

# Living longer in an ageing Europe: a challenge for individuals and societies



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**Abstract** In the quest to address the ageing population, labour shortages and demographic decline, this article advocates the redistribution of work over the course of individuals' lives. Work hours must be spread more evenly over a longer life span. In this way, individuals will have the time necessary to bear and rear children and will be able to offer their expertise later in life. With such a policy, the elderly population would be occupied and supportive of society and youth would have the opportunity to conceive and care for children during those years in which they are physically able to do so.

**Keywords** Germany · Redistribution of labour · Baby boomers · Rostock indicator

## Introduction

Europe is the oldest continent and will age rapidly over the coming decades. Despite the differences among countries and regions, the whole of Europe faces new demographics of longer lives, fewer children and migration to economically attractive regions. It is the only continent with a population that is starting to shrink and that may shrink dramatically. The future of Europe hinges on its ageing population. Policymakers and journalists in all European countries have expressed concerns about the impact that demographic change will have on economic growth, labour markets, health care costs and pension expenditures, as well as on regional disparities and international competitiveness. After intense discussion over the past decade, it has finally, albeit reluctantly, been recognised in Europe that the rising proportion of old and very old people will have major long-term consequences for individuals and societies. Often the future is pictured as dismal. Ageing populations do present a challenge, but they also offer an opportunity for individuals and societies to think about how one should live a longer, healthier life. Demographic change is inexorable but slow: the gradual pace provides a chance to develop and introduce reforms [14, 15]. This

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article focuses on Germany, Europe's most populous country, and refers to other European countries to show that, among other changes, a redistribution of work among people and over the course of people's lives is necessary and appropriate in preparing for the new demographic situation.

### **The oldest continent: Europe**

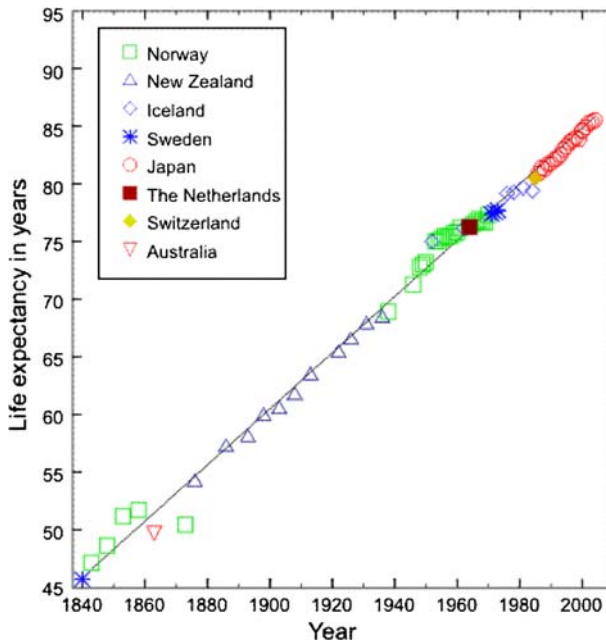
Population ageing is not confined to European or to industrialised countries alone. But, together with Japan, Europe is clearly most advanced in the process, and is most acutely in need of reforms to counteract negative long-term consequences of demographic change. As mortality and fertility decline in all regions of the world, median ages are inevitably rising in almost all countries—the level and speed of this increase can, however, vary considerably between world regions [7]. The three oldest countries today, measured by the proportion of people 60 years and older, are Japan, Italy and Germany. Apart from Japan, the top 20 countries on the list of those with the highest proportion of the elderly are exclusively European [12].

Europe's baby boom generation, born in the 1950s and 1960s, is still of working age. Some of these cohorts are already reaching age 50 and their exit from the labour market is beginning. In a few more years, the baby boomers will reach normal retirement age, leading to a dramatic shift in the ratio of dependent retirees to productive workers. Today, in more than half of the 27 EU Member States, the proportion of elderly over age 65 exceeds the proportion of children younger than 15—Italy, Germany, Bulgaria and Greece reached this threshold before the year 2000. In less than two decades, all EU countries will have this old-age structure.

### **The remarkable rise in life expectancy**

Very long lives are not the distant privilege of future generations but the probable destiny of most Europeans today. For a child born in a Western European country since the year 2000, the odds are better than 50/50 that the child will celebrate her or his 100th birthday—in the twenty-second century. Most 30-year-olds are likely to survive until their late nineties. The majority of people living in Europe today will live through the course of most of the twenty-first century. Women and men in Europe can expect to live considerably longer lives than most realise. The likelihood that many will survive to become nonagenarians and centenarians should affect how Europeans envision their future, including the way they plan and live their active lives, the way generations depend on each other and care for each other and the way they arrange their retirement. The new demography of longer lives requires radical revisions of private and public decision-making.

The rise in life expectancy is a crowning achievement of modern civilisation. Even in Western Europe, life expectancy did not reach age 40 until after 1800, and in most European countries life expectancy was under age 50 even in 1900. In the countries with the highest levels of life expectancy, female life expectancy has risen for 160 years at a steady pace of almost three months per year (Fig. 1, [8]). On average, women live longer than men, but life expectancy has also risen linearly for men since 1840, albeit a bit more slowly. The improvements in survival that have led to this linear climb in life expectancy result from the intricate interplay of advances in income, nutrition, education, sanitation and, especially over the past half century, medicine [10]. The increase in life expectancy



**Fig. 1** Country with highest female life expectancy from 1840 to 2004. The linear-regression trend is depicted by a grey line (slope = 0.243). Source: [8], adapted

from under 40 to more than 80 has been so extraordinarily steady that it may be the most remarkable regularity of mass endeavour yet observed.

Japan and various European countries lead the list of countries with the highest life expectancies: Japanese women live 86 years on average, French women reach an average age of 85 and Italian women have an average life span of 84 years. Japan, Sweden, Iceland and Switzerland are the record holders for male life expectancy, currently around 79 years [9]. Since 1950, the ongoing increase in life expectancy can be attributed largely to improvements in survival after age 60 [13].

Another striking piece of evidence for the increase in longevity is the rising number of centenarians in developed countries. What seemed almost impossible to achieve in the past—with most reports being errors or falsehoods—is becoming increasingly unexceptional and will, over the lifetime of children alive today, become normal. In Western Europe since 1950, the number of people celebrating their 100th birthday has at least doubled each decade. Old people, and even very old people, are progressively emerging as a part of reality in Europe.

Despite a widespread belief that old-age mortality is intractable, life expectancy is not approaching a limit [8]. A reasonable scenario is that life expectancy will continue to rise in the coming decades, fuelled by advances in the prevention, diagnosis and treatment of age-related diseases. If the trend continues, life expectancy in Western Europe will exceed 90 years by mid-century. The United Nations forecasts slower declines in mortality than in the past, and projects a life expectancy of 84.5 years for the Western European and 81 years for the total European population in 2050 [11]. The United Nations, however, and most national statistical offices, have repeatedly underestimated the increase in the expectation for a longer life [8]. They have based their forecasts on the assumption that life

expectancy is approaching a limit, even though there is no evidence for such a limit and, indeed, no evidence for any slowing of life span increase.

The future is uncertain, and many unexpected events—such as epidemics, wars or environmental disasters—that might reduce life expectancy could occur. The costs, however, of overly pessimistic forecasts are severe. Projections of life expectancy are used to estimate future pension expenditures, health care costs and other social needs. Increases of only a few years can produce large changes in the numbers of older people, leading to substantial growth in expenditures. Private decisions about savings and retirement plans may be distorted. Moreover, underestimation gives politicians licence to postpone painful adjustments to social security and health care systems. The number of the oldest-old who will need long-term care is likely to be higher than official forecasts suggest; this has serious consequences for care providers, regardless of whether they are families or institutions.

### **Longer lives in good health or disability? Prospects and implications**

Chances of reaching higher and higher ages are increasing—how healthy will one be during the added years? Will one have to cope with longer periods of disability and frailty? The balance of available evidence indicates that one is living longer because one is staying healthy longer. As life expectancy rises, the phase of disability does not necessarily have to expand. Indeed it appears that this period at the end of life is becoming somewhat shorter [5].

The proportion of people over age 80 will increase rapidly in all European countries over the coming decades. According to the rather conservative projections of the Federal Statistical Office of Europe's most populous country, Germany, the share of the oldest-old will triple over the first half of this century, reaching about 12% by 2050. If, as predicted, life expectancy rises more sharply than the official forecasts assume, the resulting proportion of oldest-old will be higher. Age is the major factor that increases the risk of needing long-term care, which is especially relevant for the age groups older than 80 or 85. In Germany today, 2 million people are in need of care. The increasing proportion of old people does not have to lead to a proportional rise in care demand or long-term care expenditures, but it almost certainly will lead to a substantial increase.

### **The need for long-term care**

Doblhammer and Ziegler [3] from the Rostock Center for the Study of Demographic Change have calculated the care needs for two scenarios for Germany: an optimistic healthy-years-of-life scenario, which assumes that the years gained in life expectancy will be years without disability; and a pessimistic constant-caring scenario, which assumes that the years added will be years of disability. The growth in the number of oldest-old implies that the need for care will rise from 2000 to 2030 under both scenarios, even if the additional years gained are healthy ones. The demand for care under the optimistic scenario would rise by about 80% for men and by 20% for women. If the number of elderly in need of care were to rise at the same rate as the number of elderly, the demand for care would be significantly greater, increasing by 130% for men and 40% for women over the first three decades of the twenty-first century. In either case, the demand for care among men in Germany would roughly double, and this doubling is likely to occur in most European countries. The rise in the number of women needing care from 20 to 40% is

below the projected European average. The enormous rise in male care needs can be explained by the low base level: today older women greatly outnumber older men because of higher female life expectancy and the losses among men during the Second World War among these oldest-old cohorts. In the future, more men will reach higher ages—ages that are at risk of needing long-term care.

The need for care will rise but probably not to the high values projected under the constant-caring scenario. Although one can expect to experience physical decline in the years before one dies, postponement of this decline will make it possible for one to live past 80, 90 or even 100 [2]. Education promotes a healthy lifestyle, which in turn is associated with longer active and healthy life spans. As educational levels increase and as information about healthy behaviour spreads, there is reason for optimism. However, even if the demand for care does not rise proportionately to the rising number of oldest-old, the absolute and relative numbers of old people who need care are going to expand over the following decades. At the same time, the proportion of middle-aged people who can provide care will decrease.

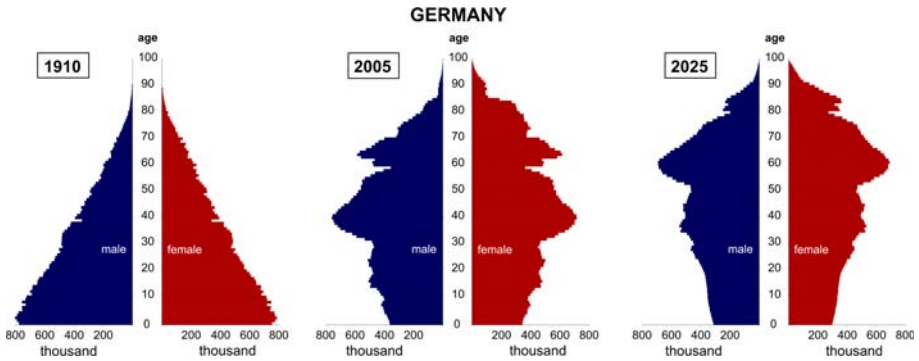
Today, about two-thirds of elderly Germans in need of care are looked after by their families, whereas about one-third rely on institutional care. The number of elderly who will move to an institution is likely to rise over the coming years, partly as a result of individual preferences and partly because of a diminishing supply of private care, especially after 2030. At that time, the baby boomers of Germany and Europe will start to need long-term care. Among the baby boom cohorts, the level of childlessness is high, the average number of children is low and divorces are common [3]. The number of elderly who are at risk of needing institutionalised care will rise accordingly. Family-supplied care resources will shrink dramatically unless new forms of partnerships within and between generations are developed to cope with the difficulties of old age.

Southern European countries will face particular challenges [3]. Today, the degree of institutionalisation is very low in these countries, as family links are strong and the old cared for by younger family members. In the Northern European countries, by contrast, the degree of institutionalisation is high, with strong political activity in this area. Interestingly, a family-based care system for the old is prevalent in those countries of the South where fertility rates today are low—whereas they are comparatively high in Northern countries. Moreover, the life expectancies in Southern countries are among the highest in Europe.

The new demography will, however, pose challenges to European societies long before the baby boomers reach advanced old age. Today, these large cohorts are around 40 or 50 years of age. In the population pyramid describing the composition of the population by age and sex, they form a bulge in the middle of the pyramid, which moves upwards as the baby boomers get older (Fig. 2). In about 20 years' time, most of the baby boomers will have moved beyond the age of 65 and will have retired. The younger cohorts are considerably smaller. As Europe ages, the number of people of working age will decrease as the baby boomers move out of the workforce. Rates of labour force participation drop sharply in most European countries after the age of 50, so that the proportion of people who work will soon decline dramatically unless older individuals remain in the workforce.

### **Redistributing work in an ageing Europe**

Take Germany again as an example: demographic change will result in an 8% decrease in the average hours worked per week per capita from 2005 to 2025, assuming the increasing

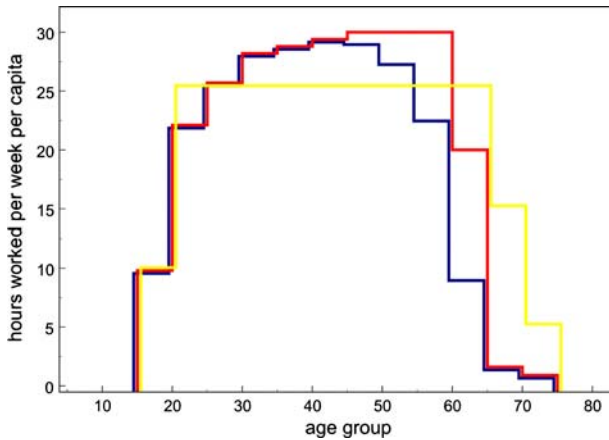


**Fig. 2** Population pyramids for Germany in 1910, 2005 and 2025. The data for 1910 do resemble a pyramid, with many children and few elderly people; by 2005 there was a bulge of adults around age 40. This bulge will rise to age 60 in 2025. Source: [14]

numbers of older workers are as badly integrated into the workforce as they are today [14]. The ‘Rostock indicator’ of demographic change captures the overall output of the population under given age-specific patterns of work. Germans in 2005 worked an average of 16.3 h per week. This value is low because only 44% of Germans worked in total. Because of the changing age structure, the average hours per week and per capita will decrease to fewer than 15 h per week by 2025 if labour force participation does not rise. In other Western European countries, such as France or the Netherlands, the ageing of the workforce will reduce the average number of hours worked at a similar rate of about 10% until 2025 if current age-specific patterns of work are not changed—with equivalent effects on their national economies. Europeans may keep or even raise somewhat their standard of living if productivity gains are high enough. The distribution of work will, however, be even more unequal than today, as more people will not be working at all.

To keep old-age dependency ratios and hours worked per week and per capita constant, labour force participation rates of older workers have to rise and the workload will have to be distributed more evenly over the course of life and among people. In Germany, the typical 45-year-old works 30 h on average, whereas the typical 60-year-old only works 8 h. This dramatic decrease in worked hours over the life course is not unique to Germany, but is a widespread phenomenon in Europe. However, there are marked differences in rates of decline in hours worked between the EU Member States. Sweden and Denmark perform comparatively well, but France and Belgium do even worse than Germany. One option for keeping the hours worked per week and per capita at current levels would be to increase the work hours of those in their 50s and early 60s who work (Fig. 3). If people in their late 60s or even in their early 70s continued to work to a limited extent, the workload could be evenly distributed at a level of about 25 h per week across ages 20 through 64. This effort could be achieved if a smaller share did not work at all, another share worked a full-time schedule of 40 h, and the rest worked between 20 and 30 h per week. The proportion of non-workers would decrease accordingly.

As people benefit from longer, healthier lives, they will have to work longer. European economies cannot afford to see active, healthy people step out of the workforce long before official retirement age, especially if these people can be expected to live three or four more decades in good health. Population ageing requires Europeans to adapt to the new situation. Obviously, these model calculations help bring clarity: the working hours of the growing



**Fig. 3** Average hours worked per week by age in Germany. The *blue line* graphs the pattern in 2005 that produces the overall level of 16.3 h of work per week per capita. The *red line* shows the increase in work effort by older Germans required to maintain this overall level of effort in 2025. The *yellow line* illustrates one way to redistribute work more equally while maintaining the overall effort: people between 20 and 65 would work 25.1 h per week on average. Source: [14] (colour in online)

group of people over the age of 50 have to be increased. Without this shift, Europe's ageing populations will challenge European economies. The models underline the urgent need for incentives designed to promote changes in age-specific labour force participation rates, for the benefit of the economy and of individuals. Redistributing work over a long life does not, however, just mean working longer; it also means rethinking the allocation of working hours.

The twentieth century was a century of redistribution of wealth. The twenty-first century may be a century of redistribution of work. Such reapportioning would spread work more evenly across people and over the different phases of life, allowing people to combine work, education, child-rearing, social activities, leisure and, possibly, care for elderly parents in varying amounts and at different ages. Economies with many part-time jobs, like the Netherlands, Denmark or Norway, suggest ways to achieve a better distribution of work. People are understandably reluctant to work to older ages if this just means that they have to put in more hours of work over their lifetimes. By reducing the hours worked per week, it would be possible for people to spread the same total amount of work effort over more years of life. This would be desirable for most people and would reduce the need for taxes to support people who are not working.

Future generations may come to see the choices Europeans and Americans currently make when it comes to organising time and structuring lives as nothing short of irrational. Life can be divided into three boxes. One concentrates education in the first years of our lives. Once one has begun a working life, phases of education are regarded as a luxury. One concentrates work during those years of life when one can have children, and when children need the time and energy of their parents. Then, in one's late 50s or early 60s, one retires, enjoying decades of leisure, largely paid for by taxes levied on younger adults who are also taking care of children. One concentrates leisure in the years when one can no longer have children, and when any children one did have no longer need the care they once required.

A redistribution of work might make it easier for younger people in Europe to have the number of children they would like to have. Today fertility is very low: by the beginning of this century, it had reached a below-replacement level throughout Europe [4]; that is, under the level of just over two children per woman that is needed to replace the previous generation of adults. Despite the general trends towards declining birth rates and delayed entry into parenthood in Europe, marked differences in the extent of the problem of low fertility between different countries can be observed. Today, three-quarters of Europe's population live in countries with very low birth rates of between 1.3 and 1.6 births per woman [6], namely, in Southern, Central and Eastern Europe. The fall of the Iron Curtain was followed by a rapid and steep decline in fertility rates from comparatively high to very low levels and a substantial out-migration of young people in the post-Socialist countries. Currently, a limited recovery of birth rates can be observed in some countries, but fertility will probably remain well below replacement level in the Central and Eastern parts of Europe for at least a decade and perhaps much longer [6]. In German-speaking countries, birth rates had already dropped to very low levels as early as the 1970s, and have remained at low levels ever since. In Southern Europe, the sharp decline began a decade later, and then hit lowest-low levels. Only in a few countries in Northern and Western Europe have fertility levels remained comparatively high. Of these countries, France, Ireland and Iceland have the highest fertility rates, and fertility may remain close to replacement level in these countries. These dramatic declines in mortality and fertility have led to today's old-age structures in Europe, pre-programming with near certainty a further accelerated ageing of the populations over the coming decades.

### **Parents need time**

The causes of low fertility in Europe are complex and only partially understood. Studies confirm what has been suspected for a long time: the number of children that people have does not reflect the number of children that people would like to have [1]. This is especially the case in Central, Eastern and Southern Europe, as well as in the German-speaking countries. In Northern European countries, the gap between the number of children people say they want and the number of children they eventually have is smaller—better opportunities to combine work and family life have helped to create this more balanced situation. Many factors are likely to contribute to keeping the gap wide in many countries, such as extended duration of education, pressure on the labour market and insufficient day-care facilities. A very important factor, which is often overlooked, is time. Parents need time to have and to raise their children; time that they do not have during the years when their children are young and will not have unless the workload is more evenly spread over the life course.

### **Greater choice in how we spend our longer, healthier lives**

One is living a longer life and a healthy life span is expanding. Under these circumstances, there is need for changes, and life-course flexibility is desirable for the benefit of both individuals and the society as a whole. The details, however, as to how to achieve this are not clear yet. Social scientists can develop more knowledge on how to move from rigid regimes like those in Germany, France and most of the rest of the EU, to societies in which individuals have greater choice about how they spend their lives. In Germany, for example,



the duration of pension entitlements has approximately doubled for men and women since the 1960s, while, at the same time, people in their 60s are in better health on average than they were 50 years ago. The ageing of the population requires rethinking along several dimensions. Working longer is one way to adapt to the new demography; distributing work more evenly over the life course, and devoting time to education, child-rearing and social activities during the middle years is equally important. Moreover, it must be widely accepted, including by political and economic decision-makers, that redistributing work among people and over the life course is not a luxury. This is a necessary step in preparing for the situation that Europe will inevitably face: a Europe of many elderly and fewer young people.

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