negative demographic impacts after 2030. Third, the rate at which productive capacity is shrinking is rather large during certain periods. It exceeds -2% for Japan around 2015, Europe will experience its severest losses between 2025 and 2030. Japan will again experience a loss of economic growth between 2030 and 2035. To put this into perspective: Germany's average economic growth rate over the last 3 decades has been about 1.5% per annum in real terms, Japan's about one percentage point less and the growth rate of the US about one percentage point more. Population aging could indeed undermine the economic power required to finance a generous welfare state - provided that nothing else changes.

Figure 2: Loss of economic growth due to aging (2010 to 2050)

Source: Own computations based on OECD and Eurostat demographic projections

"If nothing else changes " is of course the key assumption underlying Figures 1 and 2. It includes a static view of the age that separates old from young, a static view of productivity and capital intensity, and an isolated view of each country. However, international diversification, increased labor productivity and in particular, an adaptation of the life-course to

the longer life span are powerful instruments to reduce the force of aging visible in Figures 1 and 2.

International diversification exploits the gains from trade and foreign direct investment between older and younger countries. In addition, labor productivity is likely to increase due to increased capital intensity precipitated by a higher wage to interest ratio. Taken together, they dampen the loss in per capita GDP due to population aging. This holds even more so for GNP and consumption per capita. Figure 3, based on Börsch-Supan, Härtl und Ludwig (2014), makes this point using a computational general equilibrium model for three European countries (France, Germany, Italy, short: EU-3) which represent the domestic sector vis-à-vis the US (representing the foreign sector).

Figure 3: The force of international diversification in EU-3: Support ratio, GNP, GDP and consumption per capita (2005 – 2050)

Source: Börsch-Supan, Härtl und Ludwig (2014)

As the EU-3 populations age, the support ratio declines by 20 percent between 2005 and 2050. As a consequence, if policies and behavior were to remain at the current status quo, GDP per capita would decline by 15 percent and consumption per capita by about 10 percent relative to

a non-aging economy with the same total factor productivity. The decline in GDP per capita is smaller than the decline in the support ratio because scarce labor due to population aging is partially substituted by additional capital. This adaptation occurs in response to rising wages and falling interests rates. Since the US is aging much less than Europe, the return to capital would fall less (and wages would increase less) than in Europe if these two regions were economically isolated. In an open economy setting, however, European households will invest in foreign capital (which yields higher returns) until a common interest rate is achieved in equilibrium. From a life-cycle point of view, investment behavior varies with age: eventually, households will repatriate their foreign savings to enjoy their retirement consumption. The aggregate effect depends on demography. The investment behavior of the large European cohorts born in the 60s and 70s results first in rising, then falling net capital outflows, until they turn negative after about the year 2035. These international capital flows amount to almost 2% of GDP. As a consequence of these substantial flows, the fall in consumption per capita is about 5 percentage points lower than the reduction in GDP per capita by 2050. It also implies that de-trended GNP is substantially larger than de-trended GDP until about 2055. So even without any policy changes, an aging economy will adapt endogenously in response to rising wages, falling interest rates and new opportunities in younger countries abroad – provided that wages, interest rates, trade and foreign direct investment are free to move.

In addition, Börsch-Supan, Härtl und Ludwig (2014) demonstrate the potential force of countervailing policies. They compute consumption per capita in the EU-3 as a function of several hypothetical reform packages and show that living standards (measured as consumption per capita) can decline, stay constant or increase even when the old-age dependency will double, depending on the policy scenario chosen. Their scenarios range from doing nothing to a combination of reforms such as increasing French, German and Italian labor force participation rates to the current Scandinavian level and introducing the current Swedish pension system in France, Italy and Germany. It is not demography per se which will determine future living standards, but rather how we adapt to demographic change. In this sense, population aging is not primarily an economic problem but a political problem of implementing the reforms necessary to put the economy on higher growth trajectories.

The effective retirement age is the most powerful parameter in the simulation exercises of Börsch-Supan, Härtl and Ludwig (2014). Hence, the key adaptation of aging societies is to keep the length of working life in balance with the length of the entire life span. One may want to call this the "iron law of the economics of aging". If one wants to keep contributions to old-age provision by the young below a third of their income, and if one wants to replace at least two thirds of the former income as old-age benefit, then the length of the working life has to be at least twice as long as the length of retirement. Maintaining this ratio of two to one requires a steady adaptation of the retirement age to the life expectancy. Note that due to rising life expectancy both working life and the time spent in retirement increase by the same fraction. Hence, from a life span point of view, the utility of consumption and leisure will remain unchanged. This supports our initial claim that redesigning the welfare state for aging societies can be done without sacrificing the essence and even most of the current generosity of European welfare states.

3. What has been achieved in redesigning the welfare state?

Reform processes are under way in almost all European countries. Some countries reformed early in the 1980s, e.g. Sweden, most countries much later, and some just recently, e.g. Greece. Typically, we have experienced "reforms in installments". These reforms have combined "parametric" elements (introducing actuarial adjustments, changing the benefits indexation formula, increasing the retirement age) with "fundamental" elements (changing the financial mechanism by moving substantial parts of retirement income from public pensions to private savings). The multitude of reform elements in Europe is partly a result of initially different pension schemes and different political preferences. It also reflects the fact that there is no single reform measure that can lead to a stable and sustainable system of old-age provision. Rather, a mix of several reform elements is needed such as in the optimistic scenarios in Börsch-Supan, Härtl and Ludwig (2014). If the goal is to restore fiscal sustainability, then reform will require an overhaul of the existing pay-as-you-go systems as well as the re-introduction of private saving as a major source of future retirement income. Extreme policies are unlikely to work: neither can the public pension systems alone provide a sufficient retirement income at reasonable tax and contribution rates, nor can private savings fully substitute for pay-as-you-go pensions.

Relying on public pay-as-you-go financed pensions alone is not possible because the resulting tax and contribution rates from maintaining the current generosity will damage economic growth through the negative labor supply incentive effects described earlier. Further increases of the tax and contribution rates are particularly damaging in EU countries that already have high total labor costs, in particular Germany, Austria, Denmark and Sweden.

In turn, changing pay-as-you-go pensions entirely into funded ones is not a policy option anymore at this point in time. It is simply too late for that/such kind of measures/such a measure. Saving requires time, and there will not be sufficient time for the baby boomers to accumulate funds in the order of magnitude required to finance a full pension before 2030. Time and history is of the essence in pension reform. The baby boom/baby bust transition dictates the time schedule. It makes reforms impossible which were feasible 25 years ago.

There are other reasons to advocate a more subtle but also more complex multi-pillar system rather than a pure pay-as-you-go or a pure fully funded system. An important reason is diversification. Pay-as-you-go systems carry large demographic and political risks, while fully funded systems carry large capital market risks and the risk of expropriation. Since these risks are not perfectly correlated, diversified schemes provide lower risk of poor outcomes than monolithic schemes.

Hence, in order to achieve long-run fiscal balance, reforms typically need to include two components: adapting the public system to demographic change under the restriction that taxes and contributions cannot increase much further, and strengthening private savings under the restriction that not much time is left until 2035.

Adapting pay-as-you-go public pension systems

Stabilizing tax and contribution rates implies expenditure cuts when at the same time demographic change reduces the number of contributors to, and increases the number of beneficiaries from, the pay-as-you-go pension systems. Pension expenditures have two dimensions: the level of benefits (via the replacement rate) and the duration of benefits (via the retirement age). Expenditure cuts are easier to shoulder if they involve both dimensions.

How much benefit increases have to be dampened depends on both the speed and the extent of demographic change in each country relative to its productivity growth. France and Sweden,

for example, will need less adaptation than, e.g., Italy and Germany. Some countries have formalized this link between demographics and benefit level. Sweden and Italy have introduced notional defined contribution (NDC, see Holzman and Palmer 2005) systems which compute benefits on the basis of the accumulated contributions plus some fictitious interest. This fictitious interest depends on demographic essentials such as life expectancy, dependency ratio and wage growth. Since the labor force growth rate declines as a population ages, a NDC system features a declining replacement rate in the course of population aging. Moreover, longevity decreases the value of the annuity emanating from the accumulated notional wealth.

Germany has also created a link between demographics and benefit level, but has preserved the defined benefit structure which has much political acceptance. The conventional benefit formula which indexes benefits to wages/prices is multiplied by the relative number of contributors to pensioners, the so-called sustainability factor. This augmented indexation formula will lead to decreases in pension benefit levels compared to wages.

The other crucial dimension of pension expenditures is the duration of pension benefits, determined by the difference between the age at which pension benefits are taken up and life expectancy. The two main policy instruments to reduce the duration of benefits are increasing the statutory retirement age and reducing early retirement benefits. Both instruments are extremely unpopular throughout Europe.

Denmark, Germany, France and the UK have enacted increases in the statutory normal retirement age (e.g. Denmark and Germany from 65 to 67 years, UK from 65 to 68 years, and France from 60 to 62 years). Most increases will be implemented slowly and gradually.

In some countries, not the statutory retirement age but the number of years contributed to the pension system is the primary determinant of actual retirement age. France and Italy have increased that number in order to adapt it to the longer life span, although not without major controversy.

Targeting and redistribution

Cutting pay-as-you-go pensions to a sustainable share of GDP will particularly hurt those who have earned very little and whose saving capacity is also low. The reform-driven reduction of replacement rates will drive workers who have earned incomes only slightly above the poverty

line into old-age poverty after retirement. These reductions could be minimized or completely avoided by later retirement. However, poor health may prevent this since health tends to be worse than average for those in or close to poverty.

The dilemma between sustainability and old-age poverty can only be solved by targeting policies for those who are in danger of old-age poverty. One instrument is a basic and/or a minimum pension (e.g. Denmark and, effectively, Germany). Another instrument is a non-linear (concave from above) schedule linking benefits to contributions (e.g. via the PIA/AIME conversion in the US Social Security system or similar to the Swiss pension system). The downside is that such redistribution creates an additional element of payroll taxation with potentially high distortions for labor supply.

While in most countries, pension systems and/or their associated social assistance systems distribute from rich to poor, Greece and Spain have both above average pension replacement rates but nevertheless very high old-age poverty rates, mainly due to poor coverage. This suggests some extent of perverse redistribution in Greece and Spain.[2] Correcting these design flaws creates room for policy reforms that make these pension systems more resilient to population aging.

4. What are the remaining obstacles to redesigning the welfare state?

Section 2 has demonstrated that structural reforms can compensate population aging. Section 3 has shown that reasonably mild and tested reform steps could suffice. Nevertheless, the political process is slow in most European countries and has lately stalled or even been reversed in some countries. While the long-term payoff of structural reforms is generally appreciated, they are highly unpopular in the short run.

Adapting the institutional setting for retirement to the extended life expectancy is a particular salient example. This institutional setting ranges from the statutory retirement age with mandatory retirement over eligibility details for early retirement and actuarial adjustments to later pension receipt to criteria for disability insurance. There is ample evidence that changing

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[2] See the quite colorful Greek case described by Börsch-Supan and Tinios (2001).

this institutional setting is effective in changing labor supply at older ages (Börsch-Supan 2000, Gruber and Wise 2004). The primary problem is therefore not the economic transmission of institutional changes into actual behavior, but the political resistance against institutional changes. Despite the enormous increase in life expectancy all over Europe, policymakers are still largely unwilling to challenge the widely popular early and normal retirement ages. Politically speaking, reducing the generosity of early retirement is often seen as "touching the third rail," with severe consequences for election outcomes. A case in point is France, where the timid increase in the retirement age, from 60 to 62 years, was partially reverted after the most recent presidential elections. Another recent case is Germany, where early retirement at age 63 for certain workers with long contribution (not necessarily working) histories has been introduced.

One explanation for such backlashes is the political economy of reforms which benefit future voters but hurt a majority of current voters (Sinn and Übelmesser 2002, Galasso and Profeta 2004, Galasso 2006). In addition, there are deeper reasons based on a large number of popular objections.[3] First, older workers are thought to be too ill to work. Second, they are better off in terms of health and wellbeing when not working. Third, old workers tend to be less productive than younger ones. Forth, employing older workers longer makes it harder for the young to find jobs.
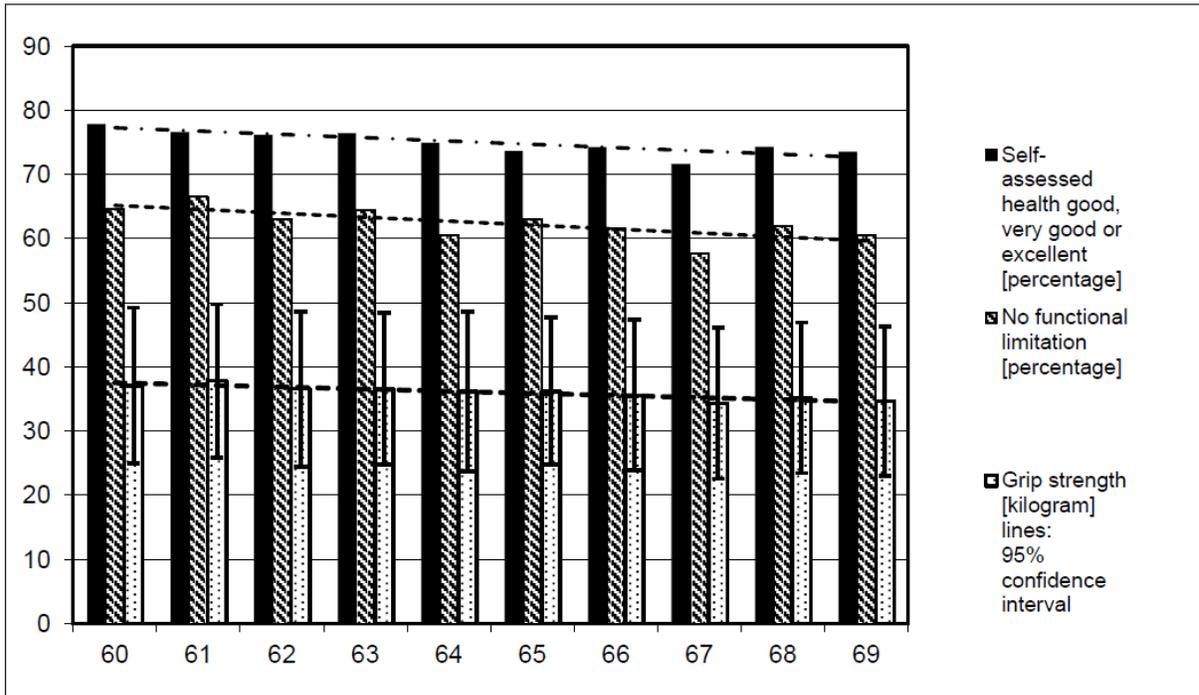
Older workers are too ill to work

It is a myth that old people are too sick to work until or after current statutory retirement ages, mostly 65. While there is no doubt that human aging is associated with progressive reductions in the function of many organs from their peak in early adulthood, the impact of these physiological changes on the capacity of individuals to function in society is quite modest (Rowe et al., 2009). The common exaggeration of the diminished function of older persons is due in part to archaic views of the elderly which overlook the significant compression of morbidity that has occurred over the past decades (Freedman et al. 2004) in Europe and the US. Newer research shows that this trend has slowed down in the US, mainly among the less

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[3] See Börsch-Supan (2013) on which some of the material in this section is based.

privileged (Freedman et al. 2013). This is not the case in Europe. The most recent data from EU-SILC show that disability-free life expectancy in Europe, defined as the time until a first disability incurs which "limits activities that people usually do", is still increasing in most countries (Eurostat 2013). It is also noteworthy that for the EU, on average, and also for the three countries considered in the macro model, disability-free life expectancy is much higher than the average retirement age, in Italy about 7 years, in France about 9 years.

Figure 4 shows the gradual decline in health measured with three degrees of subjectivity: self-assessed health (in 5 categories from excellent to poor); self-reported limitations in 10 different daily activities; and grip strength measured in kilogram. The figure is based on the Survey of Health, Aging and Retirement in Europe (SHARE). As opposed to the myth, older people in the SHARE countries perceive themselves as relatively healthy and perform well on the basis of both objective and subjective measurements. Although there is a decline in health between ages 60 and 69, it is much smaller than the variation within each age group (shown as error bars for the grip strength measure). The difference in individuals affected by activity limitations between age 69 and age 60 is about 7 percentage points. Shifting the retirement age from 65 to 67 years would therefore imply that the increase in workers who have at least one activity limitation is only about 1.5 percentage points.

Figure 4: Subjective and objective health measures in Europe, age 60-69

Source: Own computations based on Waves 1 and 2 of SHARE

This evidence leads to several conclusions. First, health is not the primary cause of retirement in Europe. Second, shifting the retirement age by two years is not bound to fail due to health problems. Third, and more generally, however, fixed retirement ages are not reasonable. People with health problems need to retire earlier, whereas most people could easily work longer. A flexible retirement system with early exit routes governed by a mixture of incentives (including actuarial adjustments) and disability pathways (including medical exams) would be the most appropriate way to deal with the strong heterogeneity in individual health.
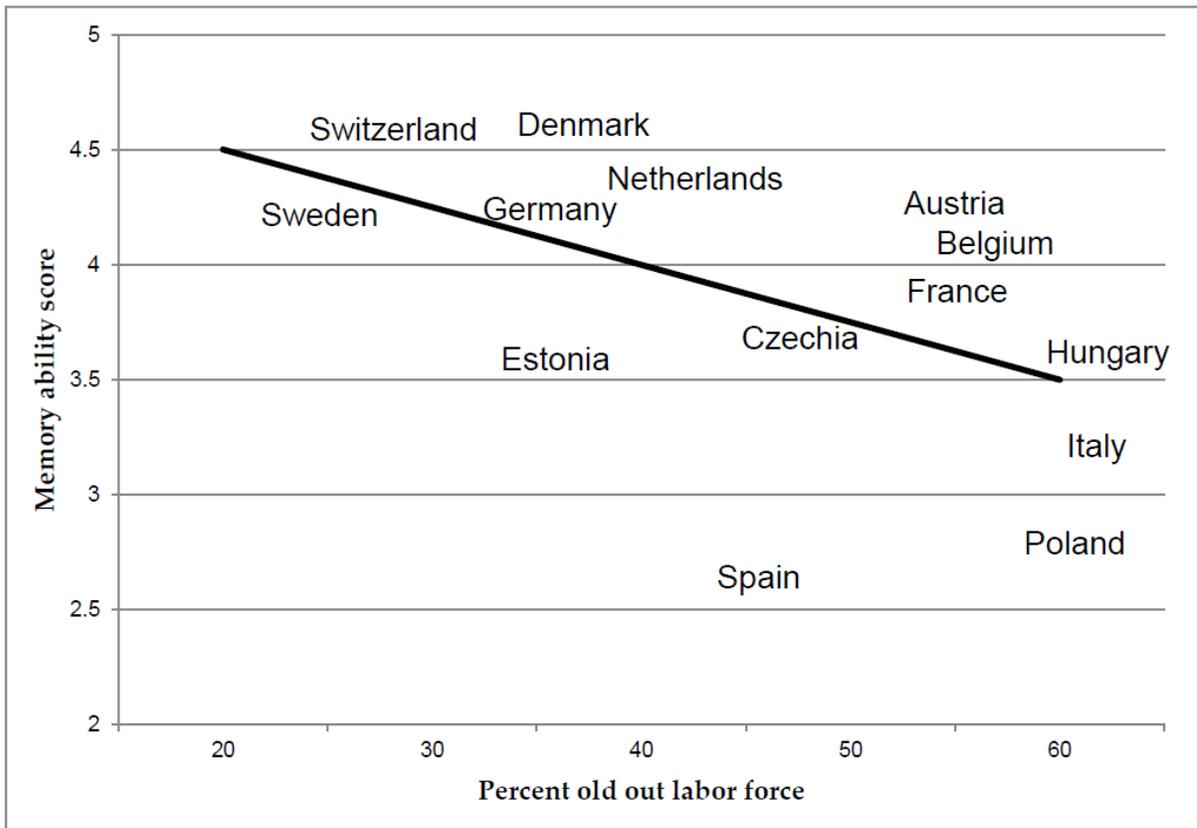
Retirement is bliss

That retirement is beneficial for the individual is another belief which strongly impedes pension reform. On the one hand, an immediate benefit from early retirement is the receipt of income support without the necessity to continue working, enabling individuals to enjoy more leisure. Moreover, early retirement relieves workers who feel constrained in their place of work, whether due to stressful job conditions or work-impeding health problems. For such

individuals, early retirement should manifest itself in an improvement of well-being and, potentially, also health.

On the other hand, early retirement might also be harmful, because individuals who stop working may lose a purpose in life. This in turn might decrease subjective well-being and mental health. Research on these issues is complicated because early retirement is not an exogenous outcome, but is likely to be related to ill health and lower cognitive abilities. The econometric problem is to find a counterfactual for well-being and health had a person not taken early retirement. The usual instruments for identifying such a counterfactual are policy changes in early retirement rules, such as changes in the pensionable age or changes in the actuarial adjustments. Internationally comparable data are useful in this respect, as they provide institutional variation across countries and the necessary counterfactuals.

A seminal paper by Adam, Bonsang, Perelman et al. (2007), based on SHARE data, found that cognition as measured by memory abilities such as delayed word recalldeclined during retirement. Figure 5 shows an updated version of the aggregate correlation. This controversial finding has sparked an entire new strand of literature.

Figure 5: Cognition and early retirement

Source: Own computation based on SHARE. The R-squared of the correlation is 28%.

While general health increases after retirement for those who have experienced hard working conditions (see e.g. Coe et al. 2008, 2012), most studies confirm the decline in cognition (e.g. Rohwedder and Willis 2010; Bonsang, Perelman et al. 2010, Mazzonna and Peracchi 2012, Behncke 2012). These studies also show that the negative effect on cognition increases with the time spent in retirement. For a given age, early retirees suffer more from cognitive decline than later retirees, even after correcting for selection effects and reverse causality. An internationally comparable data set such as SHARE is essential for this research because it contains instruments such as the eligibility age for early and normal retirement or similar institutional characteristics that contain individual variation.

Research is now proceeding to look for the deeper reasons behind these findings. One causal pathway is a direct one: skills must be used, otherwise they get lost (Rowe and Kahn 1998, Schooler et al. 1999). Another pathway hinges on the anchoring function of employment.

Work, even if unpleasant and arduous, provides social contacts. Even disliked colleagues and a bad boss appear to be better than social isolation because they provide cognitive challenges which keep the mind active and healthy (Börsch-Supan and Schuth 2013, Wrzus et al. 2013).
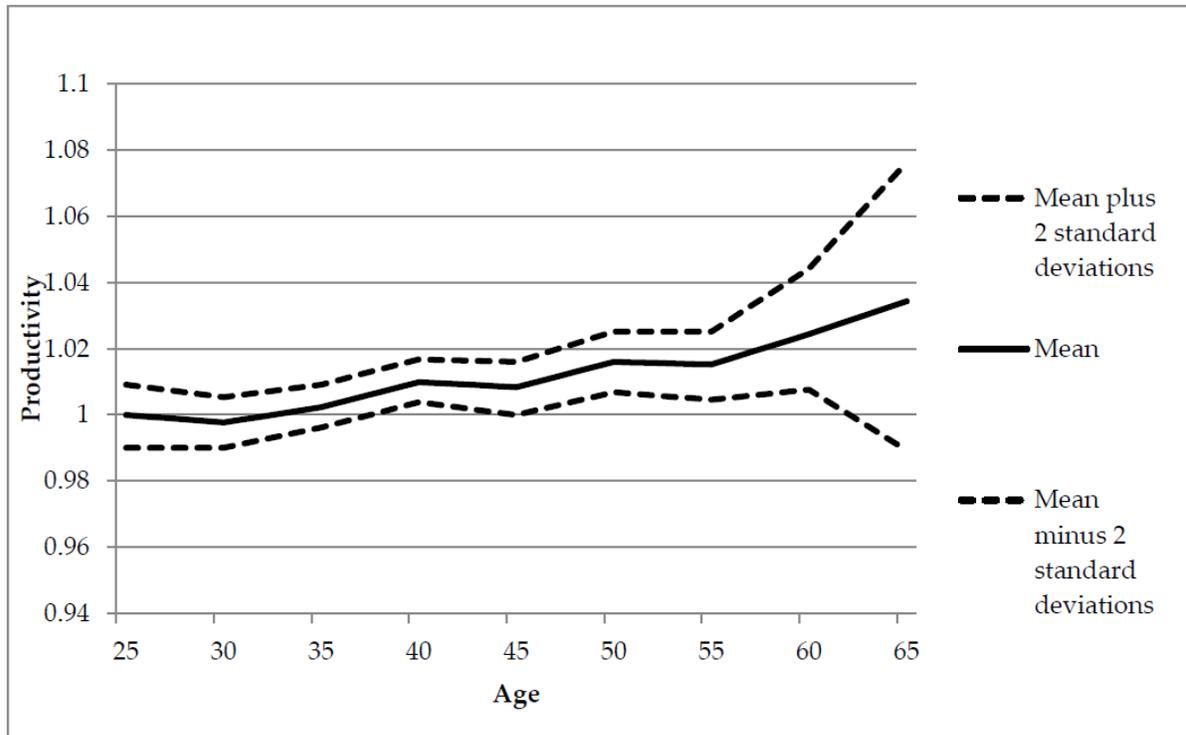
Older workers are less productive

The belief that older workers are less efficient is widespread and implicit in many discussions about aging. Often regarded as an established fact, it has profound implications for personnel policies by employers and retirement choices made by employees. It has been used as a motivation for early retirement policies in many countries. Moreover, if the belief of lower productivity is true, population aging will have negative effects on overall productivity as the share of older workers is increasing, contradicting the exogeneity assumption of technological progress in the model at the outset of this article.

Estimating age-productivity profiles has been on the agenda of labor economists for a long time. It encounters fundamental challenges: measurement, selectivity/endogeneity, and aggregation. These methodological challenges have made it hard to distinguish fact from fiction. Most studies which investigate the age-productivity nexus relate plant level productivity to the age of the plants' employees. Plant level productivity can be measured easily and reliably, and the level of aggregation is a compromise between individuals and companies. Nevertheless, the age structure of plants is probably not exogenous, as pointed out before. Sophisticated econometric studies overcome the largest methodological problems at the expense of precision. The methodologically most convincing papers (Aubert und Crépon 2007, Malmberg et al 2008, Göbel und Zwick 2009) estimate age-productivity profiles which increase up to the age of 50-55 years and then stay flat, contradicting the myth.

The study by Börsch-Supan and Weiss (2013) measures average performance of small working teams in a German truck assembly plant. This plant follows a highly taylorized production process typical for the manufacturing industry. Productivity can be nicely measured as the inverse number of mistakes made in assembling a standardized product in a fixed time. Compared to many service-sector jobs, productivity in this plant requires more physical strength, dexterity, agility etc. (which tend to decline with age) than experience and knowledge

of the human nature (which tend to increase with age). Hence, this setting is most likely to confirm the myth of declining productivity with age.

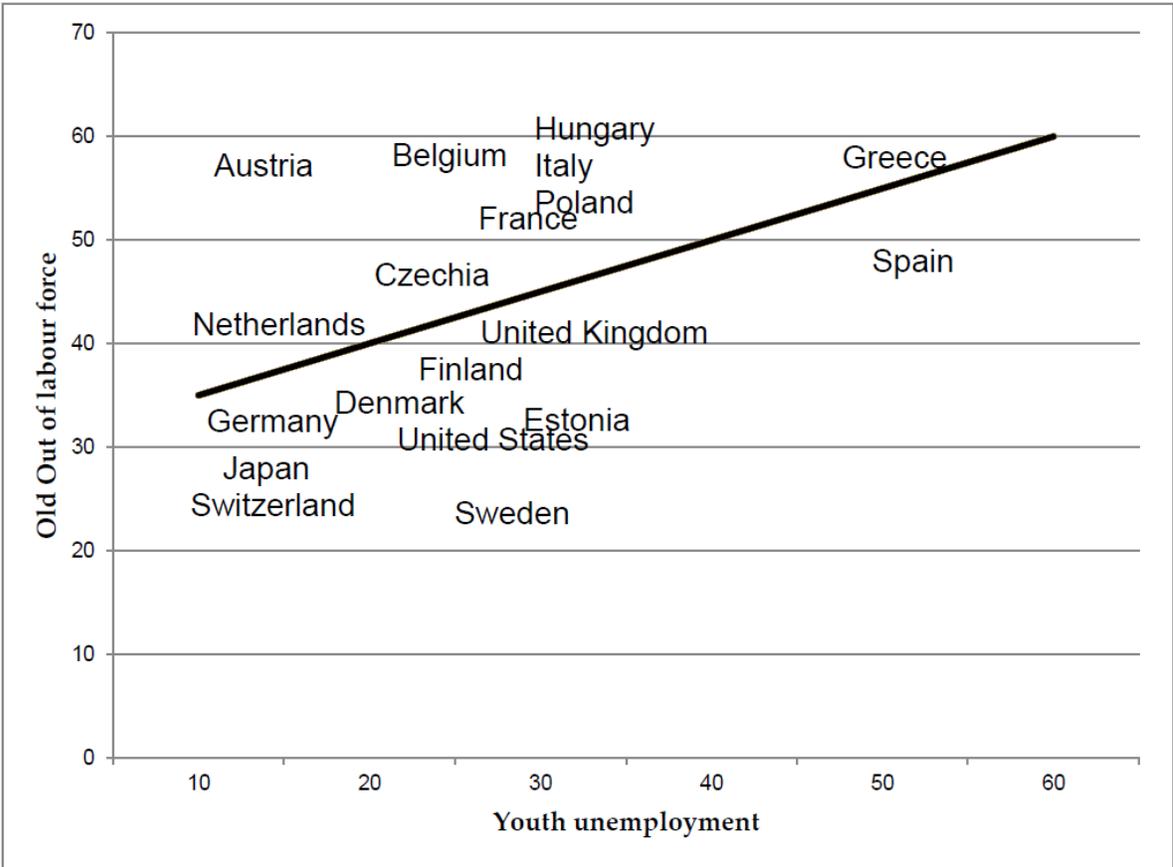**Figure 6: Age and productivity on the assembly line**

It does not do so, however. Figure 6 shows the age-productivity profiles measured in this plant, based on more than 1.2 million observations. Due to the very large number of observations, a sophisticated identification strategy based on fixed effects and a two-sided selectivity correction is possible without losing as much precision as the plant-based studies. The estimates do not show a decline in the relevant age range. On the individual workers' level, productivity actually increases monotonically up to the mandatory retirement age of 65 years.

We conclude that even in a work environment requiring substantial physical strength, its decline with age is compensated by characteristics that appear to increase with age and are hard to measure directly, such as experience and the ability to operate well in a team when tense situations occur, typically when things go wrong and there is little time to fix them. While younger workers are of course different from older ones in terms of productivity, the differences seem to even out.

Keeping older workers creates unemployment for the young

The probably most damaging myth relating to structural reforms is the so-called lump-of-labor fallacy. The belief that older workers crowd out younger ones is deeply rooted in the analogy to a small enterprise with a fixed and small number of clients which have a fixed demand for the product of the enterprise. Such an enterprise is boxed into a fixed amount of output, and therefore can only employ a fixed lump of labor. Figure 7 suggests that this boxed-in enterprise is not a good analogy for a sufficiently large economy.

Figure 7: Early retirement and unemployment in the OECD

Source: Own calculations based on OECD Employment Outlook 2012.
The R-squared of the correlation is 18% (without Greece and Spain: 21%).

It shows that in cross-national comparison, higher employment of older individuals is actually *positively* correlated with higher employment of the young, i.e., countries with a high prevalence of early retirement have, in general, *higher* unemployment rates and *lower*

employment of the young. Nevertheless, the misconception of a fixed lump of labor which has to be shared between the old and the young keeps dominating much of the policy debate on pension reform.

In order to provide a causal interpretation which goes beyond the purely suggestive correlation in Figure 7, an international team around Gruber and Wise (2010) exploit pension design changes in 11 countries as instruments to identify how higher or lower employment of older individuals has affected the employment of the young. The results in these countries vary considerably across specificationsbut remain largely insignificant. Of the significant ones, only few specifications support the myth, while many more support the positive correlation visible in the time series data.

Hence, the suggestive power of the often invoked analogy of a small enterprise with a fixed and small number of clients as a model for a sufficiently large economy is grossly misleading. In contrast to a small enterprise, entire countries can grow, increase the demand for all goods and services, and therefore also the demand for labor. Moreover, unlike enterprises, countries cannot put costs for early retirement on somebody else's shoulders. In an entire economy, all social transfer expenses have to be borne by tax and contribution payers. Since costs for early retirement increase total labor compensation of the young, and thus make their labor more expensive, early retirement for the old causes less employment of the young. While this argument may be almost trivial for a trained economist, it has not yet reached the general audience and keeps impeding structural reforms.

5. Conclusions

Our main point is that population aging will not destroy or even shrink the welfare state if it properly adapts to demographic change, especially to the longer life span. Demography is not destiny – rather, destiny is whether aging societies are able to undergo structural economic reforms which adapt these societies to a different demographic environment.

The major European pension systems still have a substantial way to go in order to become financially sustainable. We have shown that this goal is achievable with a combination of reasonable policy steps. Italy, for example, has introduced a new entrants system that will stabilize pension expenditures if it is implemented consistently also in the future. Sweden with

its NDC system has no sustainability gap. Germany has substantially reduced its implicit pension debt through a set of politically accepted gradual steps: increasing retirement age, indexing benefits to the system dependency ratio, and introducing individual-accounts-type private pensions to fill the emerging pension gap.

Recently, this promising process has slowed down, stalled or even reversed. More evidence is needed to show that such reforms are possible (e.g., have been successfully adopted in some countries) and have paid off. Some of the resistance to change and redesign the system rests on highly emotional prejudices and myths. Evidence is needed to disprove them, and the results need to be communicated by our profession.

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