How to best address pension adequacy and financial sustainability in the context of population ageing. The labour market as a key determinant

Josef Wöss* and Erik Türk**

* Chamber of Labour, Vienna/Austria, josef.woess@akwien.at
** Chamber of Labour, Vienna/Austria, erik.tuerk@akwien.at

"Raising employment levels … is arguably the most effective strategy with which countries can prepare for population ageing" (European Commission, 2008)

Abstract:

Against the background of population ageing pension debate has focussed for many years on the future increase of the so-called old-age dependency ratio, i.e. the number of older people against the number of people of working age. Incomprehensibly, this ratio is often misinterpreted as the ratio between workers and pensioners. Yet, wrongly equalizing the number of people of working age with the number of people in employment distorts the view of the most effective strategy with which countries can prepare for population ageing - which is improving the employment integration of those of working age.

Referring to a study recently carried out in Germany the authors show that improving employment integration across all ages would help to significantly contain the future increase of economic dependency ratios and, thus, significantly support pension adequacy and financial sustainability.

Introduction

Since the early 1990's, public debate on the long-term perspective of pension systems has been focused on demographic change, the increase of old-age dependency ratios and the resulting pressure on public budgets.

Yet, from an economic or budgetary point of view demographic data taken on its own is not as significant as often argued. In this respect, it is far more important to look at the economic status of people, especially at the level of employment integration of those of working age.

What, besides productivity and income growth, ultimately counts much more than the numerical relationship between age groups is the ratio between benefit recipients and contributors.

In this article we show that in the context of massive population ageing making a clear distinction between demographic and economic ‘dependency’ is a basic condition for forward-looking pension policy. Good employment integration across all working ages shows up as a key determinant both of long-term adequacy and financial sustainability of pension systems.

The more our societies succeed in improving employment integration of those of working age, the less population ageing will translate into an increase in the economic dependency ratio. Unfortunately, this simple mechanism has been widely ignored even in key documents addressing pension perspectives in the context of ageing populations.

With an integrated strategy of pension and labour market policy, both sustainability and the adequacy challenge can be best addressed.

1. Demographic Change

Obviously, the ageing of populations is one of the key challenges our societies will have to face over the next few decades.

Eurostat's demographic (baseline) projection 2016-2070 (EU-27)

		Age group 0-14	Age group 15-64	Age group 65+	Old-age dependency ratio (65+/15-64)
2016		68 m	291 m	87 m	29.9 %
2030		66 m	275 m	111 m	40.3 %
2050		66 m	253 m	132 m	52.3 %
2070		65 m	246 m	128 m	52.2 %

Source: EU Commission (2018a)

The table clearly shows two defining demographic trends:

1. Shrinking number of people in the age group 15-64
2. Increase in the number of older people.

In 2016, in EU-27 there were 291 million in the age bracket 15-64, while predictions say in 2070 it will be only 246 million (-16%). Simultaneously, the number of older people is projected to increase from 87 million to 128 million (+48%). As a result of both developments the old-dependency ratio (65+/15-64) is expected to increase from the current level of about 30% to more than 50% by 2070.

It has to be noted that both the current age structure and demographic projections differ a lot from country to country and from region to region. In 2016, the old-age dependency ratio varied between 20.9% in Ireland and 34.5 % in Italy. The projections for 2070 show a variation between 41.2% in Ireland and 67.2% in Portugal.[1]

Naturally, there is much uncertainty in projections over such a long period of time. However, despite uncertainty about its extent, derived from the current age structure it is evident that massive population ageing will take place.

2. Pension reforms

Against the background of forthcoming population ageing since the late 1980s containment of public pension expenditure has become the key goal of pension policy. Ensuring the long-term financial sustainability of pension systems became the main driver of pension reforms, jeopardizing pension adequacy.

Furthermore, key options for action were often obstructed by misleading analysis, namely by confusing demographic and economic dependency ratios.

[1] European Commission (2018a), Table III.1.60.

Financial sustainability

To put it in a nutshell, financial sustainability means that today´s pension commitments can and will be met in the future. Actually, financial sustainability is a political concept; precise limits of unquestionable scientific merit do not exist.[2]

Mainly based on demographic projections, international organizations such as the World Bank, IMF and OECD have been pushing for wide-ranging reform of public pension systems since the early 1990's. The World Bank's report 'Averting the old age crisis'[3] became the most influential document; its 3-pillar-model served as a blueprint for many pension reforms around the globe. In line with its recommendations, in many countries the generosity of the pay-as-you-go financed public 1st pillar was significantly reduced and the expansion of pre-funded 2nd and 3rd pillar, occupational and private pensions, promoted.

In the period following the 2008 financial market crisis, measures targeted at reducing public pension expenditure continued, now mainly by raising the legal retirement age. In contrast to prior reforms, based on negative experience, many countries have now reversed the expansion of pre-funded schemes.[4]

Measures such as the tightening of the rules for the pension calculation and indexation, increasing legal retirement age and restricting access to early retirement have a major impact on public pension expenditure both now and, even more, in the future. "The pension reforms undertaken over the past decade are biting."[5] While assuming massive population ageing as a result of the reforms adopted the 2018 Ageing Report's long-term pension expenditure projections now even indicate that by 2070 the GDP share of public pension spending in EU-27 will be 0.5 percentage points below the 2016 level.[6]

Statements of the EU Commission, such as disputing the long-term financial sustainability of the Austrian public pension system because of a predicted 0.5% increase of the needed GDP share between 2016 and 2070,[7] show that the Commission tends to apply the current level of public spending as a benchmark for measuring long-term financial sustainability. However, not to accept at least moderate increase of the GDP share over the next few decades despite massive population ageing misses the intergenerational fairness target at the expense of today's youth.

Adequacy

"Providing people with income in old age that allows them a decent living standard and protect them from poverty is the very purpose of pension policy."[8]

The 2018 Pension Adequacy Report's findings disclose that in many countries the adequacy target is not met. Significant pension gaps especially exist among women and among people

[2] See Blank et al. (2018), pp. 194 f.
[3] World Bank (1994).
[4] See ILO (2018).
[5] OECD (2015), p. 9.
[6] European Commission (2018a), Table III.1.66.
[7] See European Commission (2018b).
[8] European Commission (2015a), p. 9.

working in atypical and precarious types of employment. 18.2 % of people aged 65 and over in the EU are at risk of poverty or social exclusion.[9]

Many pension reforms adopted almost exclusively focused on long-term containment of public pension expenditures at the expense of the generosity of pension schemes mainly towards today´s youth. Calculations of the long-term evolution of theoretical replacement rates signal that in many EU Member States replacement rates will substantially decrease entailing increasing danger of poverty among older people.[10]

Longer working lives with good quality jobs will therefore be increasingly vital to enable men and women to acquire adequate pensions. Yet, while increasing employment integration of people of higher working ages clearly supports pension adequacy, raising the legal retirement age can entail additional risks especially for susceptible groups. "In most countries, under current projections there will be a rise in the pensionable age that will outpace the projected rise in the age of exit from the labour market … Since this difference grows in almost all countries, it is likely to leave more people with an income gap that will increase demand for early-retirement pathways or other bridging transfers, and an incomplete contribution record that will reduce pension adequacy."[11]

As in recent years many pension reforms focused on raising the legal retirement age, employment opportunities of those concerned will have to keep up, otherwise pension gaps will widen.

Furthermore, it has to be noted, that both current and future replacement rates are not only affected by pension reforms, but also by labour market trends such as the proliferation of atypical and low paid jobs, continuing problems to reconcile employment and family life and persisting high levels of unemployment in vulnerable groups. These additional labour market-related risks to adequacy, particularly those affecting less-favored groups, becomes increasingly important when instruments of social balancing are weakened by gradual shifts from public to private pensions.

Furthermore, it has to be noted that shifting pension responsibility from pay-as-you-go financed public to pre-funded private schemes does not lead to cost reduction. At best it leads to cost shifting, in many cases pension costs (and risks) will increase.[12]

3. Economic versus demographic dependency

The demographic old-age dependency ratio is a very important indicator to describe age structure and demographic change. Yet, only to look at demographic figures falls short of basic economic realities. Pure demographic figures do not capture the economic status, especially the fact that many people of working age are not actually working, but are often dependent on public benefits.

[9] European Commission (2018c), p. 15.
[10] Ibid, Chapter 5.
[11] Ibid, p. 129.
[12] See ILO (2018), p 22 f / 32 f.

Even in key documents, future shifts in the age structure of the population are misinterpreted in terms of changes in the relationship between workers and pensioners.

A look at the figures the European Commission used in its info graphic to the publishing of the 2015 Ageing Report[13] can serve as example. Under the headline "The ratio of workers to pensioners will decrease" the Commission states that between 2013 and 2060 the ratio of workers to pensioners will change from 4:1 to 2:1. However, what is interpreted as being the ratio of workers to pensioners in reality is something very different: the ratio between the age groups 15-64 and 65 plus. Yet, it is obviously wrong to equalize the number of people of working age with the number of people in employment and the number of people aged 65+ with the number of pensioners. In 2013,[14] out of 335 million Europeans in the age group 15-64 only 215 million were in employment.[15] And among the remaining 120 million not in employment a big proportion were pensioners; among the total number of pensioners the share of people younger than 65 ranged between 14.1% in Cyprus and 45.6% in Slovak Republic.[16]

Most of the statements disputing long-term financial sustainability of pay-as-you-go financed public pension systems are based on demographic data - and its incorrect interpretation. Thus, the European Commission at the presentation of the Green Paper on Pensions on 7 March 2010 stated: "The number of retired people in Europe compared to those financing their pensions is forecast to double by 2060 – the current situation is simply not sustainable."[17] However, none of the European Commission's many studies on future developments is predicting that the ratio between pensioners and contributors will double over the next decades.

There is another highly problematic consequence of the incorrect interpretation of pure demographical figures. Equalizing the number of people of working age with the number of people in employment distorts the view of "the most effective strategy with which countries can prepare for population ageing"[18]; which is improving the employment integration of those of working age.

Labour market data clearly indicate that there is an enormous potential for better labour market integration across Europe - in all age groups and not just at higher ages, as it is often stated in the sustainability debate on public pensions. According to Eurostat figures, in 2016 only 65.6% of the age group 15-64 were in employment (including many millions only marginally employed), with rates varying between only 51.8% in Greece and 76.4% in Sweden.[19]

---

[13] http://ec.europa.eu/economy_finance/graphs/2015-05-12_ageing_report_en.htm

[14] 2013 was the base year for the 2015 Ageing Report's analysis.

[15] Furthermore, among those earmarked by Eurostat's Labour Force Survey (LFS) as being in employment there are many millions only marginally integrated in employment (in LFS each person working at least 1 hour for pay during the reference week is counted as employed).

[16] European Commission (2015b), Tab III.1.80.

[17] https://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=839&furtherNews=yes

[18] European Commission (2008), p. 144.

[19] European Commission (2018a), III.1.48.

In order to shed light on the difference between pure demographic and economic dependency the Austrian Chamber of Labour (AK) developed a so-called 'dependency ratio calculator'.[20] The tool uses graphics of the age structure and people's economic status to calculate demographic and economic dependency ratios. Against the background of demographic projections, the impact of different labour market scenarios on the future evolution of the economic dependency ratio can be calculated. In a further step the impact on welfare state spending can also be determined.

The definition of 'economic dependency' used in the tool focuses on social transfers replacing former income. Recipients of public pensions and unemployment benefits are categorized as economically dependent and contrasted with people in employment.[21] As the level of earnings should be sufficient to enable decent living through own income and to contribute to the financing of social transfers for assessing economic dependency mini-jobbers are not rated as employed, provided available data allows for such a distinction.

The tool clearly shows that mobilizing existing employment potential in all age groups could help to considerably reduce future increases in the economic dependency ratio, thereby alleviating the financial burden of ageing.[22]

White Paper on Pensions

In 2012, the EU Commission's White Paper on Pensions[23] was published. In the analytical part of the document, both the limited relevance of purely demographic data and the need to look at economic dependency are clearly stated: 'The ageing challenge is often illustrated by the doubling of the old age dependency ratio … Yet, the real issue is the economic dependency ratio, defined as the unemployed and pensioners as a percentage of the employed.' Then, the White Paper points to the huge impact of employment levels on the future evolution of the economic dependency ratio and on considerable scope for improvement: 'If Europe achieves the employment goal of the Europe 2020 strategy of 75% employment rate in the age group 20-64 and further progress is made in the period 2020-2050 the economic dependency ratio will only increase from the current level of 65% to 79% in 2050.[24] Many countries have considerable scope for improving the future adequacy and sustainability of their pension systems by raising employment rates, and this not just in higher age groups, but also for groups with lower employment rates such as women, migrants and youths. Reaching the EU employment target or catching up with the best-performing

[20] See Wöss et al. (2011 and 2014).

[21] As children, students, house-wives and –husbands and other people without income are also economically dependent, the tool also allows calculations based on a broader concept of economic dependency – the total economic dependency ratio. Here the focus shifts from social transfers to total transfer needs within a society as a whole.

[22] Calculations based on the Dependency Ratio Calculator also reveal a huge impact of employment rates on public budgets (Türk et al. 2012).

[23] European Commission (2012).

[24] These calculations in the White Paper refer to AK's , dependency ratio calculator'.

countries could almost neutralize the effects of population ageing on the weight of pensions in GDP." [25]

Unfortunately, the key recommendations in the White Paper do not reflect this analysis. In line with World Bank and OECD, in order to combat the increase of dependency ratios, the Commission simply proposes to increase the legal retirement age. For whatever reason, the much broader approach of improving the labor market integration in all age groups, recommended in the analytical part of the White Paper, has not been taken up.

4. Impact of labor markets on the economic dependency ratio – case study on Germany

In 2018, together with three German researchers, the authors of this text published a study on the impact of different labour market scenarios on the future evolution of the economic dependency ratio in Germany.[26] The calculations are based on „The 2015 Ageing Report". As in this report, the study uses 2013 as base year and the projection period extends to 2060.

As a starting point, in order to calculate the current level of the economic dependency ratio the study analysed the Labour Force Survey's data (LFS) for Germany.

According to LFS total employment in Germany was about 39.6 m in 2013. Bearing in mind that in LFS all persons who work at least one hour for pay or profit during the reference week are counted as employed, this number does not help a lot when assessing economic dependency. According to German administrative data in 2013 5.3 m people exclusively worked in a mini-job. As the mini-jobbers' income (max € 450 per month) is not sufficient to ensure decent living through own work, let alone contribute to the financing of social transfers, to determine a realistic economic dependency ratio mini-jobbers are not allocated among those employed. As a consequence, the employment rate of men aged 15-64 decreased from 78.1% to 72.8%. As almost two thirds of the Mini-jobbers are women the reduction in female employment rates is even higher - from 69.0% to 57.8%. The total employment rate decreased from 73.6% to 65.4%.

While, from an economic point of view, LFS data tends to over-estimate employment figures, this data, simultaneously, tends to massively under-estimate the phenomenon of economic dependency due to unemployment. In 2013, the number of people registered as ‚unemployed' by the German Federal Labour Office was about 3 m compared to 2.2 m according to LFS. The difference mainly results from the fact that in LFS unemployed people who, in conformity with German unemployment insurance legislation, work in a mini-job are not classified as unemployed. Furthermore, it has to be taken into account that not all groups of unemployed people are covered in the official unemployment figures, such as people over a certain age, participating in measures of ALMP or being temporarily unable to work due to sickness. With the concept of „Unterbeschäftigung im engeren Sinn" the German Federal Office of Labour offers a broader and more appropriate demarcation of unemployment for the

[25] European Commission (2012), Chapter 2.3.
[26] Türk et al. (2018).

aim of correctly calculating the economic dependency ratio. It includes all these groups and is a total of 3.8 m (2013), thus, exceeding the LFS number of unemployed by 75 %.

The comparison of 24 m benefit recipients (3.8 m unemployed and 20.2 m pensioners[27]) and 35.2 m people in, more than marginal, employment the study reveals a 68% level of the 2013 economic dependency ratio[28] against an old-age dependency ratio of only 32%. The huge difference between these two ratios clearly demonstrates how misleading it is to only focus on demographic data.

The key part of the study is the calculation of three scenarios. The first two scenarios are based on the baseline demographic projections (europop2013) used in the EU's 2015 Ageing Report. From today's perspective these projections look over-pessimistic. Therefore, the third scenario is based on Eurostat's more recent and more optimistic demographic projections from 2017.

Standard scenario

First, in order to establish a reference scenario, the so-called „standard scenario" is calculated. Starting from adjusted labour market data – as mentioned above – the calculations are exclusively based on the Ageing Report 2015 projection trends. Besides pessimistic demographic assumptions this scenario is characterised by little change regarding employment rates. Over the next few decades the employment rate of 15-64 years olds would only increase by 1.2 percentage points, from 65.4% (2013) to 66.6% (2060)[29]. Little change in employment rates combined with the assumed huge decrease in the number of people of working age results in a massive decrease of the number of people in employment. As the unemployment rate is assumed to remain at a rather high level the decrease in the number of unemployed is mainly driven by demographic shifts, which simultaneously cause a huge increase in the number of pensioners. Using the „standard scenario", in comparison to the 2013 level, the economic dependency ratio would increase considerably - by 42% by 2040 and 51% by 2060. None the less these increases are significantly lower than the underlying increases in the demographic dependency ratio (75% and 86% respectively).

Building on its initial in-depth analysis of the current situation of Germany's labour market, the study judges the „standard scenario" as being far from making full use of existing employment potential.

High-employment scenario 1 - based on pessimistic demographic projections

In contrast to the „standard scenario", in the „high-employment scenario 1" we assume a significantly improved use of existing employment potential. The main assumption is that, by 2050, activity rates by age groups and sex gradually align to current (2016) activity rates in Sweden, while the unemployment rate (based on the broad concept mentioned above)

[27] European Commission (2015b).

[28] Compared to only 56% based on unadjusted LFS data.

[29] Revised figures.

declines to 4% over the same period. This would result in a significant increase in employment rates of 15-64 years olds to 75.1% by 2040 and to78.7% by 2060.

Compared to the „standard scenario“, despite the unchanged assumption of a massively shrinking working age population, in this scenario the decrease in the number of people in work is much lower. While the number of employed in the standard-scenario reduces to 29.7 m (2040) and 26.3 m (2060) the corresponding figures in the „High-employment scenario 1“ are 34.0 m and 31.9 m. While declining unemployment rates go hand in hand with a further reduction in the number of unemployed, the number of pensioners is slightly higher than in the standard scenario. Higher activity rates, especially amongst the elderly, reduces the number of those in early retirement, but also result in a gradual decrease in the number of older people without pension rights, especially among women.

Overall, in the „high-employment scenario 1“ the increase in the economic dependency ratio amounts to 19% by 2040 and to 18% by 2060, which is markedly less than the „standard scenario“ increase of 42% and 51% respectively. While, obviously, the underlying increase in the demographic dependency ratio remains unchanged.

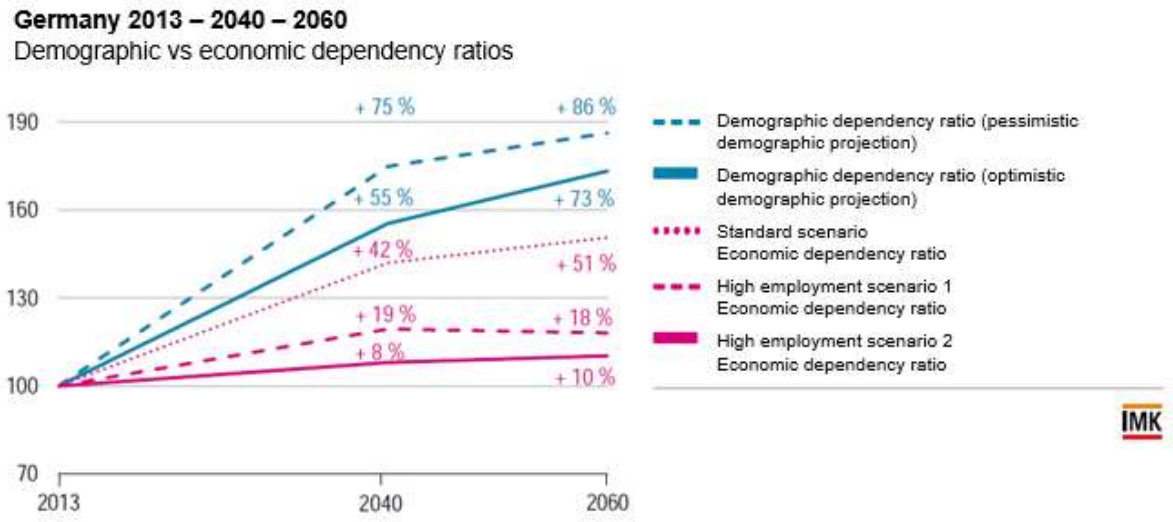
High-employment scenario 2 - based on more optimistic (and more recent) demograhic projections

The „high-employment scenario 2“ is calculated based on Eurostat‘s more recent and more optimistic demographic projections from 2017. These projections also assume that there will be a considerable shrinking of the working-age population, but with minus 16% the reduction is significantly lower than assumed in the pessimistic demographic projection from 2013 (minus 28%). On the other hand, a higher increase in the number of older people is also expected. The demographic old-age dependency ratio is expected to increase by 55% by 2040 and 73% by 2060, compared to 75% and 86% in the pessimistic scenario.

While the number of pensioners increases even more than in the first 2 scenarios, the shrinking working-age population is over-compensated by increasing employment rates, therefore, the number of employed increases to 38 m by 2040 and to 37 m by 2060.

Under the „high-employment scenario 2“, the economic dependency ratio only increases 8% by 2040 and 10% by 2060.

The table below shows the evolution of demographic and economic dependency ratios in the 3 scenarios. It clearly illustrates both the enormous difference between demografic and economic ratios and the huge potential of better employment integration to curb future increases of the economic dependency ratio.



Türk et al. (2018).

The study summarizes: „The far-reaching removal of existing shortcomings in employment integration proves to be a promising strategy to beneficially tackle demographic change, both socially and economically.“[30]

Concluding remarks

- Better labour market integration of vulnerable groups such as women, immigrants and the elderly would help significantly to achieve adequate pensions and to avoid negative fragmentation of our societies.

- Mobilizing the full employment potential in all age groups would considerably alleviate the financial burden of ageing and thus significantly support financial sustainability.

- The economic dependency ratios of unemployed and pensioners relative to people in employment is much more meaningful than demographic ratios and should be brought to the fore in long-term projections and in public debate.

[30] Türk et al. (2018), p. 17 (own translation).

Literature

Blank F./Logeay C./Türk E./Wöss J./Zwiener R., Ist das österreichische Rentensystem nachhaltig? in: Wirtschaftsdienst 3/2018 (only available in German).

European Commission (2008), Demography Report 2008.

European Commission (2012), An Agenda for Adequate, Safe and Sustainable Pensions. White Paper.

European Commission (2015a), The 2015 Pension Adequacy Report, Volume 1.

European Commission (2015b), The 2015 Ageing Report. Economic and budgetary projections for the 28 EU Member States (2013-2060).

European Commission (2018a), The 2018 Ageing Report. Economic & Budgetary Projections for the 28 EU Member States (2016-2070).

European Commission (2018b), Recommendation for a Council Recommendation on the 2018 National Reform Programme of Austria.

European Commission (2018c), Pension Adequacy Report 2018, Volume 1.

ILO (2018), Reversing Pension Privatizations. Rebuilding public pension systems in Eastern Europe and Latin America (ed by I.Ortiz, F. Duran-Valverde, S. Urban, V. Wodsak).

OECD (2015), Pensions at a Glance 2015.

Türk E./Wöss J./Zuleeg F. (2012), 1000 billion Euros at stake: How boosting employment can address demographic change and public deficits. European Policy Center, Issue Paper No 72.

Türk E./Blank F./Logeay C./Wöss J./Zwiener R. (2018), Den demographischen Wandel bewältigen: Die Schlüsselrolle des Arbeitsmarktes. IMK-Report 137 (not available in English).

World Bank (1994), Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth.

Wöss J./Türk E.(2011); Dependency ratios and demographic change. The labour market as a key element, ETUI Policy Brief 4/2011.

Wöss J./Türk E. (2014), Demographie und Sozialstaat. Arbeitsmarkt hat zentrale Bedeutung, in: Wirtschaft und Gesellschaft, No. 3/2014 (only available in German).