

The ups and downs of pension reform in Germany

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Abstract

This paper describes the German pension system in its still ongoing search for a compromise between changing political objectives and providing a stable pension system. The system started in the late 19th century as a political tool to pacify the unruly workers and became in the 1970s an ever more generous corporatist system ruled by the social partners with bi-partisan support. Due to demographic aging it was scaled back after 2000 and achieved a compromise between adequacy and sustainability. However, after a massive reform backlash around 2015, the German system is again in the midst of political and economic controversy.

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Introduction: history and political background

The aim of this paper is to describe the German pension system in its still ongoing search for a compromise between changing political objectives and providing a stable pension system. The system started in the late 19th century as a political tool to pacify the unruly workers, became in the 1970s an ever more generous corporatist system ruled by the social partners with bi-partisan support, was scaled back after 2000 due to demographic aging, but is now again in the midst of political as well as economic controversy.

The multitude of elements and the reforms that went forwards and backwards make the German system a showcase for pension policy, its successes and failures. The paper is therefore structured along the timeline of these reforms (Figure 1) and explains how the system was changed at critical junctures and why the chosen option was preferred to alternatives.

Bismarck's social security system

The German social security system was created as a political response to the increasing pressure from the labor movement in the 1870s. The 1860s and early 1870s were characterized by a tremendous boom in economic activities ("Gründerjahre") which came to a sudden halt in the economic crisis of 1873. The resulting unemployment strengthened the social democrats ("Sozialistische Arbeiterpartei Deutschlands") which were perceived as a threat to the German establishment. In 1878, Chancellor Bismarck started a two-pronged strategy. On the one hand, he made any socialist activities illegal ("Sozialistengesetz"). On the other hand, he founded the various pillars of the German social security system that in its essence still prevails today. In 1883, the German health insurance started; in 1884 workmen's compensation; and in 1889 the combined disability insurance and old-age pension system, as the oldest universal public pension system in the world.

The combined disability insurance and old-age pension system was fully funded. Contributions were split equally between employers and employees, plus a subsidy paid by the central government, a feature that is still in place. At its beginning, eligibility conditions were harsh. Disability pensions were paid after at least five years contributions and a strict definition of disability; old-age pensions were paid after at least 30 years of contributions and the retirement age was initially 70 years (Althammer et al. 2021). Nota bene: life expectancy at age 40 at that time was 26 years, and the probability to reach age 70 was about 5 percent. This austerity permitted fully funding the system without much transition to build up a capital stock.

While Bismarck's universal social security system remains until today as an institution that dominates all other old-age provisions and is organizationally independent from, but centrally regulated by, the government, the political aim of the two-pronged strategy failed. Bismarck was dismissed in 1890, and the law against Socialists was withdrawn in the same year. Between 1895 and 1910, union membership doubled every 5 years. Germany's loss of World War I precipitated a revolution, the monarchy ended, and the social democrats became the majority party.

Between the two World Wars, the social security system was consolidated and additional branches added (most importantly unemployment insurance). During the Nazi time, all social insurance

systems were centralized and all those who did not fit in their view of Germany were excluded (Althammer et al. 2021).

Resurrection after World War II as growing pay-as-you-go system

The fully funded system only barely survived World War II as it was seriously eroded in the wake of the hyperinflation and the Great Depression before the war and the destruction of Germany's industrial capital stock during the war. In the early 1950s, an intense discussion about the future financing of the pension system took place with arguments pro and contra pay-as-you-go versus fully funding that are very similar to ongoing debates. Skepticism about capitalism, the fear of inflation and outright disbelief that demography could turn worse finally dominated the debate. Chancellor Adenauer was famously quoted with "the people will always make children".¹ Hence, in 1956, the formerly funded old-age and disability pension system was converted to a pure defined-benefit pay-as-you-go system with a relatively simple and transparent structure (Box 1).² This structure prevails until today although reforms have changed the parameters of the system as will be discussed in the sequel of this paper.

BOX 1: The basic structure of the German pay-as-you-go system 1956 to 1972

Coverage: The German pension system enforces a broad mandatory coverage of workers. Only the self-employed and workers with very low earnings (less than 15 percent of average gross wage) are exempt. Civil servants have mandatory coverage by their own separate pension system. Benefits and contributions are capped for earnings higher than about two times the average wage.

Benefits: As opposed to many other countries, the system aims to extend the standard of living that was achieved during work life also into the time after retirement. Hence, pension benefits are roughly proportional to labor income averaged over the life course and feature only few redistributive properties, much less than e.g. in the US. Pension benefits are indexed to wages for new entrants as well as the stock of pensioners, hence increase over time with productivity and inflation.

Eligibility: Until 1972, a fixed retirement age at 65 with the exception of disabled individuals.

Financing: Until 2005, the contribution rate adjusts to equilibrate the budget according to the defined-benefit principle. Contributions are evenly split between employers and employees. In addition, the system receives a subsidy from the federal government to cover costs for benefits not directly linked to work (e.g., certain unemployment spells, maternity and care work).

Governance: The German retirement insurance is a separate entity governed by the social partners. Its budget is not part of the government budget. If a surplus emerges, the contribution rate must be reduced in the following year and cannot be used to decrease the government deficit.

Further details in Börsch-Supan et al. (2020 & 2023).

¹ <https://www.bundestag.de/webarchiv/textarchiv/2017/kw03-kalenderblatt-rentenreform-488538>

² In 1989, when Germany was re-united, there was not even a short debate about the nature of the unified pension system: East Germany was fully integrated in the well-established West German retirement system; the remaining technical transitional rules expired in 2023.

Initially, Adenauer was right. The baby-boom in Germany was later than in other European countries and the US due to the hunger years until 1949 but very intense. In combination with the rapid and almost miraculous economic growth (“Wirtschaftswunder”) in the 1960s and 70s, the German pension system evolved to one of the most generous pension systems in the world both as the replacement rate increased and earlier retirement was made possible. During this time, social democratic and conservative policy makers were in perfect synch to strengthen the social security system. Pensions were no issue of political controversy, and all major pension laws were passed by a large bipartisan majority.³

Optimism prevailed in spite of declining economic and population growth. The intense baby-boom was followed by a sharp drop in birth rates, and the first major economic crises in 1967 and the oil crisis in 1973 ended the economic miracle. Nevertheless, the German pension system expanded further. In 1972 “flexible retirement” was introduced. It replaced the fixed single retirement age at 65 with a window starting at age 62 which allowed earlier retirement without any actuarial adjustment. One motivation was the increasing use of disability pensions as early retirement vehicle.⁴ Another motivation was the belief that early retirement would reduce unemployment among younger workers.

Flexible retirement was immediately taken up. Since earlier retirement was not compensated for by actuarial adjustments of the benefits, it reduced the average age of labor market exit (Figure 2). However, there was no effect on youth unemployment (Börsch-Supan and Schnabel, 2010), proving evidence that the lump-of-labor belief was indeed a fallacy. Moreover, the uptake of disability pensions was only reduced after “economic disability” – granting disability benefits when the specific occupation could not be continued e.g. due to a company closure or other forms of redundancy – was abolished in 1985 (Figure 3).

BOX 2: Early retirement pathways and actuarial adjustments in Germany

Until 1972: A single fixed retirement age at 65 with the exception of women and disabled.

1999-2010: Gradual abolition of retirement at age 60 for women with 15 years of contributions.

1972-2004: “Flexible retirement” after age 62 without actuarial adjustments for workers with 35 years of contributions.⁵

1992-2004: Gradual introduction of actuarial adjustments that reduce benefits by 3.6% per year of earlier retirement. They were fully implemented in 2004.

2012-2031: Gradual increase of statutory retirement age from 65 to 67.

³ This was the case in many countries. Famous for this discussion is the OECD 'From Pyramide to pillar' (REF).

⁴ In 1970, 48% of entries into retirement used the disability pathway (Börsch-Supan and Jürges 2012).

⁵ These adjustments adjust the level of benefits according to the retirement age. Annual benefits will be larger if retiring later to adjust for a shorter retirement duration; they will be lower if retiring earlier to compensate for a longer retirement duration. Adjustments are actuarial if this compensation follows actuarial principles.

2014: “Retirement at 63”: A policy reversal that introduced retirement two years earlier than statutory retirement age without actuarial adjustments for workers with 45 years of contributions. Further details in Börsch-Supan et al. (2020).

This period of policies which increased benefit generosity and generated declining labor force exit ages lasted until 1992, the first important turning point of contemporary pension policy.

The sustainability challenge

The time between 1992 and 2007 was characterized by a string of reforms that stopped and reversed this expansion. Financial sustainability became a serious issue in response to the rapidly rising number of retirees per person in working age (Commission 2003). The first reform in 1992 abolished two design flaws of the 1956 system: it abolished the gross indexation of pensions to wages which threatened to trigger a vicious cycle (❶ in Figure 1) and introduced actuarial adjustments to reduce the incentives to retire early (❷). This reform, executed by a conservative government, was cleverly designed with a long implementation period and gained approval by both sides of the Bundestag. It went almost unnoticed by the populace although it severely cut benefits in the long-run. Moreover, the special early retirement ages for women and individuals after 52 weeks of unemployment were abolished in 1997 for new entrants (❸).

Nevertheless, the aging process turned out to be faster than the long transition periods associated with these reforms. Demographic aging was taken seriously with the proposed introduction of a “demographic factor” in 1998 that was designed to decrease pension benefits with rising life expectancy. This was a significant step away from the defined benefits principle. At this point, bipartisanship in German pension policy ended. Conservatives pleaded for fiscal consolidation while social democrats wanted to preserve the system’s generosity, especially the defined benefits principle. In the elections of 1998, pension reform dominated the political agenda. The conservatives lost and a new red-green coalition of social democrats and green party was formed. One of the first actions was to abolish the demographic factor as it has been a major promise in the election campaign.

In 2001, the pension system faced a liquidity crisis due to weak economic growth, high unemployment and the accelerating demographic change. In order to avoid a discontinuation of pension payments, the pension system received a large government loan. The now obvious need of pension reform triggered a conflict between the social democratic and the green party. The social democrats had an older voters’ base and insisted in the defined benefits principle. The green party was founded not even a decade earlier, had a much younger voters’ base and was in favor of both environmental and financial sustainability, implying lower benefits in exchange for lower contributions. The conflict in the red-green coalition was resolved by delegating the conflict to a pension reform commission which was granted far-reaching authorities (“*Rürup-Kommission*”).⁶

The commission made two important changes. It introduced a “sustainability factor”, which made the German PAYG system closer to a notional defined contribution system (❹ in Figure 1 and

⁶ The author of this article was head of the pension working group. The two other working groups made proposals for the health and long-term care systems.

Box 3) and started a gradual increase of the retirement age (5). The sustainability factor equiproportionally decreases the replacement rate and increases the contribution rate in response to an increase in the old-age dependency ratio. It thereby divides the costs of demographic change equally between the older and the younger generation. It was enacted in 2004. The gradual increase of the statutory retirement age from age 65 to age 67 was enacted in 2007, started in 2012 and will be fully implemented in 2031.

BOX 3: The sustainability factor and other compromises between the defined benefit and the defined contribution principles

For the contribution rate c , the average labor income w , and the number of workers NW , the revenue of the pension system is $c \cdot w \cdot NW$, while the expenditures are the product of the replacement rate q , the average labor income w to be replaced, and the number of pensioners NP . The budget constraint in year t is therefore:

$$(1) \quad c_t \cdot w_t \cdot NW_t = q_t \cdot w_t \cdot NP_t.$$

The average pension p_t is the replacement rate applied to the average wage, $q_t \cdot w_t$. A defined benefit (DB) system with a stable replacement q_0 changes the average pension in proportion to the average wages:

$$(2) \quad p_t/p_{t-1} = w_t/w_{t-1}$$

while a defined contribution system (DC) with a stable contribution rate c_0 evolves over time according to the rule

$$(3) \quad p_t/p_{t-1} = w_t/w_{t-1} \cdot s_{t-1}/s_t \quad \text{where } s_t = NP_t / NW_t, \text{ the old-age dependency ratio.}$$

DB and DC are not mutually exclusive systems. Any combination between the two systems is possible:

$$(2.7) \quad p_t/p_{t-1} = w_t/w_{t-1} \cdot (s_{t-1}/s_t)^\alpha,$$

where the parameter α between 0 and 1 represents all possible compromises between a pure DB and a pure DC system. If $\alpha=0$, the replacement rate of pension benefits is stabilized (pure DB system), while $\alpha=1$ stabilizes the contribution rate (pure DC system). The German sustainability factor effectively sets $\alpha=.5$.

Further details in Börsch-Supan (2007).

These two reform steps were part of a general overhaul of the German social security system, the so-called “Agenda 2010”, introduced by the social democratic Chancellor Gerd Schröder in his combat against unemployment and weak economic growth. The reform agenda also included wide-ranging labor market reforms and a much stricter regime for unemployment compensation. In addition to the sustainability factor and the gradual increase of the retirement age, two new pension pillars were added to the German pension system, reducing the dominance of the Bismarckian pay-as-you-go contributory “Pillar 1”. The new pillars were designed to offset the benefit reductions generated by the sustainability factor. The new “Pillar 0” (“*Grundsicherung*”) resembles a minimum pension that prevents old-age poverty if the sustainability factor would have

driven pension benefits below this minimum (⑥ in Figure 1). It also provides a minimum income for the increasing number of individuals who did not collect a sufficient number of earnings points, especially women with little or no labor market attachment and long-term unemployed.

The new “Pillar 3” (“*Riester pensions*”) are saving instruments in form of individual accounts with a defined contribution plan and an associated largely annuitized payout plan (⑦). They were designed to ultimately replace about 25% of formerly pay-as-you-go financed with funded pensions. Riester pensions are heavily tax-subsidized especially for low incomes and large families (Box 4).⁷ In parallel, deferred taxation of pension income was introduced in a long-term gradual transition (Börsch-Supan & Quinn 2015).

The Agenda 2010 was a huge success in creating employment and economic growth. Labor force participation increased dramatically, especially in the low-income sector and among older individuals (Figure 4). In spite of this economic success, the Agenda 2010 was very unpopular within the social democratic party as it was regarded as a betrayal of social democratic principles and excessively “neo-liberal”. Rather than celebrating the economic success, the party became divided along ideological lines and saw their voting share dwindling. The social democrats finally lost the elections in 2005 and the “red-green coalition” was replaced by a “black-yellow coalition” of conservatives and liberals. Ironically, the conservative party under Chancellor Merkel became the main political winner of the Agenda 2010 as she claimed its success as an achievement of her own economic policy.

BOX 4: Riester pensions

Contributions: Participation is voluntary. Contributions of up to 4% of gross income qualify for subsidies.

Certification: Riester products require certification by a federal agency. Providers must guarantee that the nominal return is positive; benefits must be disbursed as certain types of lifelong annuities except for lump sum payments up to 20% of the accumulated wealth; and administrative and marketing costs must be spread over at least ten years. The nominal return guarantee effectively enforces an upper limit on stocks and favors investments in government bonds.

Subsidies: Subsidies are credited to the account as part of the total contribution. There are three elements: (i) a basic subsidy that matches the participant’s own contribution, means-tested for low and middle income households; (ii) an additional subsidy for each child; (iii) contributions are tax deductible up to a maximum amount which has been fixed in nominal terms, eroding this incentive. The subsidies vary between 24% and 92% of total contributions, depending on income and number of children, averaging 39%. For a family in the lowest income decile with three children the contribution consists of 92% subsidy and 8% own contribution. However, the complexity of the administration made this substantial size of the subsidies less apparent for many individuals.

Participation: The uptake of Riester pensions made a slow start, then took off after the certification criteria and administrative procedures were simplified in 2005, reached saturation at about 16

⁷ Walter Riester was Minister for Labor and Social Affairs at that time. „Pillar 2“ are occupational pensions which cover about 50% of workers who are almost exclusively in large companies.

million contracts in 2016, and are declining in recent years. With some 41 million households in Germany and many households with two or more Riester contracts, the coverage is far from universal as it was intended in 2001. The average annuity currently paid is 132 Euro per month which is about 8% of average total pension income, much less than the expected 25%.

Further details in Börsch-Supan et al. (2021) and Geyer et al. (2021).

Reform backlash

Opposition to the Agenda 2010 was not confined to the left wing of the social democratic party. The Agenda 2010 also strengthened the populist parties at the left and the right of the political spectrum. In addition, the liberals failed to set themselves apart from their “neo-liberal” image. As a result, the elections in 2013 and 2018 produced “grand coalitions” led by Chancellor Merkel where the conservative party ruled with the social democrats as junior partner. Realizing that the populist parties to the left and right threaten her power base, Angela Merkel started to shift social policy back to pre-Agenda 2010 times. The year 2014 became the turning point from pension reform to unwinding these reforms. This shift backwards was heralded by the re-introduction of early retirement without actuarial adjustments (Box 2). It allowed workers to retire at age 63 after 45 years of contributions, including maternity, unemployment, further education and other non-work periods (⑧ in Figure 1). About 29% of all entries into retirement used this new pathway in 2024 (Rentenversicherungsbericht 2025).

In spite of the looming demographic crisis, the new era of pension expansion culminated in the plan to return to a strict defined-benefit system in 2018 by the way of imposing a fixed lower threshold of the replacement rate (⑨, in German “*Haltelinie*” or stop line). The lower threshold was set only a little lower than the then prevailing replacement rate such that it will make the sustainability factor meaningless in the course of population aging. A new grand coalition of the conservatives with the social democrats as junior partner has extended this lower threshold in December 2025 until 2031. The resulting budget deficit of the pension system will be covered by a combination of contribution increases and additional subsidies from the federal government, financed by debt and general taxation. The result of the December 2025 decision is a reversal back to the defined benefit pay-as-you-go system created in the 1950s.

One reason for the unwillingness to reform, as in many other countries, may be that pensions are regarded as the “third rail of politics”, referring to the high voltage rails in underground trains. Touching them is fatal, especially in a situation in which the populist far right and the equally populist far left are gaining ever larger shares of the popular vote while the share for the traditional parties is shrinking. This has created a new form of bi-partisanship between the conservative and the social democratic party. The social democrats take pride of having re-instated the generosity of the German pension system, while the conservatives stress the competence in fostering higher economic growth, both ignoring financial sustainability in times of rapid demographic change.

The “third rail” anxiety of German pension policy is especially pronounced with regard to the retirement age. As opposed to prejudices and maybe an earlier tradition, Germans are not workaholics but appreciate leisure. They have the second lowest number of annual hours worked

in Europe (1330 hours, OECD 2025), holidays are ample and are extended by “bridge days” between them and the weekend. Moreover, the lump-of-labor fallacy (“retiring the old creates jobs for the young”) is still widely accepted as a fact, whereas it is little understood that the increase of labor costs precipitated by the early retirement and the corresponding higher taxes and social security contributions actually reduces labor demand (Gruber & Wise 2010).

Finally, the reversal back to an omnipresent pay-as-you-go system is also a reflection of the failure to convince the German population to save for retirement. One reason is rooted in history. The country of Karl Marx has never liked capitalism, and the German *Kapital* has a different connotation than the English capital as it is more related to finance than to productive capital. *Kapitalismus* is associated with Manchester capitalism and excessive profit seeking than with the neoclassical optimizing behavior of companies. The distrust in capital has been amplified by the experience of the Great Depression and the German hyperinflation.

Another reason is the failed experiment of the Riester pensions. They were introduced as a simple and almost risk-free investment that would deliver a fixed life-long annuity income after retirement. To achieve this, they were overregulated which led to very high administrative costs. Moreover, the no-nominal-loss guarantee became very expensive when the interest on government bonds became very small and even negative. Another reason for high administrative costs and high marketing costs is that Riester plans are voluntary and based on individual accounts. These design flaws created much lower nominal returns than expected. Even worse, real returns have become negative in the wake of the post-pandemic inflation and Germany’s weak economic growth.

This has widely discredited the idea of funding pensions. While the high subsidy rates for families with children made Riester pensions popular in this group, all other remained skeptical. In total, only 45% of German households have invested in Riester pensions, and the trend is strongly declining in recent years (Geyer et al. 2021).

Conclusions and discussion

Currently, it is not clear which pension system Germany will have after 2031. Germany’s weak economic performance, the struggle about US tariffs and Chinese imports, and finally the new Iran war have created a sense of deep crisis. A new pension commission was formed in the Spring of 2026. Eight scientists and five politicians presented a reform package with 33 recommendations end of June 2026. The three most important recommendations are the abolishment of early retirement without actuarial deductions (“Rente mit 63”) and the re-introduction of the sustainability factor as indexation device for the stock of pensioners while the pensions for new entrants will still be fixed at a lower threshold, a hard-fought compromise. Moreover, a new funded pillar should replace the ill-fated Riester pensions. Two percent of earnings 48% should go to a state-fund designed after the Swedish AP7 fund, subsidized by a “transition factor” paid from general taxes in the initial years until the return of the fund is sufficiently large to overcompensate the decrease of the internal rate of return of the PAYG system due to population aging. The government has announced to implement these recommendations by the end of 2026, but details have to be worked out and heavy opposition against the recommendations has developed during the summer of 2026.

In spite of this uncertainty, some conclusions can be drawn from the German pension history: (i) Reforms such as those implemented between 1992 and 2007 can successfully re-instate fiscal sustainability even in a system that is mainly pay-as-you-go. (ii) Such reforms do not prevent pension income from raising even in a country with strong population aging such as Germany, and it does not make the distribution of pension income more unequal since it was accompanied by a minimum pension preventing poverty. (iii) However, these achievements did not stop the rise of the populist parties to the right and the left of the traditional parties and could not prevent the unraveling of reforms back to a financially unsustainable pure defined benefit system.

The first point has been documented in the international comparison studies by Gruber & Wise (2004) and its international panel equivalent by Börsch-Supan & Coile (2024), and by German studies such as Siddiqui (1997) and Hanel (2010). They show that the reforms of the German public pension system and in similar pension systems had large and causal effects on old-age employment and fiscal sustainability. Both are tightly connected, since early retirement has been the most important cost driver (Gruber & Wise 2007). One may object that the reversal of the old-age employment rate shown in Figure 4 happened in conjunction with parallel historical trends. Younger cohorts are healthier and have been better educated, permitting longer working lives. Moreover, the role of women in society has dramatically changed, affecting LFP of both genders. However, Börsch-Supan & Coile (2018) and Börsch-Supan & Ferrari (2017) show that these secular developments have contributed astonishingly little to the trend reversal. Even if many of the historical trends studied earlier may have contributed to the overall level of labor force participation, their trend does not show the U-shape pattern observed for labor force participation at older ages. Börsch-Supan et al. (2020) find that the reforms between 1985 and 2018 explain almost three quarters (72%) of the observed reduction in retirement probability over this time span.

The second point – no negative side effects on old-age poverty and inequality – is shown by Börsch-Supan et al. (2026). Old-age poverty, defined in Germany as the dependency on social assistance, has only very slightly increased since 2000. Moreover, these authors show that inequality in public pension income measured by the Gini coefficient exhibits a small increase between 2005 and 2015 but returned to its initial level after that. This is in strong contrast to the increase in inequality for financial and real wealth during the same time.

As the papers on sustainability and adequacy in this special issue show, the performance of the German pension system in international comparison is a mixed bag. It prevents old-age poverty reasonably well, but after the reform backlashes it has become again financially unsustainable and the Germans have to pay dearly for their unwillingness to reform since replacement rates are much lower than in many of Germany's neighboring countries.

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Figure 1: Timeline of German pension reforms 1980-2025



Generosity increasing, sustainability decreasing

Generosity decreasing, sustainability increasing

EEA (NEA) = earliest (normal) eligibility age

Figure 2: Average age at claiming an old-age pension

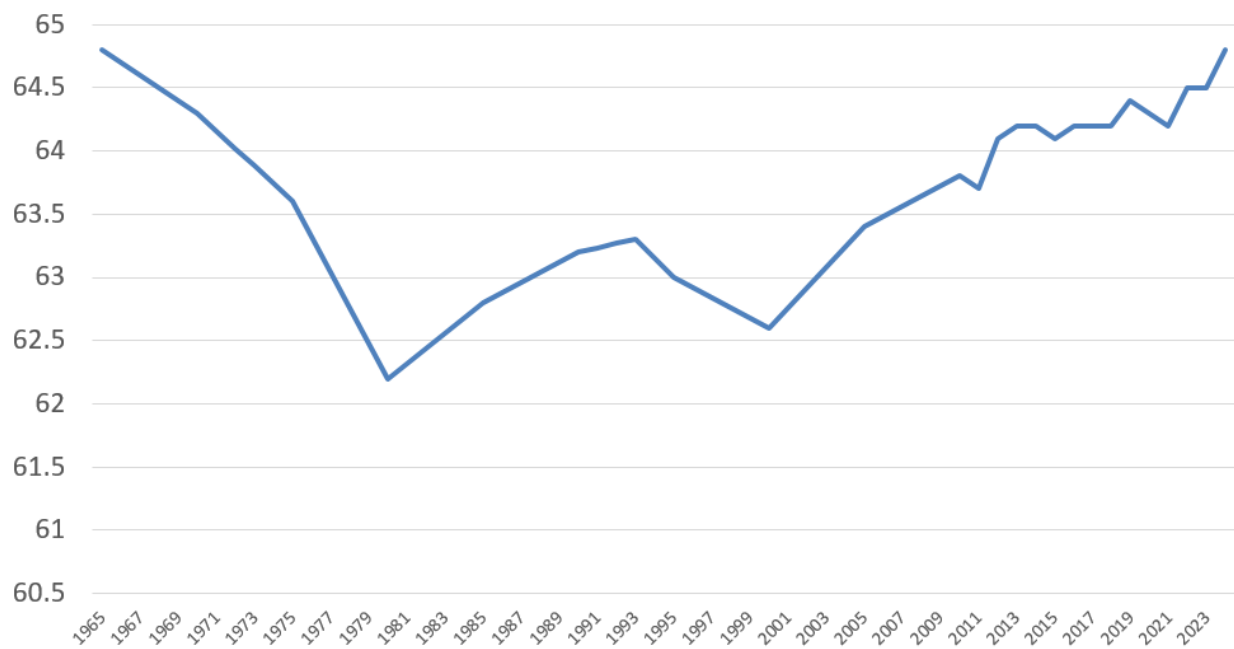


Figure 3: Share of pension types

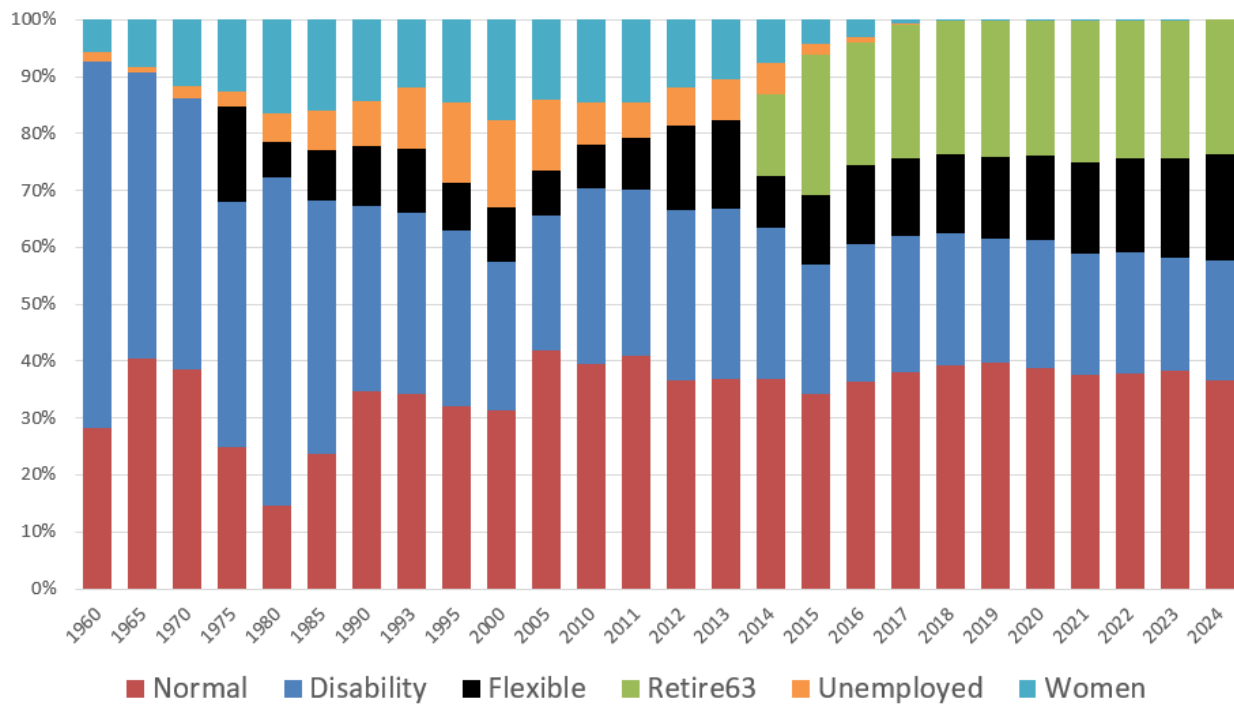


Figure 4: Old-age employment rates

