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Capital Savings and Supplementary Insurance in an Ageing Society

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Summary

In recent years, changes to the pension system have focused almost exclusively on adjustments to its parameters. However, the scope for further mandatory interventions of this kind appears to be largely exhausted if broader societal consensus is to be maintained. Strengthening the third pillar therefore emerges as a viable path forward, particularly for individuals with longer investment horizons and higher incomes.

Key Takeaways

- The Czech pension system is historically and institutionally based almost exclusively on pay-as-you-go financing, which is becoming increasingly vulnerable to adverse demographic trends.
- The absence of significant capital reserves and the low share of capital income among pensioner households substantially limit the system's long-term stability.
- Low participation of younger age cohorts in the third pillar exacerbates the long-term fiscal and social risks associated with population ageing.

The year was 1881, when Otto von Bismarck introduced a fundamentally new system of social insurance in what was then Germany. The reform ensured the payment of benefits in cases of illness, disability, or old age for broad segments of the population. It marked a paradigmatic shift that shaped the lives of hundreds of millions of people in subsequent generations and fundamentally altered the relationship between the state and its citizens. Austria-Hungary adopted Bismarck's model in 1906 in the form of old-age and disability insurance. Initially, future pension benefits were accumulated in a dedicated fund (Baldwin, 1990). Over time, however, these insurance schemes shifted—primarily for political reasons—toward a pay-as-you-go financing model, which remains in place today.

The pay-as-you-go system is inherently reliable, as it provides retirees with at least a basic pension in virtually any economic or political context. To remain balanced, total contributions must match total benefit payments. The system therefore depends on three key parameters: the demographic structure of the population, the replacement rate, and the statutory retirement age. Reforms that adjust retirement age or replacement rates are commonly referred to as parametric reforms. The pay-as-you-go model also lends itself well to social solidarity. While redistribution is not an automatic consequence of this financing method, it is relatively easy to implement within such a framework.

Pay-as-you-go systems function best in growing populations. Indeed, at the time these systems were introduced, population growth was strong. Difficulties arise when demographic structures begin to shift. The most challenging situation occurs when the share of retirees rises persistently while the working-age population declines. In such cases, the system runs into deficit and, under conditions of low fertility, may remain imbalanced for an extended period. Subsequent parametric adjustments often prove insufficient to reverse this trend. For a representative participant, the internal rate of return of a pay-as-you-go system is determined by the combined growth of the working population and real wages.

The second main approach to pension financing is the funded system, in which individuals save part of their earnings in pension funds. These funds invest the accumulated assets in financial instruments on capital markets, where their value may increase—or decrease—depending on market conditions. The returns earned are reduced by administrative, transaction, and other management-related costs.

As in the pay-as-you-go system, participants receive regular payments after reaching retirement age, continuing for the rest of their lives. A key difference, however, is that payments are made regardless of how long the recipient lives. Funded systems therefore involve redistribution between individuals with shorter and longer life expectancy. For these systems to operate effectively, a stable political environment and well-developed capital markets are essential.

Compared to pay-as-you-go schemes, funded systems provide a much lower degree of social solidarity. Pension outcomes depend on the length of the saving period, the size of contributions, and the net investment returns achieved by the fund. Capital returns often make up the largest share of total retirement savings. Contributions made early in a person's career are particularly important, as they benefit from the longest period of compounding. A key drawback of funded systems, however, is the volatility of investment returns. Sharp market downturns can be especially damaging when they occur shortly before retirement. At the same time, a major advantage of funded systems is their independence from demographic developments. As a result, they are not directly affected by future changes in age structure, including those expected in the Czech Republic.

The academic literature has long compared pay-as-you-go and funded pension systems and has formulated the so-called Aaron rule, which evaluates these models based on their real rates of return. If the combined growth of the working population and real wages is lower than the net return of the funded system—that is, the return on capital after administrative costs—the funded model is

preferable. If this combined growth rate exceeds the return of the funded system, economic theory favors the pay-as-you-go approach.

The Aaron rule is most applicable when designing a pension system from scratch. A major challenge arises, however, when transitioning from a pay-as-you-go system to a funded one. Such a shift would create a so-called transition debt, as contributions to the pay-as-you-go system would decline or even cease, while benefit obligations would remain unchanged. This would generate additional public debt and increase the cost of servicing it. That, in brief, is the perspective of economic theory.

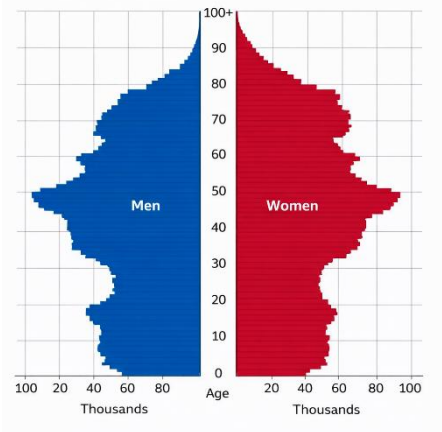
Economic Practice

In the past, one possible way to address the challenges associated with population ageing could have been the use of one-off financial resources that the Czech Republic had at its disposal as a result of the privatization of state-owned assets. However, this window of opportunity has already closed. Under current conditions, where the number of working-age individuals has been declining for an extended period, a full transition to a funded pension system can no longer be considered a realistic option. At this point, such a shift would require not only political courage but, more importantly, it no longer represents an economically rational solution. This is also why debates about a complete transition to a funded system were largely confined to the 1990s, while more recent reforms have focused exclusively on parametric adjustments.

Such adjustments have occurred relatively frequently. Demographic projections show that while there are currently approximately 2.7 workers per pensioner, this ratio is expected to decline to 1.7 workers per pensioner over the next 50 years (NRR, 2025). Policymakers, drawing on these demographic projections, have repeatedly modified the system’s parameters in the past. This is perhaps best illustrated by the fact that today’s 83-year-old pensioner—provided she raised a sufficient number of children—retired as early as age 53.

By contrast, under the current system, the same individual would retire only at the age of 67. While it is true that life expectancy has increased since the fall of the communist regime, an increase in the statutory retirement age by 14 years over a relatively short period of time is difficult for parts of the socio-political spectrum to accept. For this reason, the scope for further mandatory parametric changes within the system currently appears largely exhausted. A more viable approach lies instead in encouraging higher levels of labour market participation beyond the statutory retirement age, where individuals are willing and able to continue working.

Graph 1: Age Structure of the Czech Republic as of 31 December 2024



Source: ČSÚ, 2025.

It is precisely adverse demographic trends that require an increase in financial resources capable of offsetting future imbalances between the number of contributors and pension beneficiaries. The pension system of the Czech Republic is based almost exclusively on pay-as-you-go financing and lacks any significant reserve or stabilisation mechanism that could mitigate the impact of population ageing.

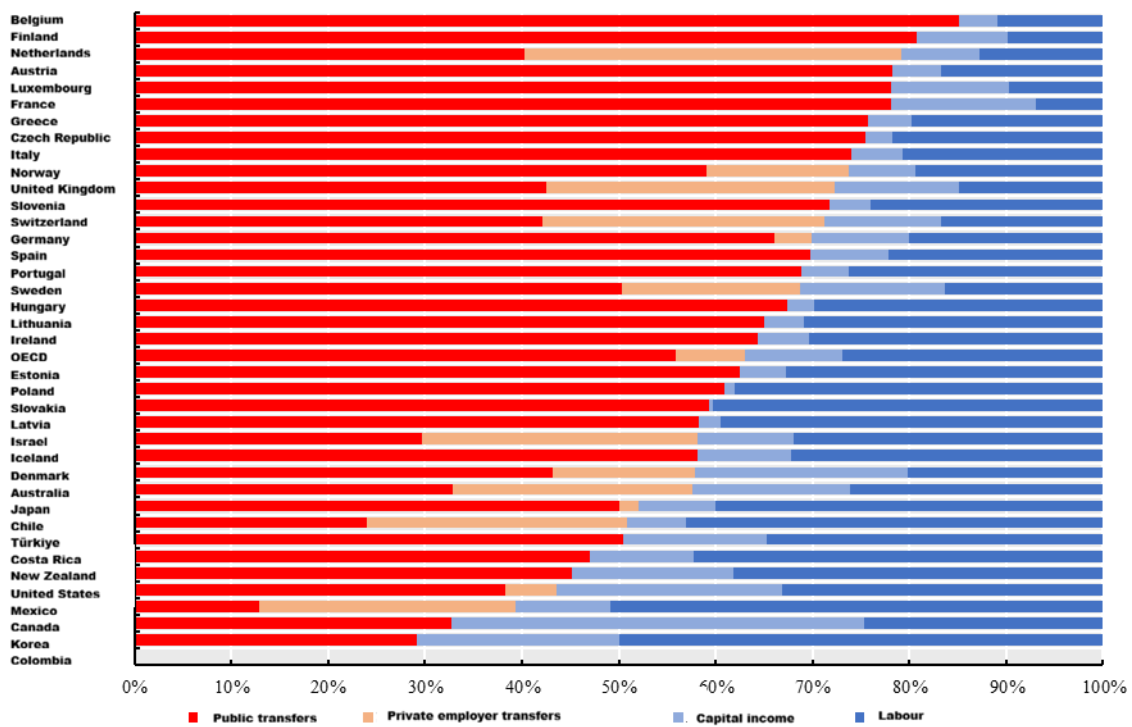
Unlike in some other countries, the Czech Republic has not established long-term capital reserves—such as a national pension fund or a systematic use of privatisation proceeds—that could compensate for the declining number of contributors. As a result, the system is exceptionally sensitive to changes in the age structure of the population.

From an international comparative perspective, Czech pensioners are highly dependent on state transfers. Public transfers account for as much as 75.5% of total income in pensioner households, meaning that roughly three quarters of their income originates from the public pension system. This share is significantly higher than the average across OECD countries, which stands at approximately 55.9%, and it also markedly exceeds the levels observed in neighbouring or otherwise comparable countries. From a regional perspective, the Czech Republic exhibits a higher degree of dependence on public transfers than most countries in Central and Eastern Europe.

More pronounced differences emerge when comparing countries with the highest and lowest levels of reliance on public transfers. The highest shares are recorded in Belgium (85.2%), Finland (80.7%), Austria (78.2%), Luxembourg (78.1%), France (78.1%), and Greece (75.7%). At the opposite end of the spectrum are countries in which pensioners rely on a far more diversified income structure, such as Korea (29.1%), Canada (32.7%), and Australia (32.8%), where capital income and earnings from continued labour market participation play a substantial role even at older ages. These differences reflect not only varying institutional designs of pension systems but also differing levels of preparation for old age over the course of individuals' economically active lives.

The limited role of capital income is one of the key structural weaknesses of the Czech pension system. Capital income accounts for only 2.7% of total income among Czech pensioner households, well below the OECD average of 10.0%. By comparison, capital income represents 10.0% in Germany, 15.0% in France, 12.0% in Switzerland, and as much as 42.6% in Canada. The low share of capital income in the Czech Republic therefore indicates not only limited individual saving and investment activity, but also a weak capacity for funded and asset-based income to complement public pensions in old age.

Graph 2: Sources of Income of Older Persons

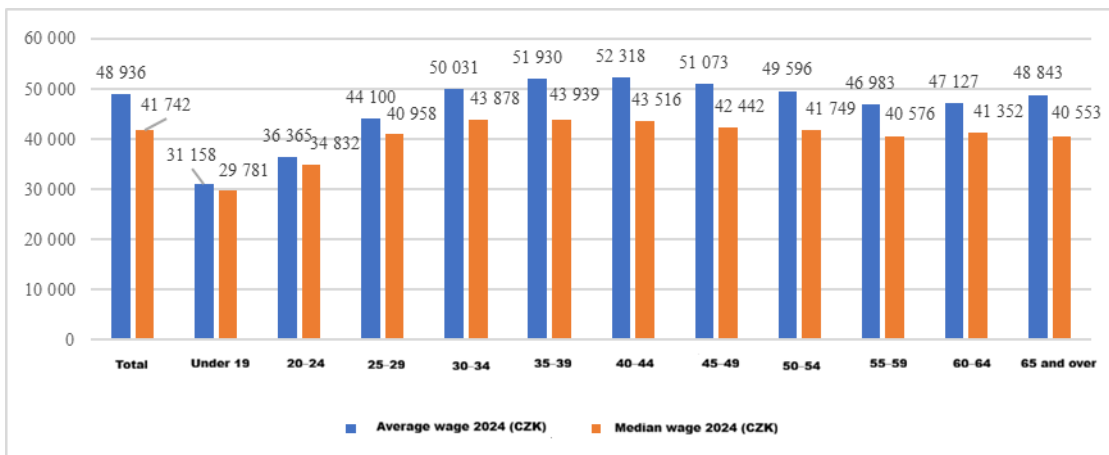


Source: OECD, 2025.

The fact that current pensioners in the Czech Republic do not have substantial retirement income beyond public state transfers is not particularly surprising. This situation reflects historical developments, during which access to capital markets was significantly limited for these generations. Today’s decisions, however, shape future outcomes, making the economic behaviour of the currently working population critically important.

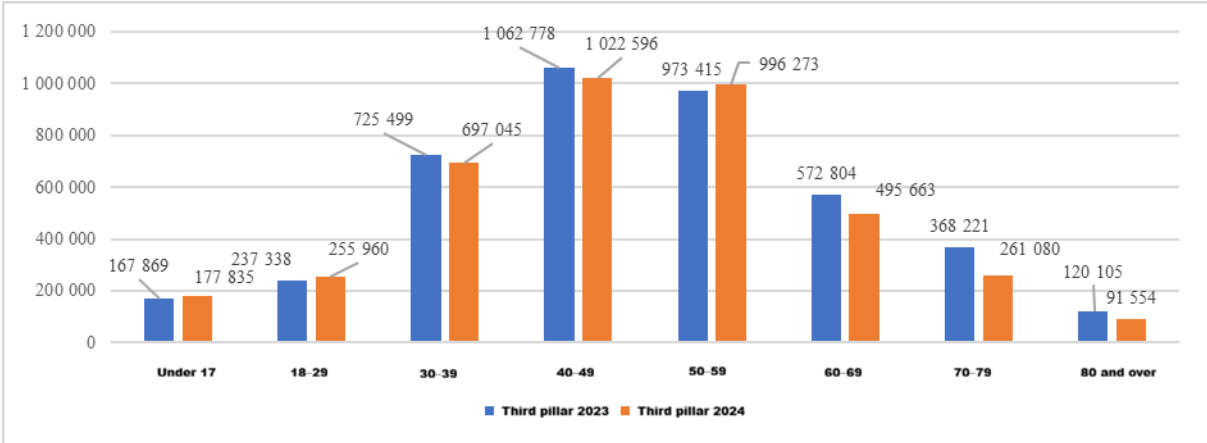
Unfortunately, data on the current saving behaviour of the working population are not encouraging. Most Czech workers begin to address retirement saving only after the age of forty, which is late from the perspective of long-term wealth accumulation. Paradoxically, this age group also tends to earn the highest incomes in the economy, both in terms of average and median wages.

Graph 3: Average and Median Wage in 2024



Source: ČSÚ, 2025.

Graph 4: Number of Participants in the Third Pillar of the Pension System by Age Cohort



Source: MF ČR 2025, author’s own compilation.

Despite this relatively high wage level, participation in the third pillar among individuals in this age group (i.e. up to 39 years of age) remains low. This can be explained primarily by the limited perceived relevance of retirement saving at younger and middle ages. Retirement is viewed as a distant prospect and therefore not regarded as an immediate priority. Financial decision-making in this phase of life tends to focus instead on current needs and short-term goals.

This weak motivation has likely been reinforced by the fact that media and political debates on pension provision in recent years have focused almost exclusively on parametric adjustments to the pay-as-you-go system. Such debates may contribute to a sense of low urgency regarding individual retirement saving, despite the fact that extending the investment horizon by even a few years can have a substantial impact on final savings. Resources invested at the very beginning of a working career play a particularly important role, as they are compounded for the longest period and generate the highest cumulative returns.

Another significant factor is limited financial literacy and a lack of targeted information, often even among individuals with relatively higher incomes. One-sided communication by the state, which concentrated primarily on the statutory retirement age, has resulted in pension products remaining largely outside the core of public debate. Moreover, these products are generally perceived as complex, insufficiently transparent, and administratively demanding. From this perspective, the approach taken by the previous government—namely pushing through a reform that raised the retirement age without broad societal consensus—can be viewed critically. A substantial part of the political spectrum repeatedly declared that these changes would be reversed if power were regained. Political attention thus remained focused on contentious parametric adjustments, for which no broad public agreement had been established.

At the same time, this led to the loss of several years that could have been devoted to the systematic development and refinement of the third pillar, with the aim of significantly increasing participation, particularly among younger age cohorts.

A source of inspiration in this regard can be found in a country that laid the foundations of the modern social insurance system as early as 1881. The government of Germany recently introduced the Frühstart-Rente, a child-based long-term investment scheme under which a fund is established for every child from the age of six until the age of eighteen. The state contributes EUR 10 per month to each account. After reaching adulthood, participants are encouraged—but not required—to continue contributing. Choosing the age of eighteen as the endpoint of state support is logical from

the perspective of legal adulthood. However, from a life-cycle perspective, most participants at this stage are not yet financially independent, which may complicate continued investment. Importantly, participants gain access to their accumulated funds only upon reaching retirement age.

The total public cost per individual over the twelve-year contribution period amounts to EUR 1,440. Assuming that the long-term return on these funds corresponds to the average annual return of the German DAX equity index, the accumulated savings at retirement would exceed EUR 107,000. This substantial appreciation is driven primarily by the exceptionally long investment horizon.

Conclusion

The main drawback of such a system is, of course, its fiscal cost. Under Czech conditions, a comparable measure would imply additional annual expenditures of approximately CZK 4.5 billion, which is problematic given the already strained state of public finances. At the same time, it is important to recognise that this step does not create new debt but merely transforms it from implicit to explicit, with all the associated consequences, including higher debt-servicing costs. In other words, the state would be disbursing funds today that it would otherwise have to pay out in the future.

The primary objective of this measure is to increase public engagement in actively shaping one's own future pension. For the system to fulfil this objective more effectively, however, it should incorporate stronger incentives and encourage parents to invest amounts above the basic EUR 10 per month that children receive automatically.

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