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Auto-enrolment in voluntary pensions: comparative OECD case studies

Abstract

Six OECD countries (New Zealand, the United Kingdom, Türkiye, Poland, Lithuania, and Ireland) have introduced auto-enrolment into the third pension pillar. The latest one, implemented in Ireland, begins operating in 2026. All projects are designed to achieve wide coverage of voluntary pension schemes among employees, to supplement moderate replacement rates from the public ones. Using case studies and a multi-dimensional comparative analysis, the study identifies key factors determining the success of these implementations. The research focuses on behavioural design, financial incentives, and the institutional and macroeconomic environment to identify factors that affect participation rates. The collected data show that auto-enrolment schemes constitute an attractive way of saving due to the offered subsidies or tax exemptions and have achieved wide coverage among the population (above 50%, except for Türkiye). Currently, the highest coverage is achieved in the United Kingdom, despite the highest contribution rate. This demonstrates that factors such as the quality of the institutional environment and a culture of saving in occupational schemes are crucial for auto-enrolment success, while a higher contribution burden is not discouraging. Additionally, the findings indicate that the structure of financial

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incentives affects participation rates across income groups: flat-rate subsidies attract low-income earners and lead to more even coverage, whereas tax exemptions are more favourable to high-income earners, resulting in participation that rises with income.

Keywords: pension system, behavioural economics, auto-enrolment, third pension pillar, voluntary savings

Introduction

In many countries, pensions paid from public schemes are expected to be at a moderate level in the future. Projected low replacement rates require individuals to accumulate capital for old age on their own. However, as behavioural economics has proven, voluntary long-term saving is difficult for many people due to myopia, status quo bias, preference for instant consumption, and inertia (Thaler, 2016).

Auto-enrolment (AE) is becoming an increasingly popular solution to boost participation in third-pillar pension schemes. It is defined as the automatic registration of individuals into a pension scheme, with the possibility to opt out (European Commission, 2021). AE requires setting up a default contribution rate and investment strategy, which may be changed upon participant request. This approach to the enrolment process allows for the use of myopia and inertia as factors supporting saving, because after AE individuals may procrastinate changing the contribution rate or investment strategy, but are active savers in the scheme. Many studies have confirmed that under an AE scheme people join pension schemes significantly earlier, which translates into a longer time of paying contributions (Choi et al., 2004; Madrian & Shea, 2001).

Auto-enrolment schemes are linked to employment (or self-employment) which is necessary to provide automatic deductions of contributions along with other levies. The law may require employers to introduce an AE scheme with specified employee and employer contribution rate or may allow adding AE to voluntarily created occupational schemes. So far, six OECD countries have gained experience with mandatory auto-enrolment schemes: New Zealand, the United Kingdom, Türkiye, Poland, Lithuania (AE operated until 2026), and Ireland, which introduced the AE scheme at the beginning of 2026. Some sources, e.g., OECD (2025c) and Foster et al. (2020), also cite Italy and Slovakia as countries with auto-enrolment pension schemes. In both cases, schemes do not require employees to pay additional contributions, still, there is another "way" of investing contributions already made. Therefore, this article will concentrate on schemes in which participants receive lower net pay. This is in line with the role of the third pension pillar, which should create additional pension savings, rather than crowd out already made to more favourable accounts. The implementation of the AE programme in Ireland is a good opportunity to study the experiences of already functioning schemes, identify factors that have translated into their success (or caused their failure) as well as compare the Irish project with prior implementations.

Despite the growing literature on behavioural initiatives in pension savings, existing studies predominantly concentrate on firm-level schemes (see: Choi et al., 2004, 2024; Madrian & Shea, 2001) or analyse the functioning of nationwide AE programmes in a limited number of countries (Bielawska & Turner, 2023; Peksevim & Akgiray, 2019).

While the former offer insights into individual behavioural patterns, the latter, although allowing for a better identification of local characteristics, limit the possibility of drawing general conclusions regarding the functioning of AE programmes across a broader range of countries. In this respect, the European Commission (2021) stands out, as it covers most AE schemes in operation at the time of its publication. However, it lacks a detailed cross-country comparison and instead focuses on identifying the best practices in AE implementation. The recently introduced Irish scheme has also received limited attention, as so far only three scientific articles[2] have addressed this topic (Foster et al., 2020; Keane et al., 2023; Whelan & Hally, 2023). Additionally, these studies were based on the project's initial design concept and, therefore, assessed the proposed design features rather than analysing its final implementation.

This paper addresses these gaps by providing a detailed cross-country comparison of all nationwide AE schemes in OECD countries, including not only overall participation rates but also their distribution across income groups, where available. This enables drawing general conclusions on their effectiveness across diverse institutional and regulatory frameworks. Specifically, the text analyses issues such as contribution structures, AE and opt-out mechanisms, early withdrawal options, and behavioural and financial initiatives for participation, evaluating them as social policy instruments that shape AE take-up rates and impact pension adequacy and life-cycle welfare outcomes. Furthermore, it incorporates the newly implemented Irish AE scheme into the analysis, drawing on the provisions of the enacted legislation.

The issue of quasi-mandatory pension schemes is important, as it contributes to the discussion on the public-private welfare mix. As many countries diminish the generosity of public pension benefits, more space is left for private savings products and their effective functioning becomes crucial, e.g., in terms of coverage and contribution rates. AE schemes are operated by private providers but within a strictly designed regulatory framework, which allows for their control by the government. The operation of these schemes provides evidence on whether by incorporating behavioural initiatives it is possible to establish widely utilised voluntary savings schemes, or if governments should concentrate on the development of mandatory funded pension programmes.

The study seeks to answer the following research questions:

- RQ1: What factors affect participation rates in AE schemes across OECD countries?
- RQ2: How do financial incentives favour specific income groups, and are these differences reflected in participation rates across income groups?
- RQ3: How does the newly introduced AE scheme in Ireland compare to previously implemented schemes in other countries?

Literature review

Literature describing behavioural methods of increasing pension saving is quite substantial. Because AE combines most of them, it is crucial to present different aspects of such schemes, resulting in more effective and popular capital accumulation.

[2] Articles were identified through searches in the Scopus and Web of Science databases.

The Behavioural Life-Cycle Hypothesis is developed on the principle of the existence of three mental accounts, which affect people's financial decisions. They include: current income, current assets and future income accounts. Individuals assign particular funds to different accounts depending on heuristics. The highest willingness to spend applies to the current income account. This account is credited by labour income, net of taxes and other contributions. Current assets account consists of wealth, excluding pension funds. As a rule, individuals are unwilling to spend accumulated wealth, therefore, propensity to consume capital on this account is low. However, the lowest propensity, close to zero, applies to funds on the future income account. It consists of pension savings and income which will be earned in the future (Shefrin & Thaler, 1988).

The occurrence of mental accounting implies that it is possible to increase an individual's savings rate by transferring funds from the current income to the future income account. Participation in a pension scheme that deducts contributions from salary allows for achieving it. Manual transfer of contributions to a pension fund, although equally effective from the point of view of classical economics theory, requires greater willpower and may be more challenging for most people (Bańbuła, 2006).

Mental accounting helps members of pension schemes to save regularly declared contribution, but does not explain factors that affect people's decisions on participation and contribution rate. Participation rate may be increased and equalised between employee groups by simplifying opting-in or introduction of AE. First option includes, e.g., offering all new employees a pension scheme enrolment forms, ideally with a default option to choose – which allows for participation with sustainable contribution rate and investment strategy. This limits the possibility of procrastination in joining the fund and reduces complexity of this decision. It is also possible to require people to decide pension scheme participation while signing job contract (Carroll et al., 2009; Thaler & Sunstein, 2021).

AE is a combination of a default option and a need of quick decision on participation. It enrols all individuals to the scheme with default contribution rate and investment strategy and requires those who do not want to participate to resign in the "opt-out window". Depending on the programme, after this period participation may become mandatory or refund of already collected contributions will be impossible. Many studies have confirmed the positive impact of the described methods on the level of retirement savings (Orlik, 2023). AE is especially effective in boosting pension scheme participation of new hires, but its effect is visible also among people working longer for the company (Choi et al., 2004). Other research has shown a stronger impact of passive savings decision (including automatic contributions or mandatory participation) on the overall household saving rate. While policies raising the financial attractiveness of pension saving attract a relatively small group of the population, which redirects savings already made to more profitable solutions, initiatives that do not require people to take action in order to start saving receive wider coverage at a potentially lower cost (Chetty et al., 2014).

The effectiveness of AE was initially studied on a firm-level (e.g., 401k pension accounts in the US), but led to nationwide legislations requiring introduction of AE covering all employees in the economy. This allowed for conducting more general research and analysis of the impact of nationwide AE rules on pension scheme

participation, including differences among firm size and sectors. Most subsequent studies have concentrated on one (Cribb & Emmerson, 2016; Jakubowski, 2021; Kritzer, 2007; Marriott, 2010) or a few countries (Bielawska & Turner, 2023; Peksevim & Akgiray, 2019) and identified AE as an effective tool for increasing pension scheme participation. In addition, this literature suggests that AE is less effective in countries characterised by macroeconomic instability and lower institutional quality.

However, as recent evidence from Choi et al. (2024) demonstrates, the long-term effect of behavioural initiatives may be attenuated by several factors. Automatically enrolled employees may prefer current consumption over retirement savings and use opportunities to withdraw accumulated funds. On the other hand, in the absence of AE, many people actively join the scheme and increase their contributions over time, narrowing the differences with the group treated by behavioural initiatives. In light of this research, the introduction of AE may be seen as an opportunity to establish uniform saving rules for all employees, including the mandatory establishment of occupational schemes and immediate vesting of employer contributions. This would help even active savers, who previously did not have the option of automatic payroll deductions, nor did they receive employer matching contributions, to save more effectively for retirement.

Background and methodology

The article employs a multiple-case study design (Yin, 2018), supplemented by a multi-dimensional comparative analysis. Given that all examined countries share the implementation of AE and have achieved a substantial level of development (reflected by OECD membership), their selection reflects the logic of the most-similar cases methodology (Seawright & Gerring, 2008). The study evaluates the participation in voluntary pension schemes by examining the interplay between behavioural design (AE rules, and opt-out possibilities), financial incentives (government subsidies and employer contributions), the institutional and macroeconomic environment (the rule of law and wage levels), and the benefits paid from mandatory schemes. Specifically, it seeks to explain which factors reinforce or attenuate the effectiveness of AE. Data on the use of third-pillar solutions were synthesised from official national sources, which (depending on local practices) are published by financial regulators, statistical offices, or other public institutions. Academic literature, identified through targeted searches in the Scopus and Web of Science databases, complemented by Google Scholar queries and backward reference screening, constitutes the scientific basis of this study. Special attention was given to works directly addressing the design and outcomes of nationwide AE schemes.

There are three main indicators of the development of voluntary pension products: participation (savers/working-age population), contributions (average contribution/average wage), and assets (total assets/GDP) (see: Marcinkiewicz, 2019). In the case of newly established nationwide AE schemes, the most important indicator is participation rate, calculated here as a percentage of eligible population saving in a scheme. This approach enables measuring the precise impact of AE, as a denominator depends on particular legislation, which may establish age or income AE criteria. For

this reason, the article will concentrate on participation rate among eligible population (as a rule, the complement of the opt-out rate). Both the contributions and assets deserve less attention due to establishment of the minimum/default level of contributions in the AE schemes. It closely defines nominal contributions as well as assets.

Whilst the participation rate is identified as the primary indicator of scheme success, it should be acknowledged that it does not fully reflect adequacy and long-term outcomes. Participation rates are driven by individuals' decisions whether to partake in a given scheme and are shaped by the dimensions analysed in this article. By contrast, long-term outcomes and adequacy depend to a greater extent on regulatory parameters set by the government, such as contribution rates and withdrawal rules, as well as on the persistence of saving behaviour over the life course. As Cribb & Emmerson (2016) demonstrated, in the UK, introducing an AE scheme may "anchor" contribution rates at a statutory minimum, despite the prior practice of setting higher rates in voluntarily established occupational schemes. In such cases, AE increases the total participation rate, however, it may decrease the contribution level among groups previously covered by pension agreements. On the other hand, people seem to make active decisions more frequently when the default contribution rate (which is also the minimum rate in the case of a nationwide AE scheme) is suboptimal or excessively high (Beshears et al., 2023). This implies that it cannot be set too high, so as not to result in a high opt-out rate. Ultimately, this creates a policy trade-off, where parameters designed to maximise participation may compromise the long-term adequacy of retirement savings. A similar dilemma applies to early withdrawal rules. While their presence may increase a scheme's appeal and boost the participation rate, they can result in significant leakages that reduce old-age income adequacy (Munnell & Webb, 2015).

Since the design of the mandatory pension system is the reference point for additional savings, Table 1 presents the replacement rates projected for the studied countries. Because in some parts of the article, values in national currencies are presented, the exchange rate to the EUR and the average wage level are also given. Additionally, as institutional quality is an important factor influencing opt-out decisions and one of the dimensions analysed, the Rule of Law score collected from the Worldwide Governance Indicators is also included.

The presented data show low benefits paid in all studied countries except Türkiye. For mean earners in remaining states, replacement rates are significantly below 70%, the rate is used as a benchmark of decent pension, allowing for consumption smoothing. Ireland, New Zealand, and the United Kingdom offer flat-rate pensions. This results in a higher replacement rate for minimum wage earners than high-income earners. AE in such cases offers the possibility to add a widely available and used earnings-related component of pension provision.

The Lithuanian public scheme pays a combination of a flat-rate and an earnings-related component. This also results in a lower replacement rate for high-income earners. Poland has only an earnings-related scheme, which offers a stable but low replacement rate for all income groups (there is also a minimum pension) (OECD, 2025c). For these countries, AE helps increase the replacement rate to a more appropriate level for all workers.

Table 1. Replacement rates, average wages, Rule of Law scores, and exchange rates to EUR in the studied countries

Country	Gross replacement rate			Average wage	Rule of Law score	Exchange rate to EUR
	50%	100%	200%			
New Zealand	65*	40	20	92,779	85.7	2.04
United Kingdom	45	22	11	44,806	78.8	0.87
Türkiye	69 *(66)*	69 *(66)*	69 *(66)*	389,034	42.5	50.48
Poland	30 *(33)*	29 *(22)*	28 *(22)*	91,625	66.9	4.22
Lithuania	27	17	13	28,756	80.6	NA
Ireland	49	24	12	55,591	84.4	NA

*For New Zealand, the values for the 63% mean wage.

Source: Own work based on European Central Bank (2025), OECD (2025a; 2025b; 2025c), World Bank (2025).

The gross replacement rate for a worker entering the labour market in 2024, earning 50/100/200% of the mean wage until retirement age (values for women in parentheses when different). Average annual wages in local currencies as of 2024 (2023 for Türkiye). The Rule of Law indicator as of 2024, measured on a scale from 0 to 100 captures "the extent to which agents respect and follow the rules of society, including contract enforcement, property rights, the police, courts, and the likelihood of crime and violence" (World Bank, 2025). Exchange rates as of December 31, 2025.

Country case studies

New Zealand

KiwiSaver, introduced in New Zealand in 2007, was the first auto-enrolment programme at the national level worldwide. It was motivated by a low household saving rate and the flat-rate benefit in the public scheme. Low occupational scheme coverage (13.4%) and the absence of previous tax support for retirement saving were also critical factors (Marriott, 2010).

The key idea of KiwiSaver, stable since its introduction, is auto-enrolment of all employees aged 18–65 starting new employment, with the possibility to opt out between the second and eighth week. After this period, resignation is not possible, but contributions may be suspended up to 1 year, with the option to make resuspensions (Dale, 2019; Kritzer, 2007). Employee contributions are made from net income (no tax exemption). Accumulated capital can be withdrawn at retirement age as a lump sum or in instalments. KiwiSaver is not only dedicated to working people, as there is a possibility to opt in via provider and make voluntary lump sum contributions, qualifying for government subsidies. Taxation of investment gains is similar to the rules for other forms of saving (MacDonald & Ross, 2019).

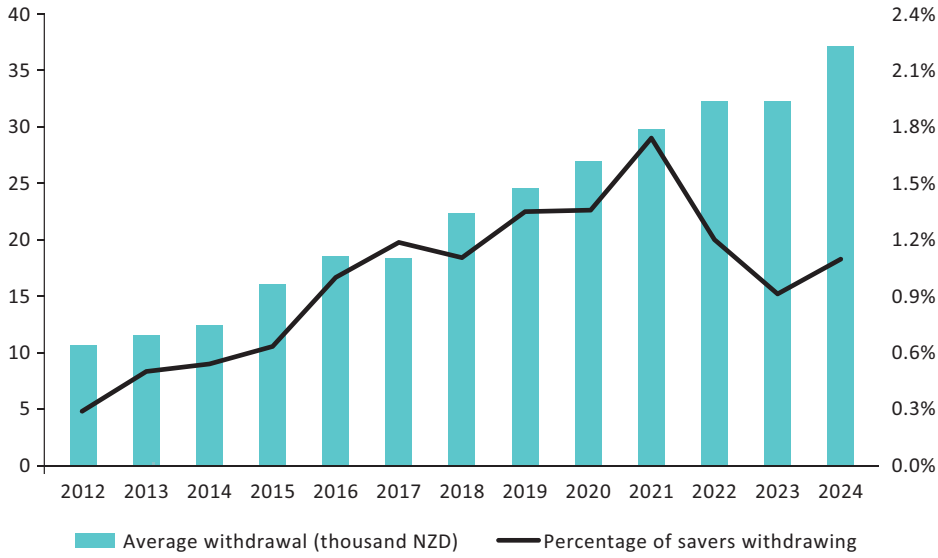
KiwiSaver has been reformed many times since its introduction. Most changes reduced its attractiveness and lowered the fiscal cost of government subsidies. Initially, the scheme offered a 100% government match of employee contributions up to

1,043 NZD per year, a rate that was gradually reduced to 25% in 2025, with individuals earning above 180,000 NZD becoming ineligible for the subsidy. There was also a 1,000 NZD "kick-start" deposit for new accounts, which was phased out in 2015.

At the inception of KiwiSaver, the default employee contribution rate was 4% of salary and employer contributions were planned to reach this level in 2011. In 2009, however, a new default rate of 2% was applied to both employees and employers. The reform was partly reversed in 2013, when 3% became the default[3]. Since 2012, employer contributions have been taxed at a rate close to PIT (previously tax-exempt) (Hobbs & Feld, 2023; Marriott, 2010).

Early withdrawals (before the age of 65) are possible in three cases: a first-home purchase, illness, and financial hardship. Figure 1 presents the average value of the first home withdrawals and the percentage of total savers who have withdrawn funds. The increase in the average pay-out over time is logical due to the relatively short duration of the programme, so that those making later withdrawals have generally participated for a longer time. The recent withdrawal rate of more than 1%, given that this pay-out can be made only once and the KiwiSaver is a lifelong scheme, means that this way of using funds is quite popular.

Figure 1. Average value (LHS) and share of savers (RHS) making first-home withdrawals from KiwiSaver, New Zealand, 2012–2024

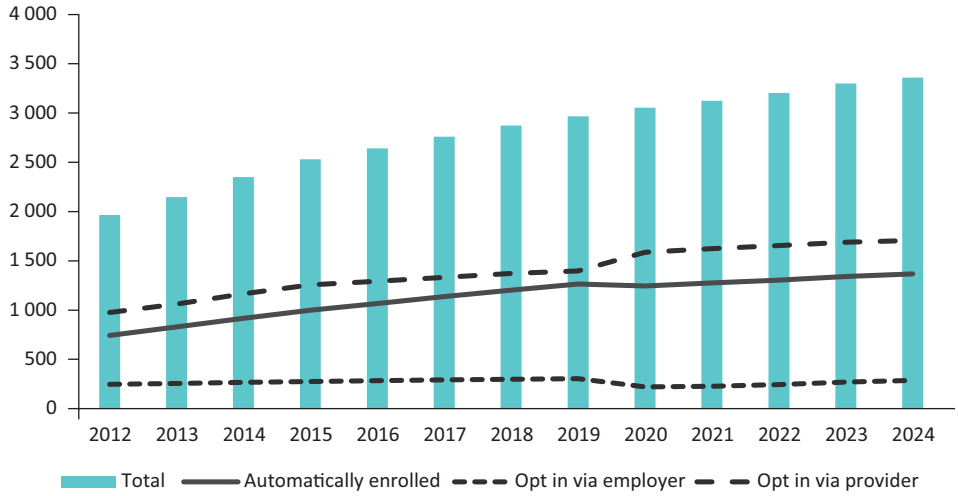


Source: Own work based on Inland Revenue (2025).

[3] In April 2026, the default contribution rate and employer subsidies rose to 3.5% and are scheduled to increase further to 4% in April 2028.

In KiwiSaver, 75% of the eligible population participates. Among all savers, 59% opted in and 74% actively chose the investment fund. Many opt-ins result from auto-enrolment of individuals starting new jobs, which means that those in stable employment need to take action to participate and receive attractive subsidies. The number of participants is presented in Figure 2.

Figure 2. Number of KiwiSaver participants and enrolment method (thousands), New Zealand, 2012–2024

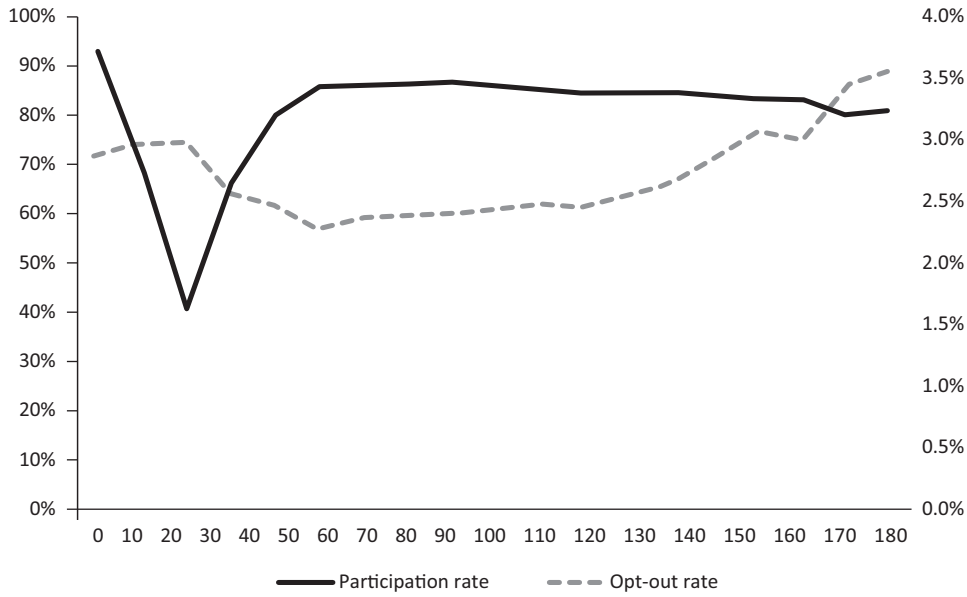


Source: Own work based on Inland Revenue (2025).

KiwiSaver is most attractive to low-wage earners because government subsidies are capped in nominal terms and subject to an income eligibility limit. Minimum wage earners contributing 4% of their salary have been able to receive most of the government subsidies available since the inception of the programme. Conversely, higher earners benefit from larger nominal employer contributions and a lack of their taxation since 2012 (progressive PIT). This implies that the (low-income) group, which has a high replacement rate in the public scheme, also receives attractive conditions in KiwiSaver. This is reflected in the stable participation rates (Figure 3), which oscillate above 80% for all income groups above 40,000 NZD (slightly below minimum wage). Such consistency across the income spectrum demonstrates that the scheme's financial design effectively incentivises lower-income workers to participate, despite relatively generous pension expected from public pillar.

For income groups up to 40,000 NZD, the participation rate is V-shaped but opt-out rates are only up to 0.3 p.p. higher than average. This indicates that the higher number of non-savers in the 10,000–40,000 NZD income range is a result of not opting-in despite the possibility of gaining subsidies, rather than massive resignations.

Figure 3. Participation (LHS) and opt-out (RHS) rates in KiwiSaver among income groups, New Zealand, 2024



* The horizontal axis represents income bands in thousands of NZD, ranging from 0 to 180,000 and above. Data are grouped in 10,000 income brackets.

Source: Own work based on Inland Revenue (2025).

United Kingdom

In the United Kingdom, AE was introduced in 2012. Its implementation was parallel to the reform of the public scheme, which abolished the earnings-related component and introduced a flat rate benefit (Robertson-Rose, 2021; for a review of public scheme see: Crawford et al., 2013). Voluntary pensions can thus help medium-high earners to achieve an appropriate replacement rate.

Even before 2012, the UK had a well-established tradition of voluntary occupational schemes, which covered 36% of private sector workers. Additionally, 20% of the population participated in personal schemes. Employers who did not offer occupational pensions were required to offer deductions of contributions from salary to Stakeholder Pensions. Like other third-pillar solutions in the UK, this offers tax exemption for contributions and investment returns. Withdrawals are taxed at the marginal PIT rate (except the first 25% of capital) and are possible after reaching age 55 or in cases of ill health (Cribb & Emmerson, 2016; Disney et al., 2007).

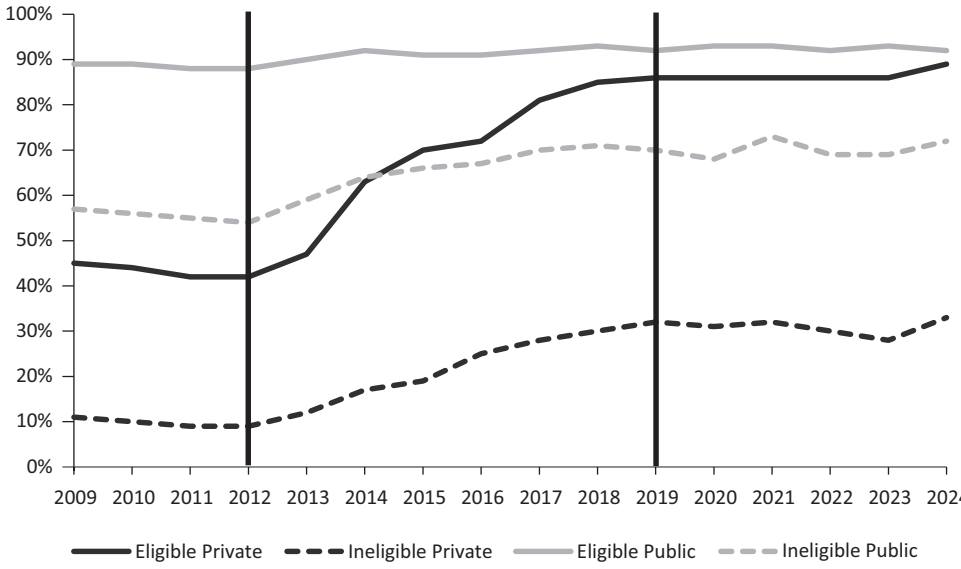
AE into pension schemes was combined with mandatory employer matching contributions. Employees of big companies were enrolled first (in 2012), while small enterprises joined up to 2018. Contribution rates increased to 5% for employees and 3% for employers in 2019. As contributions are tax-exempt, the real contribution of

workers is 4% (at the basic 20% tax rate) because the tax relief covers the rest. The standard withdrawal rules apply (Cribb & Emmerson, 2016). AE was introduced as part of occupational schemes, so employees with pension plans and appropriate contributions were not subject to any changes.

AE applies to persons older than 22 but below retirement age, if their yearly income exceeds the 10,000 GBP "earnings trigger". However, contributions are paid for "qualifying earnings" bracket (currently 6,240–50,270 GBP) (The Pensions Regulator, 2026). Those who want to opt out must do so within one month to get their contributions back; thereafter, they remain invested in the scheme until retirement but it is possible to suspend saving. After three years or while changing an employer, AE takes place again (Davies & Kolaczkowski, 2022).

In 2026, the minimum yearly wage for adults is above 25,000 GBP, so all full-time workers are subject to AE. However, those earning twice the minimum wage are close to the upper level of qualifying earnings, and high-income earners do not save additional money in occupational pensions. Introduction of AE significantly increased coverage of occupational schemes in the private sector – Figure 4. Before mandatory AE, 42% of employees who met future AE criteria participated. After the end of the programme implementation, more than 85% were active savers. Additionally, many individuals not affected by AE reform, due to low income or young/old age, decided to join the scheme actively (Cribb & Emmerson, 2016).

Figure 4. Participation rates in occupational schemes, United Kingdom, 2009–2024

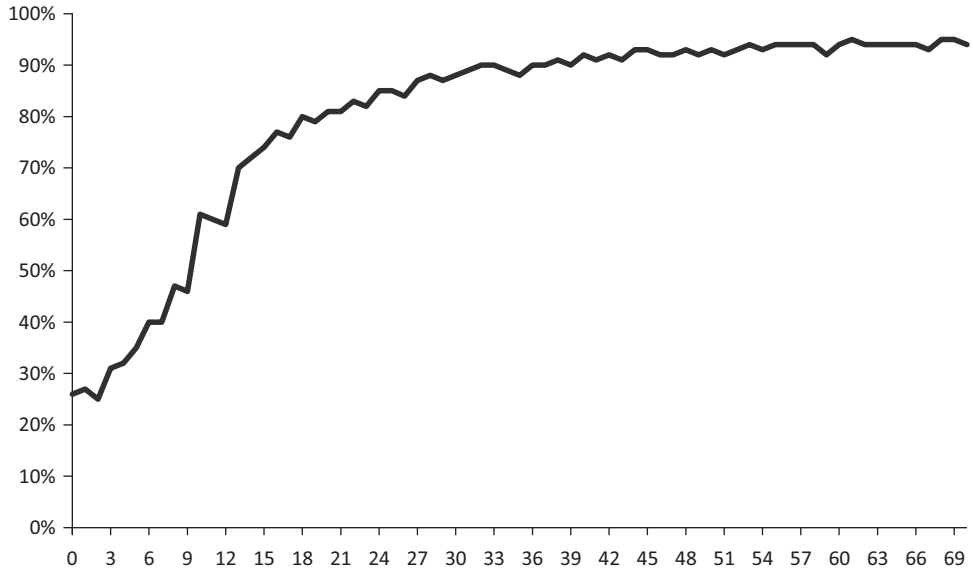


* Eligible employees are defined as those meeting the AE criteria, including the period prior to the scheme's introduction. Vertical lines mark the period of AE introduction.

Source: Own work based on Department for Work and Pensions (2025).

Like previous third-pillar accounts, the AE programmes favour high-income savers who pay PIT at a higher marginal rate. The scheme allows them to receive greater tax relief and take advantage of a 25% tax-free withdrawal, combined with a possible lower marginal PIT rate in old age. This also applies to employer matching contributions, which all savers receive at a similar level (compared to their contributions). However, high earners may benefit from higher marginal tax relief for this (deferred) part of remuneration. The greater attractiveness of the scheme for higher-rate taxpayers is reflected in a participation rate that increases alongside income levels (see Figure 5). Participation rises rapidly among the lowest-income groups, especially around the 10,000 GBP earnings trigger – this upward trend continues up to approximately the average wage level.

Figure 5. Participation rates among income groups in the AE scheme, United Kingdom, 2024



* The horizontal axis represents income bands in thousands of GBP, ranging from 0 to 70,000 and above. Data are grouped in 1,000 income brackets; axis labels are displayed every 3,000.

Source: Own work based on Department for Work and Pensions (2025).

Türkiye

Auto-enrolment was introduced in Türkiye in 2017 (with enrolment taking two years depending on company size) as a continuation of the savings incentive projects started in 2013 (Sahin & Elveren, 2011). Benefits for savers in the AE scheme are similar to those established in 2013 in the Individual Pension System (IPS), which offers a 20% government subsidy on participants' contributions[4]. Standard withdrawal is possible after 10 years of saving and upon reaching the age 56. Contributions are made from net income, so capital is not taxed upon withdrawal, but investment returns are taxed at 5% (OECD, 2015; Pension Monitoring Center, 2025b). According to the earliest data published by the Pension Monitoring Center (2025c), 21% of the workforce participated in the IPS in 2019. Occupational schemes were almost non-existent in the private sector (Peksevim & Akgiray, 2019).

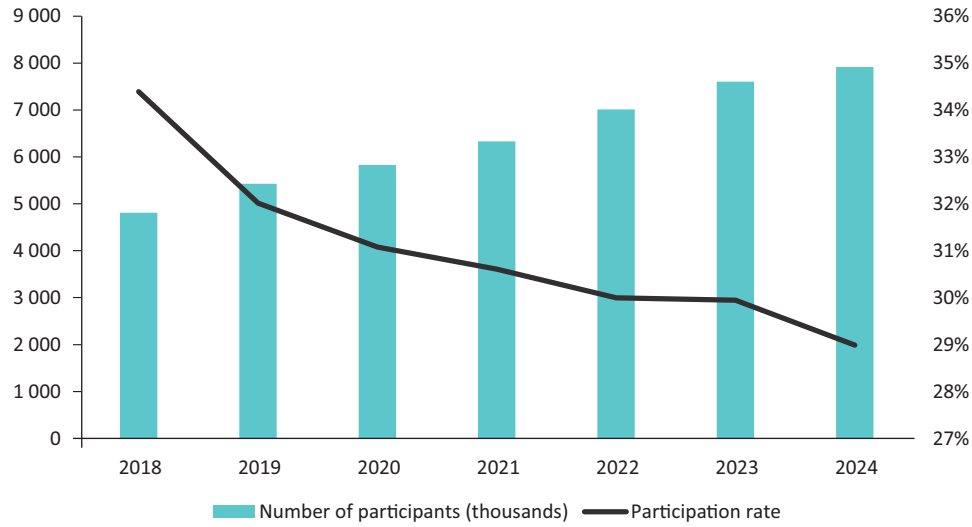
Although it is possible to withdraw the entire capital from IPS at any time by closing the account, state subsidies are reduced (most benefits vesting only after 10 years of participation) and higher taxation of investment returns may apply. In the case of disability, pre-retirement withdrawal is possible without loss of government subsidy (5% tax on profits). The AE system is separate from the IPS; however, the above-described rules apply to both third-pillar solutions. All employees younger than 45 are subject to AE with a 3% contribution rate (Social Security Administration, 2022). The scheme did not introduce employer contributions. Opt-out is possible within 2 months; after this period, the individual may close an account (described above, as in IPS) or suspend contributions – employees who decide to stay in the scheme receive a 500 TRY government subsidy[5]. There is also a subsidy of 5% of accumulated funds if a saver decides to withdraw money as at least 10-year annuity at retirement (Pension Monitoring Center, 2025b).

As only 29% of workers participate, the AE programme is evaluated as unsuccessful and not achieving the desired goals (Bielawska & Turner, 2023). However, it attracted participants much faster than IPS, which demonstrates that AE helps boost participation but does not guarantee success (Yanıkkaya et al., 2023). Additionally, the lack of re-enrolment (except upon starting new employment) hinders future increases in coverage. The participation rate is presented in Figure 6.

[4] The government subsidy was 25% until January 2022 and 30% until January 2026. In 2026, further changes to the AE scheme are planned, as it is going to be transformed into a mandatory second pillar scheme.

[5] 1,000 TRY until January 2026.

Figure 6. Number of participants (LHS) and participation rate (RHS) in the AE scheme, Türkiye, 2018–2024

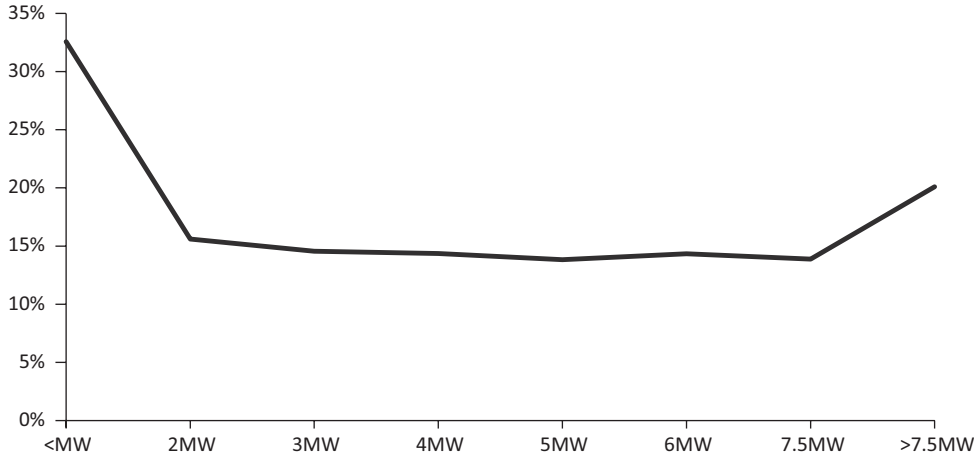


* The participation rate is calculated by comparing the number of individuals with active and closed AE contracts.

Source: Own work based on Pension Monitoring Center (2025d).

The low interest in the programme can be attributed to its limited attractiveness: the lack of an employer match and moderate state subsidies. The government's welcome deposit of 500 TRY theoretically makes the scheme more attractive to low-income individuals, as this amount is higher in relation to their contributions. Data on participation rates among income groups (Figure 7) show that people earning below the minimum wage (e.g., part-time workers) participate in the AE scheme most frequently (33%). This may confirm the importance of the welcome deposit for this group or be a result of a small nominal burden, which is outweighed by the perceived bureaucratic cost of opting out. Participation ranges between 14% and 16% for middle-income employees (earning between one and 7.5 times the minimum wage), rising slightly to 20% for the highest-income earners.

Figure 7. Participation rates among income groups in the AE scheme, Türkiye, 2018–2024



* The horizontal axis represents income bands as multiply of minimum wage (MW). Data are based on the number of certificates.

Source: Own work based on Pension Monitoring Center (2025a).

Overall, the low participation rate may partly result from high inflation levels (with historical peaks above 50%), which diminish confidence in long-term investment returns and, combined with the taxation of nominal investment gains, effectively overshadow the 20% government subsidy. Yanıkkaya et al. (2023) identified that an increase in returns from investments in gold or USD negatively affects the number of new participants in the IPS. Low income, debt repayment and lack of affordability of pension contributions are also cited as important reasons (Bielawska & Turner, 2023).

Poland

Poland introduced auto-enrolment when setting up an additional third-pillar scheme. Employers with more workers entered the scheme faster, the first in 2019, while smaller companies and the public sector joined in 2021. The introduction of the AE scheme was intended to raise coverage of voluntary pension plans from a mere 12% of the workforce (Urząd Komisji Nadzoru Finansowego, 2019a; 2019b; 2025b).

Employee Capital Plans introduced auto-enrolment of all employees younger than 55 who are subject to social contributions. Those who decide to opt out (available at any time) are enrolled again every four years. Default employee contribution is 2% (no tax relief) and can be reduced to 0.5% for workers earning below 1.2 times the minimum wage. Employer match (exempt from social contributions, but taxed by PIT) is set at 1.5% of salary. The government offers 250 PLN for everyone who decides to stay in the scheme, plus an additional 240 PLN for each year of participation.

Withdrawal is possible at age 60. To obtain relief from capital gains tax (no other taxes apply), the individual must withdraw at least 75% of the capital in instalments

spread over 10 years. Before the age of 60, participants can withdraw all accumulated capital. However, taxation of investment profits applies, government subsidies are removed, and a 30% social contribution levy is imposed on employer contributions (Pogonowski, 2023). Withdrawal is also possible (without penalties) in the event of serious illness (25% of assets) and to cover a down payment when taking out a mortgage (for savers younger than 45; 100% of assets)[6]. As of May 2024, a total of 3.1 thousand participants (0.06% of all members) had utilised the home-purchase withdrawal option, taking out on average 16,200 PLN (Polski Fundusz Rozwoju, 2024). This relatively low use may reflect limited awareness of the option, or the short duration of the programme, meaning participants have not yet accumulated balances large enough to justify the effort required for withdrawal.

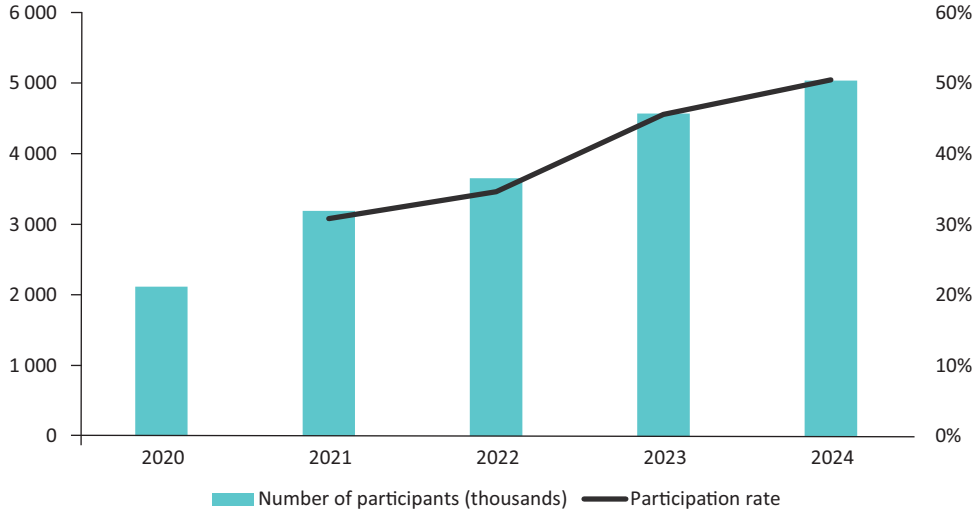
State and employer subsidies make the AE scheme financially more attractive than other third-pillar solutions. However, the investment rules are heavily regulated. Equity allocation must include at least 40% stocks of companies from the WIG20 index[7]. This raised some concerns, as at the end of 2018, 12 out of the 20 companies in the WIG20 index were under the control of the State Treasury, accounting for 74% of the index's total weight (Jakubowski, 2021; Prusik, 2021).

Another issue is the relatively low quality of the institutional environment in Poland, evidenced by the second lowest Rule of Law score among the analysed countries. This undermines the perceived credibility of pension arrangements and the capital market. The AE scheme is often compared to Open Pension Funds, which were a funded part of the mandatory pension scheme. However, in 2014, the government transferred 51.5% of their assets to the public pay-as-you-go (PAYG) pillar (Szczepański et al., 2022). Fear of a potential state "takeover" of ECP funds discourages some employees from participating in the programme (Bielawska & Turner, 2023). Therefore, as presented in Figure 8, the participation rate is at a moderate level of 50%. The dynamic increase in the number of participants in 2023 can partly be attributed to the first re-enrolment round.

[6] Funds must be repaid at nominal value to the scheme within 15 years; otherwise, capital gains tax applies.

[7] This index comprises the twenty largest companies listed on the Warsaw Stock Exchange.

Figure 8. Number of participants in occupational plans (LHS) and participation rate (RHS), Poland, 2020–2024



* The number of participants is calculated as the sum of participants in the EPP and AE schemes. The participation rate is defined as the share of participants covered by AE who remain in the scheme.

Source: Own source based on PFR Portal PPK (2025), Urząd Komisji Nadzoru Finansowego (2025a; 2025b).

Participation in the AE scheme is slightly more attractive for low-income earners, as government subsidies are relatively higher in comparison to their contributions. Special rules for minimum wage earners – possibility to reduce contributions to 0.5% keeping all subsidies constant – make the ECP very attractive. This should encourage low earners to participate in the scheme, which is desirable given the small public pension for this group.

Lithuania

In Lithuania, auto-enrolment to voluntary savings was implemented after the reform of the second pillar. Capital part of the mandatory pension scheme began with the optional transfer of a part of the mandatory social contribution to funded accounts instead of PAYG in 2004 (Bitinas, 2011). The reform of 2014 introduced additional contributions – participants could contribute 2% of their salary and receive a government match of 2% of average pay (Bitinas & Maccioni, 2014). As a result, since 2014, the second pillar did not have (yet) auto-enrolment, but became another option for making voluntary pension savings.

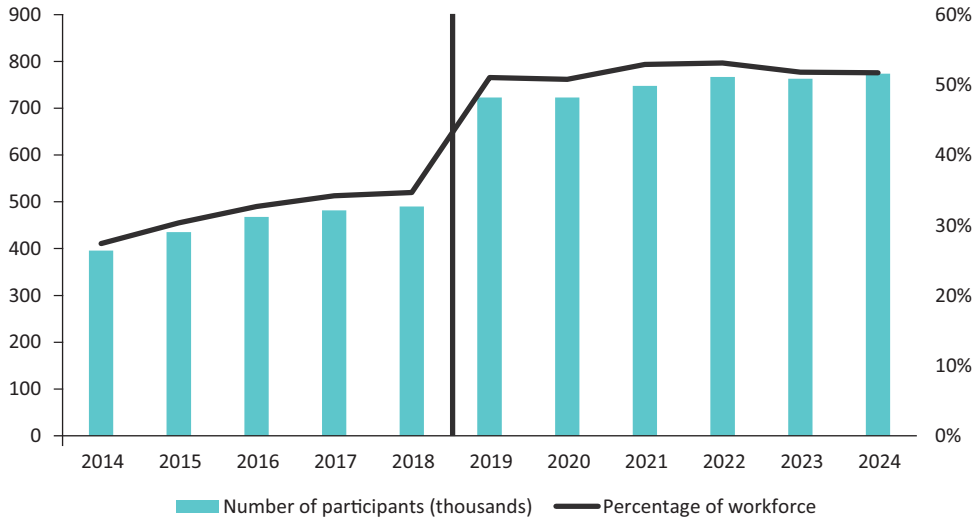
The second pillar was reformed again in 2019, when the transfer of mandatory contributions from the PAYG scheme to the second pillar was abolished, so those who wanted to contribute needed to do so voluntarily. New rules introduced contributions of 3% of a salary and a government subsidy of 1.5% of the average wage. Most employees automatically joined the second pillar with voluntary contributions; people over 40 who were not saving in the second pillar were not AE (Katinaitė, 2020). People (younger than 40) entering the labour market after 2019 were also AE with 3% contribution.

Further changes were introduced in 2026: AE was discontinued, current savers were allowed to withdraw part of accumulated assets during a two-year grace period, and more flexible withdrawal options were introduced (including pre-retirement). The main focus is going to be placed on informing (through annual invitation letters) individuals about second pillar saving opportunities, rather than relying on AE. However, the main parameters such as contribution rate and government subsidy remain unchanged. Because the reform was implemented only recently, it is not yet possible to assess its impact on scheme development (this will be fully possible after 2027); therefore, the article will describe the scheme as of 2025 (after the key 2019 reform).

Under 2019 legislation, opt-out was possible within six months after AE; following that period, participation became mandatory to the end of career. All workers younger than 40 were re-enrolled every three years. Withdrawal was possible after reaching retirement age, without taxation. Depending on the value of the assets, benefit could be taken as a lump sum, in instalments, or as an annuity.

Introduction of AE, as presented in Figure 9, increased the number of participants making additional contributions (to 52% of the workforce). This implies that AE has proven to be an effective way of increasing retirement savings, and its impact has been more substantial than state subsidies. In 2014, when the possibility of making additional contributions was introduced, the government offered effective 100% match for average income earner. However, the participation rate increased slowly, up to 35%. Introduction of AE, combined with reduction of subsidy and increasing contribution (50% match for average income earner), raised participation by 16 p.p. within one year.

Figure 9. Number of participants making voluntary contributions to the second pillar (LHS) and participation rate (RHS), Lithuania, 2020–2024



* The participation rate is calculated as the number of participants in relation to the active workforce. The vertical line marks the year of AE introduction.

Source: Own work based on Lietuvos Bankas (2023; 2025).

The scheme is more attractive for low-income earners because a 1.5% average wage subsidy is higher in relation to their contributions[8]. Given a low expected replacement rate for all income groups, additional pension benefits accumulated by all workers are desirable.

Ireland

Ireland launched its AE scheme in 2026. The pension system in this country is similar to that of the United Kingdom; both countries began the evolution of pension provision with the same Act in 1908, during British rule in Ireland. The programme aims to increase private-sector supplementary pension coverage. As in the UK, additional pension schemes were widespread in Ireland even before AE (37% of the workforce participated). However, those without an occupational plan rarely accumulated pension savings, as in 2022 only 13% of the labour force held a Personal Retirement Savings Account (PRSA) (The Pensions Authority, 2022; Department of Social Protection, 2022). Employers without occupational plans had to offer automatic deduction of contributions into a PRSA (The Pensions Authority, 2024).

[8] Medaiskis et al. (2018) studying data before 2019 reform, identified that the share of workers voluntary making additional contributions was higher among lower earners.

Unlike previous third-pillar solutions, which offered exemption from progressive PIT and attracted high-earners, the new AE scheme introduces government subsidies at the same rate for all participants; additionally, a 100% employer match applies. Contribution rates are scheduled to increase in the first years of the scheme's operation – details are presented in Table 3. Employees contribute a set percentage of their gross wages, deducted from net pay (Whelan & Hally, 2023).

Table 3. Contribution rates and state subsidy in the AE scheme in Ireland

Year of operation	Employee	Employer	State subsidy	Total
1–3	1.5%	1.5%	0.5%	3.5%
4–6	3.0%	3.0%	1.0%	7.0%
7–9	4.5%	4.5%	1.5%	10.0%
10+	6.0%	6.0%	2.0%	14.0%

Source: Own work based on the Automatic Enrolment Retirement Savings System Act 2024.

AE applies to all employees between 23- and 60-years old earning more than 20,000 EUR per year (slightly below minimum wage). Workers who participate in another pension plan cannot join the AE scheme. Any scheme related to held position, to which contributions are payable by the employee, employer or even PRSA contributions deducted from net pay, meets this criterion. No minimum level has been set for the contributions that must be made to exclude participants from the AE scheme; however, they will probably be introduced in the future. As in Britain, the earnings threshold was applied – earnings above 80,000 EUR are not subject to contributions.

After enrolment into the scheme, all individuals must participate for six months; after that period, there is a two-month "opt-out window" in which all contributions are refunded (re-enrolment every 2 years). Thereafter, an employee becomes a scheme member and can only suspend contributions for a maximum of two years (Department of Social Protection, 2022).

Withdrawal is possible upon reaching retirement age or in the event of ill health. Currently, only a lump-sum payment (25% of the withdrawal tax-free and 75% subject to PIT) is available, although other options are planned to be added in the future. The lack of well-defined withdrawal rules may raise uncertainty about the overall attractiveness of the scheme and discourage individuals from saving.

Discussion and conclusions

The case studies showed a variety of solutions used in countries implementing auto-enrolment. The experience of the five countries in which AE was functioning for several years (the first participation data for Ireland will probably become available in the second half of 2026, after "opt-out window") makes it possible to identify several broad patterns.

Addressing RQ1 on coverage, the analysis suggests that AE schemes achieve high participation rates across target populations in countries where behavioural nudges are supported by a stable institutional environment and attractive saving rules. At the same time, replacement rates from mandatory schemes appear to be less important, meaning that low public pension benefits are not the sole factor motivating individuals to save.

Countries with a lower rating in the Rule of Law score (Türkiye and Poland) achieve lower participation rates than their higher-scoring counterparts (New Zealand and the United Kingdom). In this respect, the moderate popularity of the Lithuanian scheme stands out negatively. This is probably a result of a less developed saving culture, the ongoing post-Soviet economic transition, and the emerging role of voluntary pension schemes, which contrast with the mature structures in the UK.

The case of New Zealand shows that, once the institutional environment is favourable, pension schemes may achieve high participation level even under weaker behavioural nudges. In this country, due to the lack of AE for people in stable employment, most participants actively opted in, encouraged by generous financial incentives and broad information campaigns (O'Connell, 2009). This observation aligns with the premise explored in RQ2, which confirms that financial conditions encourage the targeted population to save.

Additionally, no straight relationship between the replacement rate from the public scheme and participation in AE programmes was identified. The lowest participation rate occurs in Türkiye, where the benefits from the mandatory scheme are the most generous, but the other factors (institutional quality and financial incentives) are probably the ones discouraging participation. On the other hand, high participation in New Zealand is achieved in parallel to a relatively decent replacement rate from the public scheme (the highest among the remaining countries, except Poland's high-income workers). This lack of dependence is further evidenced by Lithuania. Despite offering the lowest replacement rates from mandatory contributions (except for high-income groups in the UK), it has achieved only moderate participation in the AE scheme.

In both New Zealand and Poland, accumulated funds may be withdrawn to finance a first-home purchase. This solution should make participation in the AE scheme more attractive for young workers, who are subject to AE, but face more urgent financial expenses than retirement saving. However, the evidence suggests that this feature probably plays a secondary role in determining participation rates. Although this withdrawal option is widely utilised in New Zealand, high participation rates are better explained by the favourable institutional environment and generous financial incentives discussed above. Similarly, the availability of a housing withdrawal option in Poland has not prevented elevated opt-out rates driven by a weak institutional environment.

It should be noted that while this study focuses on participation, which is crucial for ensuring broad coverage and avoiding income inequalities in old age, other factors like contribution rates and saving persistence were given less attention. However, because countries with higher total contribution rate (the sum employee and employer contributions, as well as government subsidy) also achieve higher scheme coverage, incorporating these adequacy dimensions would likely reinforce the overall conclusions of the study.

Addressing RQ2 on the impact of financial incentives, data on participation rates among income groups collected for New Zealand, the United Kingdom, and Türkiye allows for the measurement of the relationship between the attractiveness of the schemes and the coverage. Schemes offering relatively greater benefits to low--income workers (New Zealand and Türkiye) through lump-sum government subsidies, achieve a mostly stable participation rate across different groups of workers (earning above the minimum wage). On the other hand, the British AE programme, which is more attractive to high-income earners due to tax exemptions, exhibits a participation rate that rises with income. This suggests that even low-income households may be willing to reduce their current consumption if incentives are sufficiently large and that governments may influence participation across socio-economic groups through tailored benefit structure.

However, it is important to acknowledge the limitations of drawing conclusions from a limited sample of three countries. Furthermore, there are significant differences among them. In the case of New Zealand, due to the lack of AE for people in stable employment, participation rates and opt-out rates present a different picture of programme participation. Although it is assumed that in this case the opt-out rate is a more informative indicator, this results in further limitations regarding the direct comparability of the data. These constraints may only be addressed by analysing a significantly larger number of countries for which participation data across income groups are available or through detailed micro-level studies.

Addressing RQ3 on the design of the AE scheme introduced in Ireland, the analysis shows that it shares significant similarities with the model successfully operating in the United Kingdom. Both countries apply lower and upper earnings thresholds for the contributions. The minimum level excludes low-income earners (part-time workers), who can count on a high replacement rate from the first pillar. For this reason, it makes sense not to enrol them and not to burden their (low) income with additional contributions. In Poland, the possibility of lowering the contribution rate when earning minimum wage corresponds to a low replacement rate for all workers. This mechanism does not fit into the Irish system. On the other hand, the contribution cap corresponds to the Beveridge pension model, which provides (more generous due to AE) a safety net rather than consumption smoothing for high earners.

As in the UK, young workers are excluded from AE in Ireland. On the one hand, younger workers tend to earn less and have more important life expenses to meet. On the other hand, people starting a career may still live with their parents and do not have many current expenses, which is a favourable situation to accumulate savings (Joint Committee on Social Protection, Community & Rural Development and the Islands, 2023). New Zealand and Poland enrol young employees into the scheme but allow for withdrawal in case of home purchase. Therefore, two main models of treatment of young people may be identified: AE combined with first home withdrawal or higher AE age combined with uninterrupted accumulation, with the Irish implementation establishing the latter approach. Overall, as Foster et al. (2020) noticed, excluding some working periods (young age) from pension saving translates into a higher impact of potential career breaks on pension benefits (in the absence of early withdrawals), so higher inequalities and gender gaps may be observed.

Ireland is going to have, after nine years of the scheme's introduction, the highest contribution rate. The success of the British scheme, currently with the highest rate, seems to assume that this will not translate into an increased opt-out rate. The six-month mandatory participation in the scheme is a pioneering solution. From the point of view of behavioural economics, it may allow employees to get used to a new, lower level of pay, before making a premature decision to opt out. As people compare their situation (net pay) to the previous one, an initially painful decrease in salary will be observed, but individuals will not be allowed to respond immediately. After six months, a possible increase in net wage (return to the previous level) should be seen as pleasant. However, as gains are two times less impactful than losses, savers should feel less incentive to resign (Kahneman, 2012). Re-enrolment every two years will be the most frequent among the studied countries, further hindering non-participation. This represents a shift in later programmes from the principle of "nudging" individuals to participate by AE, towards more restrictive solutions (frequent re-enrolments and mandatory participation periods).

Increases in contributions are planned to take place once, at the same time, for all workers. As a result, individuals entering the workforce after 2035 will face a 6% contribution rate upon joining the scheme. This may translate into many opt-outs because of the initial burden being too high. Therefore, it may be beneficial to set up a gradual increase in contributions for all new joiners (e.g., from the age of 18) and achieve the target rate after some years. This would align with the "Save More Tomorrow" programme identified by Thaler & Benartzi (2004) as most appropriate in achieving a high saving rate despite myopia and preference for current consumption. On the other hand, as Choi et al. (2024) showed, many people opt out of auto-escalation plans at subsequent contribution increases. Given that the Irish scheme does not permit cancellation of further increases, but only allows total resignation from the scheme, the final effect of gradual escalation of contributions would be similar to an instant 6% burden faced by new members in 2035. This also means that a full evaluation of participation levels in the Irish scheme will only be possible after the 10-year period of contribution increases. This lack of participation data, even for the first stages of implementation, constitutes a major limitation for cross-country comparisons and the evaluation of the Irish scheme. At this stage, the Irish scheme was only assessed based on its design features and the environment in which it operates, but not on its outcomes (e.g., participation rates), which partly narrows the scope of the analysis.

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