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BEHAVIOURAL ECONOMICS AND VOLUNTARY PENSION PARTICIPATION: A COMPARATIVE ANALYSIS OF ITALY, POLAND, THE UK AND NEW ZEALAND

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Abstract

Purpose – This article investigates the effectiveness of behavioural economics tools in increasing participation in voluntary pension programmes, explicitly focusing on automatic enrollment, default contribution rates, tax incentives, and behavioural nudges. The study aims to: (1) analyse how automatic enrollment influences participation rates across different countries, and (2) examine how trust in financial institutions and financial literacy moderate the effectiveness of these behavioural interventions.
Methodology – This study adopts a comparative approach, examining four countries that have implemented or experimented with auto-enrolment and other behavioural interventions—Italy, Poland, the United Kingdom, and New Zealand. The research draws on existing academic literature, policy reports, and empirical studies to outline each system's structure, the influence of cultural and institutional contexts, and the interplay of financial literacy and trust in shaping saving decisions.
Findings – The findings suggest that automatic enrollment can significantly increase pension participation rates, particularly when reinforced by sound regulatory policies, transparent governance, and initiatives to enhance financial literacy. However, trust in governmental and financial institutions emerges as a crucial moderating factor; lower trust often translates into reduced uptake of voluntary schemes. Behavioural nudges—framing, choice architecture, and matching contributions—prove pivotal in guiding individuals toward more proactive retirement savings.

Keywords: automatic enrollment, nudges, choice architecture

JEL classification: D14, G51, J26, H55

Introduction

One of the main problems with retirement savings is that people are often unwilling to save voluntarily for the future (Madrian, Shea, 2001). To address this issue, many pension systems worldwide have implemented automatic retirement savings, which involve employers automatically deducting a portion of employees' wages and transferring it to a retirement account (Thaler, Benartzi, 2004). This approach makes saving for retirement standard practice, eliminating individuals needing to take additional steps to start saving. Research has demonstrated that automatic retirement savings can increase the number of people saving for retirement and the total amount of their savings (Deacon, Sonnet, 2009). Additionally, automatic retirement saving is effective because individuals tend to stick with the status quo; once they are automatically enrolled, they are more likely to remain in the system than if they had to enroll themselves (Gruber, Madrian, 2002). Public pension systems often fail to provide adequate pensions. As a result, private pension systems using a defined contribution (FDC) formula are becoming increasingly significant. To secure an adequate pension, various forms of pension security must be utilised based on the FDC principle (Antolin, Whitehouse, 2009). While it is crucial for the foundational aspect of the system to be well-structured, the system alone cannot ensure sufficiently high returns, meaning that the design elements of the system are not only for allocation. All of this influences the behaviour of system participants. Employee programmes rely on the role and significance of the foundational part of the pension system. According to Petelczyc (2016), a robust public pension security pillar that offers a high replacement rate decreases the necessity for additional pension security within other pillars. There are three methods of pension security: insurance (Bismarckian), provision (Beveridge), and care (Petelczyc, 2016). In the Bismarckian system, the state is accountable for pensions, while in the Beveridge system, responsibility lies with the public. When the first pillar of the pension system is well-established and delivers substantial benefits, and when expectations are met, the need for additional pension security diminishes. The necessity for supplementary security arises when the system provides only basic benefits. Incentives that encourage people to work longer and save more are also vital, as the supplementary portion profoundly impacts the overall size of the pension. Current demographic and institutional conditions indicate that the importance of supplementary pension provision is significantly increasing (Szumlicz, 2010). Promoting the expansion of supplementary pension security based on funded pension plans is essential to enhance the adequacy of benefits, and behavioural methods can be employed for this purpose (Sieczkowski, 2023).

The primary objective of this research is twofold: first, to analyse the effectiveness of automatic enrollment and other behavioural interventions in increasing participation rates in voluntary pension systems across four countries with different institutional contexts; second, to examine how trust in financial institutions and financial literacy levels moderate these behavioural effects. This comparative analysis aims to identify which behavioural tools are most effective under different cultural and institutional conditions, thereby providing evidence-based policy recommendations for countries seeking to enhance voluntary pension participation.

Methodology

Neoclassical economic theories are founded on the assumption that individuals make rational decisions as homo economicus - a robot programmemed to optimise needs through a utility function (Ariely et al., 2017). However, people frequently make systematic errors in assessing this probability, undermining the theory's assumption regarding purely rational individuals. According to Benartzi and Thaler (2007), three cognitive errors - status quo bias, loss aversion, and present bias - are pivotal in this context. A fundamental law of human decision-making is the preference for the so-called status quo, meaning doing nothing or maintaining one's current or

previous choice (Samuelson & Zeckhauser, 1988). Benartzi and Thaler (2007) further state that beginning to save for retirement necessitates proactive action to instigate a change, which causes individuals to delay or avoid making decisions in this area. Loss aversion signifies a heightened sensitivity to losses compared to equivalent gains (Kahneman, Tversky, 1979).

This study employs a comparative case study approach to analyse voluntary pension systems in four countries: Italy, Poland, the United Kingdom, and New Zealand. The research design combines qualitative analysis of institutional frameworks with quantitative assessment of participation rates and behavioural intervention outcomes. The four countries were selected based on the following criteria:

- implementation of automatic enrollment at different periods (UK 2012, New Zealand 2007, Italy 2007, Poland 2019);
- variation in institutional trust levels (higher in UK/NZ, lower in Italy/Poland);
- different cultural contexts (Anglo-Saxon vs. Continental European);
- availability of reliable data on participation rates and policy outcomes;
- diversity in pension system structures (from predominantly public to mixed systems).

The analysis draws on academic literature from peer-reviewed journals, official government statistics and policy reports, OECD pension databases and comparative studies, national regulatory documents and legislative acts and empirical studies from central banks and financial supervisory authorities.

This article aims to address two research questions:

RQ1: How does automatic enrollment influence participation rates in voluntary pension systems across different countries?

RQ2: How does the level of trust in financial institutions and financial literacy moderate the effect of automatic enrollment on retirement decisions?

1. Behavioural methods to shape and support decisions in the pension system

Due to the demographic ageing of the population—a process that is progressing in nearly all economically developed countries (for example, in EU or OECD member states)—public pension systems are struggling to maintain living standards post-retirement and provide sufficient income in old age. Supplementary pension systems—whether individual or occupational—should address this financial shortfall. However, there are significant concerns that individuals are not saving for retirement despite the economic incentives provided by state institutions and regulations (the most prominent being tax incentives). Policymakers in numerous countries are taking measures to encourage the development of additional voluntary retirement savings (Rutecka, 2014; Jedynak, 2016; Marcinkiewicz, 2018). Traditional incentives—such as tax breaks, matched contributions, or institutional regulations designed to promote retirement savings—are not always effective. For instance, wealthier individuals typically utilise tax breaks for participants in supplementary pension schemes. While they positively impact retirement savings, their overall effect on generating new savings tends to be limited. It is important to note that the assessment of the limited effectiveness of traditional incentives for participation in supplementary pension programmes focused on voluntary pension plans. In contrast, mandatory or quasi-mandatory supplementary pension programmes (in countries such as the Netherlands, Sweden, and Switzerland) tend to stimulate additional retirement savings effectively. Insights from behavioural economics are utilised to broadly promote supplementary retirement savings and influence decision-making in three main ways: altering the choice architecture, adjusting the frame of reference (framing), and providing appropriate behavioural incentives (nudges).

According to the assumptions of standard economic models, formulating a decision problem should not affect the decisions made. This is because a rational decision-maker always seeks to maximise their satisfaction (utility), guided by a specific set of preferences that satisfy, among

other things, the postulate of independence. In reality, however, this assumption is often incorrect. As evidenced by the findings of behavioural economists, the way a decision problem is presented can significantly impact the choices made (Highhouse, Paese, 1996). One of the most striking examples of how a decision problem is formulated and how the default option is indicated in decisions made in reality concerns the issue of accumulating savings for retirement. B. Madrian and D. Shea (2001), studying participants in a U.S. 401(k) program, demonstrated that the level of participation in supplementary pension programs largely depends on whether the decision to participate is framed as a positive election or as automatic enrolment with the option to opt out. In the first instance, the participation rate was 37%, compared to 86% in the latter. The results obtained by B. Madrian and D. Shea suggest that people do not possess defined beliefs about accumulating retirement savings, and their preferences are influenced by how questions are posed ("Do you want to enrol?" versus "Do you wish to unsubscribe from the program?"). The framing effect also arises in asset allocation decisions within pension plans. A study by S. Benartzi and R. Thaler (2001, 2002) indicates that how options for selecting the composition of a pension plan's investment portfolio are formulated has a more significant impact on a participant's choice than the actual risks and returns of individual investment options. In other studies, the same authors demonstrated that American investment decisions are swayed by how information is presented. They discovered that depending on whether pension plan participants were shown annual rates of return or more stable 30-year rates, the average share of stocks in their portfolios varied by nearly 18 percentage points (in the former case, it was 63%, and in the latter, 81%) (Benartzi, Thaler, 1999). The use of simplified reasoning rules further exacerbates the impact of the framing effect on retirement savings decisions. Individuals faced with a challenging decision-making problem (and for most, beginning to save for retirement and determining how much to contribute is indeed such a problem) tend to rely on the simple heuristics of accepting the default option. Without the ability or willingness to analyse the problem comprehensively, this heuristic suggests acquiescing to the choices made by others (“probably someone else determined it was a good solution"). Following this heuristic essentially results in inaction (Blake, 2006).

Professor Szumlicz introduced the concept of supplemental social insurance, which supplements the base social security system with specific preferences. This arrangement incentivises households to increase social security for members through supplemental insurance. The idea is to offer a security standard below the desired one to encourage families to supplement it directly. Supplemental insurance must be social, and the state should indicate it is desirable or take initiatives in this direction. The base system covers participants in the pension security system. It can over-insure itself, deciding on a method that is shaped and dependent on this base system (Szumlicz, 2017).

Voluntary pension plans play a vital role in retirement planning across various nations, and their structural diversity reflects the distinct socioeconomic contexts in which they operate. In Italy, for example, voluntary pension plans often function alongside a predominantly public pension system, characterised by both individual and collective retirement savings plans. This dual structure aims to supplement state pensions, which are primarily financed through contributions. Private pension funds consist of diversified investment portfolios to which individuals can contribute voluntarily, designed to enhance their retirement income. Conversely, employers typically provide professional pension schemes. They may be defined benefit plans, which guarantee a specified retirement payment, or defined contribution plans, where the pension received by the retiree depends on the contributions made by both the employee and the employer over time. The historical development of these systems illustrates the shift from reliance on state pensions to a more individualised approach to retirement funding, necessitated by demographic changes and economic pressures. Nonetheless, various behavioural economic factors influence participation in Italy’s voluntary retirement plans. Social confidence emerges as a significant determinant of commitment to these savings mechanisms. High levels of trust in financial

institutions and the regulatory framework foster an environment conducive to participation in private pension funds.

In contrast, a lack of confidence may lead to scepticism regarding the sustainability of these systems, discouraging individuals from contributing. This dynamic is fundamental given that Italy has faced several financial crises, which have undermined public confidence in the financial system. Economic behavioural literature offers essential insights into psychological factors that influence individual decision-making in this context. At the heart of understanding the effectiveness of automatic registration in the UK is the principle of option inertia, which suggests that individuals are more likely to remain in a program when registration is automatic, with the liberty to opt out without requiring an active decision to participate (Thaler, Sunstein, 2009). This has significantly impacted the likelihood of pension savings, as many employees, particularly those with low financial literacy or limited financial planning involvement, tend to rely on default options instead of making informed choices (Van Rooj et al., 2011).

2. Evaluation of behavioural solutions used in pension security systems

Italy (2007), Lithuania (2019), New Zealand (2007), Poland (2019), Turkey (2017), and the United Kingdom (2012) have implemented auto-enrolment programmes for opt-out retirement savings schemes at the national level. New Zealand has achieved a coverage rate approaching 80% in its "KiwiSaver" program. In the UK, which launched its automatic enrolment programme later than New Zealand, 49% of the working-age population was covered by an employer-sponsored plan in 2020. In Italy, since 2007, private sector employees' severance benefit (known as Trattamento di Fine Rapporto - TFR) has been automatically directed into an occupational pension plan unless the employee explicitly opts to remain in the TFR system. However, most workers have chosen to do so, and only 11% of the working-age population is currently covered by an employee pension plan. Poland and Turkey are still in the early stages of automatic enrolment, which likely explains the relatively low coverage in 2020. Conversely, Lithuania already enjoys a relatively high percentage of individuals covered by the second pension pillar (more than 75%), despite the recent introduction of an automatic enrolment programme in 2019.

Various tax incentives and financial products designed to encourage individual contributions further complicate the Italian voluntary pension landscape. Despite such incentives, participation rates have been notoriously low, raising concerns about the adequacy of future retirement. Poland presents another case of notable structural differences, particularly after the reform of the 1999 pension system, which introduced a multipillar structure that combines public pension coverage with mandatory and voluntary private savings schemes. The optional nature of the voluntary pillar allows individuals to generate additional savings, yet participation remains significantly influenced by economic sentiment and perceived risk. Apathy and inertia are common traits among Polish taxpayers, often resulting in a lack of commitment to supplementary pension products, even when they offer favourable tax treatment.

In the United Kingdom, the landscape of voluntary pension plans is fundamentally shaped by a combination of regulated occupational schemes and personal pension plans. Following the introduction of auto-enrolment in workplace pensions, the UK has witnessed a significant rise in participation rates, demonstrating a classic application of economic behavioural principles. The automatic nature of enrolment and the default option to contribute help mitigate individuals' well-documented tendency to postpone or undervalue the importance of retirement savings. Furthermore, implementing "nudges," such as gradually increasing contributions, aligns with behavioural economic theories suggesting that such strategies can enhance savings behaviour. One example of using defaults to reduce procrastination in saving decisions is the automatic enrolment of employees in occupational pension schemes in the UK, which includes the option to opt out. Between October 2012 and February 2018, the government initiated the rollout of

automatic enrolment in occupational pension schemes. All employers are legally mandated to enrol all eligible employees aged 22 and above, who earn more than £10,000 in the 2018/19 tax year, into a qualifying occupational scheme. To facilitate automatic enrolment, the government established the National Employment Savings Trust (NEST), a trust-based defined contribution occupational scheme, ensuring all employers have access to a quality, low-cost pension plan. NEST carries a public service obligation to accommodate all employers wishing to establish a pension plan with them, irrespective of their income (OECD, 2019). Employee pension savings through a voluntary scheme were statutorily introduced in the Pensions Act of 2008 due to concerns about the declining retirement savings of workers in the UK private sector. Under the Act, employers are required to automatically enrol employees who meet the eligibility criteria into an occupational pension plan with a minimum level of contributions set by both the employee and the employer, as established by the government. The Pensions Regulator was established as part of the Department for Work and Pensions (DWP) to ensure employers fulfil their obligation to enrol employees. Compliance checks were stringent, and employers who failed to enrol employees within the prescribed timeframes faced severe penalties. The solution was progressively implemented from 2012 to 2018, aiming to boost participation in occupational pension programmes, enhance the replacement rate of retirement income concerning working life, and ultimately reduce dependence on the public pension system, which offers only basic financial security in old age (basic protection against poverty - Table 1). The implementation of the policy commenced in October 2012 and continued for five and a half years. The implementation dates for employers were assigned based on the number of employees registered on the payroll (PAYE) in April 2012, ensuring that larger companies automatically enrolled their employees first, followed by smaller companies. In addition to the group of employees eligible for automatic enrolment, both ineligible and eligible employees can enrol in the employee pension program voluntarily. The ineligible group includes employees aged 16 to 21 or above retirement age who earn at least £10,000 a year, or those aged 21 to retirement age earning between £5,824 and £10,000 annually. The employer must make a minimum contribution if they voluntarily enrol in the pension scheme.

Table 1. Main features of the pension system in the UK

Three pillars	
Pillar I	A public pension system, consisting of the following two components: a basic pension and a supplementary pension.
Pillar 2	Collection of occupational pension plans, divided into the following two categories: defined benefit plans (salary-related) and defined contribution plans (cash purchase arrangements);
Pillar 3	Individual (voluntary and supplementary) retirement savings products

Source: (Andersen et al, 2019, p. 501).

The public pension system in the UK provides only a modest portion of retirement savings. Privately managed, funded pension products play a significant role in the pension system.

The New Zealand approach to voluntary pension plans is based on a unique model known as Kiwisaver, which facilitates voluntary contributions while encouraging participation through government contributions and tax credits. The innovative structure emphasises simplicity and ease of use, thereby reducing barriers to commitment. Kiwisaver has reported high uptake levels, partly attributed to its automatic registration feature and the initial economic behaviour driven by loss aversion: individuals are reluctant to forfeit the benefits associated with government assistance. Additionally, proactive marketing and financial education initiatives that support Kiwisaver demonstrate an understanding of the importance of promoting an informed and committed populace, which addresses the complex decision-making processes inherent in retirement savings. Researchers, including Cho et al. (2022), have highlighted the fundamental role of behavioural economics in clarifying these participation patterns across various cultural and economic landscapes. The case of New Zealand is an example of a successful auto-enrolment story. New Zealand's pension system is structured as a tax and transfer pay-as-you-go (PAYG) system with a unique, nearly universal, lump-sum single-pillar pension. Since 2007, NZS has been enhanced by KiwiSaver, a hybrid two-thirds pillar program (a combination of an employee and individual pension plan).

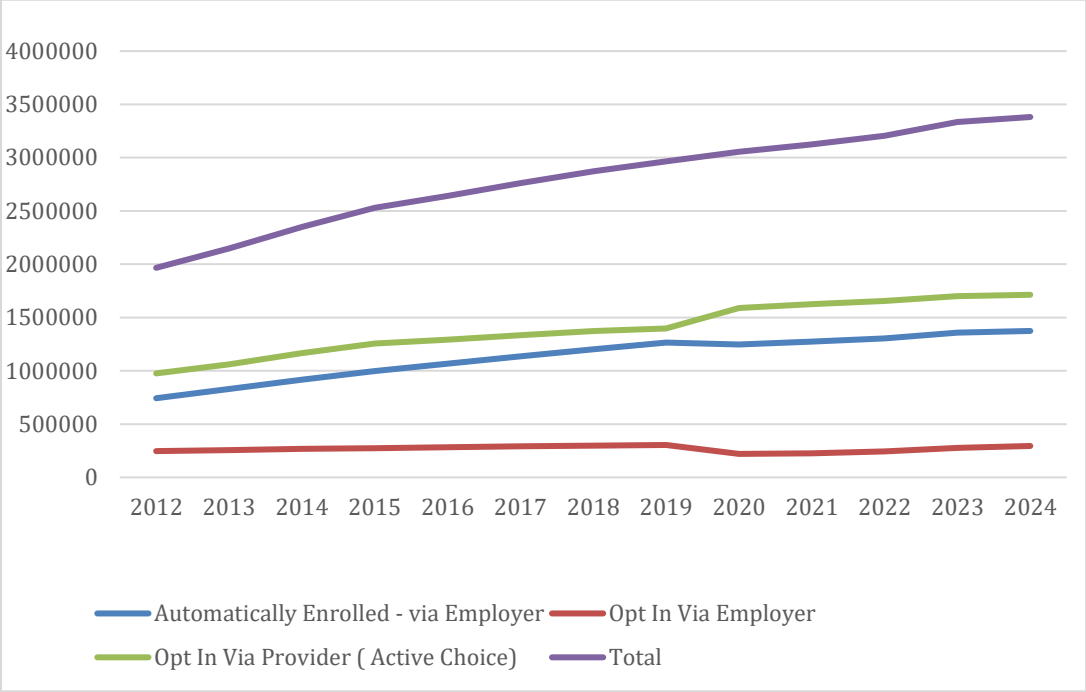

Figure 1. Number of active KiwiSaver members by enrollment method

Source: https://www.kiwisaver.govt.nz/statistics/annual/joining (accessed 20.01.2025).

KiwiSaver is a defined contribution voluntary scheme regarded as the second pillar of New Zealand's pension system, introduced in July 2007. It involves contributions from both employees and employers, with a minimum employee contribution set at 3% of pre-tax income. KiwiSaver operates as an auto-enrolment programme and functions similarly to compulsory social security, as employees seldom opt out. Retirees benefit significantly from the default option, since individuals tend to maintain the status quo and hesitate to make changes. However, due to the relatively short duration of the program, many retirees aged 65 and older do not take full advantage of it, and some employees have chosen to opt out despite the low withdrawal rate. Before the introduction of KiwiSaver, the employee savings program (offered by both the government and the private sector) reached about 15% of the workforce, but the enrolment rate was declining (Xu et al., 2023). Furthermore, KiwiSaver contributes to improving the financial

circumstances of retirees with low or medium wealth; however, it is of little relevance to high-income retirees, as affluent retirees typically have alternative strategies to sustain their pre-retirement lifestyles.

The statutory objective of KiwiSaver, as outlined in the KiwiSaver Act 2006, is to encourage long-term saving and asset accumulation by individuals who would struggle to maintain their standard of living in retirement relying solely on the New Zealand Public Pension Scheme and the voluntary individual pension scheme, commonly referred to as private superannuation (the first pillar of the New Zealand Pension Scheme). Individuals are automatically enrolled when they begin work for the first time or when changing jobs. Those who are automatically enrolled can only opt out within eight weeks of this automatic enrollment. After this period, they may apply for unlimited contributory leave for up to five years. In New Zealand, members possess a unique KiwiSaver account throughout their working lives. After 17 years, KiwiSaver boasts over 3.2 million members and has established itself as an integral part of New Zealand's retirement system and savings sector. A person is automatically enrolled, as there is only one default fund type, and only needs to select contribution amounts. This implies that even those members who wish to choose their preferred fund remain unable to do so. Default members are automatically and randomly assigned to one of nine government-designated default funds, with a standard contribution rate of 3%, unless a different rate is consciously selected (Townstead, 2018). The number of KiwiSaver members is consistently increasing (Figure 1). KiwiSaver's participation rate in 2024 was approximately 78%. Retirees can select their supplemental pension plans under the third pillar, before or after retirement, to ensure ample income for their post-retirement life. This pillar is not compulsory and acts as an additional source of retirement income to complement the first two pillars, enabling retirees to enjoy their desired lifestyle. However, without savings from the third pillar, maintaining a pre-retirement lifestyle becomes challenging for retirees. In New Zealand, a diverse array of voluntary pension plans is available.

Many countries face the challenge of maintaining sustainable pension savings schemes, as insufficient retirement funds risk compromising retirees' standard of living. In Poland, the response to these challenges includes the Employee Capital Plans (PPK), an auto-enrolment long-term savings programme to promote financial sustainability in retirement. The Social Insurance Institution (ZUS) manages Poland's pension system, consisting of two pillars: statutory and supplementary (Bielawska, Turner, 2023). The statutory pension system involves mandatory contributions made by employees and employers. Since 1 October 2017, the retirement age has been set at 60 for women and 65 for men, ensuring a sustainable flow of funds. Contributions to pension insurance amount to 19.52% of gross salary, equally shared between employees and employers. Social insurance coverage in Poland is high; however, demographic changes, such as an ageing population, underscore the urgent need for a sustainable pension system. At the end of 2022, Poland's population was 37.767 million, with 22.2 million working-age people constituting approximately 58.7% of the total population. The post-working age population accounted for over 8.6 million, with this group's share increasing to 22.8%. These demographic shifts highlight the urgency of creating a sustainable pension system, particularly as OECD forecasts indicate that by 2075, Poland's demographic burden ratio will be among the highest in the organisation (Central Statistical Office, 2025).

Supplementary pension schemes, such as PPK, are established by employers and include savings accounts. Despite the introduction of PPK, participation remains low, particularly among older employees and those in the public sector. The average age of participants is 39, with slightly more men than women enrolled. The system aims to supplement statutory pensions; however, many Poles lack the experience and financial knowledge needed for long-term savings. As of June 2024, there were 881.38 thousand Individual Pension Accounts and 526.28 thousand Individual Pension Security Accounts, but payments were made into only about 40%. This suggests that these schemes play a minimal role in current retirement income provision, with most

pensioners' income deriving from public statutory pensions. The auto-enrolment savings contribution in PPK is funded by employers (1.5% of salary, plus up to 2.5% voluntarily) and employees (2.0% of salary, plus up to 2% voluntarily).

Additionally, participants receive a welcome fee from the state and a surcharge at the end of each year. Employees in the private sector are nearly twice as likely to participate in PPK compared to public sector employees. Participation is highest among 25-34 and 35-44 employees, while those over 60 are the least likely to join. Contributions to PPK are primarily made by employees, followed by employers and state subsidies. Since 2009, pensions have been granted in Poland mainly under new rules based on the defined-contribution (DC) system, resulting in less generous benefits. In the future, an increase in the risk of poverty is expected as replacement rates decline. The introduction of PPK could enhance future benefit adequacy if individuals utilise their savings for annuity payments. However, participation in supplementary savings, including PPK, is lower than anticipated. To improve the adequacy of future pensions, it is crucial to promote longer working lives, including employment beyond pensionable age, and to increase savings in occupational and supplementary schemes. In the long run, a return to a higher pensionable age is advised.

Effective pension reforms demand coherent strategies, balanced responsibilities, and supportive default options to encourage participation and foster trust in the system. In Poland, the introduction of PPK marks a step in the right direction, yet further efforts are necessary to enhance participation and financial awareness among the populace. Compared to other countries, the number of OECD nations implementing sustainable auto-enrolment schemes at the national level is steadily rising. By the end of 2023, seven OECD countries had adopted such programmes: Italy, Lithuania, New Zealand, Poland, Turkey, the United Kingdom, and the Slovak Republic. The United States also introduced a similar scheme in 2018. Despite the introduction of auto-enrolment in Italy in 2007, participation rates remain low due to structural issues. Poland and Turkey also exhibit relatively low participation rates, possibly owing to the recent introduction of these programmes and a lack of trust in their long-term benefits.

Therefore, a comprehensive examination of participation in voluntary pension plans in Italy, Poland, the United Kingdom, and New Zealand necessitates understanding both institutional structures and the behavioural determinants that shape individual saving behaviours. The landscape of voluntary pension plans in Italy is characterised by a multifaceted structure, including private pension funds and professional pension plans that operate alongside the statutory public pension system.

3. Influence of financial literacy and regulatory policies on pension participation

Financial literacy is vital for participation rates. Research shows Italians often have an inadequate understanding of financial products and retirement savings, adversely affecting their decision-making processes regarding pensions. A lack of knowledge about the benefits of early and sufficient savings can decrease participation in voluntary pension plans. Moreover, individuals with higher financial literacy are more equipped to navigate the complexities of the retirement landscape, thus enhancing their potential retirement outcomes. This relationship underscores the opportunity for educational interventions to boost participation rates.

Additionally, the regulatory framework established by the Italian government plays a critical role in shaping savings behaviour. Policies incorporating behavioural nudges—such as automatic enrolment in professional retirement plans—have effectively increased participation. An example of this is evident in implementing the "piano di accumulo del capital" (CAP), which encourages systematic investments in pension funds. These strategies harness the principle of behavioural economics regarding inertia, as individuals are more likely to remain enrolled unless they actively

opt out (Fornero, Fornero, 2019). While Italy's landscape of voluntary retirement plans presents various methods to ensure financial stability in retirement, the interplay between social confidence, financial literacy, and regulatory frameworks significantly influences participation and savings behaviour. The barriers linked to trust and knowledge must be tackled through targeted education and policy initiatives to enhance engagement with voluntary pension plans and foster a long-term savings culture. The United Kingdom has adopted an impressive approach to voluntary pension schemes, most notably through the implementation of automatic enrolment, which has fundamentally transformed the landscape of pension participation. Introduced under the 2008 pensions law and fully rolled out in 2018, this policy requires employers to automatically register employees in a workplace pension plan, markedly increasing participation rates. Research indicates that this policy change has resulted in significant outcomes, with registration rates rising from approximately 50% in 2012.

Kiwisaver's initial success stemmed from these behavioural incentives, resulting in significantly low exclusion rates and higher overall participation in the savings scheme. For instance, Luu (2022) highlights that over 3 million New Zealanders, representing approximately 70% of the available workforce, are enrolled in the Kiwisaver scheme. This statistic showcases the efficacy of the default setting in boosting participation. In addition to mandatory registration, the structure of contributions within Kiwisaver offers behavioural incentives to encourage higher savings rates. The scheme features a staggered employer contribution, which motivates employees to maximise their contributions up to certain thresholds. This component is a compelling motivator, as individuals are more likely to increase their savings when they perceive they are receiving a reward. The availability of various investment options within the Kiwisaver framework exploits the behavioural principle "choice architecture." This concept refers to how the presentation of possibilities can influence decision-making. In Kiwisaver, individuals can choose from diverse investment funds, allowing them to tailor their contributions in line with their risk preferences and retirement goals. However, an excess of options can cause decision paralysis, hindering participation. Therefore, while the variety of investment options can empower participants, it also necessitates careful structuring to mitigate the potential adverse effects of overwhelming choices. Education and awareness initiatives regarding Kiwisaver also play a vital role in stimulating participation. Behavioural economics emphasises the impact of subtle cues, minor nudges, and incremental indicators that guide individuals towards making better decisions without limiting their choices. Informative campaigns aimed at clarifying the benefits of saving early and consistently, along with transparent information regarding the compound growth of savings, serve as crucial motivators to enhance commitment to the retirement savings scheme. Empirical studies underscore the importance of financial education as a determinant of optimised participation and saving behaviour within voluntary pension plans.

In summary, the New Zealand voluntary pension plan is a model that leverages behavioural economics to promote savings participation and behaviour effectively. By integrating default registration, coincidental employer contributions, and a well-structured choice architecture, the KiwiSaver scheme enhances individual responsibility for retirement savings. It fosters a culture of strong participation, thereby outlining a pragmatic approach to retirement planning in an increasingly complex financial landscape. The insights from behavioural economics provide a compelling foundation for analysing participation rates and savings behaviour in voluntary pension systems across various countries, particularly Italy, Poland, the United Kingdom, and New Zealand. Understanding how factors such as trust, financial literacy, and behavioural incentives influence individual pension saving choices can elucidate the characteristics and distinct performance of these patterns.

Trust emerges as a fundamental factor influencing individual participation in pension systems. In the United Kingdom and New Zealand, high levels of trust in government and financial institutions correlate positively with higher enrolment rates in voluntary pension

regimes. Establishing a regulatory environment that ensures accountability and transparency strengthens this trust. For example, the "predefined" automatic enrolment option for pension savings programmes has been effectively utilised in New Zealand, considerably improving participation rates. Conversely, in Italy and Poland, where political instability and economic uncertainty have eroded trust in public institutions, participation in voluntary pension schemes tends to be lower. These phenomena underscore the need for robust institutional frameworks to cultivate trust between individuals regarding their pension savings. Financial literacy also plays a significant role in shaping pension savings behaviour in the examined countries. The extent to which individuals engage with financial products and perceive the importance of long-term saving varies considerably, influencing their participation in voluntary schemes. Research indicates that higher levels of financial literacy are associated with a more proactive approach to pension planning, resulting in increased savings rates (Lusardi, Mitchell, 2014). In the United Kingdom, targeted initiatives to enhance financial literacy, particularly among younger populations, have shown promise in improving participation in voluntary pensions. Conversely, financial literacy remains a significant barrier in Poland and Italy, as many individuals express confusion regarding available pension options, ultimately hindering active engagement in the voluntary pensions market (Świecka et al., 2025). Behavioural factors represent another crucial aspect influencing participation and savings behaviour in voluntary pension schemes. The concepts of "opt-in" versus "opt-out" are prime examples of effective nudging strategies employed globally. New Zealand's automatic registration policy exemplifies an opt-out strategy linked to significant increases in participation rates, contrasting sharply with Italy's reliance on more traditional opt-in measures that require individuals to take the initiative (Thaler, Sunstein, 2009). These nudges exploit the status quo bias inherent in human decision-making, where individuals are more likely to maintain their current situation rather than change it, due to inertia or the complexity of choice. Additionally, social norms and peer influences can also serve as behavioural factors significantly affecting the decision-making process regarding retirement savings. In Poland, initiatives based on community and cooperative schemes have gained traction, leveraging social belonging and conformity to encourage participation. Studies suggest that when individuals observe peers engaging in savings behaviour, they are more likely to follow suit. This trend is less pronounced in Italy, where individualism often prevails, posing challenges to establishing collective norms related to pension savings (Pavia, Grima, 2019). In summary, the interaction between trust, financial literacy, and behavioural factors highlights the multifaceted nature of participation and savings behaviour in voluntary pension programmes in Italy, Poland, the United Kingdom, and New Zealand. Moving forward, policymakers must consider these behavioural economic factors to design more effective pension systems that promote greater participation and increased savings among individuals. Income inequality is pervasive in many societies, and the structure and effectiveness of voluntary pension schemes can significantly impact this phenomenon. Comparative analyses of pension systems in Italy, Poland, the United Kingdom and New Zealand reveal attractive interrelations between the design of these systems and their effect on income inequality, especially when examined through the lenses of participation rates and savings behaviours. As highlighted by Verberi and Kaplan (2024), discrepancies in involvement with voluntary pension schemes can produce different socioeconomic results that exacerbate or mitigate income inequality. In Italy, the voluntary pension system operates in a context characterised by the duality of the deeply ingrained labour market. Informal and precarious employment sectors are less likely to participate in voluntary pension schemes, further expanding the gap between those with stable employment and those without. Behavioural economic factors, such as inertia and perceived law, significantly influence individual decisions about pension participation. Many Italians, particularly those with low-income brackets and non-traditional employment, cannot get involved in voluntary economies due to a lack of immediate financial incentives and overwhelming compliance costs. This inertia

perpetuates income inequality, where wealth accumulates among those who actively participate, while the financially vulnerable remain unprotected. On the other hand, Poland's pension scheme, which underwent significant reform since the early 1990s, is a different case. The introduction of a multi-pillar system, combining mandatory and voluntary elements, increased the general participation rates. Notably, behavioural ideas have been used to design disclosure programmes that address cognitive biases affecting decision-making around the economy. Polish government initiatives, which aim to increase financial literacy and encourage voluntary contributions, are directed to those lower on the income scale. As a result, preliminary studies indicate a positive correlation between these efforts and the reduction of income inequality as more individuals from various socioeconomic antecedents are involved in savings behaviour (Verberi, Kaplan, 2024). However, the challenges remain, as income disparities persist in different age groups and geographical locations, suggesting that although systemic improvements have been made, more actions are needed to achieve equitable results. In addition, financial education, stress, and perceived future needs play a considerable role in the four countries. Behavioural barriers, such as current bias, a tendency to prioritise immediate satisfaction over long-term benefits, are notably pronounced in Italy and Poland, where individuals exhibit lower levels of savings. This underlines the need for custom interventions. For example, participatory shoves, such as providing specific communications that clarify the long-term benefits of saving early, have proven promising. Huang and Curtin (2019) emphasise that improving the understanding of people in financial products and retirement planning can significantly enrich decision-making processes and, therefore, improve participation rates.

Conclusion

Behavioural economics demonstrates how modest adjustments—such as making enrollment automatic, providing employer-matching contributions, or framing contributions in less painful ways—can significantly raise participation in voluntary pension schemes. This comparative analysis answers our research questions clearly while offering essential policy insights. Regarding RQ1, our findings demonstrate that automatic enrollment significantly increases participation rates across all four countries, though with varying degrees of success. The UK increased from 50% to over 80% participation, while New Zealand's KiwiSaver reached approximately 78% coverage. However, Italy's auto-enrollment showed limited success despite early implementation, while Poland's PPK system is still developing with lower initial uptake rates. Addressing RQ2, the study reveals that trust in financial institutions and financial literacy are critical moderating factors. Countries with higher institutional trust (UK, New Zealand) achieved better outcomes from automatic enrollment than those with lower trust levels (Italy, Poland). Financial literacy particularly influences the effectiveness of behavioural nudges - more financially literate populations respond better to choice architecture and matching contributions.

Countries like the United Kingdom and New Zealand show that auto-enrollment can become the norm, dramatically enlarging the pool of savers. However, these successes hinge on trust, financial literacy, and consistent regulatory support. Where cultural and historical contexts have undermined confidence in financial institutions (Italy, Poland), merely instituting auto-enrollment may be insufficient. Building trust through transparent fee structures, robust consumer protections, and public education campaigns is critical. Additionally, as more countries consider adopting or refining auto-enrollment models, they must account for labour-market realities (e.g., informal sectors) and demographic shifts that affect saving capacity and retirement horizons. Key policy recommendations from this analysis emphasise the importance of several interconnected strategies to enhance retirement savings outcomes. To maximise its effectiveness, automatic enrollment should be paired with simple and transparent fee structures, strong regulatory oversight,

government co-contributions or tax incentives, and clear communication strategies. Building institutional trust is equally critical and can be achieved through transparent governance structures, robust consumer protection frameworks, regular public reporting on fund performance, and independent oversight mechanisms. Finally, behavioural nudges are most effective when default options are carefully calibrated, choice architecture minimises complexity, framing emphasises long-term benefits, and social proof and peer effects are utilised to encourage positive financial behaviours.

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EKONOMIA BEHAWIORALNA A DOBROWOLNE FORMY ZEBEZPIECZENIA EMERYTALNEGO: ANALIZA PORÓWNAWCZA WŁOCH, POLSKI, WIELKIEJ BRYTANII I NOWEJ ZELANDII

Przemysław Wysiński

Streszczenie

Cel. Niniejszy artykuł bada skuteczność narzędzi ekonomii behawioralnej w zwiększaniu uczestnictwa w dobrowolnych programach emerytalnych, ze szczególnym uwzględnieniem automatycznego zapisu, domyślnych stawek składek, zachęt podatkowych i bodźców behawioralnych. Badanie ma na celu: (1) analizę wpływu automatycznego zapisu na wskaźniki uczestnictwa w różnych krajach oraz (2) zbadanie, w jaki sposób zaufanie do instytucji finansowych i poziom wiedzy finansowej moderują skuteczność tych interwencji behawioralnych.
Metoda. Badanie przyjmuje podejście porównawcze i analizuje cztery kraje, które wdrożyły bądź testowały mechanizmy automatycznego zapisu i inne interwencje behawioralne — Włochy, Polskę, Wielką Brytanię oraz Nową Zelandię. W opracowaniu wykorzystano istniejącą literaturę naukową, raporty instytucjonalne i studia empiryczne, by opisać strukturę każdego z systemów, wpływ uwarunkowań kulturowych i instytucjonalnych, a także znaczenie poziomu wiedzy finansowej oraz zaufania dla kształtowania decyzji o oszczędzaniu.
Wyniki. Przeprowadzone analizy wskazują, że automatyczne zapisywanie do programmeu emerytalnego może istotnie zwiększać partycypację w dobrowolnych systemach oszczędzania, zwłaszcza gdy towarzyszą mu właściwie skonstruowane regulacje, przejrzyste zasady zarządzania oraz inicjatywy mające na celu podnoszenie poziomu edukacji finansowej. Kluczową rolę odgrywa jednak zaufanie do instytucji publicznych i finansowych; jego niedostatek często przekłada się na mniejsze zainteresowanie programmeami dobrowolnymi. Z kolei zastosowanie bodźców behawioralnych — takich jak odpowiednie ramy decyzyjne (framing), architektura wyboru (choice architecture) oraz dopłaty pracodawcy (matching contributions) — okazuje się mieć decydujące znaczenie w skłanianiu jednostek do bardziej aktywnego gromadzenia oszczędności.

Słowa kluczowe: automatyczny zapis, bodźce behawioralne, architektura wyboru

Klasyfikacja JEL: D14, G51, J26, H55

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