

Polish pension reform of 1999: from political compromise to adequacy challenge

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Abstract

Poland's 1999 pension reform replaced a defined-benefit pay-as-you-go system with a notional defined contribution (NDC) scheme, a mandatory funded pillar and voluntary savings. This article examines how the reform emerged from the political economy of the post-communist transition, why its design promised long-term sustainability and later retirement, and how it evolved over the following quarter-century through implementation problems, the struggle over the retirement age, the dismantling of the funded pillar after 2011 and the introduction of auto-enrolment savings plans. Drawing on documentary analysis and secondary data from the OECD, the European Commission, the Polish Social Insurance Institution and the financial supervisor, it assesses outcomes against the reform's own criteria and against adequacy. The NDC core has delivered long-run expenditure stability, with old-age pension spending projected to peak below 10 per cent of GDP, but at the price of some of the lowest future replacement rates in the OECD, a widening gender pension gap locked in by the 2017 reversal of retirement-age increases, and rising old-age poverty risk among women living alone. The Polish case shows that in defined contribution systems fiscal sustainability is necessary but not sufficient, that moderate mixed reforms are politically fragile, and that adequacy ultimately depends on politically legislated retirement ages and on labour-market careers.

1. Introduction

The Polish pension reform of 1999 was one of the most ambitious systemic transformations of old-age security in Europe. It replaced a defined-benefit, pay-as-you-go (PAYG) system inherited from the communist period with a multi-pillar architecture combining a nonfinancial defined contribution (NDC) scheme, a mandatory funded defined contribution (FDC) pillar, and voluntary retirement savings. The reform cannot, however, be understood in isolation from the broader transformation of Poland from a centrally planned to a market economy. Pensions were both a casualty of that transition absorbing much of its social cost, and one of its instruments, as policymakers deliberately linked pension funding to privatisation and the development of domestic capital markets.

A quarter of a century later, Poland's reform exemplifies a stark trade-off facing modern pension systems: the success in achieving long-term fiscal and demographic sustainability has come at the cost of mounting adequacy pressures. According to the OECD (2025), a full-career average earner entering the Polish labour market today can expect a net replacement rate of 40.6 per cent for men and only 31.8 per cent for women, among the lowest in the OECD, where the average replacement rate stands at approximately 63 per cent. The gender dimension of this pressure is acute: women's effective retirement age, locked at 60 by the 2017 policy reversal, combines five years' earlier exit with five years' fewer contributions and five years' longer life expectancy in the benefit divisor. Simultaneously, the share of older Poles at risk of poverty has been rising, concentrated among older women living alone. Poland thus illustrates a critical question for "pension systems under pressure": whether and how societies can sustain both the fiscal constraints imposed by demographic ageing and the income adequacy necessary for decent retirement security.

The article draws on documentary analysis of the reform's legislative and political history and on secondary data from the OECD, the European Commission, the Social Insurance Institution (ZUS) and the financial supervisor (UKNF). It traces the reform from the political economy of the transition (Sections 2 and 3) and its design (Section 4) through implementation, the retirement-age struggle and the dismantling of the funded pillar (Sections 5–8), before assessing outcomes against the reform's own criteria and against adequacy (Section 9) and drawing lessons (Section 10). The analysis shows that the defined contribution logic has survived, but its funded component and its retirement-age ambitions have not—and that institutional choices made in the 1990s continue to constrain policy options in 2026.

2. Setting the stage: pensions in the transition from plan to market

Under central planning, old-age security in Poland was not a "system" in the actuarial sense. Social insurance was formally contributory, but contributions were paid by state enterprises as an accounting transfer, benefits were an instrument of wage and social policy, and no meaningful link existed between individual contributions and pensions. Special occupational pension rights for miners, railway workers, teachers, the uniformed services and others were granted as political rewards or compensation for arduous work, but also, especially in the early 1990s, to people who lost jobs during the economic restructuring.

The economic transformation launched in 1989–1990, including rapid liberalisation, stabilisation of near-hyperinflation and deep restructuring of state enterprises, produced a dramatic labour-market shock. Registered unemployment, effectively non-existent in 1989, exceeded 16 per cent by 1993. Governments of the early transition used the pension system as the main social buffer: access to early retirement and disability pensions was deliberately eased to absorb workers shed by restructured enterprises. The number of pensioners rose by roughly a third within a few years, while the number of contributors shrank. The system dependency ratio increased from 51 per cent in 1989 to nearly 84 per cent in 1996 (Chłóń-Domińczak 2002).

Fiscal consequences followed quickly. The 1991 pension law revalorised benefits to compensate for high inflation and introduced regular wage indexation, locking in a high level of generosity. A separate farmers' scheme (KRUS), created in its modern form in 1990, provided near-universal rural coverage at token contribution rates and became almost entirely subsidised by the state budget. By 1994 total pension expenditure (old-age, disability and survivors' benefits) exceeded 15 per cent of GDP, and the social insurance contribution reached 45 per cent of payroll (Chłóń et al. 1999). Attempts to contain costs through ad hoc under-indexation in 1991–1993 provoked mass court appeals and were struck down by the Constitutional Tribunal, which ruled that acquired pension rights could not be suspended by budgetary fiat, a ruling that paradoxically strengthened the case for structural reform, since parameters could no longer be adjusted opportunistically.

Growth had resumed, and the 1997 Constitution introduced a debt ceiling of 60 per cent of GDP with corrective thresholds at 50 and 55 per cent, a rule that would later prove decisive for the fate of the

funded pillar. The planned mass privatisation offered a natural source of transition financing, while pension funds would become domestic institutional investors deepening the young Warsaw capital market.

3. From expert debate to political compromise (1994–1998)

Initial policy discussions in the mid-1990s polarised around three expert camps: "non-reformers", who believed careful indexation and minor adjustments could stabilise the PAYG system; "rationalisers", who proposed tightening the defined-benefit system; and "reformers", who argued that only a systemic shift to defined contributions and risk diversification could deliver long-term sustainability (Chłóń et al. 1999).

These positions mapped onto institutional interests. The Ministry of Labour and Social Policy proposed a moderate rationalisation of PAYG with at most a marginal funded element. The Ministry of Finance advanced a radical blueprint inspired by the Chilean reform of 1981 and by the World Bank's 1994 report *Averting the Old Age Crisis*: replacement of PAYG by mandatory individual funded accounts, with the state providing only a minimum pension. Neither proposal could command a majority but their confrontation shifted the debate from parametric repair to systemic redesign.

The reformist perspective had three intertwined sources. The first was domestic academic economics: a group of young economists, including Marek Góra and Michał Rutkowski, developed the intellectual case for defined contribution principles, individual accounts and the separation of insurance from redistribution. The second was international diffusion. A decisive moment came at a 1996 conference in Warsaw at which the Swedish and Latvian notional defined contribution schemes were presented to Polish policymakers. The NDC concept reconciled the "funding hawks" with the "PAYG hawks": it allowed the public pillar to remain pay-as-you-go in financing while adopting the defined contribution logic of individual accounts, thereby drastically reducing transition costs compared with full funding (Chłóń-Domińczak et al. 2012).

The third source was direct international support. The World Bank provided technical assistance and financed advisers and actuarial modelling, and Rutkowski returned from the Bank to direct the Office of the Government Plenipotentiary for Pension Reform. Support was advisory rather than conditional, but the Bank's imprimatur mattered for credibility with financial markets. The prospect of European Union accession played a more indirect role. The EU has no pension *acquis*, but the accession perspective anchored macroeconomic discipline, made long-term fiscal sustainability a criterion of state credibility, and reinforced the reformers' argument that Poland had to prepare for the fiscal rules of the Union it aspired to join (Müller 1999; Orenstein 2008).

The decisive political shift occurred in 1996 with the appointment of Andrzej Bączkowski, a former Solidarity activist respected across party lines, as Minister of Labour and first Plenipotentiary for Pension Reform. Bączkowski moved the reform out of inter-ministerial trench warfare into a dedicated office reporting to the prime minister and into the Tripartite Commission for Social and Economic Affairs, where government, the two rival union confederations (Solidarity and the post-communist OPZZ) and

employers' organisations negotiated. His early death in November 1996 turned him into a unifying symbol; his expert team, led by Góra and Rutkowski, published the reform blueprint *Security through Diversity* in February 1997.

The involvement of social partners was unusual in comparative perspective. Solidarity, shaped by its opposition to communist state control, was surprisingly supportive of individual accounts and partial privatization, an anti-collectivist trade unionism that proved crucial for consensus (Chłóń-Domińczak et al. 2012). OPZZ was more sceptical but was drawn into negotiations over transition rules. The main sticking points were the size of the funded pillar and the fate of early-retirement privileges of specific occupational groups; the exclusion of farmers (KRUS reform was postponed indefinitely) and, later, of the uniformed services, was the price of political feasibility. A media campaign presented the reform through the metaphor of "your own account", replacing the abstract intergenerational contract of PAYG, which citizens of a post-communist state had little reason to trust, with the familiar image of personal savings. The cost of this simplification was that the NDC pillar was widely understood as "real" savings, storing up disappointment for the moment when the state would later change the rules.

The reform was legislated in two packages under two governments of opposite political colours: institutional laws on pension funds and employee schemes in August 1997 under the post-communist SLD-led government, and the systemic laws on the NDC scheme, contributions and benefits in October-December 1998 under the Solidarity-rooted AWS government. That continuity across a change of power was the strongest evidence of the breadth of the consensus.

4. The design: how defined contribution logic promises sustainability and later retirement

The system introduced on 1 January 1999 for cohorts born after 1948 rested on a simple principle: pensions should reflect lifetime contributions. The old-age contribution (19.52 per cent of wages) was split between a first, NDC pillar (12.22 per cent) and a second, funded pillar of open pension funds, OFE (7.3 per cent), managed by private pension companies. A third tier of voluntary occupational and, later, individual savings completed the architecture. Redistribution was deliberately taken out of the insurance system: a minimum pension guarantee, financed from the state budget and conditional on a minimum contribution record, became the sole explicitly redistributive element.

The sustainability properties of the NDC derive from its design (Buchholtz et al. 2019). Contributions are recorded on individual nonfinancial accounts and indexed to the growth of the covered wage bill, that is, to the contribution base of the economy. At retirement, the accumulated notional capital is divided by unisex life expectancy at the actual retirement age. This construction embeds three automatic stabilisers. First, liabilities grow only as fast as the economy's capacity to finance them. Second, every increase in life expectancy automatically lowers the annual benefit for a given retirement age, transmitting demographic change into benefits rather than deficits. Third, and crucially for retirement behaviour, each additional year of work raises the benefit substantially, through further contributions,

further indexation and a lower divisor, so the system rewards later retirement actuarially instead of penalising it. In principle, therefore, the NDC design makes later retirement individually rational; in practice, as Section 6 shows, the statutory retirement age remained a far more powerful anchor of behaviour than these incentives.

Participation in the funded part was made compulsory for workers under 30 (voluntary for those aged 30–50) for several reasons. Individual myopia and low financial literacy meant that a voluntary pillar would have remained marginal; compulsion created scale, low unit costs and a mass constituency for the reform; and mandatory flows of contributions were expected to deepen the Warsaw capital market and support the privatisation programme. Risk diversification was the official rationale: "Security through Diversity" meant that retirement income would depend partly on the labour market (NDC) and partly on capital markets (FDC), which do not move in unison. In retrospect, both the political risk attached to a state-administered funded pillar and the exposure of participants to financial-market fluctuations were underestimated; the architects assumed that property rights over funded accounts would protect the pillar politically, an assumption the events of 2011–2014 disproved.

5. Implementation challenges

Implementation revealed the gap between legislative design and administrative capacity. ZUS had to move from aggregate employer reporting to monthly individual records for millions of insured persons; its new IT system was delayed, contribution records contained errors, and the calculation of "initial capital", i.e., the conversion of pre-1999 rights into opening NDC balances, dragged on for years. These bottlenecks delayed transfers to pension funds and undermined early trust in the new system.

Fiscal strains appeared as well. Transition costs linked to the contributions diverted to OFE, which had to be replaced in the PAYG pillar, proved higher than projected, while privatisation revenues earmarked to cover them were partly redirected to other budgetary needs. The reform improved the long-term outlook, and simulations showed substantial improvements in cash balances and a roughly equal sharing of the adjustment burden across generations (Jabłonowski and Müller 2013), but its short-term deficits persisted, leaving the system exposed when the global financial crisis struck.

6. The retirement age struggle and retirement patterns

The most protracted battle of the post-reform period concerned when Poles retire. The pre-reform system combined statutory ages of 60 for women and 65 for men with pervasive early-retirement rights, producing effective exit ages of about 55 for women and 59 for men. The 1999 reform envisaged eliminating early retirement, replacing it with temporary "bridging pensions" for genuinely arduous occupations; vested rights and political resistance delayed this for a decade. Only in 2009 were bridging pensions finally legislated, replacing occupational lists with medically defined criteria and limiting early exit to five years before the statutory age.

The trajectory of the statutory age itself became a political battlefield. In 2012–2013 the government legislated a gradual increase to 67 for both sexes, a rare case of retirement-age equalisation in the region. The increase became a central issue of the 2015 election campaign, and in 2017 the new PiS government restored the ages of 60/65. The reversal triggered a one-off inflow of roughly 417,000 new pensions in 2017 and permanently lowered women's effective retirement age, with direct consequences for their benefits under the NDC formula.

Retirement patterns over these decades demonstrate the power of the statutory age as a behavioural anchor. Men's average retirement age hovered around 60 until 2013, then rose towards the statutory 65 by 2017–2020 as early options closed; women's rose from about 55 before 2009 to just above 60 after 2016, and after the 2017 reversal settled just below 61, that is, most women retire almost immediately upon reaching 60, despite the strong actuarial rewards for postponement. The policy nevertheless produced one unambiguous success: early-exit transfers collapsed, and the number of pensions paid below the statutory age fell by nearly three-quarters between 2008 and 2016. At the same time, the employment rate of persons aged 55–64 rose from about 25 per cent in 2004 to about 58 per cent in 2023, among the fastest improvements in the EU.

7. Crisis and reversal: how the funded pillar was dismantled

The global financial crisis of 2008 transformed the politics of the funded part. Slower growth and widening deficits collided with two hard constraints: the constitutional debt thresholds and the EU's excessive deficit procedure. A 2004 Eurostat decision had ruled that mandatory private pension funds could not be classified inside general government, so the contributions flowing to OFE, and the debt issued to replace them, counted fully against Poland's deficit and debt, even though they reduced implicit pension liabilities by the same logic. Reform-generated "accounting" deficits thus created a standing temptation: reclaiming OFE contributions and assets would improve the visible fiscal position immediately, at the cost of invisible future obligations (Guardiancich 2017; Gołębiowski et al. 2020).

The reversal proceeded in three steps. First, in 2011 the contribution to OFE was cut from 7.3 to 2.3 per cent of wages, the difference being credited to a newly created NDC "sub-account" in ZUS indexed to GDP growth, individual accounts were preserved on paper, but their financing became pay-as-you-go. Second, in 2014 the government transferred the government-bond portfolios of the funds, about PLN 153 billion, some 9 per cent of GDP, to ZUS and cancelled the bonds, converting explicit debt into implicit NDC liabilities at a stroke; participation in OFE was made voluntary, with inertia channelling most members back to ZUS. Third, an automatic "slider" began shifting each member's remaining OFE assets to ZUS over the ten years preceding retirement. Each step was legally defensible precisely because account balances were converted, not confiscated, i.e., pension entitlements were preserved in nominal terms while their character changed fundamentally. The Constitutional Tribunal upheld the 2014 operation in 2015, reasoning that OFE assets were public means; nothing better illustrates the fragility of the "property rights" on which the political security of the FDC had been premised.

Party politics shaped the sequence but not the direction. The centre-right PO-PSL coalition carried out the 2011 and 2014 operations on fiscal grounds; PiS, hostile to "privatised" pensions, lowered the retirement age in 2017 and prepared the final liquidation of OFE. The initial consensus of the 1990s thus eroded across the whole spectrum: as Guardiancich (2017) puts it, Poland displayed "instability despite consensus", and the case confirms the broader finding that moderate, mixed reforms are the most vulnerable to reversal (Wilson Sokhey 2017).

The consequences reach beyond fiscal accounting. The retreat from funding reduced expected future benefits. Jarrett (2011) estimated that the 2011 change alone could lower total pensions of future retirees by around a fifth relative to the original design. Above all, the reversals inflicted lasting damage on trust: citizens who had been enrolled compulsorily in 1999 watched the state unilaterally rewrite the arrangement three times within a decade. Survey and qualitative evidence document deep scepticism towards ZUS and pension promises in general, which depresses voluntary saving, may encourage contribution evasion, and burdens every subsequent reform attempt (Marzec and Szczudlińska-Kanoś 2019; Szczepański et al. 2022; Ząbkowicz 2024).

8. Rebuilding retirement savings: IKE, IKZE and the PPK

Voluntary savings were meant to compensate for the modest replacement rates of the mandatory system, and their importance grew after the FDC part was dismantled. Purely voluntary individual accounts, IKE (from 2004) and IKZE (from 2012), never achieved scale: by the end of 2025 only about 0.77 million IKE and 0.57 million IKZE accounts were actively funded (UKNF 2026), a small fraction of the 16 million insured. Beyond low financial literacy, limited saving capacity, modest tax incentives and high fees, research points to the credibility problem created by the OFE experience: why lock away savings in a pension wrapper if the state has shown it can change the rules (Sołdek 2015; Stańczak-Strumiłło 2017; Ząbkowicz 2016)?

The Employee Capital Plans (PPK), introduced from 2019, drew the behavioural lesson. Employers must set up a plan; employees are enrolled automatically with the right to opt out; contributions combine employee (2 per cent minimum), employer (1.5 per cent minimum) and state top-ups. To rebuild trust, the law states explicitly that PPK assets are private property, a formulation that is itself a monument to the OFE episode. Results are intermediate: after phased roll-out, by the end of 2025 some 4.9 million PPK accounts had been opened, 3.5 million of them receiving contributions, with assets of PLN 45.1 billion (UKNF 2026), which is far beyond IKE/IKZE, yet well below the near-universal coverage of the original funded pillar, and with contribution rates too low to offset the decline of mandatory replacement rates on their own (Ociepa-Kicińska and Dawidowicz 2018; Błaszczyk 2020).

9. Outcomes: the adequacy–sustainability trade-off in a maturing system

The reform's own criteria of expected outcomes were long-term fiscal sustainability, intergenerational fairness, and transparency of the contribution–benefit link. On fiscal sustainability, the record is largely positive: long-term projections of the ZUS actuarial model indicate that old-age pension expenditure rises from 8.7 per cent of GDP in 2026 to a peak of about 9.7 per cent around 2050, when the large post-war and 1980s cohorts are retired, and then declines to 8.6 per cent by 2080, as smaller cohorts follow and the DC formula automatically aligns benefits with contributions and longevity (ZUS 2025). Expenditure no longer drifts upward independently of the economy's contributory capacity. This stabilisation, it should be stressed, is the mirror image of benefit adjustment, as the NDC design balances not by raising resources but by lowering benefits relative to wages.

Adequacy is therefore the reform's open flank. According to the OECD (2025), a full-career average earner entering the Polish labour market today can expect a net replacement rate of 40.6 per cent (men) and only 31.8 per cent (women), against OECD averages of approximately 63 per cent. Even low earners face gross replacement rates around 30 per cent, insufficient to maintain living standards in retirement without supplementary income or savings. Poland ranks among the lowest five OECD members on this metric. This is a combination of the relatively low retirement age, and the NDC pension formula, which distributes the longevity risk between the labour market activity and retirement periods.

The distribution of replacement rates reveals a key asymmetry: the defined contribution formula is nominally progressive, yet it is regressive in absolute terms. A worker earning 50 per cent of the average wage faces a replacement rate of approximately 50 per cent, while a worker earning 150 per cent of average faces approximately 35 per cent (Chłoń-Domińczak 2002; OECD 2025). The vulnerability is compounded for those with interrupted careers: the minimum pension, currently set at 30 per cent of the average wage, protects only those who meet the contributory-record condition (25 years of contributions for men and 20 years for women). As the European Commission and SPC (2024) document, a growing share of new pensioners fail this test, particularly women with care-related career breaks: approximately 8–12 per cent of new pensioners now receive benefits below the statutory minimum, a reversal from the early 2010s when near-universal coverage was achieved.

Old-age poverty, measured at the EU's 60 per cent of median income threshold, was relatively low in Poland during the 2010s (below 12 per cent, compared to an EU-27 average of around 16 per cent). However, recent data show a rising trend: by 2023, old-age at-risk-of-poverty reached approximately 13–14 per cent, and the concentration among older women living alone is stark, approaching 20–22 per cent for women aged 75+ (European Commission and SPC 2024). This reversal reflects mostly price-based indexation over 2015–2023, the 2017 retirement-age reversal and the failure of voluntary savings to compensate low-income households.

This means that the gender imbalance is the clearest structural weakness of the matured system. A defined contribution formula is gender-neutral on its face but transmits every labour-market inequality. The 2017 decision to reverse the statutory retirement age to 60 for women and 65 for men locked Poland into the largest gender gap in retirement age among EU members. For a woman retiring at 60,

this means five years' fewer contributions and almost five years' longer life expectancy in the divisor: a compound effect that substantially reduces the benefit. Simulations by the European Commission and SPC (2024) show that a woman with an identical earnings history to a man will receive approximately 25–30 per cent lower pension income, all else equal, due to the age and (unisex) longevity asymmetry.

Women in Poland continue to bear the primary responsibility for childcare and elder care. The average woman experiences 3–5 years of interrupted employment for care purposes, compared to negligible interruptions for men (Statistics Poland 2023). Under the DC formula, each year out of the labour market is a year without contributions, and the NDC credits awarded for care periods are much lower. The result is a "care penalty" that reduces women's benefits by an estimated 12–18 per cent relative to men with identical earnings histories (Chłoń-Domińczak and Strzelecki 2013; European Commission and SPC 2024).

Women's adequacy crisis is sharpened for those with low education, rural residence, or informal work history. Rural women, who comprise approximately 35 per cent of Poland's older female population, are more likely to have interrupted KRUS (farmers' scheme) records, which offer even lower benefits than the social insurance scheme. For these groups, old-age poverty risk exceeds 25 per cent (European Commission and SPC 2024).

Voluntary savings, described above, cannot close this gap. Even the auto-enrolment PPK contribution structure is insufficient to offset the decline in mandatory replacement rates: the minimum employee contribution (2 per cent) plus employer contribution (1.5 per cent) plus state top-up totals approximately 3.5–4 per cent of wages, generating annual accruals of only PLN 1,500–2,000 per worker in lower-income cohorts. Over a 45-year career, even with compound growth, these balances will generate replacement rates of only 5–8 per cent at retirement (Ociepa-Kicińska and Dawidowicz 2018; Błaszczuk 2020). Thus, even with full PPK participation, the combined mandatory plus PPK replacement rate for an average earner would reach approximately 48 per cent, which is still well below the OECD average. A second unresolved problem is decumulation. PPK regulations allow payouts as lump sums or phased withdrawals; annuitisation is not mandated, so a retiree who withdraws the balance at 60 must manage longevity risk for potentially thirty years, precisely where low financial literacy is most consequential (OECD 2025).

Poland's adequacy crisis must be understood in comparative context. Among other NDC systems, Poland's replacement rates are substantially lower than Sweden's (approximately 55–60 per cent for average earners, due to higher contribution rates and longer careers) and comparable to or slightly lower than Italy's (44–48 per cent). Central European peers such as Czechia also outperform Poland, reflecting Poland's lower NDC contribution rate and the absence of a funded component. Poland's gender gap in replacement rates, moreover, is driven entirely by the statutory retirement-age inequality, that is a policy choice, not an economic necessity. In comparison, Sweden, which equalised retirement ages at 65 in 2019, higher care credits in its NDC system, achieves gender parity in replacement rates by design (OECD 2025). The European Commission and SPC (2024) explicitly recommend that Poland equalise

and eventually raise statutory retirement ages, credit care periods on NDC accounts, and strengthen the minimum pension floor, each technically simple but politically fraught, as the 2017 reversal demonstrated.

10. Lessons from the Polish case

There are several lessons that can be learnt from the Poland's experience. First, systemic reform became possible because fiscal crisis, constitutional constraints on ad hoc fixes, domestic expertise and international support converged; the NDC concept then provided the compromise technology that let PAYG financing coexist with defined contribution logic. The political craftsmanship, including a dedicated plenipotentiary's office, tripartite negotiation, a trade union that favoured individual accounts, and legislation carried across a change of government, was as important as the economics. Second, initial consensus does not guarantee durability, and moderate, mixed reforms are the most fragile: transition costs interact with fiscal rules to make reversal profitable in accounting terms, while moderate multi-pillar designs generate neither vested interests strong enough to defend them nor stakes small enough to be ignored (Wilson Sokhey 2017), a pattern repeated in Hungary and Czechia. Third, fiscal accounting frameworks matter enormously: rules that recognise explicit but not implicit liabilities invited Poland to swap the former for the latter, improving measured debt while weakening retirement security (Kołodko and Tomkiewicz 2014). Fourth, statutory retirement ages dominate incentives. The NDC formula rewards longer work handsomely, yet behaviour tracks the legal threshold; adequacy in a DC world therefore ultimately depends on politically legislated retirement ages, the very parameter that proved most reversible. Fifth, compulsion can be undone but its breach is remembered: the reversal of mandatory funding continues to depress voluntary saving through a credibility channel that auto-enrolment only partly offsets. Finally, adequacy is the hard constraint. The Polish experience demonstrates that fiscal and demographic sustainability are necessary but not sufficient for pension system success. A system can stabilise its fiscal trajectory through benefit adjustment (the NDC mechanism) while failing on the dimension that legitimates the system: providing adequate retirement income. The adequacy crisis now looms larger than the fiscal crisis that prompted the 1999 reform. The question is not only "Can we afford this?" but "Who bears the cost?", and in Poland's case, the answer is disproportionately older women, low-income workers, and those with interrupted careers.

A quarter of a century on, the Polish pension system retains the defined contribution core of 1999 and has achieved a form of long-run expenditure stability that few European systems can match. Yet stability has been purchased at a high cost: some of the lowest projected replacement rates in the OECD, a widening gender gap locked in by the 2017 reversal, and rising old-age poverty risk among women living alone. The reform succeeded in what it promised, tying benefits to contributions, and that is precisely why the remaining agenda is no longer technical but starkly political. Adequacy must be restored either through higher contribution rates (politically implausible for employers and workers), longer contribution records (requiring sustained employment and later retirement ages), or redistributive supplements (requiring fiscal space the constitutional debt ceiling constrains).

Pension reform in Poland did not end in 1999; it is an ongoing process that now faces a choice between accepting low replacement rates as the new normal, with a stronger minimum pension floor for the poorest and reliance on voluntary savings and family support for the rest, and acknowledging the adequacy crisis as unsustainable and deliberating honestly over whether contribution rates, retirement ages, or tax-financed supplements must increase. Sweden's experience shows that NDC systems can deliver both sustainability and adequacy if statutory retirement ages are kept high and care credits are generous; Poland's experience shows what happens when these conditions slip. The Polish case thus offers a cautionary tale for other systems under demographic and fiscal pressure: fiscal sustainability is necessary but not sufficient. Without attention to adequacy, and without political mechanisms to insulate long-term design choices from electoral reversals, even well-architected reforms can mature into systems that fail their citizens, not through fiscal crisis, but through the slow erosion of retirement income security.

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Use of AI tools An AI language model (Claude, Anthropic) was used to verify the completeness and structure of the article, and to assist with copy-editing; all content was reviewed, verified and revised by the author, who takes full responsibility for the text.

Author Contribution

The author is solely responsible for the conception and design of the study, the collection and analysis of the documentary and secondary data, the interpretation of the results, and the drafting and revision of the manuscript. The author read and approved the final version.

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