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Public Policy and Access to Private Pension Funds: Reducing Barriers for Portugal's Low-Income Population

Tiago Miguel Marques Pereira

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FACULDADE DE **ECONOMIA**

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Diogo Campos Monteiro de Melo Lourenço

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Abstract

The dissertation investigates the barriers hindering adherence to private pension schemes in Portugal, with a particular focus on lower-income workers, and examines the role of public policies in overcoming these obstacles. Three main objectives guide the study: first, to define old-age pension schemes and compare their design and outcomes across OECD countries, with particular attention to Portugal; second, to analyse the barriers influencing the adoption and reinforcement of voluntary private pension schemes in Portugal; and third, to assess public preferences for public policies that may encourage their adoption. The research contributes to the literature by addressing a gap on the financial behaviour and retirement planning of vulnerable groups, who often face limited income, lower financial literacy, and higher dependency on the public old-age pension scheme. While Portugal's pay-as-you-go (PAYG) scheme remains relatively generous, providing one of the highest net replacement rates in the OECD, its adequacy is expected to decline in the future, particularly for individuals with fragmented careers or lower lifetime earnings. To address these issues, an anonymous online survey was conducted, targeting lower-income and less-educated individuals within the Portuguese workforce. The survey explored respondents' financial literacy, retirement expectations, awareness of complementary pension products, and attitudes towards barriers and public policies. Descriptive and comparative analyses were applied across income, education, age cohorts, and a constructed financial literacy proxy. The findings reveal low levels of financial literacy, limited savings capacity, distrust of private providers, and weak incentives as key barriers. Results also reveal heterogeneous preferences concerning the State's role, with stronger support for intervention among low-income and less-educated respondents. These insights highlight the need for tailored financial education and evidence-based public policy to promote broader adoption of complementary pension schemes and to strengthen retirement income adequacy in Portugal.

JEL codes: J11, J26, J32

Keywords: Financial literacy, Low-income workers, Pension adequacy, Private pensions, Public policies

Resumo

A presente dissertação investiga as barreiras que dificultam a adesão aos regimes de pensões privadas em Portugal, com foco nos trabalhadores de baixos rendimentos, e analisa o papel das políticas públicas na sua superação. O estudo tem três objetivos principais: primeiro, definir os regimes de pensões de velhice e comparar o seu desenho e resultados nos países da OCDE, com especial atenção a Portugal; segundo, analisar os obstáculos à adoção de regimes voluntários de pensões privadas em Portugal; e terceiro, avaliar as preferências públicas relativamente a políticas públicas que possam incentivar a sua adesão. A investigação contribui para a literatura ao colmatar uma lacuna sobre o comportamento financeiro e o planeamento da reforma de grupos vulneráveis, caracterizados por rendimentos limitados, menor literacia financeira e maior dependência do regime público. Embora o sistema público português (PAYG) seja relativamente generoso, oferecendo uma das mais elevadas taxas líquidas de substituição da OCDE, prevê-se uma redução da sua adequação futura, em especial para indivíduos com carreiras fragmentadas ou baixos rendimentos ao longo da vida. Para analisar estas questões, realizou-se um inquérito anónimo online, dirigido a trabalhadores de baixos rendimentos e com menor nível de escolaridade. O inquérito avaliou a literacia financeira, expectativas de reforma, conhecimento de produtos complementares de pensão e atitudes perante barreiras e políticas públicas. Foram aplicadas análises descritivas e comparativas por rendimento, escolaridade, faixa etária e um proxy para a literacia financeira. Os resultados evidenciam baixos níveis de literacia financeira, limitada capacidade de poupança, desconfiança nos prestadores privados e fracos incentivos como principais barreiras. Revelam ainda preferências heterogéneas quanto ao papel do Estado, com maior apoio à intervenção pública entre os grupos com menores rendimentos e com nível de educação. Estas conclusões sublinham a importância de educação financeira direcionada e de políticas públicas baseadas em evidência para promover maior adesão a regimes complementares de pensões e reforçar a adequação dos rendimentos de reforma em Portugal.

JEL codes: J11, J26, J32

Palavras-chave: Literacia financeira, Trabalhadores de baixos rendimentos, Adequação das pensões, Pensões privadas, Políticas públicas

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List of Acronyms

ASF – *Autoridade de Supervisão de Seguros e Fundos de Pensões*

CGA – *Caixa Geral de Aposentações*

CMVM – *Comissão do Mercado de Valores Mobiliários*

CSI – *Complemento Solidário para Idosos*

DB – Defined Benefits

DC – Defined Contribution

EU – European Union

FFDB – Fully Funded Defined Benefits

FFDC – Fully Funded Defined Contributions

GDP – Gross Domestic Product

H - Hypothesis

IGFCSS – *Instituto de Gestão de Fundos de Capitalização da Segurança Social*

INE – *Instituto Nacional de Estatística*

NDC – Notional Defined Contribution

OECD – Organisation for Economic Co-operation and Development

PAYG – PAY-As-You-Go

PPR – *Planos Poupança-Reforma*

RPC – *Regime Público de Capitalização*

RQ – Research Question

SB – State Budget

SS – *Segurança Social*

TCO – *Trabalhadores por Conta de Outrem*

1. Introduction

In recent decades, public pension schemes have faced threats to their sustainability. In most developed countries, they are challenged by demographic ageing and declining fertility rate OECD (2023b, pp. 179-183). These trends have led to a growing number of retirees depending on a shrinking active workforce to finance pension, raising concerns about adequacy (OECD, 2023b, pp. 179-183). Consequently, many individuals are expected to face a significant drop in income at retirement, with lower earners particularly at risk of seeing their living standards deteriorate (European Commission, 2024, p. 23).

In addition to these demographic trends, recent events, such as the COVID-19 pandemic and the energy crisis triggered by the Russian invasion of Ukraine, have worsened pensioners' living conditions (European Commission, 2024, p. 107). Inflationary pressures and the erosion of purchasing power, especially when pensions are not promptly adjusted, have further deteriorated the living conditions of retirees, affecting disproportionately lower-income households (OECD, 2023b, pp. 29-30).

One proposed solution to supplement retirees' income is the adoption of voluntary private Planos Poupança-Reforma (PPR). In many countries, these schemes significantly increase gross replacement rates and contribute to more stable retirement incomes (OECD, 2023b, p. 152).

The Portuguese pension scheme, a PAYG scheme, is generous by international standards, with a net replacement rate of over 90% for average earners, which is well above the OECD average (61%). However, sustainability concerns remain, as this rate is expected to fall to around 85% for an average-earner with 40-year career by 2062, and adequacy challenges persist for vulnerable groups such as low-income earners and individuals with fragmented careers (European Commission, 2024, p. 78; OECD, 2023b, pp. 109, 156-157).

Against this backdrop, the objective of this dissertation is threefold. First, it defines old-age pension schemes and compares their design and outcomes across OECD countries, with particular attention to the Portuguese case. Second, it seeks to understand the barriers influencing adoption and reinforcement of complementary voluntary private pension schemes in Portugal, with particular attention to lower earners during their working years. Third, it assesses the perceived role of public policies in encouraging voluntary participation in these schemes. This study responds to a gap in the existing literature, which has largely overlooked the retirement prospects of low-income and less-educated workers prior to retirement. To this end, an online survey was conducted to gather quantitative and qualitative data, mapping perceptions, barriers, and potential incentives to adherence.

Accordingly, two research questions guide this dissertation:

RQ1: What barriers hinder adherence to private pension schemes in Portugal, particularly among low-income workers?

RQ2: What is the perceived role of the State in old-age income protection?

Understanding these obstacles provides valuable insights into why low-income workers show limited adherence to complementary pension schemes, while also highlighting the role of financial literacy and public policies in shaping outcomes. This contributes to the debate on how to balance mandatory and voluntary mechanisms to strengthen retirement income protection.

This dissertation is organized as follows. Chapter 2 presents the literature review. Chapter 3 outlines the methodology. Chapter 4 discusses the data analysis. And, Chapter 5 concludes with the main findings, limitations, and directions for future research.

2. Literature review

2.1. What is an old-age pension scheme?

According to Andersen and Bhattacharya (2016, pp. 896-896), the two components of the two-armed welfare state are the old-age pension scheme and the public education system. The old-age pension scheme is a financial and social mechanism designed to provide income security during the later phase of workers' lives, after their exit from the labour market, to ensure that individuals can maintain a stable standard of living when they retire, thus reducing the risks of financial insecurity and poverty (European Commission, 2024, p. 11).

2.1.1. WHEN WERE THE OLD-AGE PENSION SCHEMES ESTABLISHED?

The origin of modern old-age public pension schemes dates back to the late 19th century and early 20th century, a time of profound social and economic transformation triggered by industrialization and urbanization (Kuhnle & Sander, 2010, pp. 77-78). Germany was the first country to adopt an old-age pension scheme under Chancellor Otto von Bismarck in the 1880s. This "Bismarckian" model was responsible for establishing a mandatory contributory scheme covering sickness, workplace accidents, and old-age pensions, to address the growing economic insecurity faced by industrial workers while simultaneously fostering loyalty to the state (Kuhnle & Sander, 2010, pp. 77-78).

In subsequent decades, variations of the "Bismarckian" approach were adopted across Western Europe and beyond, with the necessary scheme changes to address their political, economic, and social contexts (Kuhnle & Sander, 2010, p. 77).

Nations such as Iceland and Denmark were among the first to implement non-contributory social pensions in 1890 and 1891, respectively, choosing instead to finance them through general taxation. Implementing non-contributory social pensions constitutes an alternative path to the contributory model, where the focus resides on alleviating poverty among retirees rather than linking benefits to prior earnings (Palacios & Knox-Vydmanov, 2014, p. 253).

At the time, the UK and some of its colonies already had a working non-state alternative to social insurance, provided by the so-called friendly societies, which decreased the pressure to adopt compulsory social insurance, like the "Bismarckian" approach, compared to Germany (Kuhnle & Sander, 2010, pp. 82-83). Therefore, the introduction of a proper welfare state and its old-age pension scheme lagged behind other developed countries. The United Kingdom (UK) introduced the Old-Age Pension Act of 1908, which the non-state welfare providers opposed at the time (Kuhnle & Sander, 2010, p. 83). Australia's trajectory includes the establishment of state-level pension schemes in 1900 in New South Wales and Victoria, and in 1908 in Queensland, which evolved into a federal scheme in 1908 (Kuhnle & Sander, 2010, p. 84). Despite facing the same challenges, New Zealand introduced a non-contributory social pension scheme in 1898. However, access to it was limited to those who had "lived a sober and reputable life", i.e., those who received a positive evaluation on a long list of conditions about their character (Palacios & Knox-Vydmanov, 2014, p. 253).

Another country that pioneered the old-age pension scheme was Sweden, which established the first universal contributory old-age pension scheme, where every citizen can claim a pension (Kuhnle & Sander, 2010, p. 84).

The interwar and post-World War II periods witnessed the global diffusion of pension schemes, driven by the growing recognition of Social Security (SS) as both a fundamental right and cornerstone for economic stability (Palacios & Knox-Vydmanov, 2014, p. 253). Moreover, the International Labour Organization, established in 1919 under the Treaty of Versailles, was an important advocate of the establishment of Social Security (SS) schemes, contributing to its diffusion, expansion and consolidation across the world, especially in the American continent (Kuhnle & Sander, 2010, pp. 85, 89).

2.1.2. THE OBJECTIVES OF OLD-AGE PENSION SCHEMES

From the individual point of view, pension schemes need to provide a mechanism for consumption smoothing over the different phases of life and a means of insurance against longevity risk (Barr & Diamond, 2006, p. 16).

According to Barr and Diamond (2006, p. 20), individuals are not interested in pensions per se but in the possibility of consuming after they leave their active phase of life. Therefore, pension schemes must provide a way to save part of the income of the productive working years for consumption in the future during retirement, in a process known as consumption smoothing (Barr & Diamond, 2006, p. 16). More than providing financial security in retirement, consumption smoothing is also responsible for maintaining overall economic stability by reducing the risk of a catastrophic reduction of income in retirement (Barr & Diamond, 2006, p. 38).

Since uncertainty surrounds an individual's lifespan, there is the risk of individuals outliving their savings, or consuming very little to keep that from happening. Pension schemes deal with the longevity risk by pooling individuals' pension savings and offering a pension based on the life expectancy of the group and the total of contributions made during the working years, which can take the form of annuities after retirement (Barr & Diamond, 2006, p. 16).

These two crucial objectives could be achieved only by a voluntary pension when assuming a first-best world, where there are no economic distortions and no missing information apart from the date of death. There is more missing information and distortions in the real world, such as imperfect information, risk and uncertainty, and progressive income taxation. The first-best framework is unsuitable for guiding the design and implementation of public policy capable of adequately addressing these deviations from the first-best world (Barr & Diamond, 2006, p. 16).

Achieving the second-best solution entails not only merely ensuring a bare minimum pension level for all retiree, but also addressing objectives other than the previously mentioned individual ones (consumption smoothing and insurance against the longevity risk), such as poverty relief, redistribution of income, while at the same time addressing sustainability and fiscal stability, market failures, and avoid the creation of unwanted incentives (Barr & Diamond, 2006, pp. 16-17).

From the policymaker's point of view, pension schemes should contribute to alleviating poverty and allowing the redistribution of income between individuals and generations (Barr & Diamond, 2006, pp. 16-17). To alleviate poverty, public policy looks to establish a minimum threshold to guarantee a minimum pension to individuals unable to save enough during their active life or those who interrupted their careers at some point due to illness or choice (Holzmann & Hinz, 2005, p. 11). Income redistribution among individuals occurs when pension schemes complement the progressive taxation of income by guaranteeing a higher replacement rate for lower earners to subsidize their consumption (Barr & Diamond, 2006, p. 16). "Pension systems can also redistribute across generations, for example if a government reduces the contribution rate of the present generation, thereby requiring future generations to pay higher contributions or have lower pensions" (Barr & Diamond, 2006, p. 17). However, these reforms need to guarantee intergenerational equity to balance the benefits of the current retirees and the contributions of the current workers without putting an excessive financial burden on younger generations (International Monetary Fund, 2011, p. 6).

The redistribution of income, especially between generations, can also compromise the sustainability and fiscal stability of pension schemes, particularly in the context of demographic changes in most of the OECD countries, where there is an aging population and declining fertility rate (OECD, 2023b, pp. 179-183). Therefore, public policy in different countries has implemented different reforms, such as adjusting contribution rates, limiting future retirees' benefits by modifying benefit formulas, and introducing automatic stabilizers to maintain financial stability (International Monetary Fund, 2011, pp. 16-17, 30-32).

Another concern that public policy must address is the market failures inherent to the old-age pension markets, such as imperfect information, limited financial literacy, and the absence of a fully functioning annuity market (Barr & Diamond, 2006, p. 16).

Imperfect information arises from one of three sources. First, individuals must deal with the uncertainty about the future. Second, there is a lack of risk information. Third, another cause of imperfect information is the complexity of some financial instruments, which relates to the problem of limited financial literacy (Barr & Diamond, 2006, p. 20).

Financial literacy is "a combination of financial awareness, knowledge, skills, attitudes and behaviours necessary to make sound financial decisions and ultimately achieve individual financial well-being" (OECD, 2020, p. 3). Limited financial literacy amplifies other old-age pension market failures, making establishing a retirement plan harder. Therefore, a part of the problem can be reduced through financial education, reducing information asymmetries and improving decision-making (Barr & Diamond, 2006, p. 21). While strengthening financial literacy facilitates better retirement planning, especially among lower earners, it is not a standalone solution. Therefore, complementary public policies are required to ensure effective pension outcomes (Lusardi & Messy, 2023, p. 9).

Moreover, some old-age pension schemes rely on a fully functional annuity market that could provide a pension through retirement based on the previously accumulated assets. However, when such a market is absent, individuals face difficulties guaranteeing a stable income source at retirement, justifying government intervention (Barr & Diamond, 2006, p. 16). Public policies address these challenges by regulating annuity markets to ensure transparent pricing, mitigate longevity risk, and uphold solvency requirements for providers. These policies are designed to protect pensioners and prevent market failures, while effective regulation is also responsible for fostering confidence in retirement schemes and securing sustainable income sources for retirees (Ramaswamy, 2012, p. 19).

While, as previously described, public policy regulation is crucial to correct market failures, it is also responsible for introducing more distortions to the old-age pension market, as regulation can create distortions in the labour market and savings behaviour (Holzmann, 2000, pp. 14-15).

The impact on the labour market is the highest when no strong correspondence exists between contributions and benefits. Current workers, especially the younger ones, could consider the contributions a labour tax. Therefore, they are incentivized to evade them as much as possible or even reduce the time spent working, and some of the workers will opt to work in the informal labour market (Holzmann, 2000, pp. 14-15). Moreover, excessive taxation on labour earnings to finance current old-age benefits can also decrease workforce participation, particularly among older workers (International Monetary Fund, 2011, pp. 23-24). Moreover, if the pension schemes offer strong incentives for early retirement, it can also decrease the workforce since individuals would leave the labour market prematurely (OECD, 2023b, pp. 179-183). All these impacts on the labour market combined can curb the country's growth rate, jeopardize income redistribution between workers and pensioners, and exacerbate fiscal pressures and intergenerational imbalances (Holzmann, 2000, pp. 14-15).

The impact on savings behaviour can come from a high replacement rate provided by the public pension scheme, since this high replacement of the previous salary reduces the incentives to adopt a private savings plan, which lowers overall capital accumulation and can have negative effects on the country's growth capability (Holzmann, 2000, pp. 14-15).

Thus, public policy interventions, although needed, must adequately balance pension benefits with labour market efficiency and economic sustainability (International Monetary Fund, 2011, p. 20). To respond to these objectives, many countries adopted a multi-pillar pension model, which encourages the diversification of pension income sources by combining public, occupational and private pension schemes to mitigate the longevity risk, reducing reliance on a single funding source, allowing different countries to choose between poverty reduction and income replacement goals (Holzmann, 2000, pp. 19-22).

2.1.3. OLD-AGE PENSION SCHEME ORGANISATION

This section outlines the structure of the multi-pillar pension scheme and is based on the approach adopted by the OECD and the World Bank.

The multi-pillar pension scheme, as described by the World Bank, adopts a combination of five pillars (Holzmann & Hinz, 2005, pp. 81-83).

The zero or basic pillar, as indicated in its description, intends to provide a minimal threshold of protection in retirement for individuals who lived a lifetime of poverty, or for those who do not accumulate enough resources during their informal or formal work life, or for those who were not able to obtain a formal pension. Since the main objective of this pillar is to serve as a social safety net to mitigate extreme old-age poverty, it is generally funded by budget or general government revenues, i.e., through taxes (Holzmann & Hinz, 2005, pp. 81-82).

The first pillar is responsible for replacing workers' standard of living from the formal sector upon retirement. This mandatory pillar, which can take the form of defined benefits (DB) or nonfinancial defined contributions (DC) (see section f), is funded through SS contributions, and perhaps some other reserves, to finance intergenerational transfers (Holzmann & Hinz, 2005, pp. 81-82).

The second pillar is a mandatory scheme in which contributions are used to purchase financial assets during the accumulation phase, and then, in retirement, the assets are converted into an annuity. This pillar can be comprised of occupational or personal plans and is designed to provide a net-replacement target, and can take the form of a fully funded defined benefits (FFDB) or fully funded defined contributions (FFDC) (Holzmann & Hinz, 2005, pp. 81-82).

The third pillar provides an additional source of income in retirement, other than the mandatory pillars, where the benefits and contributions are flexible and dependent on the capitalization of assets in the financial market. This pillar comprises voluntary individual or employer-sponsored schemes to complement the previous mandatory pillars, particularly for workers from the formal and informal sectors, that can take the form of FFDB or FFDC (Holzmann & Hinz, 2005, pp. 82-83).

The fourth pillar encompasses the remaining sources of income in retirement, such as access to informal support (from the family, which can be classified as intergenerational transfer), the benefit from social programs (like health care, or housing), and other individual financial and nonfinancial assets (like homeownership, and personal savings). Although this pillar cannot be considered a formal part of a pension scheme, it can play a fundamental role in ensuring a part of individual consumption during retirement (Holzmann & Hinz, 2005, pp. 82-83).

According to OECD (2023b, p. 134), a multi-pillar pension scheme adopts a combination of three different tiers, which serve distinct roles, serving similar functions of the pillar from the pension taxonomy advocated by the World Bank (described above).

The first tier is mandatory and provides basic financial protection during retirement, ensuring that every retiree receives a pension, regardless of their previous earnings. Therefore, it is normally provided by the public sector and is funded via taxes, comprising the previous zero and part of the first pillar from the World Bank approach. The first tier's main objective is to alleviate poverty in retirement through three distinct approaches: basic (residence or contribution-based), targeted, and minimum contributory pensions, which will be described in section F. (OECD, 2023b, pp. 134-135).

The second tier is responsible for maintaining the standard of living after retirement as much as possible, and it is composed of mandatory contributions, which the public or private sector can provide. This tier comprises the other part of the first and second pillars in the World Bank approach and can be operationalized through a DB, point, or contribution schemes, which will be described in section G (OECD, 2023b, pp. 134-135).

The third tier comprises voluntary contributions to supplement the previous tiers, further enhancing financial security during retirement, and the third and fourth pillars are based on the World Bank approach. Therefore, this tier allows individuals to volunteer additional funds through various individual savings schemes or group plans promoted by the employer to increase their income in retirement. In such a plan, participation is always voluntary, while entitlement coverage is determined by total contributions amassed during active employment and, where relevant, by adding investment earnings accrued in funded schemes. Although entirely voluntary, these third-tier plans are often incentivized by tax advantages or matching contributions to encourage people to save, and they play a supplemental role in providing adequate retirement benefits for those who can save more than the minimum amount required by the mandatory tiers of old-age pension schemes (OECD, 2023b, pp. 134-135).

2.1.4 TYPES OF OLD-AGE PENSION SCHEMES

Whatever the tier, there are two polar opposite approaches in the spectrum of methods available to finance old-age pensions: pure PAYG and fully funded schemes, each presenting advantages, disadvantages, and inherent challenges and a lot of mixed schemes. The mixed schemes can be seen as the backbone of the multi-pillar schemes described in the previous section, presenting a set of benefits and challenges (Barr & Diamond, 2006, p. 17).

Pure PAYG schemes are characterized by their intergenerational transfer mechanism, in which current workers' contributions are used to directly fund the pensions of current retirees, functioning as a direct transfer mechanism between generations (Andersen &

Bhattacharya, 2016, p. 896). From an economic standpoint, current workers contribute to the scheme because they hope that the state fulfils the promise that they will also receive an old-age pension. At the same time, at the aggregate level, the state's role is simply to transfer income between the workers and the current retirees (Barr & Diamond, 2006, pp. 17-18). Moreover, these schemes are administratively more attractive due to their simplicity and lower operational costs since they do not require a management fund, as contributions flow directly to pay the current pensions (Barr & Diamond, 2006, p. 36). However, pure PAYG schemes also present drawbacks because they are susceptible to demographic challenges, such as the fertility rate across OECD countries fell to an average of 1.59, below the replacement level of 2.1, and the increase in the life expectancy at the age of 65 years old, even after the COVID-19 pandemic, which was projected to be of more 23.2 years for men and 26.4 years for women, which is above the average of OECD countries (OECD, 2023b, pp. 179-183). These demographic changes result in an aging population that needs a pension to continue consuming after retirement that is covered by a smaller number of workers, i.e., these demographic changes reduce the ratio of contributors to beneficiaries, threatening the financial sustainability of pure PAYG schemes (OECD, 2023b, p. 184). Furthermore, these schemes may discourage individual savings since comprehensive coverage and a high replacement rate can decrease the demand for additional old-age income sources (OECD, 2023b, p. 185). Therefore, from a government point of view, if there is a short-term mismatch between contributions and benefits, it can result in a fiscal imbalance for the government because of the need to cover the difference via taxes or public debt (Holzmann, 2000, p. 13).

On the other side of the spectrum to pure PAYG schemes, FFDC schemes operate according to the accumulation principle, since individuals or collectives are invested in financial assets to generate returns over time that will finance the consumption during retirement, through an annuity, for instance (Barr & Diamond, 2006, p. 17). Demographic changes, such as the one described in the sector of pure PAYG schemes, are less susceptible to affect these schemes since benefits depend on savings and investment performance rather than intergenerational transfers (OECD, 2023a, p. 6). However, in extreme cases, these changes, particularly the decrease in the working-age population, can reduce equilibrium output growth and interest rate, via reduced labour supply (OECD, 2023b, p. 184). FFDC schemes also give contributors a sense of ownership, encouraging long-term financial planning (Holzmann, 2000, p. 22). Additionally, investments in diversified portfolios offer the potential for higher returns compared to wage growth, potentially providing a more substantial pension than pure PAYG schemes (Ramaswamy, 2012, p. 19). Despite these advantages, FFDC schemes also present drawbacks since they are highly exposed to financial fluctuations, which can jeopardize retirement savings during economic downturns (Holzmann, 2000, p. 19). Managing individual accounts and investments often entails high administrative costs, which can reduce overall returns (Holzmann, 2000, p. 14). Furthermore, equity issues must be considered, especially when low-earners struggle to save adequately, leading to disparities in retirement benefits (European Commission, 2024, p. 149). Moreover, the reliance on market performance increases the risk of insufficient returns, particularly during prolonged periods of economic instability (Ramaswamy, 2012, p. 12). Robust regulatory frameworks are essential to mitigate these risks, but their implementation can be complex and resource-intensive (Holzmann, 2000, p. 19).

Mixed schemes integrate within PAYG framework schemes, a partially funded component, where a part of the contribution is used to accumulate assets for retirement, presenting a set of benefits and challenges. One crucial advantage is risk diversification since the retiree does not depend only on the pension provided by the PAYG scheme but also receives a pension in the form of annuity or in another form from the funded component, reducing, therefore, the dependency on demographic factors previously described in the PAYG section (Alonso-García et al., 2024, p. 25). Additionally, the funded component is responsible for higher returns for future consumption than pure PAYG schemes because the investment in higher-growth markets than the domestic market allows the possibility of surpassing the limits of internal Gross Domestic Product (GDP) growth (Ramaswamy, 2012, p. 19). Moreover, sustainability and fiscal stability are improved, despite PAYG rate of return being lower than the return from funding schemes, when the option for the establishment of a mixed scheme creates a practical approach to incorporating a funded component while addressing the demographic constraints of PAYG schemes (Alonso-García et al., 2024, p. 25). However, mixed schemes also present inconveniences, such as high administrative complexity and exposure to market risk. High administrative complexity arises from managing both schemes, which require robust regulatory oversight and lead to higher operational costs (Holzmann & Hinz, 2005, p. 114). Exposure to financial market fluctuations creates volatility in the pension return since, during economic downturns, the funded component can result in a pension shortfall (Ramaswamy, 2012, p. 13).

While mixed schemes can be seen as a compromise between PAYG and FFDC schemes, the transitioning process also presents challenges, such as increased short-term fiscal costs, and can create intergenerational equity concerns. The increase in short-term fiscal costs occurs because contributions are not only allocated to the current retirees in the form of a pension but also to long-term investment funds to guarantee part of the old-age pension of the current workers, contributing to the creation of budgetary pressures that may require state financing (International Monetary Fund, 2011, p. 18). This transition can create intergenerational equity concerns because current workers may have to support a disproportionate burden of transition costs while at the same time facing uncertainty about their future benefits (Alonso-García et al., 2024, p. 3).

2.1.5. APPROACH TOWARDS THE BENEFITS FORMULA FROM THE FIRST TIER

According to the OECD (2023b), the benefits from the first tier can follow one of three approaches: basic, targeted, and minimum contributory pensions (OECD, 2023b, pp. 134-135).

Basic pensions can follow two distinct methods: retirement pension can be calculated via residence or contribution-based benefits. Residence-based benefits are provided universally to all residents, regardless of their respective contribution histories during their working years, whereas contribution-based benefits are only accessible to individuals who contributed during their working years (OECD, 2023b, pp. 134-135).

Conversely, targeted plans are conditional on meeting the residence criteria and having assets or other pension income below a certain threshold (205€, according to the site of SS). Therefore, this method provides higher pension benefits to lower earners among retirees (OECD, 2023b, pp. 134-135).

Another method is a minimum contributory pension, which provides a guaranteed minimum pension to workers with low contributions since they were low earners during their working years. This method ensures that contributors receive a minimum pension, even though the previous contributions are insufficient to adequately guarantee a pension (OECD, 2023b, pp. 134-135).

These different approaches reflect the various ways countries enact policies to meet the same goal of ensuring minimum income security in retirement to alleviate poverty (OECD, 2023b, pp. 134-135).

2.1.6. CLASSIFICATION BASED ON THE RELATION BETWEEN CONTRIBUTIONS RELATED TO PREVIOUS EARNINGS AND PENSION BENEFITS

Whatever the option towards the financing of old-age schemes, every old-age pension scheme must choose one of the following three options regarding the way benefits are linked to the previous contribution, in both second and third tier, point schemes, DB schemes, and DC schemes (OECD, 2023b, pp. 134, 140).

Point schemes allocate points during the worker's career, according to their earnings, which are multiplied by the pension-point value to obtain the retirement pension. In the OECD countries, all the points schemes are financed through PAYG frameworks (OECD, 2023b, pp. 134, 140).

In a DB scheme, the retirement pension is defined according to the worker's wage history or only to the worker's final salary in the last year or few years. DB can be established at the state or employer level. However, DB schemes are normally run by the state; therefore, the risk is not normally borne by the retirees but by the contributors when the scheme is financed through workers' contributions or by the taxpayers when the scheme is financed through a taxpayer subsidy. In practice, governments can change the benefit formula and the rate of contribution when revenue and expenditure do not match (Barr & Diamond, 2006, pp. 18-19). DB schemes can either be financed by PAYG, funded schemes, or mixed schemes (OECD, 2023b, p. 140).

DC schemes involve accumulating over time, according to one of two mechanisms: pure DC schemes or DC schemes with the sharing of risks. Pure DC schemes perpetuate the individual lifetime budget constraint because there is no redistribution between individuals; therefore, every contribution is converted into assets accumulated for each individual's retirement and then transformed into a source of income in retirement. In this case, and despite protecting individuals against the longevity risk, pure DC schemes leave the individual vulnerable to a wide range of risks, such as the volatility of real rates of return of the accumulated assets, the risk associated with the future earnings, and the future annuity price. The DC scheme can also be modified to include sharing risk between individuals by guaranteeing a minimum pension, pooling a part of contributions, or legislating a pre-establishment way to deal with capital market outcomes (Barr & Diamond, 2006, p. 18).

Another type of DC scheme is the recent international innovation of notional defined contribution (NDC). The main difference between the NDC and the other types of DC schemes is that, unlike the other DC schemes, the contributions of the individuals are not used to buy assets for retirement. They are documented and modified according to a theoretical rate of return established by the government. Therefore, this type of DC scheme may not follow the accumulation principle and can rely only on the PAYG principles (Barr & Diamond, 2006, p. 19).

To summarize, within the mandatory second, four publicly provided schemes are available: point schemes, DB schemes, funded DC schemes, and NDC schemes. And two privately provided schemes: DB schemes and funded DC schemes. The two privately provided schemes are also the schemes available within the third tier (OECD, 2023b, p. 135).

2.1.7. BENCHMARK

Different countries have opted for different solutions on the spectrum of options for financing public pension schemes.

Starting with the cases of the countries broadly closer to the polar case of pure PAYG schemes, it is possible to identify countries such as France, Germany, and Spain (OECD, 2023b, pp. 133-135).

The French old-age pension scheme can be generally described as a pure PAYG scheme, with strong social insurance principles and extensive income redistribution (Holzmann & Hinz, 2005, p. 50; OECD, 2023b, pp. 133-135). This scheme presents a multi-tier structure, where the first tier ensures a base income level for individuals who did not contribute enough during their work years (OECD, 2023b, pp. 133-141). The second tier replaces the previous income through a mandatory public contributory earnings-related PAYG DB scheme operationalized via a point scheme (OECD, 2023b, pp. 133-135). The third tier comprises voluntary private pension schemes supported by tax incentives. Despite these incentives, participation rates in lower-income groups remain limited (OECD, 2024, pp. 37-39). The French pension scheme is renowned as one of the more comprehensive social protection schemes. It alleviates poverty by providing universal coverage to all workers (OECD, 2023b, pp. 70-72, 140-141). Nevertheless, this scheme places substantial fiscal pressures, as demographic trends of declining fertility rate and an aging population increase the burden on the active working population (International Monetary Fund, 2011, p. 29). However, reforms, such as extending the retirement age to 64 years old and higher contribution rates were already adopted (International Monetary Fund, 2011, p. 29; OECD, 2023b, pp. 70-72).

The German old-age pension scheme can be principally described as a pure PAYG scheme (Holzmann & Hinz, 2005, p. 50; OECD, 2023b, pp. 133-135). This scheme does not have a first tier responsible for providing basic pension support, only a mandatory public contributory earnings-related PAYG DB scheme implemented through a point scheme (OECD, 2023b, pp. 133-141). This mandatory second tier is complemented by a third tier comprising voluntary private pension options that receive tax incentives, although with limited participation among lower earners (OECD, 2024, p. 40). This scheme provides a stable income replacement for average earners by linking the benefits to previous earnings and years of contributions. However, this scheme offers smaller returns for lower-earners (International Monetary Fund, 2011, p. 30). Moreover, this scheme still faces significant challenges to its sustainability from the demographic trends, like other countries' PAYG schemes, because Germany's elevated old-age dependency ratio is expected to increase in the next decades (OECD, 2023b, pp. 183-185). Reforms such as raising the statutory retirement age (to 67 by 2030) and expanding coverage for self-employed workers were adopted (European Commission, 2024, p. 173; International Monetary Fund, 2011, pp. 28-29). However, these reforms tend to encounter political resistance, complicating their implementation (Holzmann, 2000, p. 17).

The Spanish old-age pension scheme is a pure PAYG scheme, which is centrally administered and is financed through mandatory social contributions (Holzmann & Hinz, 2005, p. 44; OECD, 2023b, pp. 51, 133-135). The first tier comprises a minimum contributory and a non-contributory pension for low-income retirees who have accumulated insufficient contributions over time (OECD, 2023b, pp. 140-141). The second tier comprises a public earnings-related PAYG DB scheme, which offers high replacement rates based on average earnings over the best 25 out of 29 years of the career (OECD, 2023b, pp. 49, 133-141). The third tier comprises voluntary occupational and individual pension plans, incentivised through tax incentives. Nonetheless, workers' participation remains relatively low (OECD, 2024, pp. 84-86). The most prominent feature of the Spanish scheme is its high replacement rate for full-career workers (OECD, 2023b, p. 51). The main drawbacks are budgetary constraints, the reversal of earlier cost-containment measures, and an aging population, like other PAYG schemes. To address these concerns, a gradual increase of the contribution reference period to 27 years by 2044 and steady increases in contribution rates were introduced. An intergenerational equity mechanism was also created, and the SS Reserve Fund was reactivated (OECD, 2023b, p. 48). Even though this reform was implemented, the Spanish pension scheme remains vulnerable to political resistance to further reforms and lacks automatic demographic adjustment mechanisms, weakening its long-term sustainability (OECD, 2023b, p. 48).

At the opposite end of the spectrum, some countries, like Chile and Australia, have opted for schemes that can be characterized as fully funded schemes (OECD, 2023b, pp. 133-135).

The Chilean old-age pension scheme can be described as a FFDC pension scheme despite including a first tier aimed at poverty alleviation (OECD, 2023b, pp. 133-135). The first tier offers a flat-rate amount to nearly all older individuals, independent of the individual's contribution history (OECD, 2023b, pp. 66-67, 133-135). The second tier comprises mandatory contribution-based private individual fully funded plans managed by Pension Fund Administration (AFPs) (Holzmann & Hinz, 2005, pp. 142-143). In this tier, workers' contributions are capitalised over time, and as a result, returns depend on the market performance (OECD, 2023b, pp. 133-135). The third tier comprises voluntary and personal schemes or other supplementary plans. Each of these plans is incentivised by public policies via tax exemptions subject to a tax exemption limit (OECD, 2024, pp. 23-25). This scheme is transparent and actuarially fair since benefits are obtained based solely on previous contributions and market returns. However, this scheme struggles to offer an adequate pension to lower earners or informal workers. Moreover, this scheme also presents limited risk pooling among individuals and does not allow the transference of income between generations, within its fully funded structure (Holzmann & Hinz, 2005, pp. 145-146). The reform that reintroduced the Universal Guaranteed Pension in 2022, the discussion of integrating more solidarity elements, and reduction of AFPs fees, comprise some key steps in addressing the challenges of this scheme (OECD, 2023b, p. 56).

The Australian old-age pension scheme presents at its core FFDC retirement plans, where workers' contributions are accumulated (OECD, 2023b, pp. 133-135). The first tier complements the core of the scheme by providing basic support to those with low income and other financial assets, via a residence-based targeted pension, which is financed through general taxation (OECD, 2023b, pp. 64, 133-135). The second tier is formed by mandatory Superannuation Guarantee schemes, in which workers contribute a fixed percentage of their wages to an individual retirement account (OECD, 2023b, pp. 55, 64, 133-135). The third tier represents voluntary extra contributions to the Superannuation, which are often incentivised by concessional tax treatment (OECD, 2024, pp. 8-10). The main advantages of this old-age pension scheme are its high sustainability and asset accumulation (OECD, 2023b, p. 64). However, this scheme presents a gap in coverage for workers with a fragmented career, who have worked in the informal sector, or, even part-time (OECD, 2023b, p. 64). Ongoing policy reform discussions in Australia focus on improving the efficiency and equality of Superannuation schemes, including proposals to lower contribution thresholds, enhance portability, regulate fees, and consolidate funds to improve long-term outcomes (OECD, 2023b, p. 55). In parallel, supervisory authorities have intensified monitoring efforts by publishing heatmaps highlighting underperforming and high-fee superannuation products, urging trustees to reduce costs and enhance investment performance (OECD, 2023a, p. 41).

Most countries' old-age pension schemes can be better described as mixed schemes. Within this category, it is possible to examine the cases of Italy, the United Kingdom, Sweden, and Switzerland (OECD, 2023b, pp. 133-135).

The Italian old-age pension scheme can be described as a mixed scheme that predominantly operates within a PAYG framework, with no separate first tier providing non-contributory basic pension support, only a mandatory contributory earnings-related second tier (OECD, 2023b, pp. 133-137). The second tier is operationalized through a public PAYG NDC scheme that credits notional contributions while adjusting old-age pensions based on life expectancy and returns (OECD, 2023b, pp. 133-139). The third tier offers complementary voluntary occupational and personal pension plans provided through life insurance contracts that benefit from favourable tax treatment (OECD, 2024, pp. 53-54). This model can offer predictability and financially stable retirement benefits since they are calculated transparently, according to the amount of the previous contributions and the increase brought by the application of a theoretical rate of return established by the government (Barr & Diamond, 2006, p. 19; Holzmann & Hinz, 2005, pp. 75-77). However, it also faces sustainability challenges since Italy presents one of Europe's highest old-age dependency ratios due to an ageing population and low fertility. Furthermore, this scheme also faces the issue of guaranteeing an adequate old-age pension to individuals who present fragmented labour market participation (International Monetary Fund, 2011, pp. 18-19). Therefore, to address these challenges Italy should reinforce its NDC rules, allowing an increase in the statutory retirement age to qualify for the old-age pension and restrict the possibility to opt for an early retirement (OECD, 2023b, pp. 133-135).

The United Kingdom's old-age pension scheme can be characterized as a mixed scheme, combining a PAYG public foundation and a widespread adoption of funded occupational and personal pension plans (OECD, 2023b, pp. 133-135). The first tier comprises a residence-based State Pension offering a flat-rate benefit based on the National Insurance System (OECD, 2023b, pp. 86-87, 133-137). The second tier consists of a mandatory occupational DC scheme, into which employees are automatically enrolled, with contributions made by both the employers and the employees (OECD, 2023a, p. 19; 2023b, p. 219). The third tier complements the second tier occupational scheme, encompassing voluntary personal and stakeholder pensions incentivised with tax relief (OECD, 2024, pp. 92-94). The main benefits of this scheme include its broad coverage and improved adequacy due to the auto-enrolment procedure, as well as access to the strong growth of assets typical of the DC schemes (OECD, 2023a, pp. 19, 55). However, adequacy remains uneven between individuals, since this scheme still presents gaps for the self-employed, part-time, and low-income workers (European Commission, 2024, pp. 173-176). Reforms such as the auto-enrolment procedure in 2012 and the flat-rate pension reform in 2016 have been implemented to address this issue. Moreover, further improvements to minimal contributions are planned (OECD, 2023b, p. 219).

The Swedish old-age pension scheme can be described as a mixed scheme, combining an NDC scheme with fully funded accounts (OECD, 2023b, pp. 133-135). The first provides a minimum income for the lower earners in retirement via a residence-based targeted scheme (OECD, 2023b, pp. 133-138). The second tier comprises a contributory PAYG NDC scheme that links benefits to lifetime earnings with the increase of the notional interest rate defined by the government (OECD, 2023b, pp. 133-138). Additionally, it includes a mandatory fully funded DC scheme, known as the Premium Pension System, in which contributors choose the fund where 2.3% of their wages are accumulated in individual accounts (OECD, 2024, pp. 86-88). The third tier offers the option to adopt one of the widely available quasi-mandatory occupational and voluntary individual pension savings plans supported by tax exemptions (OECD, 2024, pp. 86-88). The main benefit of this scheme is the inclusion of automatic stabilisers, such as life expectancy indexation and a balancing mechanism that adjusts notional accounts and benefits in case of financial imbalance, helping the scheme remain aligned with demographic and economic conditions while maintaining long-term financial sustainability and transparency (OECD, 2023b, p. 141). On the other hand, the scheme's complexity, the small contribution rate to the funded component, and the heavy reliance on the individual choice of investment plans can limit pension adequacy (OECD, 2023b, p. 141). To address some of these concerns, Sweden has linked retirement age to life expectancy, increasing the eligibility age for the minimum guaranteed pension from 65 to 67 by 2026, among other reforms (OECD, 2023b, p. 43).

The Swiss old-age pension scheme can be described as a mixed scheme as well since it does not have a first tier in the sense of a non-contributory basic pension, but rather a mandatory PAYG scheme, combined with DB schemes (OECD, 2023b, pp. 133-135). The PAYG scheme provides a contribution-based minimum income in old-age, financed through social contributions, and incorporates a redistributive function (OECD, 2023b, pp. 133-135). The second tier comprises mandatory DB occupational pension schemes, either public or private, which are employer-sponsored and aim to maintain previous income levels (OECD, 2023b, pp. 47, 133-135). The third tier is formed by voluntary individual retirement savings plans that are completely funded and incentivized via a preferential tax treatment to encourage participation in this tier to complement the previously described tiers (OECD, 2024, pp. 88-89). By including a dual-mandatory structure, this scheme certifies a relatively high replacement rate of around 60% of previous income for the average worker (OECD, 2023b, p. 153). These replacement rates are obtained by presenting diversified income sources from PAYG and funded savings plans. Despite the structure of this scheme, it is still under pressure from demographic changes, especially from the increase in the longevity of individuals, namely in the financial sustainability of the annuity conversion rates throughout retirement (OECD, 2023b, p. 47). To address this problem, the Swiss Parliament voted in 2023 to reduce the conversion rate in occupational schemes, from 6.8% to 6% (OECD, 2023b, p. 47).

In addition, one last category is the case of countries currently transitioning between pension scheme options. In this category, we can find the Netherlands (OECD, 2023b, pp. 133-135).

The Dutch old-age pension scheme comprises a two-tier mandatory structure complemented by voluntary individual savings plans as a third tier (OECD, 2023b, pp. 133-135). The first tier is formed by a universal flat-rate public pension, which is financed through income taxes and is indexed to wages. This tier offers a basic income level to all residents upon retiring (OECD, 2023b, pp. 44, 133-135). Since 2013, the second tier has shifted from a DB to a DC scheme. This transition process was initiated by the 2023 pension reform law, which aims to improve transparency, while adapting to changes in the labour market. This reform introduced pooled contributions while being individually tracked (OECD, 2023b, p. 47). Despite being supported by tax incentives, the third tier presents a modest level of participation in voluntary plans, due to the strong coverage provided by the occupational schemes (OECD, 2024, pp. 70-72). The Netherlands' old-age pension scheme has several benefits, such as high coverage and trust in the scheme, which are provided by the two-tier structure. However, this scheme faces the transition complexity from the change in the second tier, while also raising concerns about intergenerational fairness since younger workers may benefit more from that change, whereas older workers face the uncertainty brought by the transition (OECD, 2023b, p. 47; 2024, pp. 70-72).

The following table summarizes the different types of old-age pension schemes described.

Country	Pure PAYG schemes	Mixed schemes	Fully funded schemes	Transitioning between schemes
France	X			
Germany	X			
Spain	X			
Italy		X		
United Kingdom		X		
Sweden		X		
Switzerland		X		
Chile			X	
Australia			X	
Netherlands				X

Figure 1 – Benchmark pension scheme typology by country

2.2. The Portuguese Social Security Scheme

The Portuguese old-age pension scheme can be broadly described as a PAYG scheme, where contributions from the current workforce are directly used to fund the pensions of current retirees (OECD, 2023b, pp. 133-135).

2.2.1. BRIEF HISTORICAL REVIEW

The Portuguese old-age pension scheme, currently a PAYG model, evolved gradually over the 20th century. Initially, social protection was provided by religious and charitable institutions such as the *Misericórdias* and *Casa Pia de Lisboa*.

The first modern step came with the ("Lei n.º 1884/1935, 16 de março,"), which introduced compulsory insurance for illness, old-age, disability, and workplace accidents under a Bismarckian, occupational-based approach (Conselho Económico e Social, 2018, pp. 39-40).

In 1962, the ("Lei n.º 2115, 18 de junho,") created a general regime for private-sector employees, managed by the newly established *Caixa Nacional de Pensões* (CGA), expanding coverage to healthcare and assistance (OECD, 2019, pp. 61-62).

Following the 1974 Revolution, SS was enshrined as a universal right, with additional 13th and 14th pension payments and the creation of a means-tested social pension in 1977. Coverage also expanded to rural, domestic, informal, and self-employed workers (OECD, 2019, pp. 61-62).

Subsequent decades consolidated and reformed the system: the ("Lei n.º 28/84, 14 de agosto,") (first Framework Law) defined universality, solidarity, and financing rules; the ("Decreto-Lei n.º 140-D/86, 14 de junho,") introduced the Single Social Contribution (TSU); and the ("Decreto-Lei n.º 143/88, 22 de abril,") harmonised CGA with the general regime of the SS.

In the 1990s, major reforms set a unified retirement age (65), minimum contribution periods (15 years), and a new pension formula ("Decreto-Lei n.º 329/93, 25 de setembro,"), alongside the creation of the *Fundo de Estabilização Financeira da Segurança Social* (FEFSS) in 1998.

The ("Lei n.º 17/2000, 8 de agosto,")(second Framework Law) improved adequacy, followed by the creation of the *Instituto da Segurança Social* (2001) and the restructuring into three pillars by ("Lei n.º 32/2002, 20 de dezembro,"). The current structure was established in ("Lei n.º 4/2007, 16 de janeiro,"), which also introduced the sustainability factor and new indexation rules ("Decreto-Lei n.º 187/2007, 10 de maio,"), later complemented by the ("Lei n.º 83-A/2013, 30 de dezembro,"), linking retirement age to life expectancy.

2.2.2. STRUCTURE

First tier

The first tier of the Portuguese old-age pension scheme ensures minimum income protection in retirement, particularly for individuals with incomplete or no contributory careers. This tier comprises three main components financed through general taxation to alleviate old-age poverty (OECD, 2019, pp. 29-55).

First, a contribution-based minimum pension[1] for individuals with low contributions during their active career offers a benefit between 21% and 30% of the average wage,

[1] Pensão Mínima, in Portuguese.

according to their respective length of contribution history. The minimum pension covers approximately 38% of individuals above 65 years old and accounts for 2.6% of GDP in 2016 (OECD, 2019, pp. 29-55). This component of the first tier of the Portuguese old-age scheme finds a close match in the Spanish minimum contributory pension, since it is a state-sponsored minimum pension amount for individuals with sufficient contributory years (OECD, 2023b, pp. 133-139; 2023c, pp. 202-205).

Second, a means-tested old-age social pension[2], a non-contributory flat-rate pension offering benefits for individuals with insufficient or no contributory history, covers up to 11% of the average wage. The pension guaranteed by this scheme only covered 1.2% to 1.5% of the population aged 65 or more and represented 0.04% of GDP in 2016 (OECD, 2019, pp. 29-55). The Australian age pension plays a similar role to the Portuguese old-age social pension, because it is a tax-financed, means-tested pension for residents in need above a certain age (OECD, 2023b, pp. 133-139; 2023c, pp. 6-12).

Third, a supplementary pension known as *Complemento solidário para Idosos* (CSI) offers an additional pension for individuals who do not reach a specific retirement income threshold[3]. This supplement provides up to 29% of the average wage for about 8% of the population aged 65 or more in 2016 and accounts for 0.11% of GDP in 2016 (OECD, 2019, pp. 29-55). Additionally, combined with the social pension, it improves income adequacy for the poorest elderly by increasing the replacement to about 40% of the gross average wages (OECD, 2019, pp. 29-55). The UK's guarantee credit component mirrors the function of the CSI, since it is an additional benefit for pensioners with low incomes above the minimum level (OECD, 2023b, pp. 133-139; 2023c, pp. 225-228).

Second tier

The second tier of the Portuguese old-age pension scheme is responsible for providing income replacement in retirement according to prior contributions and can be characterized as a mandatory public PAYG DB scheme. Until 2006, there were two main schemes through which public and private workers were entitled to an old-age pension, via the CGA and the Portuguese SS Scheme, respectively (OECD, 2019, p. 58).

The old-age pension provided by the CGA was granted to the so-called subscribers, who were "civil servants and military personnel employed by the central, regional, local

[2] Pensão Social de Velhice, in Portuguese

[3] 205€, according to the website of the Portuguese SS.

governments and by the social security, private and cooperative school teachers, magistrates, local elected representatives and Members of Parliament, as well as employees of some public corporations and state owned enterprises" (Goulart & Camacho, 2014, pp. 9-10). The subscribers of CGA benefit from disability, survivor, and death pensions, in addition to the old-age pension (Goulart & Camacho, 2014, p. 10). The finance of CGA is only partially financed by employee/employer contributions, with the remaining expenses being covered by transfers from the Portuguese Budget (Goulart & Camacho, 2014, pp. 10-11).

The old-age pension offered by the SS is provided to individuals covered by the Contributory system of the SS, including employed and self-employed workers, as well as individuals who have opted to make voluntary contributions to the Contributory system (Goulart & Camacho, 2014, pp. 4-5). According to Goulart and Camacho (2014, p. 6), "[t]he B included in the social security budget are, in decreasing order of importance: (i) employer contributions; (ii) employee contributions; (iii) State Budget (SB) and other public entity transfers; (iv) earmarked revenues, namely from lotteries, and (v) income from financial and property income" (Goulart & Camacho, 2014, p. 6). In the Previdential system case, the funding is mainly provided via employer and employee contributions, 23.75% and 11% for the generality of workers[4], respectively (Goulart & Camacho, 2014, p. 6). The Contributory system follows a PAYG framework, i.e., the current workers directly finance the old-age pension of the current retirees. While also having a limited funded reserve component, known as SS Financial Stabilisation Fund, to be a stabilisation mechanism in the short term, which is funded by the surpluses of the PAYG component (Goulart & Camacho, 2014, p. 6).

After 2006, the system closed to new entrants, and all the new possible subscribers were enrolled in the general scheme of SS. Therefore, currently, the main scheme providing an old-age pension to public and private workers is the general scheme of SS, which offered an old-age pension to 2 117 487 pensioners in 2023, while the CGA still provided an old-age pension to 487 576 pensioners in 2023[5]. One of the most similar schemes to the general scheme of Portuguese´s SS, which encompasses the second tier of old-age pension scheme is the Spanish's SS general scheme, since it is a PAYG DB scheme, which is financed by employer and employee contributions and offers a high replacement rate pension based in

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[4] According to the official website of the Social Security.

[5] According to the official website of the *Caixa Geral de Aposentações* and the data from *Pensionistas da segurança social em 31 dezembro (N.º) por Tipo de pensão* retrieved from INE database.

the best 25 years out of 29 working years (OECD, 2023b, pp. 133-135, 140-141; 2023c, pp. 202-205).

Third tier

The second tier of the Portuguese old-age pension scheme is complemented by the voluntary funded pension system, which is *de facto* the third tier of the Portuguese old-age pension scheme (OECD, 2019, pp. 97-100; 2024, pp. 78-80). The third tier comprises a publicly funded old-age pension scheme, via the Voluntary Complementary System of the SS, known as *Regime Público de Capitalização* (RPC), and multiple privately funded old-age pension schemes (occupational or personal) (Goulart & Camacho, 2014, p. 3; OECD, 2024, pp. 78-80).

The RPC consists of an individual pension plan[6] established by the Portuguese government and managed by the Institute of Management of Capitalisation Funds of the Social Security[7] to help individuals voluntarily increase the amount of savings (OECD, 2019, pp. 97-134). This scheme was established after the SS reforms in 2007, which instituted a limitation on the pension benefits offered by the second tier to address the sustainability of the old-age pension scheme, via the introduction of a sustainability factor to the formula that calculates the pension benefits offered to the retirees (OECD, 2019, pp. 97-134). Therefore, after this reform, only two options were available to maintain pre-reform levels: individuals can either work longer or voluntarily increase their contribution level for a pension plan (OECD, 2019, pp. 97-134). The RPC emerged as the public response to maintaining the pre-reform levels; however, participation remains low despite being open to any individual covered by a mandatory pension scheme (OECD, 2019, pp. 97-134). Due to limited awareness and promotion, this scheme has been underutilised, with only around 900 members, only approximately half of whom are active contributors (OECD, 2019, pp. 97-134). The reported returns of FCR are historically low, being 0.10% at 5 years and 1.06% at 10 years, in nominal terms, with the year 2023 representing an outlier with a nominal return of 5.21%. Contributions to the RPC are eligible for a personal income tax deduction of 20%, subject to age-based ceilings. These ceilings are set at 400€ per year for individuals under 35,

[6] "Participation in the RPC is based on individual membership, although the administration body (the IGFCSS), has recently approved a change which allows employers, through a collective agreement with their employees, to pay contributions to individuals' accounts" (OECD, 2019, p. 100).

[7] Instituto de Gestão de Fundos de Capitalização da Segurança Social (IGFCSS), in Portuguese. "The IGFCSS is a unit within the Ministry of Labour, Solidarity and Social Security" (OECD, 2019, p. 98).

350€ for those aged 35 to 50, and 300€ for individuals over 50. Furthermore, investment returns are tax-exempt, and withdrawals benefit from preferential tax treatment if they occur under qualifying conditions, such as an early withdraw after age 60 with minimum holding period of 5 years, or in the case of serious illness, long-term unemployment, or use for mortgage repayment (OECD, 2019, pp. 97-100; 2024, pp. 78-80). One of the most similar plans to the RPC of the SS of the third tier of the Portuguese old-age pension scheme is the German *Riester* pension plan, despite differing in target and provider, this scheme is a publicly regulated individual voluntary plan incentivized via tax incentives with the objective of complementing the regular old-age pension (OECD, 2023c, pp. 82-85; 2024, pp. 39-43).

Private-funded old-age pension schemes were introduced in 1985 to promote long-term savings and help individuals deal with the loss of income upon retirement (OECD, 2019, pp. 97-134). According to OECD data, as of 2017, the reported returns of voluntary private pension schemes in Portugal were 1.8% and 2.1% over 5 and 10 year periods in nominal terms, and 0.9% and 1.3%, in real terms, respectively (OECD, 2019, pp. 97-134). The privately funded old-age pension schemes can be occupational or personal (OECD, 2019, pp. 98-108).

The occupational plans are employer-sponsored PPRs and can be delivered via closed[8] or open[9] pension funds, through collective membership, and collective pension insurance contracts (OECD, 2024, pp. 78-80). Most occupational plans, 92% of assets in 2017, are DB plans. The adherence to this scheme remains very low, approximately 2.5% of the working-age population, in 2017. Despite varying from sectors or firms and according to the risk tolerance and funding strategy, these schemes normally invest in government and corporate bonds, equities, and real estate. Most of the occupational plan's contributions are made by employers, who enjoy corporate tax deductions if certain legal criteria are met (OECD, 2024, pp. 78-80).

One occupational plan that can be compared with the Portuguese occupational plans is the auto-enrolment Italian private-sector employees in occupational plans, because, despite being established and incentivized via tax benefits, most individuals still opt out and prefer to receive a lump sum at the beginning of their retirement. Therefore, similarly to the

[8] "Closed pension funds are established by private companies, groups of social or professional associations, or by agreement between workers' associations and trade unions" (OECD, 2019, p. 98).
[9] "Open pension funds differ in that they do not require a business or association link between employers" (OECD, 2024, p. 98).

Portuguese occupational plans, the Italian occupation plan reports a low participation rate of about 13% (OECD, 2023b, pp. 217-219).

The private personal plans comprise individual membership in open pension funds and PPRs. However, PPRs were introduced in 1989 and became the dominant private schemes from the third tier of the Portuguese old-age pensions, since they currently represent approximately 90% of the private personal plans. PPRs are voluntary individual savings plans and can take one of three types: insurance contracts, investment funds, and pension funds (OECD, 2019, pp. 97-134).

Insurance-based PPR contracts are a conservative investment strategy that primarily invests in fixed-income instruments such as bonds or other guaranteed instruments and often guarantees the invested capital. These schemes are managed by licensed life insurance companies, which charge a high management fee, while offering limited transparency. The regulatory oversight follows the *Autoridade de Supervisão de Seguros e Fundos de Pensões* (ASF) (OECD, 2019, pp. 97-134).

PPRs structured as investment funds offer greater potential returns but are more prone to volatility than the insurance-based PPRs, since they invest in diversified portfolios, which include equities, bonds, and international assets, and do not guarantee the invested capital. These schemes are managed by investment fund managers, who offer higher transparency and liquidity than the insurance contracts. The regulatory oversight follows the *Comissão do Mercado de Valores Mobiliários* (CMVM). (OECD, 2019, pp. 97-134).

PRRs structured as pension funds operate like individualised pension plans, which offer diversified portfolios with long-term horizons and rarely offer the option of guaranteeing the invested capital. Pension fund manage these schemes, and the regulatory oversight follows the ASF (OECD, 2019, pp. 97-134).

According to OECD (2019, pp. 97-134), personal pension plans enjoy a higher participation rate between 14.7% and 17.2% of the working-age population. The vast majority of PPRs, about 84% in 2017, are insurance-based PPRs, due to the perceived safety of this type of PPRs (OECD, 2019, pp. 97-134). Contributions to PPRs are eligible for the same personal income tax deduction of 20% as the RPC, subject to age-based ceilings. These ceilings are set at 400€ per year for individuals under 35, 350€ for those aged 35 to 50, and 300€ for individuals over 50 (OECD, 2019, pp. 97-134). "Withdrawals from retirement savings plans (PPR) under the following conditions are not subject to penalties: (i) old-age retirement; (ii) long-term unemployment of the participant or any member of their household; (iii) permanent disability of the participant or any member of their household; (iv) severe illness of the participant or any member of their household; (v) at the age of 60; (vi) for payment of instalments of mortgage-backed credit on the participant's own permanent residence" (OECD, 2024, p. 79).

One of the most similar plans to the Portuguese PPRs is the French individual retirement savings plans, since it allows tax-deductible contributions until 10% of the previous year's income, and provides flexibility for early withdrawals in cases such as retirement or in the purchasing of a primary residence (OECD, 2023c, pp. 75-80; 2024, pp. 36-39).

2.2.3. MAIN BENEFITS OF THE PORTUGUESE OLD-AGE PENSION SCHEME

The three main benefits of the Portuguese old-age pension schemes are the high net replacement rate provided by the second tier, the comprehensive coverage of diverse social risks, and early and flexible retirement options.

First, through the general scheme of SS, the second tier can offer a net replacement rate of 98.8% of the previous income for all average-income workers, which is well above the OECD average of 61.4% for men and 60.6% for women. Moreover, since individuals who only received about half of the average wage (lower earners) have a net replacement rate of 97% and individuals who received above the average wage (high earners) have a net replacement rate of 96.1%. The Portuguese old-age pension also presents the benefit of a redistributive nature (OECD, 2023b, pp. 156-157).

Second, the general scheme of SS offers a multi-risk coverage (see section K.2), since beyond the core function of offering old-age pensions, for both employed and self-employed individuals, this scheme also provides disability and survivor pensions, which deliver a pension for individuals who are unable to work due to illness or impairment, and a pension for the family of a deceased individual. Additionally, this scheme provides minimum pensions for low-income individuals or those with incomplete careers and provides non-contributory old-age pensions and Solidarity Supplement for the Elderly, which ensures a basic income for individuals who are not entitled to the contributory safety net from the minimum pension scheme. Furthermore, the SS also provides broader benefits, such as unemployment, sickness, maternity or paternity, and long-term care throughout individuals' lives (Goulart & Camacho, 2014, pp. 4-5).

The Portuguese old-age pension scheme offers two options of early retirement in addition to the normal retirement age in Portugal, which is 66 years and 4 months in 2023. First, individuals above 60 years old with a long contributory career, i.e., with 40 years of registered contributions, can apply for an early retirement with favourable conditions, such as a partial or total exemption from applying the sustainability factor. However, the early retirement typically leads to a 0.5% monthly reduction as a penalty. Second, individuals aged 57 or older, who have been involuntarily unemployed and exhausted their unemployment benefits, could qualify for an early retirement if they had previously registered contributions for at least 22 years. However, despite receiving the exemption of the application from the sustainability factor, the "long-term unemployment route" for early retirement still leads to a penalty of 0.5% per early month, as seen in the first case (OECD, 2019, pp. 144-147). Moreover, at the other end of the spectrum, individuals who extended their retirement age beyond the normal retirement age may receive a monthly increase of up to 1%, subject to the previous contributory years (OECD, 2019, pp. 82-84).

2.2.4. MAIN CHALLENGES OF THE PORTUGUESE OLD-AGE PENSION SCHEME

The Portuguese old-age pension scheme faces three main challenges. First, the structural complexity and financial sustainability of the scheme. Second, significant gaps in public engagement, financial literacy, and retirement planning. Third, persistent socioeconomic disparities contribute to pension adequacy shortfalls.

The structural complexity and financial sustainability can be further divided according to the different tiers of the Portuguese old-age pension scheme.

The three main components of the first tier of the Portuguese old-age pension scheme, described in section B, serve overlapping functions, with each component presenting its own eligibility criteria and benefit levels, which leads to inefficiencies and unequal treatment of individuals in similar situations. Moreover, administrative fragmentation limits the transparency of the first tier and reduces benefit take-up, particularly among low-income or vulnerable individuals (OECD, 2019, pp. 29-55). Therefore, the OECD (2019, pp. 51-52, 89-90) recommends addressing these inefficiencies through policies, such as simplifying and consolidating the first tier's components to improve transparency and equity; harmonizing eligibility criteria and benefit indexation across the components; lowering the minimum contribution period from 20 to 15, with each additional year of contribution resulting in a higher pension benefit in the future; and coordinating the design of the CSI and the minimum contributory pensions to prevent benefit overlaps and unintended disincentives.

As previously discussed, the second tier of the Portuguese old-age pension can be characterized as a mandatory earnings-related public PAYG DB scheme. Therefore, like PAYG schemes of other countries, it faces significant sustainability challenges stemming from profound demographic shifts, namely, an aging population, a declining fertility rate, and a shrinking working-age population. According to the 2021 Censos, the Portuguese population declined by 2.1% between 2011 and 2021 (INE, 2022, p. 6). Additionally, projections indicate that the old-age dependency ratio will more than double by 2050, increasing the pressure on a shrinking active population (OECD, 2019, pp. 59-60). Moreover, Portugal presented the lowest fertility rate of the OECD countries between 2015 and 2020, which, combined with an ageing index of 182 elderly persons per 100 young people in 2021, further illustrates the difficulty in guaranteeing the sustainability of PAYG scheme (INE, 2022, pp. 20-21; OECD, 2019, p. 24). These pressures are further compounded by rising public pension expenditure, which accounts for about 13.5% of the GDP from 2013 to 2016 and is expected to remain among the highest in the European Union at least until 2050 (OECD, 2019, pp. 64-65). According to the International Monetary Fund (2011, p. 4), this capture of the public spending share allocated to old-age pensions can crowd out of investment in pro-growth public spending, undermining intergenerational equity. Additionally, the pressures also increase through structural dependence on State Budget (SB) transfers of the legacy cost of CGA, since its closure expenditures heavily exceed contribution revenue, therefore, this deficit is financed by the SB, which in 2013 and 2023 accounted for about 51.4% and 47.7%[10] of contributory expenditure, respectively (Conselho das Finanças Públicas, 2024, p. 27; Goulart & Camacho, 2014, pp. 10-12). Limited effectiveness of past parametric reforms also increased pressure on the Portuguese old-age pension scheme, because despite measures such as the 2007 sustainability factor and the 2014 link between retirement age and life expectancy, the impact of these reforms has been undermined by ad hoc increases and inconsistent application of indexation rules (OECD, 2019, pp. 41-43, 62-64, 89-90). The main recommendations from the OECD (2019, pp. 89-90) are to maintain or even strengthen the link between the retirement age and life expectancy, reviewing long-term sustainability according to demographic trends and potential productivity stagnation, avoiding ad hoc pension increases, due to the

[10] Percentage financed by the State Budget = State Budget Transfers / Total CGA Expenditure = 6 208 M€ / 13 017 M€ ≈ 47.7% (calculated based on (Conselho das Finanças Públicas, 2024, p. 27))

consequences seen above, and merging the administration of the CGA with the general scheme covering private-sector workers.

The third tier of Portugal's old-age pension scheme remains underdeveloped and plays a marginal role in overall retirement income (OECD, 2019, pp. 14-15). Therefore, it fails to complement the PAYG scheme, which is the core of the second tier of the Portuguese old-age pension scheme (OECD, 2019, p. 98). Furthermore, access is particularly low among low earners and workers with unstable or informal employment and is concentrated in higher income groups (OECD, 2019, p. 70). Portuguese private pension schemes manage assets representing only 17.1% of GDP in 2022, well below the OECD average of 86.7% of GDP (OECD, 2023b, pp. 222-223). To address these problems, OECD (2019, pp. 128-133) recommends developing more stable, generous, and predictable tax incentives, promoting occupational schemes through collective agreements, tightening the rules around early withdrawals from PRRs, and introducing financial literacy programmes focusing on retirement income planning and decision making.

Although according to INE (2022, pp. 44-45), the illiteracy rate decreased 2.1 percentage points between 2011 and 2021, another challenge faced by the Portuguese old-age pension schemes is that most of the Portuguese population still displays limited understanding of the old-age pension scheme and low levels of financial literacy.

The limited understanding of the old-age pension scheme contributes to confusion about how pensions are calculated, the estimated amount of future benefits, and how their previous contribution history affects entitlements (Goulart, 2024, pp. 6-7). Moreover, the scheme's complexity, frequent reforms, and the absence of regular pension statements or simulations limit individuals' ability to plan for the future (Goulart, 2024; OECD, 2019). These limitations disproportionately affect vulnerable groups, such as women, younger workers, and low earners (Conselho Nacional de Supervisores Financeiros, 2024, pp. 69-74).

Financial literacy is essential for navigating an old-age pension scheme increasingly reliant on individual savings and responsibility for pension adequacy. However, according to Conselho Nacional de Supervisores Financeiros (2024, p. 72), the average financial literacy score was 62.7 out of 100, in 2023, close to the previous level of 2020 (61.8). Even so, Portugal ranked 13th out of 39 countries in the OECD in the international financial knowledge comparison module (Conselho Nacional de Supervisores Financeiros, 2024, p. 87). Only 27.2% of respondents reported having other income sources than the SS scheme pension (Conselho Nacional de Supervisores Financeiros, 2024, pp. 32-34). However, less than half of the respondents expressed confidence in their preparedness for retirement (Conselho Nacional de Supervisores Financeiros, 2024, pp. 32-34). Additionally, among those who save for retirement most (84%) adopt instruments less suitable for this task, such as low-yield products like deposits (Conselho Nacional de Supervisores Financeiros, 2024, pp. 30-32). Despite 82.1% of respondents indicating that they plan and control their household budget in somehow, only 10.2% of respondents compared financial products within the same institution and 40.3% across different institutions when contracting a financial product. Notably, 44.1% did not compare any options, reflecting limited financial decision-making awareness (Conselho Nacional de Supervisores Financeiros, 2024, pp. 50-51).

OECD recommends four key changes to address these two issues (OECD, 2019, pp. 89-90, 128-132). First, the SS should provide individuals with regular pension projections through an online simulation tool. Second, SS should also follow the example of other OECD and launch personal digital pension statements. Third, pension literacy should be integrated into the national financial education strategy. Fourth, the accessibility and clarity of public communication from SS institutions should be improved.

Another major issue facing the Portuguese old-age pension scheme is social inequalities and gaps in pension adequacy among retirees.

First, the average gender pension gap was 31% in Portugal in 2016, compared to an average of 25% at the OECD countries, i.e., women receive significantly lower pensions than men and are also more prone to suffer from poverty during retirement, because they have lower lifetime earnings, career interruptions, and other care responsibilities (European Commission, 2024, pp. 124-128; OECD, 2019, pp. 84-87). Therefore, in Portugal, one in three retirees receives a survivor pension, and 82% are women (OECD, 2019, pp. 84-87). To address this problem OECD (2019, pp. 142-143) recommends strengthening pension credits for care-related career breaks, such as childcare, elderly care, etc.

Second, another social inequality is the income disparity among retirees, since more than 90% of increases in wage inequality continue after retirement as pension inequality (European Commission, 2024, pp. 150-157; OECD, 2019, pp. 32-33). This problem is reflected in the Gini coefficient[11] of 0.34 in 2015 compared to the OECD average of 0.30, which illustrates the reduced progressivity of the formula for calculating pension benefits,

[11] Gini coefficient "varies between 0 if everybody had the same income and 1 if all of the income went to only one person" (OECD, 2019, p. 32).

with the low and high earners having similar replacement rates when they had a full contributory career (OECD, 2019, pp. 32-33). Moreover, without the high coverage of minimum pension old-age inequality would be worse (OECD, 2019, pp. 32-33). To face this issue, the OECD (2019, pp. 41-44) recommends indexing the minimum pensions to average wages to avoid the loss in the replacement rate over time, for instance.

Third, individuals with incomplete contribution histories, such as non-standard or interrupted careers, may receive pensions below the poverty threshold, since the scheme continues to be more suitable for full-time and stable workers (OECD, 2019, p. 138). Moreover, to be entitled to receive an old-age pension from the second tier of the Portuguese old-age pension scheme individuals need to have 15 years of contributions (OECD, 2019, pp. 33-41). Besides the issue of different criteria of the three main components of the first tier explained above, individuals who work on the informal economy, part-time works, and false self-employed[12] face lower job security and have a less clear path to guarantee an old-age pension, with the informal workers being completely excluded from the second-tier benefits (OECD, 2019, pp. 147-155). To address these cases, OECD (2019, pp. 9-10, 128-132) advocates simplifying non-contributory benefits from the first tier, lowering the minimum contribution period to 10 years, and improving coverage to atypical work paths, via enforcement of mandatory contributions to the scheme and the simplification of procedures.

Fourth and last, but not least, the lower earners are generally more exposed to retirement poverty since they normally contribute less to the second tier, and earn a lower salary (OECD, 2019, pp. 35-37). Additionally, these individuals heavily rely on the first tier, particularly minimum pensions and CSI (OECD, 2019, p. 30). Furthermore, these individuals are also largely excluded from the voluntary savings plans of the third tier (OECD, 2019, p. 70). To address the problems low-income individuals face, OECD (2019, pp. 128-132) recommends reinforcing basic pensions, simplifying first-tier design, and enhancing financial literacy to reach vulnerable groups. Both the factors and barriers faced by the Portuguese population, particularly the case of low-income individuals, and what role the State should play via public policy will be analyse in the next chapter.

[12] Recibos Verdes, in Portuguese (OECD, 2019, p. 148).

2.3. Barriers conditioning adherence to private pension schemes in Portugal

Considering the challenges outlined above, one way to improve the living standards of Portuguese retirees is to incentivise adherence to a complementary income source to address the issues of relying only on the first and second tiers of the Portuguese old-age pension scheme (Conselho Económico e Social, 2018, pp. 39-40; OECD, 2019, pp. 97-134). However, adherence to these plans faces economic, cognitive, institutional, and behavioural barriers (Barradas & Lagoa, 2019, pp. 9-16). Among the economic barriers, insufficient disposable income plays a crucial role in the lack of retirement savings, and, consequently, reduces the adherence to long-term investment plans (Barradas & Lagoa, 2019, pp. 9-176; Goulart, 2024, pp. 6-7). Moreover, the current cost of living competes directly with the ability to save for retirement, particularly in environments with less disposable income, where the ability to save is limited by the need to buy everyday products (Conselho Nacional de Supervisores Financeiros, 2024, pp. 11-12). The main cognitive barriers are the low financial literacy of the generality of the Portuguese workforce and the perceived complexity of savings and investment products and their associated fiscal incentives (Barradas & Lagoa, 2019, pp. 9-16). Additionally, the main institutional barrier to adopting complements to SS is the distrust in private pension providers, due to the risk of going bankrupt or opting for suboptimal investment decisions (Barradas & Lagoa, 2019, pp. 9-16). Furthermore, behavioural barriers, such as procrastination and present bias may also harm retirement planning (Barradas & Lagoa, 2019, pp. 9-16). The low-income individuals face greater economic, cognitive, institutional and behavioural barriers, since they face more income instability, have less disposable income, are more affected by the fees of financial products, are more likely to have a lower financial literacy and have less access to financial education (Barradas & Lagoa, 2019, pp. 9-16). To summarize, participation in these schemes can be impacted by income instability, financial literacy, and trust in the reliability of the complementing scheme providers (Goulart, 2024, pp. 6-7).

2.4. Role of public policy

Additionally, public policies play a pivotal role in fostering the adoption of complements to the general regime of the Portuguese SS scheme, not only through the reduction of complementing pension market failures, but also by creating effective tax incentives such as those associated with PPRs (Barradas & Lagoa, 2019, pp. 9-16). Therefore, to incentivise the adoption of complementary old-age pensions, already existing public policies could be improved, such as promoting tax incentives for PPRs adoption (Barradas & Lagoa, 2019, pp. 9-16). A second policy that could be developed is to create a national financial education strategy based on the existing *Plano Nacional para a Educação Financeira* (2011-15) (Barradas & Lagoa, 2019, pp. 9-16). And the promotion of the CSI, which remains underused among eligible individuals, despite having recently abolished the income of children from it calculations (Barradas & Lagoa, 2019, pp. 9-16, 28-29; EAPN Portugal, 2024, p. 22). Public examples abroad that have successfully boosted participation rates include matching contributions in Turkey, automatic enrolment procedures in pension schemes in six OECD countries, like the UK, and employer-sponsored pension schemes in Sweden, for instance (OECD, 2019, pp. 97-134; 2023b, pp. 46-56; 2024, pp. 89-91, 86-88).

Preferences regarding the role of the State and the adoption of complementary old-age pension plans vary significantly across income and education levels; hence, differentiated policy approaches are required (Barradas & Lagoa, 2019, pp. 9-16; Goulart, 2024, pp. 12-14). In the specific case of lower-income earners, direct subsidies or tailored incentives are a cornerstone of inclusivity (Goulart, 2024, pp. 6-7; OECD, 2019, pp. 97-134; 2023b, pp. 46-57). Moreover, these measures, beyond enhancing individual financial security, reduce individuals' dependency on the strained public pension scheme, contributing to its long-term sustainability (Barradas & Lagoa, 2019, pp. 16-17; Conselho Económico e Social, 2018, p. 41; OECD, 2019, pp. 97-134). Furthermore, strengthening regulatory frameworks and increasing the quality of the supervision of the private pension providers to limit the risk of bad investment decisions can bolster trust and encourage widespread adoption, addressing not only the income security of pensioners, but also the systemic challenges faced by the Portuguese old-age pension scheme (Conselho Económico e Social, 2018, pp. 40-42; OECD, 2019, pp. 97-134).

3. Methodology

This section outlines the methodological approach to address this dissertation's central research questions:

RQ1: What barriers hinder adherence to private pension schemes in Portugal, particularly among low-income workers?

RQ2: What is the perceived role of the State in old-age income protection?

From this question, two objectives emerge, apart from the defining of an old-age pension scheme and comparing these schemes across OECD countries, seen in the previous chapter. First, to analyse the barriers influencing the adoption or reinforcement of complementary pension schemes in Portugal. Second, to assess the perceived role of public policies in encouraging the adoption of these complementary schemes.

An anonymous online survey[13] was conducted to address the remaining two objectives, inspired by the 4th Survey on Financial Literacy of the Portuguese Population 2023 (Conselho Nacional de Supervisores Financeiros, Banco de Portugal, 2023*)*. The survey was administered online, through Microsoft Forms between the 12th of July and the 5th of August 2025, gathering 171 valid answers. While it registered working-age individuals' answers, particularly in the Aveiro district, the main target was the lower-income and lower-educated individuals within the Portuguese workforce, since the data about this group of individuals is scarce and hard to obtain. The survey comprised 26 questions divided into five blocks, each aligned with the hypotheses derived from the literature review: the first block collected socioeconomic information to segment respondents by age cohort, education, and income level; the second block addressed barriers to retirement planning and adoption of complementary old-age savings plans; the third explores expectations about the role of the State and support for four public policies; and the fourth and fifth blocks assessed financial literacy and knowledge of the first and second tiers of the Portuguese public pension scheme.

Research questions and hypotheses' structure:

RQ1: What barriers hinder adherence to private pension schemes in Portugal, particularly among low-income workers?

RQ1.1: What factors influence retirement planning?

H1: Lower financial literacy is associated with reduced retirement planning.

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[13] The full survey questionnaire is provided in the annex.

According to Barradas and Lagoa (2019, pp. 12-16), individuals with a low financial literacy level tend to plan retirement less, engage less in voluntary savings, and show lower participation in complementary schemes, largely due to a lack of knowledge or understanding. This contributes to limited use of financial products and a greater dependency on the public old-age pension scheme. This hypothesis is tested by comparing respondents' knowledge and holding of financial products, particularly complementary schemes, using knowledge of the first and second tiers of SS as a proxy for financial literacy as a reference.

H2: Most of the Portuguese workforce presents low financial literacy levels.

According to Conselho Nacional de Supervisores Financeiros (2024, pp. 15-16), the average score of the global financial literacy indicator in Portugal (63.4) is above the OECD average (62.7). Despite this, the results were weaker in the financial products knowledge indicator. While many individuals were aware of different financial products, such as PPRs, only a small minority reported owning them (Conselho Nacional de Supervisores Financeiros, 2024, pp. 43-53). Furthermore, knowledge about the Portuguese SS is also limited, with many individuals unaware of pension calculation rules or the legal retirement age (Goulart, 2024, pp. 6-7). Therefore, despite being marginally above the OECD average in Portugal's global financial literacy indicator, it is possible to conclude that most of the Portuguese workforce presents low financial literacy levels, particularly in the knowledge about SS and financial products. This hypothesis is tested by comparing respondents' knowledge and ownership of financial products and complementary schemes, and by the proxy for financial literacy.

RQ1.2: Do workers intend to finance their retirement mainly via the public old-age pension provided by Social Security?

H3: Workers expect the public pension that maintains their current standard of living in retirement.

Although the current average theoretical net replacement rate in retirement is 98.8%, this is expected to decrease to approximately 85% by 2062 for the average-earner with a 40-year career (European Commission, 2024, p. 78; OECD, 2023b, pp. 156-157). Moreover, evidence suggests that most individuals have unrealistic expectations and, thus, expect to be able to maintain their current standard of living (Goulart, 2024, pp. 12-13). This hypothesis is tested by analysing respondents' expectations regarding the share of their last net salary expect to keep in retirement.

H4: Workforce intends to finance their retirement mainly via the public old-age pension provided by Social Security.

According to Barradas and Lagoa (2019, pp. 12-16), most Portuguese workforce considers the public old-age pension as the main retirement income source, characterised by a low diversification of retirement income sources. This low diversification leads to a greater dependency on the public pension to ensure the replacement of their income in retirement (Goulart, 2024, pp. 12-13). This hypothesis is tested by analysing the relative importance respondents assign to SS pensions, complementary schemes, and other sources.

RQ1.3: What are the main barriers to complementary pension savings?

H5: The lack of disposable income plays a crucial role in the retirement savings.

Rising living costs significantly erode potential to save, especially among lower-income households, by reducing the portion of income available for complementary old-age pension schemes after covering essential expenses. Consequently, in contexts of limited disposable income, the high cost of living directly competes with the capacity to allocate resources to long-term retirement planning (Barradas & Lagoa, 2019, pp. 12-16; Conselho Nacional de Supervisores Financeiros, 2024, pp. 34-38, 95-96). This hypothesis is tested by analysing responses on whether low income and saving difficulties are perceived as barriers.

H6: Low financial literacy levels provide limited awareness and understanding of complementary pension schemes.

Low financial literacy is associated with limited awareness of private pension products and their advantages. According to Conselho Nacional de Supervisores Financeiros (2024, pp. 43-46), 68.7% of respondents report knowing retirement savings plans, such as PPRs, but only 16.7% owned such plans. Therefore, Barradas and Lagoa (2019, pp. 12-16) defend that despite recognizing the name of some plans, actual participation in these schemes remains low, because there is insufficient understanding of their functioning and advantages, in other words financial literacy. This hypothesis is tested by assessing how lack of knowledge of complementary schemes is perceived as a barrier.

H7: Distrust of private pension providers discourages participation.

Distrust of private pension providers is linked to the risk of bankruptcy or poor fund management. This leads to individuals fearing the possibility of returns below expectations or even losing capital. Therefore, trust in private pension providers is fundamental to encourage participation in retirement savings plans (Barradas & Lagoa, 2019, pp. 9-10;

Conselho Económico e Social, 2018, pp. 53-54). This hypothesis is tested by evaluating perceptions of trust in private pension providers.

H8: The current level of incentives is insufficient to encourage long-term savings.

Existing tax incentives in Portugal present low uptake and have not substantially reduced the barriers to planning complementary retirement income, particularly for the lower earners (OECD, 2019, pp. 128-129). According to Conselho Económico e Social (2018, pp. 60-62), increasing the current level of incentives is necessary to encourage long-term savings, following the existing incentives to PPRs. This hypothesis is tested by examining respondents' awareness of, and perceptions about, existing fiscal incentives and whether these are considered sufficient to encourage long-term savings.

RQ2: What is the perceived role of the State in old-age income protection?

H9: Individuals show heterogeneous preferences about the role of the State and which public policies they support.

The different preferences about the role of the State originate from the differences in the financial literacy indicators according to education and income levels (Conselho Nacional de Supervisores Financeiros, 2024, pp. 14-15, 43-53). Since more highly educated and higher-earning individuals have higher financial literacy indicators and present a more diverse income source in retirement, while lower-income and less educated individuals have lower financial literacy indicators, and present reduced diversification of income sources in old-age, and a greater dependency on the mandatory public old-age scheme (Conselho Nacional de Supervisores Financeiros, 2024, pp. 14-15, 43-53). Therefore, lower-income and less educated individuals tend to show stronger preferences for a more interventionist role of the State in old-age income protection (Goulart, 2024, pp. 6-7; OECD, 2019, pp. 97-134; 2023b, pp. 46-57). This hypothesis is tested by analysing respondents' views on whether the State should play a more active role and which public policy measures to support they support.

After the data were collected, descriptive analysis and cross-tabulations were applied. The analysis focused on four main variables: age cohorts, education, income levels, and a proxy for financial literacy derived from the answers to the last chapter of the survey. These dimensions provide the comparative framework used throughout the following sections.

4. Analysis of the Survey´s data

4.1. Characterization of the respondents

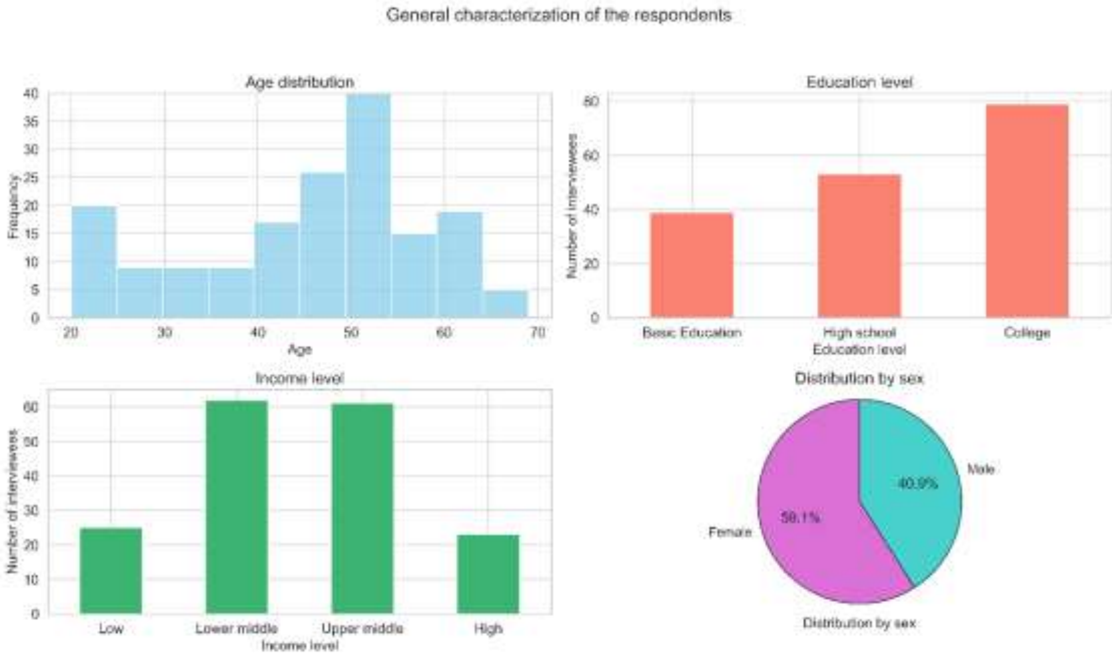

Figure 2 – General characterization of the respondents

From the universe of 209 respondents, only 171 were eligible active individuals between 18 and 69 years old. About 59.1% of the respondents were women, and 40.9% were men. The respondents were segmented according to age cohort, income level, education level, and financial literacy to compare answers among individuals with similar characteristics. When comparing with the Portuguese working population (based on employees under employment contract (TCO)[14]), women are slightly overrepresented (59.1% versus 54.4%), while men are underrepresented (40.9% versus 45.6%) (Gabinete de Estratégia e Planeamento, 2024).

Regarding income, the respondents were divided into four income classes: low, medium low, medium high, and high. The low-income class aggregates 25 individuals (14.6%) with the monthly net income below 899.25€ (75% of the average monthly net income of the employed population[15]); the lower middle-income class encompasses 62 individuals (36.3%) with net monthly income between 899.25€ and below 1199€ (average monthly net income

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[14] This comparison was chosen because most of the sample were employees under an employment contract (Trabalhadores por conta de Outrem (TCO), in Portuguese), representing 136 out of 171 respondents.
[15] This cut-off is a conservative adaption of the OECD's international low-income criterion (<2/3 of the median), since the data retrieved from INE reports the mean of the monthly net income of the employed population rather than the median.

of the employed population, according to INE[16]); the upper middle-income class comprises 61 individuals (35.7%) with monthly net income between 1199€ and below 1798.50€ (150% of the average monthly net income of the employed population[17]); and -the high income class, which contains 23 for individuals (13.5%) with monthly net income at or above 1798.50€. In other words, almost half of the sample individuals (49.2%) reported earnings above the mean, while 50.9% were below. However, when comparing with the Portuguese working population, based on employees under an employment contract (TCO), it is possible to see that only 29% of employees earn more than the average monthly wage, while the majority (71%) fall below it[18] (INE, 2023). These figures highlight that the survey sample substantially underrepresents low earners, while disproportionately including individuals around or above the average.

In terms of education level, the respondents were divided into three classes: basic education, high school, and college education. The basic education level comprises 39 individuals (22.8%), with an education level from individuals between primary, *1º Ciclo*, *2º Ciclo*, and *3º Ciclo*. The high school level encompasses 53 individuals (31.0%), with *Secundário ou Pós-secundário não Superior*. And the college education level aggregates 79 individuals (46.2%), with a *Bacharelato*, *Licenciatura*, *Mestrado*, and *Doutoramento*. When comparing with the Portuguese working population, based on employees under an employment contract (TCO), individuals with only basic education are underrepresented in the sample (22.8% versus 34.5%), while those with high school education are in line with the national average (31.0% versus 30.7%). Conversely, individuals with a college education are substantially overrepresented (46.2% versus 34.8%) (Gabinete de Estratégia e Planeamento, 2022).

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16 Calculated based on the data retrieved form Census 2021 for individuals without any limitation in carrying out activities due to a health problem.

17 This cut-off follows the OECD's recurrent practice for identifying high pay, defined as earnings above 1 and 1.5 times the median, adapted to the mean of the monthly net income of the employed population provided by INE.

18 The data from Ganho mensal dos TCO por local de trabalho – 2021 (INE, 2023) report gross monthly earnings (before taxes and Social Security contributions), while the survey data are based on self-reported net income. As a result, the two figures are not directly comparable.

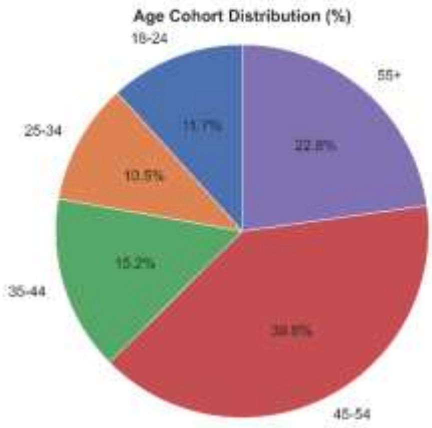

Figure 3 - Age Cohort Distribution (%)

Age-cohorts were established in a 10-year interval, starting at 18, and ending with the class of 55 or more years, matching the national statistics reported in the *Quadros de Pessoal* of 2023 to facilitate comparison. In relative terms, the respondents were mainly concentrated in the age-cohort of 45-54 years (39.8%), followed by those aged 55 and older (22.8%), 35-44 (15.2%), 18-24 (11.7%), and 25-34 (10.5%), respectively. When comparing with the Portuguese working population, based on employees under an employment contract (TCO), some discrepancies are evident: younger respondents aged 18-24 are slightly overrepresented (11.7% versus 8.6%), while those aged 25-34 (10.5% versus 24.5%) and 35-44 (15.2% versus 25.6%) are strongly underrepresented. Conversely, individuals aged 45-54 are strongly overrepresented (39.8% versus 24.8%), and those aged 55 and older are also somewhat overrepresented (22.8% versus 16.5%) (Gabinete de Estratégia e Planeamento, 2024).

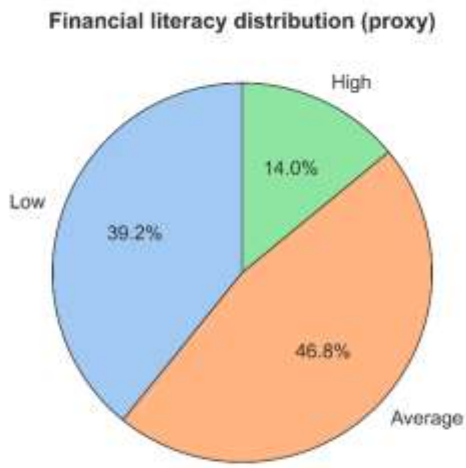

Figure 4 - Financial literacy distribution (proxy)

To divide the individuals according to their literacy level, a proxy was constructed based on the six questions about the rules and mechanisms of the Portuguese public pension scheme's first and second tiers in the survey's last chapter. By comparing the answers of the individuals to the correct answer to each question, a variable was created to save the number of correct answers. According to the number of correct answers, individuals were divided into three groups. The first group, with low financial literacy according to this proxy comprised 67 individuals who answered correctly to two or fewer questions; the second group with 80 individuals presented average financial literacy, by answering between three and four questions correctly; and the third group encompassed 24 individuals who showed high financial literacy by answering five or six questions correctly. To summarize, approximately only 14% of the 171 respondents presented high financial literacy, 39.2% of the respondents presented low financial literacy, and 46.8% of the respondents presented average financial literacy.

When comparing the broader global financial literacy indicator from the 2023 Financial Literacy Survey[19] from *Conselho Nacional de Supervisores Financeiros* of *Banco de Portugal*, it is possible to conclude that most individuals score between 50 and 80 points out of 100 possible, indicating medium to relatively high levels of financial literacy. In this survey, only 14% of respondents achieved a high level of knowledge about the first and second SS old-age pension schemes, which may suggest a bias towards lower literacy. Nevertheless, as emphasized by the OECD's Pensions at a Glance 2023, the Portuguese pension scheme is relatively generous but highly complex, with rules varying across career length and earnings levels (OECD, 2023b). This complexity makes it plausible that the results observed in the sample are not far from the reality of the broader population in terms of knowledge about the SS scheme, despite the higher values of financial literacy when considered from a holistic perspective.

In summary, although the sample reveals some limitations in terms of representativeness - namely the underrepresentation of men, younger cohorts, individuals with lower levels of education, and low-income earners, alongside an overrepresentation of those with higher education and low-, upper-middle and high income groups - the construction of a proxy for financial literacy and the comparative framework applied support answering the hypotheses

[19] The global financial literacy indicator from the 2023 Financial Literacy survey is a composite index ranging from 0 to 100, combining knowledge, attitudes, and behaviours. It does not directly measure knowledge of first and second tier of Portuguese Social Security, therefore serves only as a broad benchmark.

extracted from the literature review. The analysis in the next sections is centred on income groups (particularly contrasting the low and lower-middle income from the remaining classes). However, it is enriched, when relevant, by comparisons across education levels (particularly contrasting the basic educated, or even high school educated individuals in some cases, and the other education classes), financial literacy proxy (distinguishing individuals with lower financial literacy from the remaining classes), and age cohorts (especially contrasting the youngest and oldest with intermediate groups). This methodological approach enables the testing of the hypotheses described above and the analysis of the barriers and preferences regarding the role of the State among different groups of individuals.

4.2. Financial Literacy and Portuguese old-age pension scheme knowledge

In this section, hypotheses H1-H4 are tested against the survey, with particular focus on questions 24-27 (knowledge and holding rate of financial products, and complementary pension schemes), question 30 (perceived importance of different income sources to finance retirement), and question 21 (expected replacement income rate in retirement).

H1: Lower financial literacy is associated with reduced retirement planning.

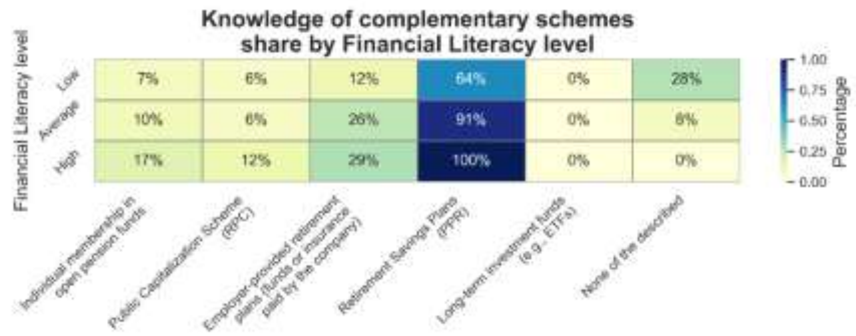

Figure 5 - Knowledge of complementary schemes share by financial literacy level

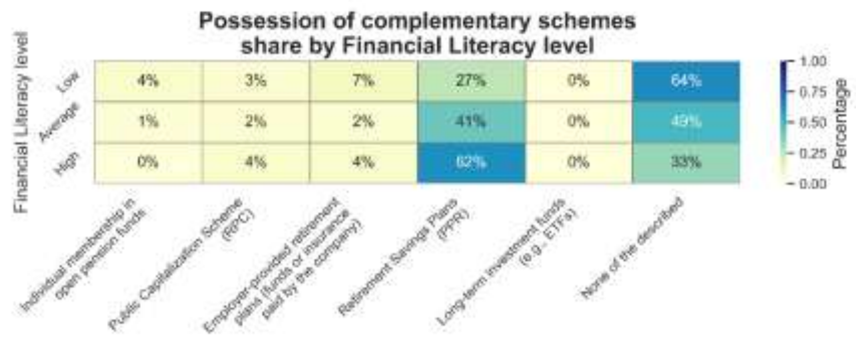

Figure 6 - Possession of complementary schemes share by financial literacy level

To test hypothesis H2, the comparison between the knowledge and holding rate of complex financial products, particularly complementary pension schemes, was made according to the financial literacy proxy. As expected, individuals with low financial literacy reported not only less knowledge about most financial products, but also lower holding rates compared to the other three classes (annex Figure A3 and A4). About 28% of respondents in the lower-literacy class stated that they were unaware of any of the complementary pension schemes described, and 64% reported not holding any such scheme. By contrast, respondents in higher-literacy class present a perfect rate of knowledge of such schemes, and only 33% of them report not holding any complementary scheme. These results indicate that individuals with limited knowledge of the first and second tiers of SS also display the lowest levels of awareness and uptake of financial products and retirement-related schemes. In other words, low financial literacy is associated with reduced retirement planning. While these findings provide evidence in support of H1, they must be interpreted with caution given the limitations of the sample.

H2: Most of the Portuguese workforce presents low financial literacy levels.

First, as seen in the characterization section, only 14% of the respondents answered correctly to five or more question in the last section of the survey. In contrast, about 39.2% managed to answer more than two questions correctly, meaning that a large share of respondents did not surpass this first test. These figures indicate limited knowledge about the first and second tiers of the Portuguese old-age pension scheme, which is consistent with H2.

Figure 7 - Knowledge of financial products share by income level

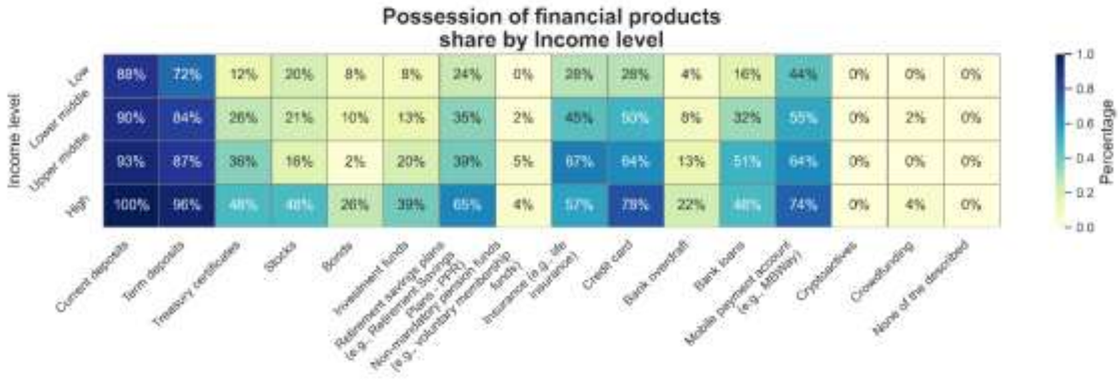

Figure 8 - Possession of financial products share by income level

Second, the knowledge of common financial products is high across all income classes, exceeding 85%. Awareness of more sophisticated products, however, increases with income – for example, recognition of bonds rises from 20% among low-income respondents to 39% among high-income respondents. Yet, name recognition does not necessarily translate into ownership. Investment funds illustrate this gap: while recognition ranges from about 32% and 61% depending on income level, actual holding rates are only 8%, and 13% in the two lowest income groups, compared with 20% and 39% in the two highest-income groups, respectively. Thus, despite being aware of the existence of most financial products, many respondents – particularly those with low or lower-middle income - present limited uptake beyond everyday-orientated financial products, such as current deposits, term deposits, or MBWay accounts. These findings further support H2 by showing that knowledge alone does not equate to effective financial literacy or engagement with more complex financial products.

Third, the gap between awareness and actual possession is also visible in complementary pension schemes (annex Figure A1 and A2). Among low-income respondents, around 40% were unable to recognise any of the schemes described, whereas this share drops to only 4% in the high-income respondents The possession rate follows a similar gradient: in the high-income class, about 65% reported holding at least one complementary scheme, compared with less than half in the remaining classes, and only 40% in the lowest-income group. Retirement savings plans, such as PPRs, are the most widely recognised across all income levels, yet among the three lowest-income classes their ownership rate is only about half of the reported level of awareness. These results further support H2, as they confirm that large parts of the Portuguese workforce, particularly in the lower-income classes, combine limited awareness with very low actual possession of complementary pension schemes.

Considering, these three results together, it is evident that most respondents display limited knowledge of public pension scheme, low engagement with more sophisticated financial products, and very modest uptake of complementary pension schemes, particularly lower-income groups. While these results must be interpreted in the light of the sample's limitations, described in the previous section, they support H2 by confirming that a significant share of the Portuguese workforce presents low levels of financial literacy.

H3: Workers expect the public pension that maintains their current standard of living in retirement.

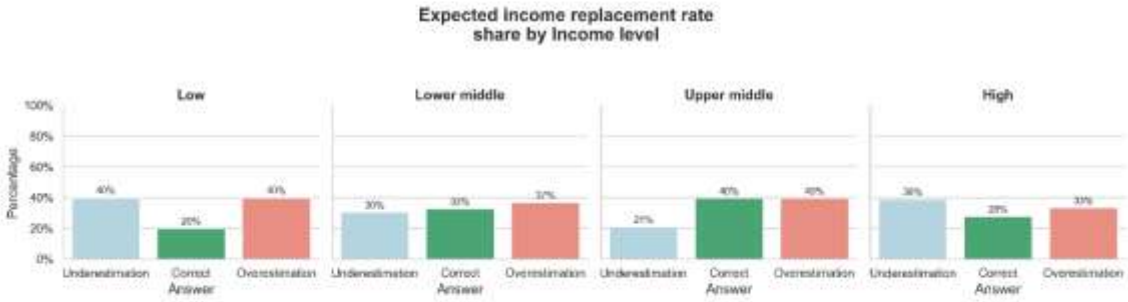

Figure 9 – Expected income replacement rate by income level

While the current average theoretical net replacement rate in Portugal is 98.8%, it is projected to fall to around 85% by 2062 for an average-earner with 40-year career (European Commission, 2024, p. 78; OECD, 2023b, pp. 156-157). Survey results show that many respondents' expectations are misaligned with these projections. Among low-income respondents, about 80% either underestimated or overestimated the replacement rate, leaving only 20% within the correct range 75%-90%. In the lower-middle and upper-middle income groups, misperceptions were also frequent (around 67% and 61%, respectively), while in the high-income group underestimation was more than overestimated or correct answers (39% versus 33% versus 28%, respectively. Additionally, by education level (annex Figure A7), more than 30% of respondents in each group overestimated the expected income replacement rate. Contrary to H3, most respondents did not expect the public pension alone to maintain their standard of living, though misaligned expectations were frequent.

H4: Workforce intends to finance their retirement mainly via the public old-age pension provided by Social Security.

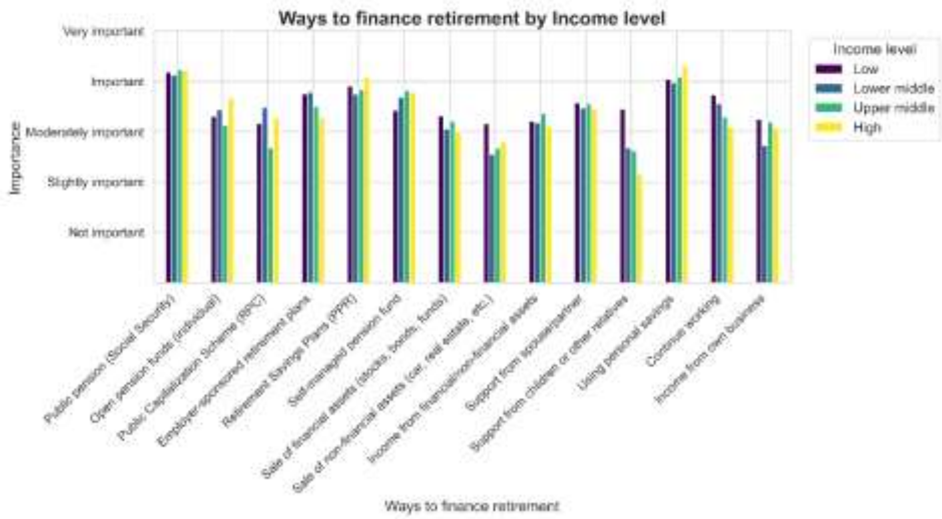

Figure 10 – Ways to finance retirement by income level

Across income groups, the public pension from the general regime of the Portuguese SS emerges as the most important expected income source for retirement, except among high-income respondents, who assign relatively more weight to using personal savings (82.6% compared with 80.4%). Low- and lower middle-income individuals also attribute greater importance to support from descendants or the sale of non-financial assets, whereas reliance on complementary pension plans rises with income (annex Figure A5). A similar trend is visible across education levels (annex Figure A6), with SS pensions ranked highest overall, although for respondents with high school or post-secondary non-tertiary education personal savings slightly surpass them (79.6% compared with 78.2%). These results provide evidence in support of H4, showing that most respondents expect to rely primarily on the public pension scheme from SS as their main source of retirement income.

4.3. Barriers conditioning adherence to private pension schemes in Portugal

To evaluate the impact of the different barriers described in chapter 2.3 and to test hypotheses H5-H8, the respondents were asked in question 16 of the survey in annex to rate the importance of different barriers to saving for retirement, using a scale from "not important" to "very important". The barriers considered were (from right to left in the following figure): difficulty in saving and consequently investing, lack of knowledge about the various supplementary options for retirement, lack of trust in private institutions providing supplementary options, lack of predictable tax incentives capable of encouraging the adoption of these supplementary schemes, and lack of income to ensure the standard of living in the present.

Figure 11 – Grid plot of the importance level of each barrier by income level

H5: The lack of disposable income plays a crucial role in the retirement savings.

Looking at the answers about the importance of the lack of income sources and difficulty in saving and consequently investing, it is possible to conclude that independent of the income class, most respondents say they are either important or very important barriers. However, the importance level of these barriers decreases with the income level (annex Figure A8). Looking at education levels, it is possible to conclude that the importance of these barriers is transversal to the education level, but with a small decrease in importance with the increase in education level (annex Figure A9 and A10). Additionally, the same trend is visible when looking at the different levels of knowledge about the Portuguese SS, through the financial literacy proxy (annex Figure A11 and A12). Despite being assessed as important or very important, the level of importance decreases according to financial literacy. Moreover, the same pattern appears across age cohorts, since most respondents in each class say they are either important or very important barriers (annex Figure A13 and A14). On average, the lowest level of assigned importance can be found in the age cohorts of 25-34, 45-54, and 55+ in the case of lack of disposable income, and 18-24 in the case of difficulty in saving and consequently investing, respectively. These findings provide evidence in support of H5, suggesting that lack of disposable income and difficulty in saving hinder retirement planning.

H6: Low financial literacy levels provide limited awareness and understanding of complementary pension schemes.

Looking at the answers about the importance of the lack of knowledge about the various supplementary options for retirement, it is possible to conclude that the percentage of respondents who answer the question as important and very important decreases sharply with the increase in income level. The average level of importance decreased from 82% to 60%, from respondents with low to high income, respectively (annex Figure A8). Looking at education levels, it is possible to conclude that the importance of this barrier is the highest in respondents with basic and high school education, with an average importance of 76% and 79%, respectively (annex Figure A9 and A10). Additionally, the same tendency is visible when looking at the different levels of financial literacy, since the average of importance decreases with increasing levels of financial literacy from 80% to 69% (annex Figure A13 and A14). The age cohorts presenting the biggest average level of importance to this barrier are 25-34, 35-44 and 55+, respectively. Therefore, these results, particularly the decrease in importance according to the level achieved in the financial literacy proxy, can provide evidence to support H6.

H7: Distrust of private pension providers discourages participation.

Looking at the answers about the importance of the lack of trust in private institutions providing supplementary options, it is possible to conclude that the percentage of respondents who answer the question as important and very important decreases with the increases in income level. In contrast, the share of respondents selecting lower levels of importance increases with income. In other words, the average percentage of importance decreases with income level from about 85% to approximately 65% (annex Figure A8). Looking at education levels, it is possible to conclude that the importance of this barrier is the highest in respondents with basic and high school education. In the college education class is possible to see a decrease in the importance attributed to this barrier (annex Figure A9 and A10).

Additionally, the same trend is visible when looking at the different levels of financial literacy, since the average importance decreases with increasing levels of financial literacy (annex Figure A13 and A14). Across age cohorts, this barrier is consistently relevant, with the exception of the 18-24 group, where it is less pronounced. These results provide evidence that distrust of private pension providers can discourage participation in complementary schemes, aligning with H7. Furthermore, some respondents mentioned that they distrust complementary plan providers, due to recent poor management decisions and bankruptcy, such as the bankruptcy of the *Banco Espirito Santo*.

H8: The current level of incentives is insufficient to encourage long-term savings.

Finally, when looking at the answers about the importance of the lack of predictable tax incentives that encourage the adoption of these supplementary schemes, it is possible to conclude that the percentage of respondents who answer the question as important and very important decreases between the extremes. However, the percentages of the answers important and very important to the importance of this barrier are higher in the low-income class, followed by the upper-middle income class, and, then by the lower-middle income class, with an average importance of 85%, 82%, and 79%, respectively (annex Figure A8). Regarding education level, this barrier is on average more pronounced is the high school education level (86%), followed by college (78%) and basic education (76%) levels (annex Figure A9 and A10). Considering the differences between financial literacy levels, the low level assigns more importance to this barrier, with 83%, while the high level only assigns an average of 76% (annex Figure A13 and A14). The age cohorts that present the biggest average level of importance to this barrier are 38-47 (85%), 28-37 (83%), and 48-57 (82%). Following that age cohorts, the level of importance is highest in the middle-aged cohorts with an average importance level of 84% (25-34), 83% (35-44, and 45-54), and then the oldest age cohort with an average importance level of 76%, and younger age cohort with an average importance level of 72%. These results suggest that the current level of incentives is perceived as insufficient to encourage long-term savings, providing indicative evidence in support of H8.

4.4. Perceptions about the role of State

H9: Individuals show heterogeneous preferences about the role of the State and which public policies they support.

First, to test hypothesis H9, the analysis considered the answers to question 18 of the survey in the annex, which asked whether the State should play a more active role in preparing individuals for retirement. Preferences were then compared across to income, education, financial literacy levels, and age cohorts.

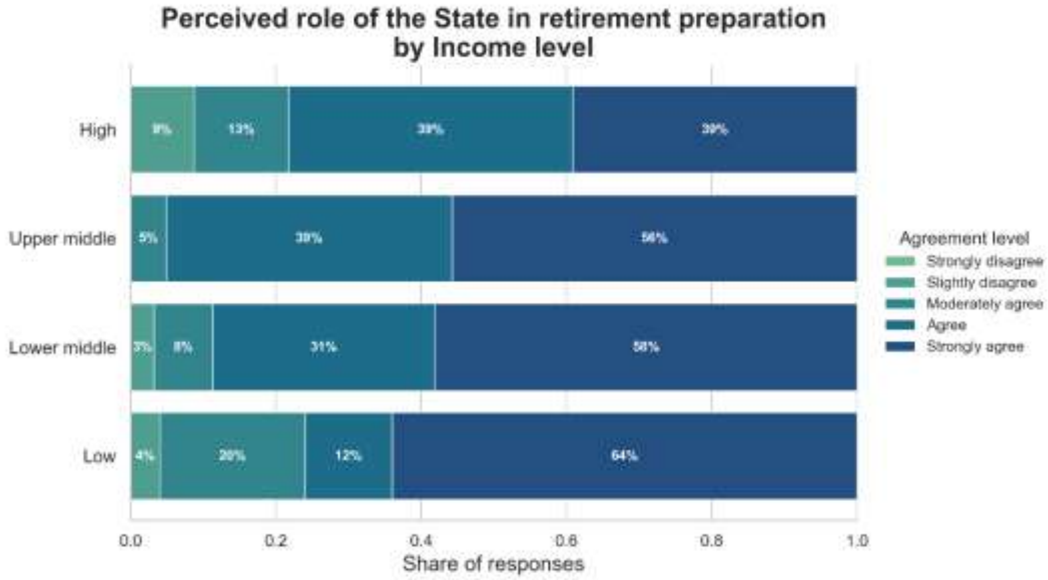

Figure 12 - Perceived role of the State in retirement preparation by income level

Support for a more active role of the State in retirement preparation varies across groups. By income, respondents with low income show the strongest support, with 64% strongly agreeing, while this share declines to 39% among high-income individuals. Education shows a similar pattern: 69% of those with basic education strongly agree, compared with 62% of high school graduates and 44% of college-educated respondents, with strong opposition appearing only in the latter (6%) (annex Figure A15). By financial literacy levels, strong support is highest (60%) among the least literate and weakest (50%) among the most literate (annex Figure A16). Age cohorts also differ: the 35-44 group shows the strongest support (69%), followed by those aged 55 or older and 45-54 (both 59%), and 25-34 (50%), while the youngest cohort (18-24) express the lowest support (25%). Overall, these results suggest heterogeneous preferences regarding the role of the State (H9), though the findings remain indicative given the survey's limitations (annex Figure A17).

Second, a comparison between the segmentation variables - income, education, financial literacy level, and age cohorts - was conducted to evaluate the heterogeneous preferences among individuals regarding public policies. The analysis is based on the responses to question 19 of the survey presented in the annex, which asked respondents to what extent they agreed with four public policies: better and more consistent tax incentives for the adherence to complementary pension schemes, reinforcing contributions from lower-income workers to the SS scheme by the State, encouraging employers to offer employer-sponsored plans, and inclusion of a specific financial literacy course in compulsory education.

Figure 13 - Grid plot of agreement level of each public policy by income level

Agreement with the four public policies presents clear variation across income levels. Low- and lower-middle income respondents express the strongest support for employer-sponsored plans (80% and 79%, respectively) and for the inclusion of a compulsory financial literacy course (84% and 82%, respectively). They also show moderate support for improved tax incentives (76% and 77%, respectively) and for reinforcing contributions from lower-income workers (56% and 55%, respectively). By contrast, upper-middle- and high-income respondents display declining agreement with redistributive measures: only 44% and 39%, respectively, support reinforcing contributions, and agreement with employer-sponsored plans fails 62% and 57%, respectively. Still, they maintain very high support a compulsory financial literacy course (93% and 87%, respectively), with particularly high levels of strong agreement (70% and 61%, compared with 60% and 40% in the lower-income groups), as well as stable support for improved tax incentives (80% and 83%, respectively) (annex Figure

A18). Overall, these results suggest that preferences regarding the role of the State in old-age income protection are indeed heterogeneous across income groups, with low- and lower-middle-income respondents expressing stronger support for interventionist measures, particularly redistributive ones, while higher-income groups show more restraint. Nevertheless, given the limitations of the survey sample, these findings should be interpreted with caution and regarded as indicative rather than definitive evidence in testing H9.

Agreement with the four public policies also varies markedly across educational levels. Respondents with high school education express the highest overall support with rates of either agreeing or strongly agreeing of 87% for improved tax incentives, 70% for reinforcing contributions for low-income individuals, 79% for employer-sponsored plans, and 89% for a compulsory financial literacy course. Those with basic education also report consistently high levels for agreement with the support for these four public policies (with the percentage of respondents that either agree or strongly agree ranging between 70% and 90%). By contrast, respondents with college education are much less supportive of redistributive policies, with only 25% agreeing with the reinforcing contributions for low-income individuals and 61% with employer-sponsored plans, while maintaining strong approval of improved tax incentives (75%) and especially a compulsory financial literacy course (90%), with 75% strongly agreeing (annex Figure A19 and A20). Overall, these results suggest that less-educated individuals tend to show greater openness to State intervention across all public policies, whereas college-educated respondents are more selective, strongly supporting a compulsory financial literacy course, but less supportive of redistributive policies. Again, given the limitations of the survey sample, these findings should be interpreted with caution and regarded as indicative rather than definitive evidence in testing H9.

Agreement with the four public policies increases with financial literacy level, though with distinct patterns across measures. Respondents with low literacy show strong support for a compulsory financial literacy course (78%), improved tax incentives (76%), and employer-sponsored plans (73%), while 55% also support reinforcing contributions for low-income individuals. Among those with medium financial literacy, agreement remains stable for a compulsory financial literacy course (92%), and improved tax incentives (79%), but drops for employer-sponsored plans (65%) and the reinforcing contributions for low-income individuals (44%). Respondents with high financial literacy display the strongest overall endorsement of a compulsory financial literacy course (96%, with 71% strongly agreeing), improved tax incentives (88%), and employer-sponsored plans (79%), but remain more sceptical towards reinforcing contributions for low-income, with only 50% agreeing with it (annex Figure A21 and A22). Thus, differences among financial literacy levels appear to reflect varying attitudes toward different public policies, providing evidence in support of H9.

Agreement with the four public policies varies across age cohorts. Younger respondents (18-24) present the lowest support overall, particularly for reinforcing contributions for low-income individuals (30%) and employer-sponsored plans (55%). The 25-34 age cohort stand out with the highest approval of a compulsory financial literacy course (100%), though support for the reinforcement of contributions for low-income individuals is minimal (22%). Respondents aged 35-44 and 45-54 display more balanced preferences combining high support for improved tax incentives (77% and 84%, respectively), inclusion of a compulsory financial literacy course (88% and 91%, respectively), and employer-sponsored plans (81% and 69%, respectively), with gradually rising agreement on contributions (35% and 56%, respectively). Finally, the last cohort is most favourable to redistributive measures, with 69% supporting the reinforcement of contributions for low-income individuals, while showing comparatively lower support for the inclusion of a compulsory financial literacy course (77%) (annex Figure A23 and A24). Overall, support for a compulsory financial literacy course and improved tax incentives is consistently high across age groups, but preferences for the reinforcement of contributions for low-income individuals, and employer-sponsored plans vary substantially, suggesting heterogeneous attitudes towards the State's role (H9).

Taken together, the results indicate that preferences regarding the role of the State in retirement preparation, as well as support for four public policies, are heterogeneous across income, education, financial literacy levels, and age cohorts. In this sense, the findings provide evidence consistent with H9, while remaining indicative given the limitations of the survey sample.

5. Conclusion

The two research questions of this dissertation: **"**What barriers hinder adherence to private pension schemes in Portugal, particularly among low-income workers?" and "What is the perceived role of the State in old-age income protection?" were answered through the analysis of empirical data collected via an online survey.

The three following objectives were accomplished. First, defining an old-age pension scheme and comparing these schemes across OECD countries, with a deeper analysis of the Portuguese old-age pension scheme. Second, analysing the barriers influencing the adoption or reinforcement of complementary pension schemes in Portugal. Third, assessing the perceived role of public policies in encouraging the adoption of these complementary schemes.

Across OECD countries, pension schemes differ in design, combining PAYG, funded, and mixed schemes to varying degrees, each with distinct implications for sustainability and adequacy. The Portuguese old-age pay-as-go pension scheme, although generous in providing one of the highest net replacement rates in the OECD – around 98.8% for average earners – faces important adequacy challenges. One challenge is that the current replacement rate is expected to gradually decline to around 85% for an average-earner with 40-year career by 2062, increasing concerns about the adequacy of future pensions. Furthermore, lower-income individuals and those with fragmented or interrupted careers, in particularly, often rely heavily on the first tier of the SS, receiving pensions that fall short of ensuring sufficient protection against old-age poverty.

The main findings indicate that financial literacy levels among the Portuguese workforce remain relatively low, particularly regarding SS schemes rules and financial products (particularly, complementary pension schemes), which constrains retirement planning and income diversification. The survey further revealed structural barriers: lack of disposable income, limited saving capacity, and consequently limited investment capacity, insufficient knowledge of complementary schemes, distrust of private providers, and weak fiscal incentives. Finally, the results show heterogeneous preferences regarding the role of the State, with stronger support for State intervention among low-income and less-educated respondents.

Despite these findings, the study faces limitations. First, the survey was geographically concentrated in the Aveiro district. Second, the convenient sample was not representative, overrepresenting women, highly educated individuals, middle-to-high income groups, and the youngest and the two oldest age cohorts, while underrepresenting men, middle-aged cohorts, and low-income individuals. In addition, the proxy for financial literacy, based on six questions on SS scheme, only partially captures the multidimensional nature of financial literacy. These limitations constrain the extent to which the results can be generalised to the broader Portuguese workforce and call for a cautious interpretation of the findings.

Future research could also apply econometric models, such as regression analysis with dummy variables for income, education, financial literacy, and age cohort, to test the relative weight of each barrier and policy measure in influencing adherence to complementary pension schemes, while capturing how perceptions of barriers and approval of policies vary across groups. This would allow outlining the profile of the typical individuals most affected. In addition, a more direct approach through fieldwork, for example via interviews or focus groups, could provide deeper qualitative insights into how individuals perceive barriers, assess public policy, and make retirement planning decisions.

In conclusion, while the findings of this dissertation must be interpreted with caution due to sample limitations, they provide meaningful evidence that financial literacy, structural barriers, and individual preferences regarding the State's role all significantly shape retirement planning in Portugal. By identifying the barriers faced by low-income workers and signalling potential pathways for increasing adoption or reinforcement of complementary schemes, this dissertation provides insights that can help policymakers design more inclusive and effective retirement income protection.

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Annexes

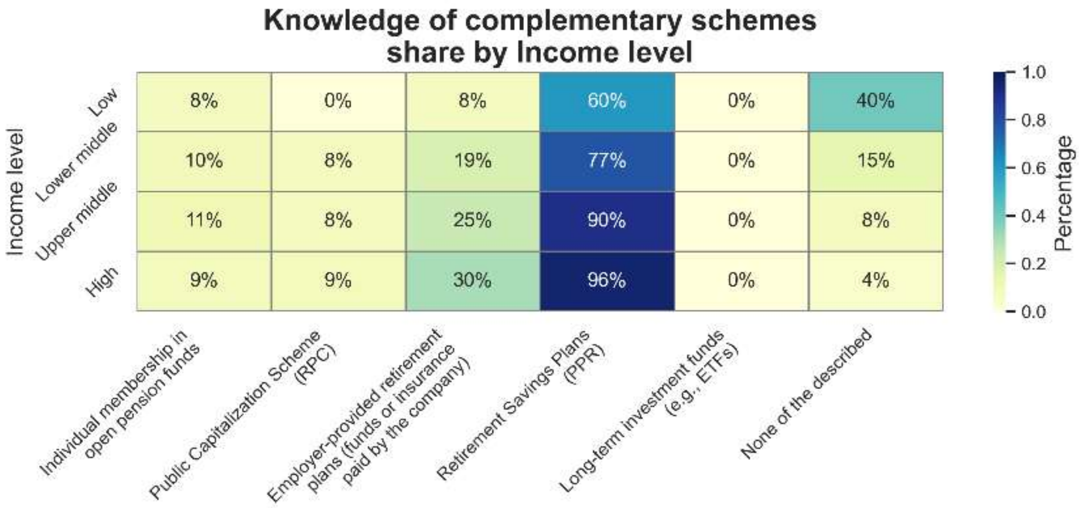

Figure A1 – Knowledge of complementary schemes share by income level

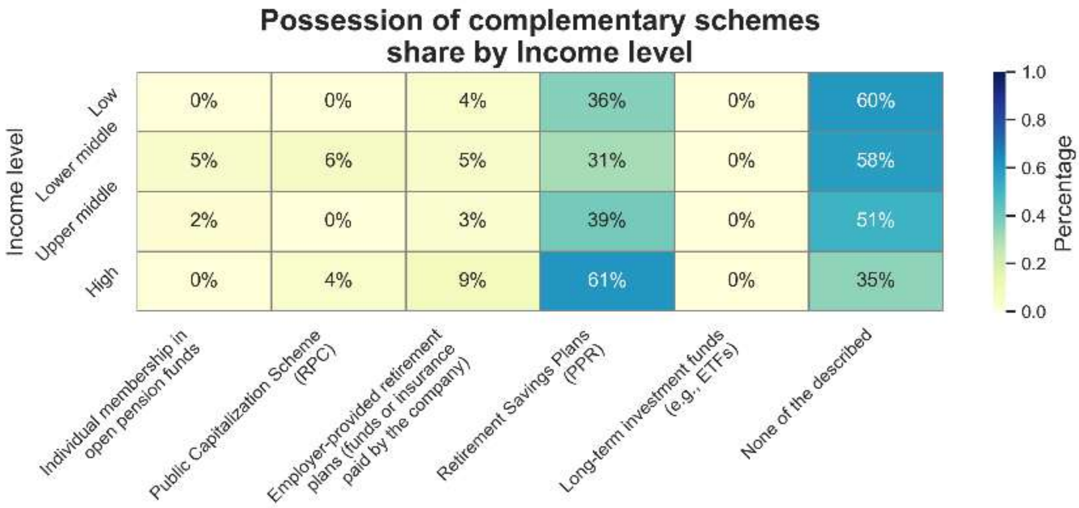

Figure A2 - Possession of complementary schemes share by income level

Figure A3 - Knowledge of financial products share by financial literacy level

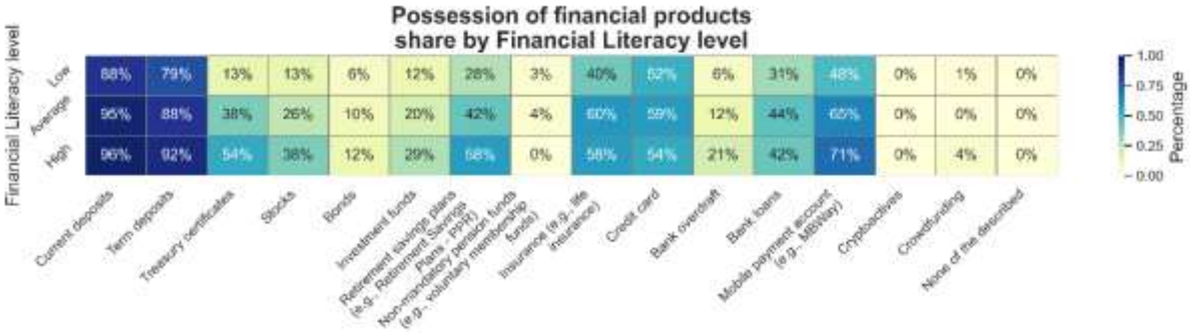

Figure A4 - Possession of financial products share by financial literacy level

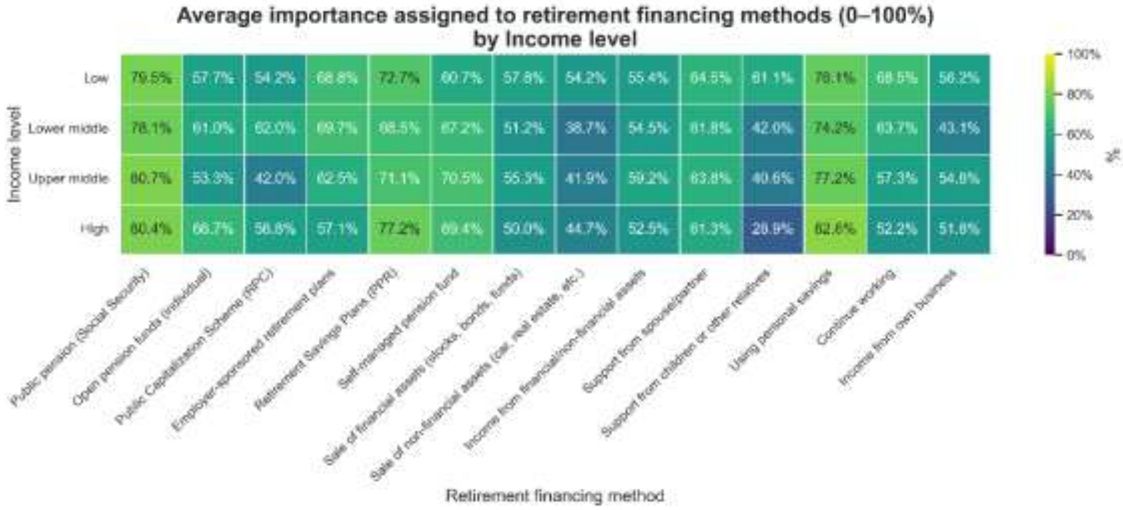

Figure A5 - Average importance assigned to retirement financing methods (0–100%) by income level

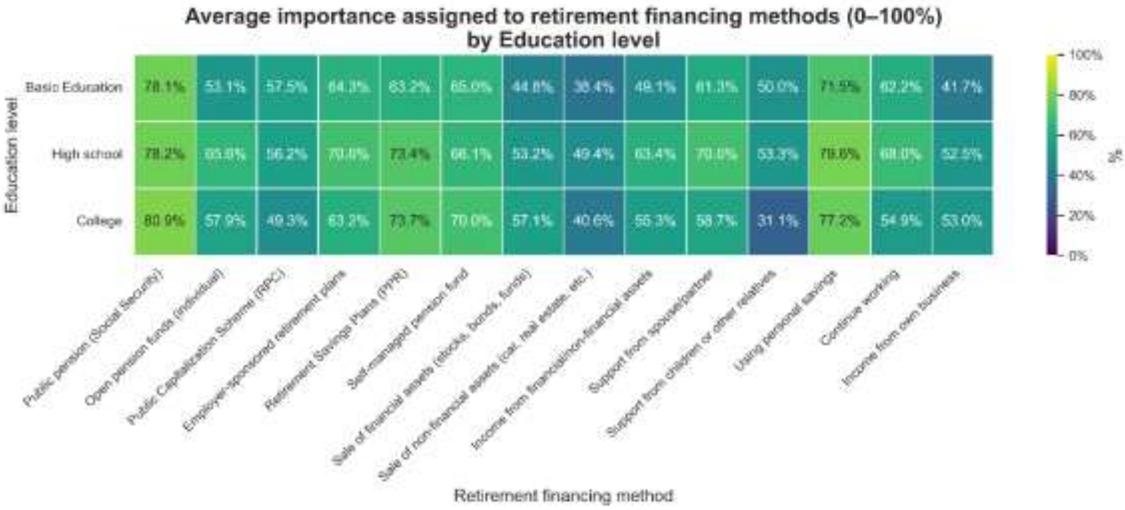

Figure A6 - Average importance assigned to retirement financing methods (0–100%) by education level

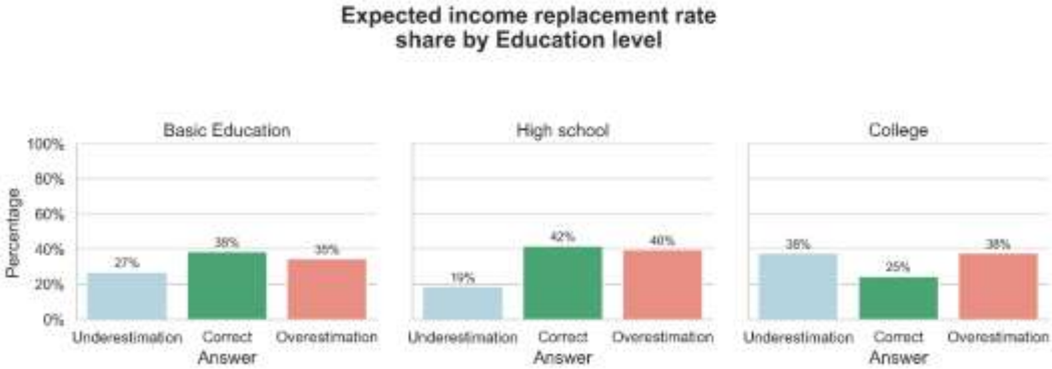

Figure A7- Expected income replacement rate by education level

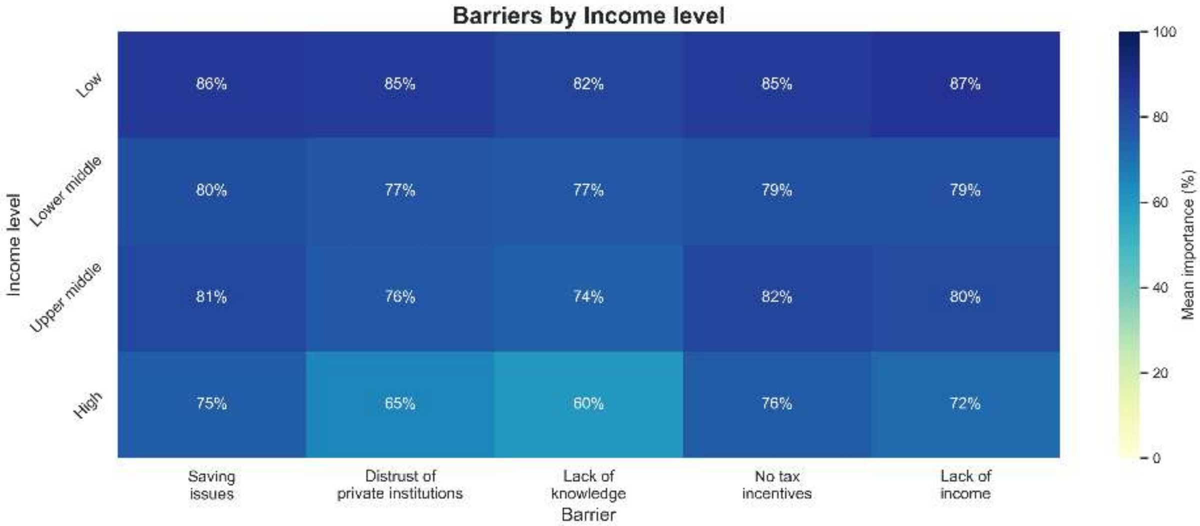

Figure A8 - Heatmap of importance level of each barrier by income level

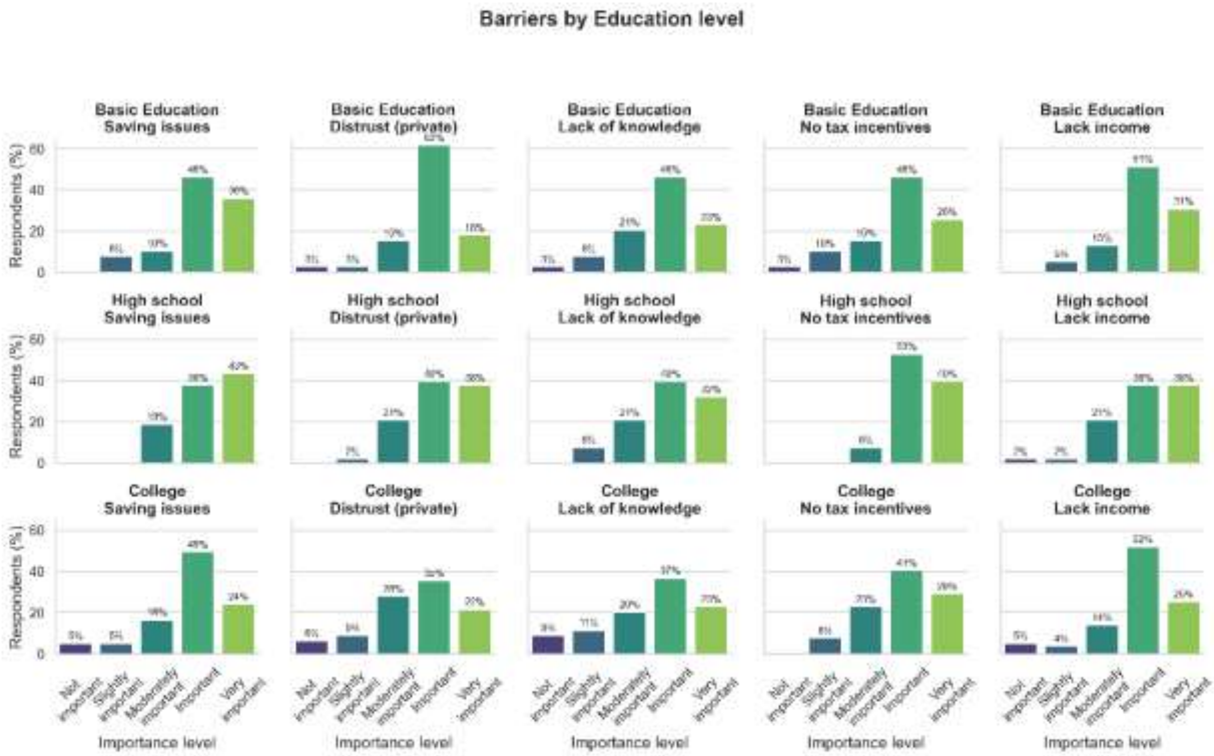

Figure A9 - Grid plot of importance level of each barrier by education level

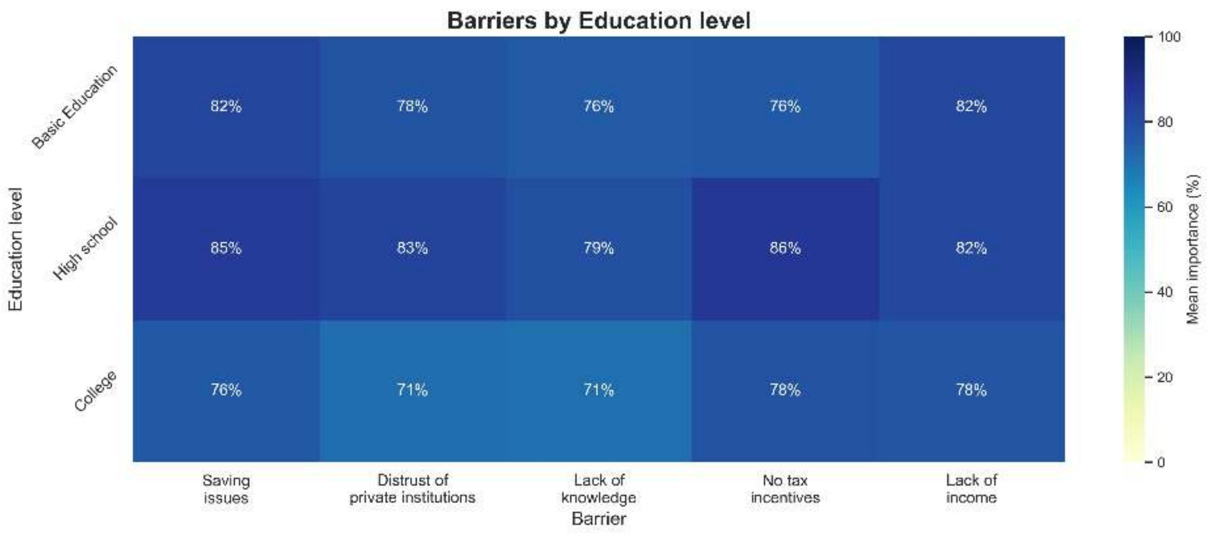

Figure A10 - Heatmap of importance level of each barrier by education level

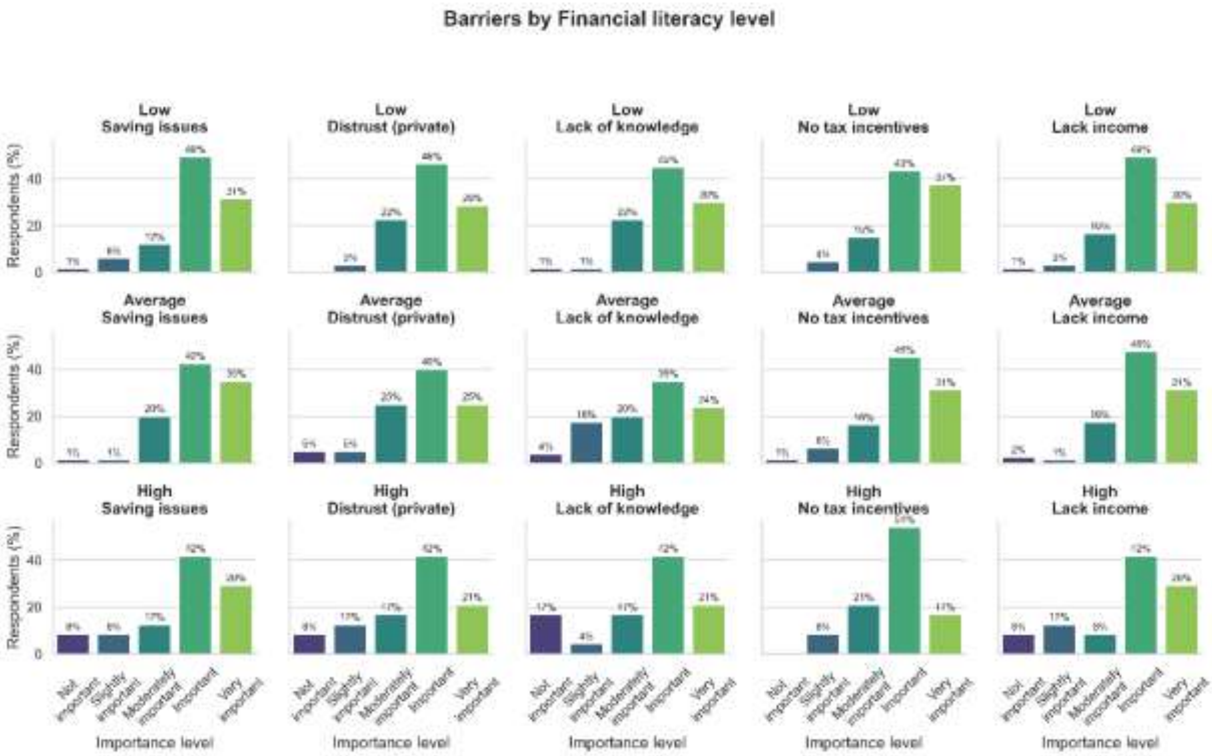

Figure A11 - Grid plot of importance level of each barrier by financial literacy level

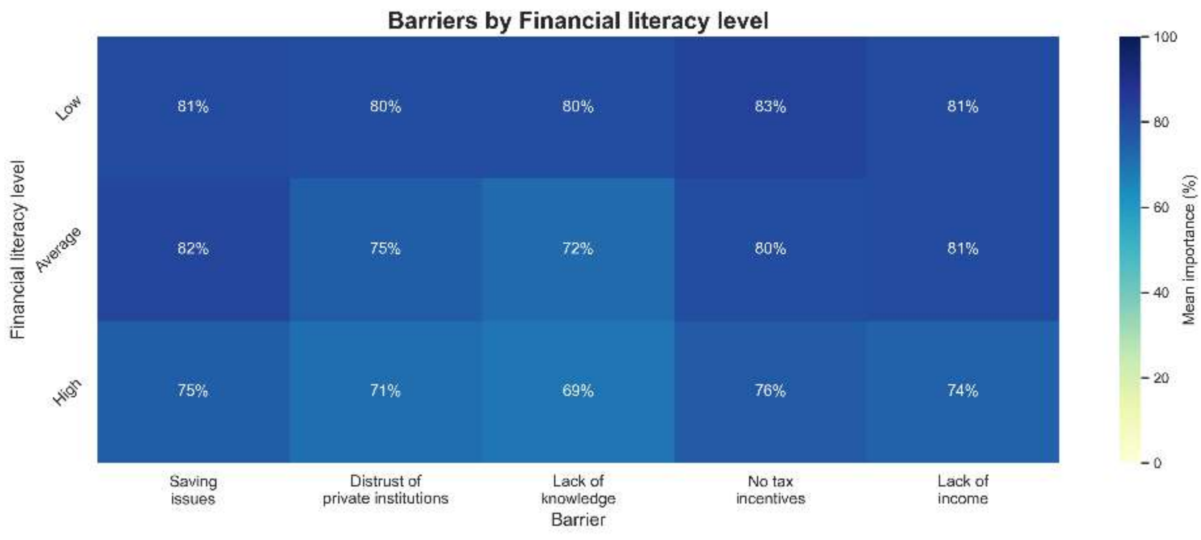

Figure A12 - Heatmap of importance level of each barrier by financial literacy level

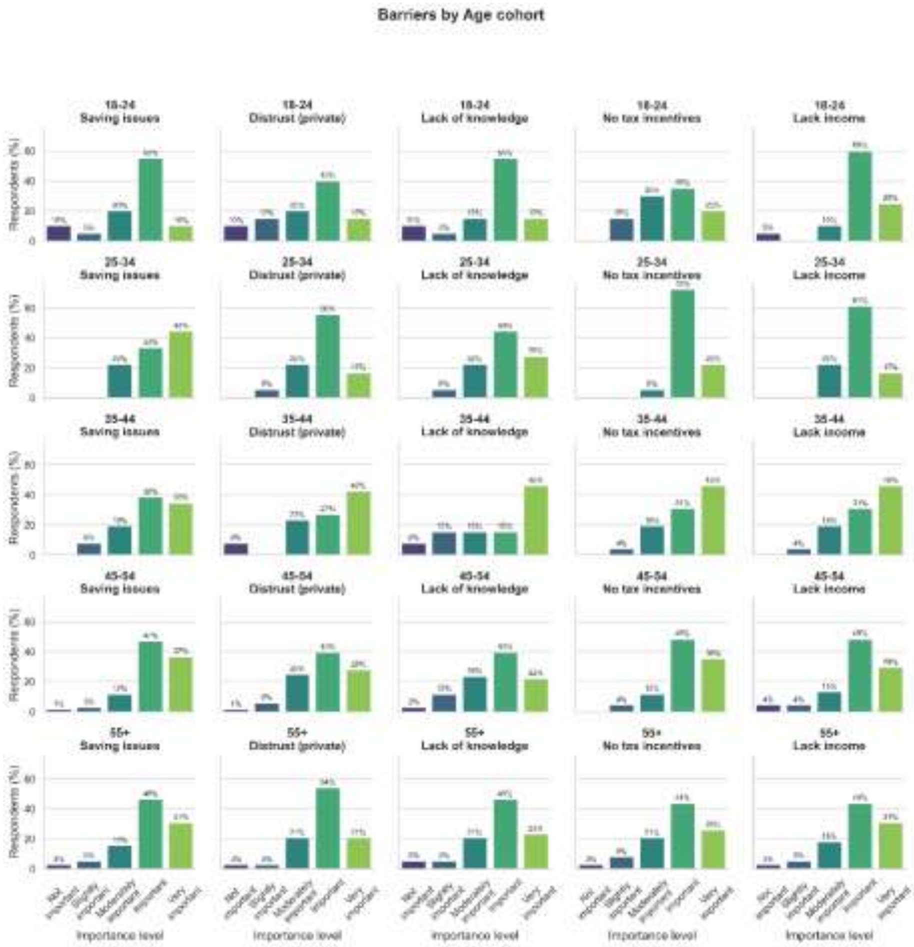

Figure A13 - Grid plot of importance level of each barrier by age cohort

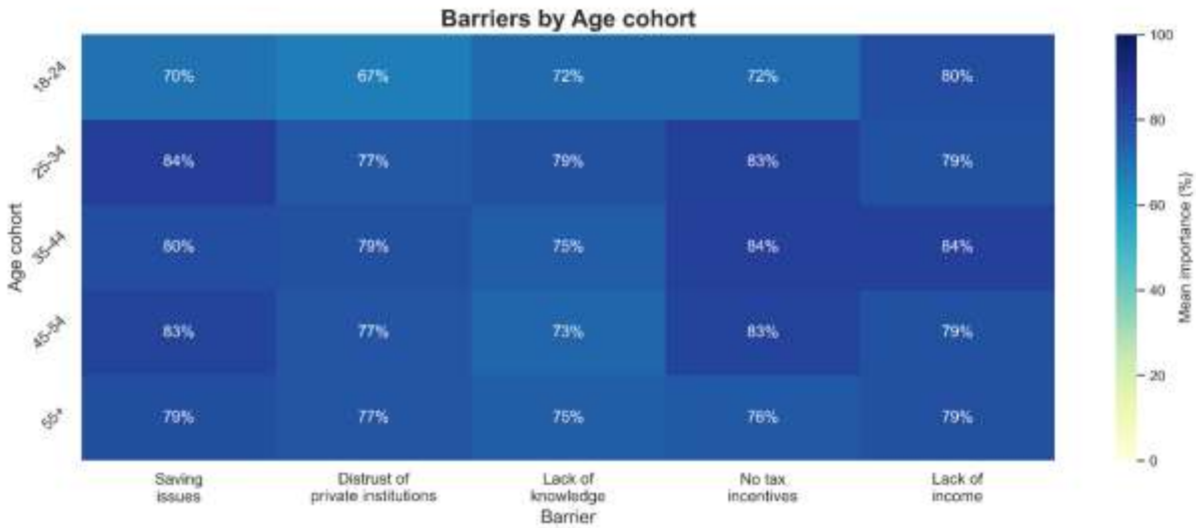

Figure A14 - Heatmap of importance level of each barrier by age cohort

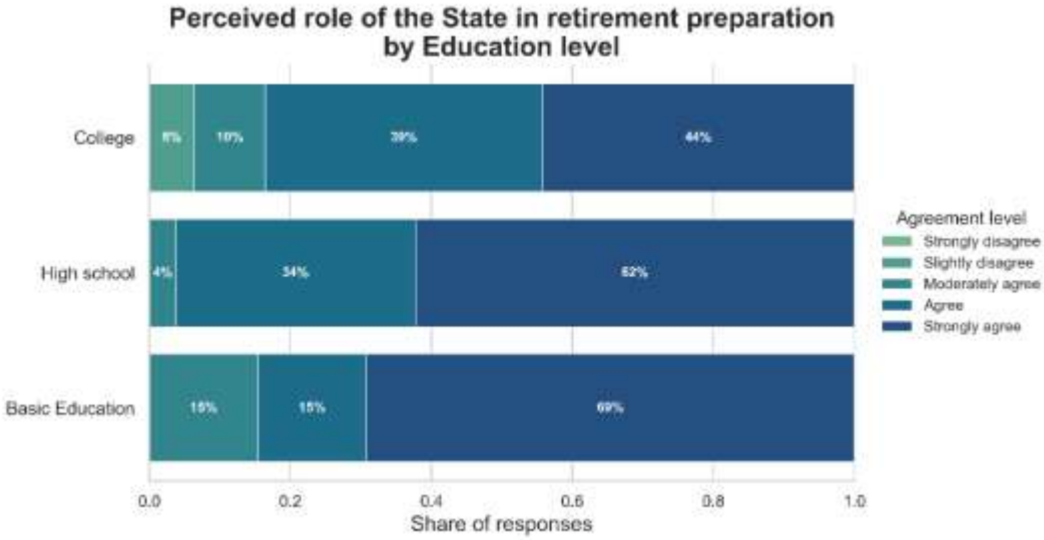

Figure A15 - Perceived role of the State in retirement preparation by education level

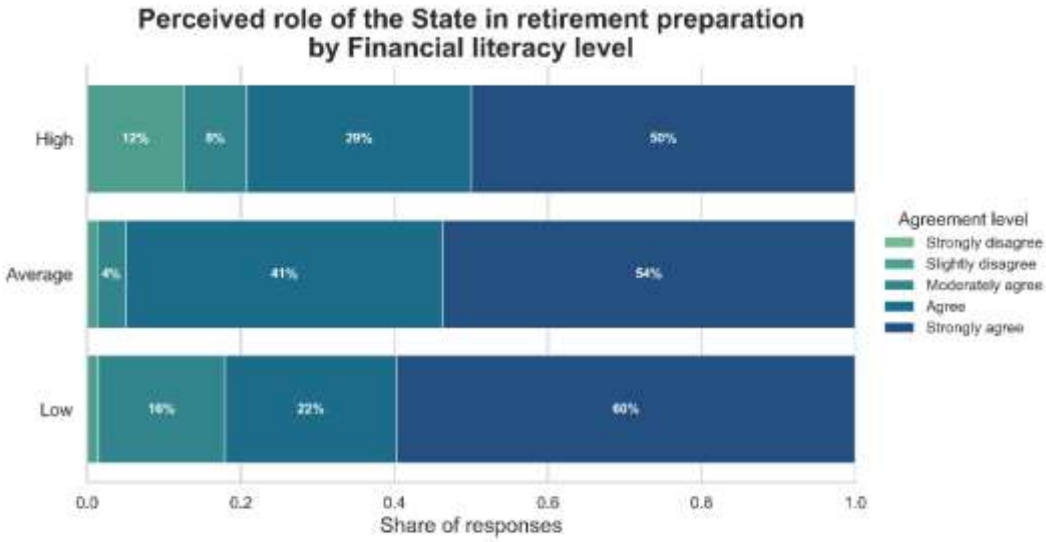

Figure A16 - Perceived role of the State in retirement preparation by financial literacy level

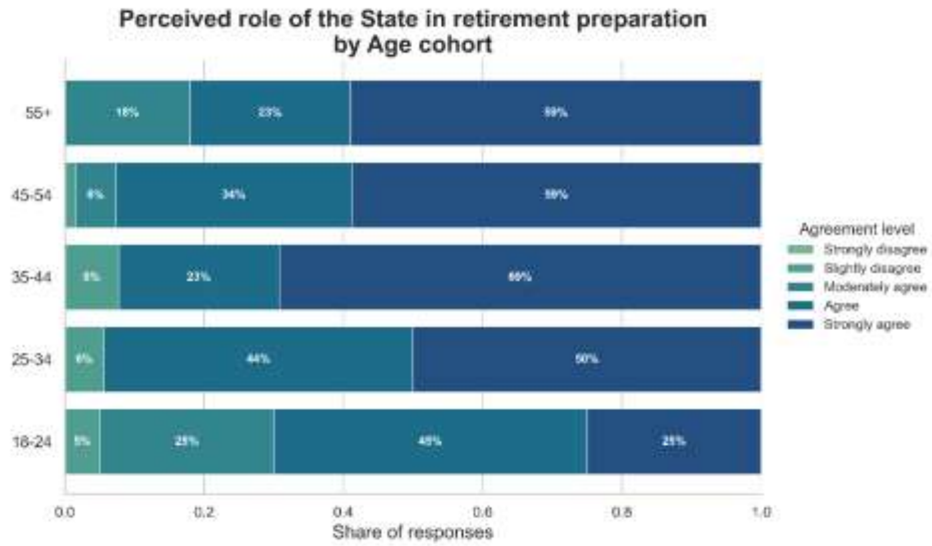

Figure A17 - Perceived role of the State in retirement preparation by age cohort

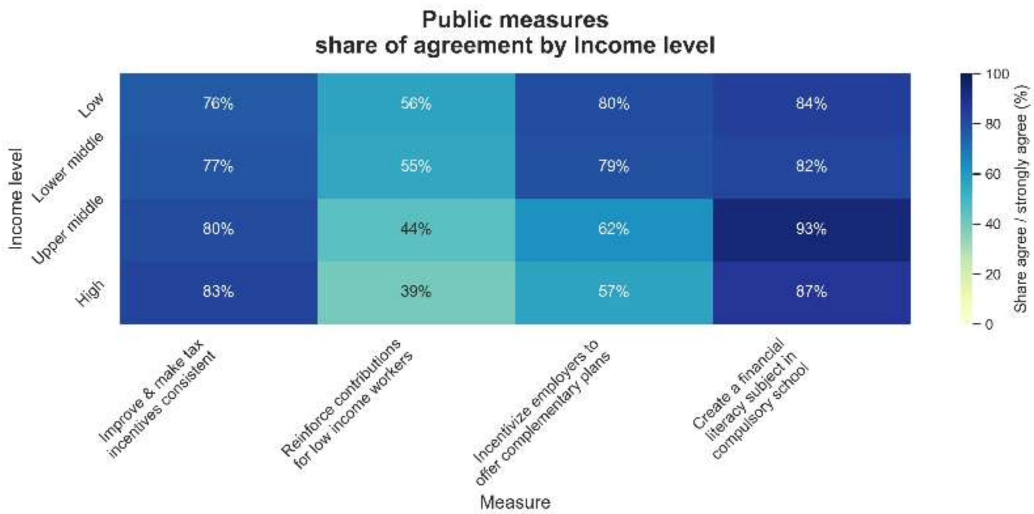

Figure A18 - Heatmap of share of respondents who agree or strongly agree with each public policy, by income level

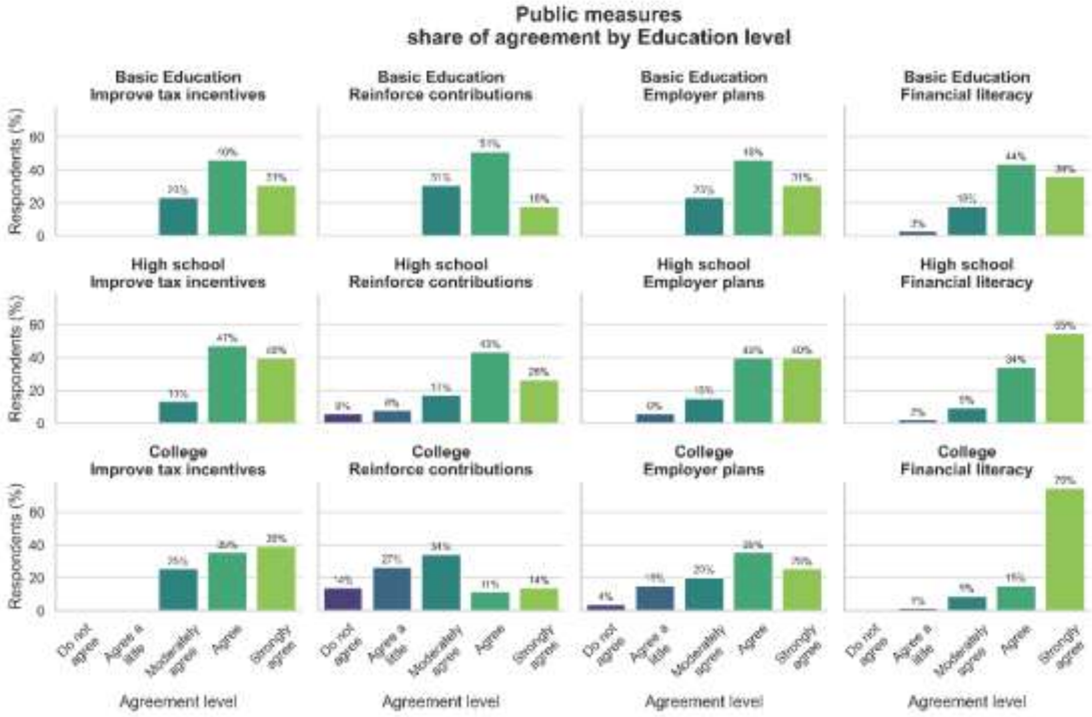

Figure A19 - Grid plot of agreement level of each public policy by education level

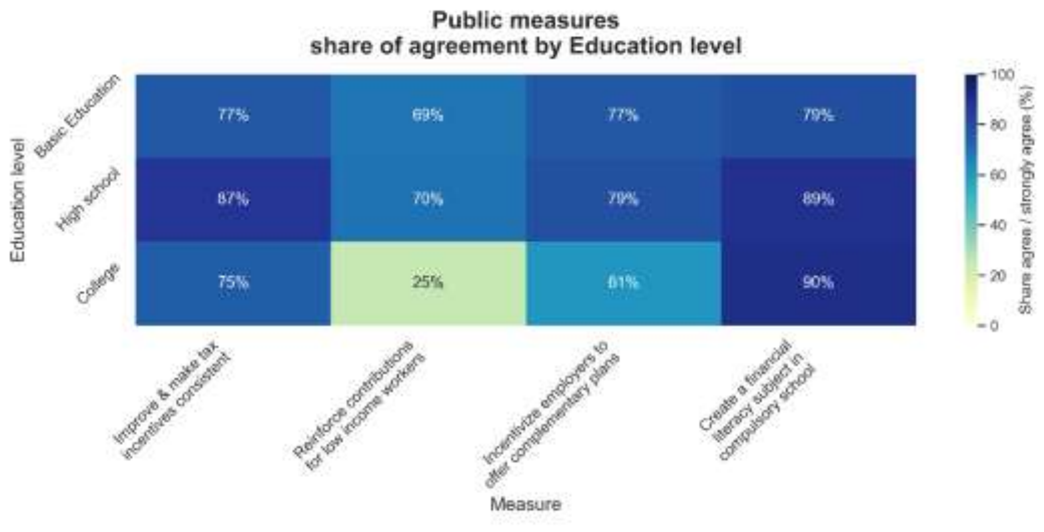

Figure A20 - Heatmap of share of respondents who agree or strongly agree with each public policy, by education level

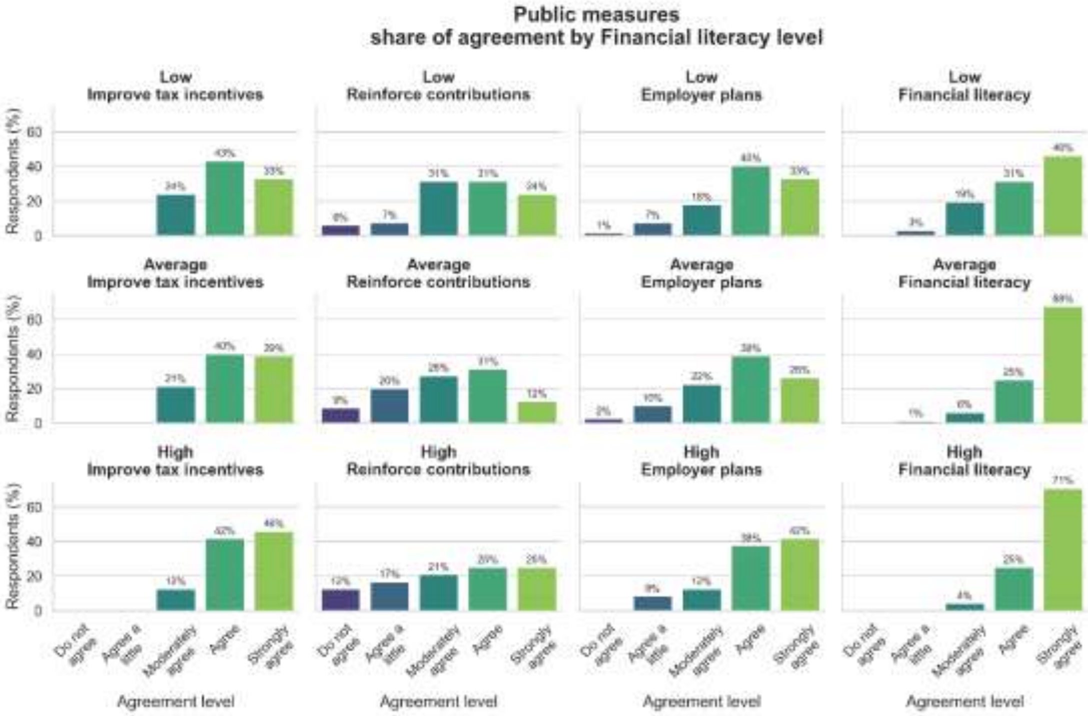

Figure A21 - Grid plot of agreement level of each public policy by financial literacy level

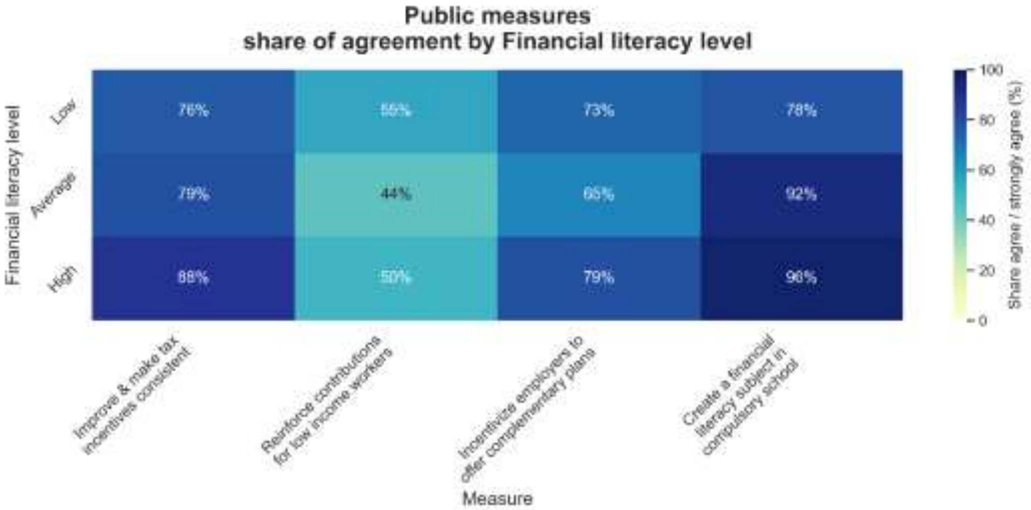

Figure A22 - Heatmap of share of respondents who agree or strongly agree with each public policy, by financial literacy level

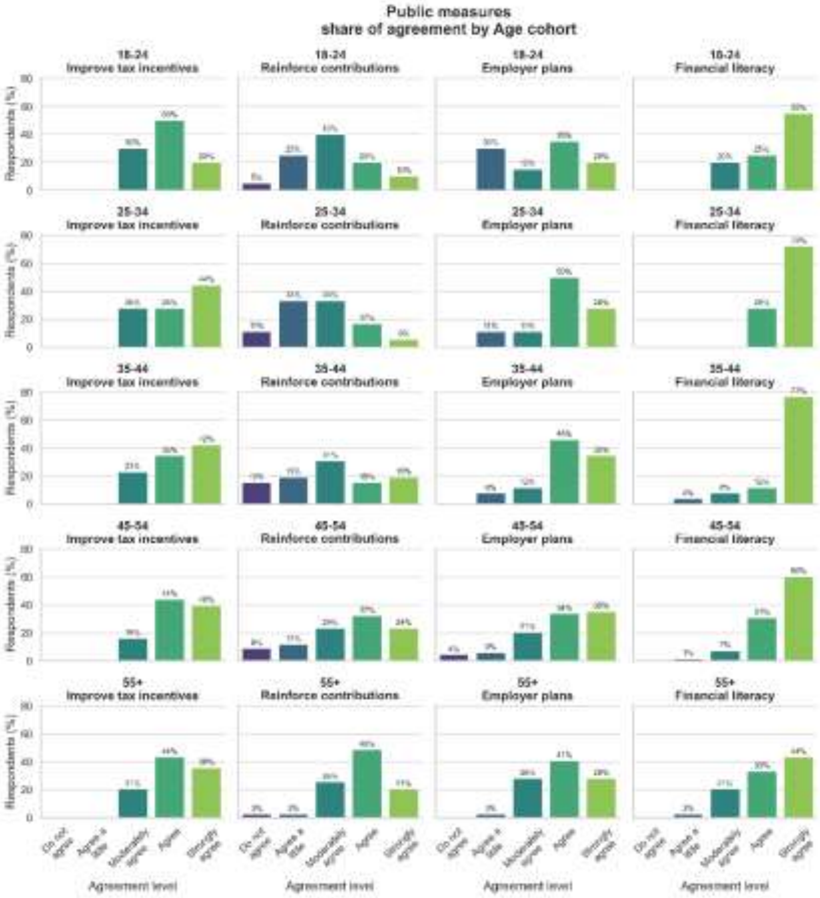

Figure A23 - Grid plot of agreement level of each public policy by age cohort

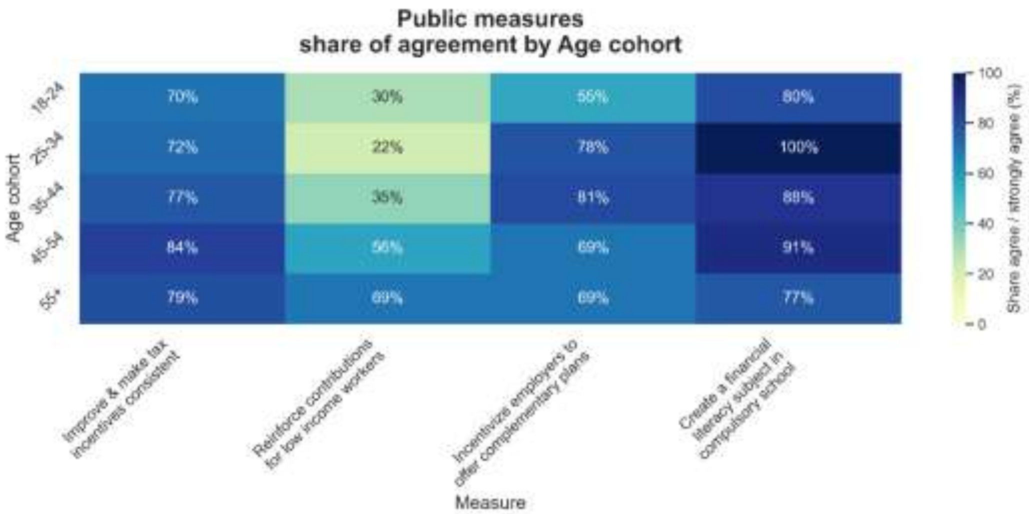

Figure A24 - Heatmap of share of respondents who agree or strongly agree with each public policy, by age cohort

Survey

Inquérito sobre a Literacia Financeira e Preparação da Reforma da População Portuguesa

2025

* Obrigatória

Introdução

Bem-vindo(a)!

Este inquérito pretende ajudar a compreender melhor os conhecimentos, atitudes e comportamentos da população portuguesa em relação à preparação para a reforma. As suas respostas são anónimas, confidenciais e destinam-se exclusivamente a fins académicos. A participação é voluntária e não deverá demorar mais de 15 minutos.

Obrigado pelo seu contributo!

Caraterização sociodemográfica

Esta secção serve para recolher informações gerais sobre o seu perfil pessoal e profissional.

1. Região (distrito): *

- Açores
- Aveiro
- Beja
- Braga
- Bragança
- Castelo Branco
- Coimbra
- Évora
- Faro
- Guarda
- Leiria
- Lisboa
- Madeira
- Portalegre
- Porto
- Santarém
- Setúbal
- Viana do Castelo
- Vila Real
- Viseu

2. Idade (em anos): *

3. Sexo:

- ○ Feminino
- ○ Masculino
- ○ Outro

4. Nível de escolaridade mais elevado obtido? *

- ○ Nenhum
- ○ 1º Ciclo (até ao 4º ano)
- ○ 2º Ciclo (até ao 6º ano)
- ○ 3º Ciclo (até ao 9º ano)
- ○ Secundário ou pós-secundário não superior
- ○ Bacharelato
- ○ Licenciatura
- ○ Mestrado
- ○ Doutoramento

5. Qual a sua situação profissional? *

- ○ Ativo
- ○ Inativo

Ativo

6. Qual das seguintes opções descreve melhor a sua situação? *

- Trabalhador/a por conta própria
- Trabalhador/a por conta de outrem a tempo parcial
- Trabalhador/a por conta de outrem a tempo completo
- Estagiário/a
- Desempregado/a
- Outra

7. Por favor, indique a sua situação profissional. *

8. Trabalha em que setor? *

- Setor Público
- Setor Privado

Inativo

9. Qual das seguintes opções descreve melhor a sua situação? *

- Trabalhador/a doméstico/a
- Reformado/a
- Estudante
- Outra

10. Por favor, indique a sua situação ocupacional. *

Caraterização sociodemográfica continuação

11. Qual é o seu rendimento mensal liquido? *

12. No conjunto qual é o rendimento mensal liquido das pessoas com quem vive incluindo o seu?

13. Costuma tomar decisões sobre o uso do seu dinheiro no dia a dia? Como por exemplo, a decisão de quanto do seu rendimento é poupado num dado mês?

- ◯ Não
- ◯ Sim, sozinho
- ◯ Sim, em conjunto

Barreiras à preparação da reforma

Esta secção pretende identificar os principais fatores que podem dificultar a sua preparação financeira para a reforma.

14. Por favor, avalie o impacto dos seguintes fatores na sua preocupação com a reforma. *

	Nada preocupante	Pouco preocupante	Moderadamente preocupante	Preocupante	Muito preocupante
O valor das pensões ser baixo	○	○	○	○	○
O valor das pensões não acompanhar os aumentos de preços (inflação)	○	○	○	○	○
Custo de vida no presente	○	○	○	○	○
Aumento do número de reformados e diminuição do números de indivíduos ativos	○	○	○	○	○

15. Caso considere que outros fatores impactem a preocupação pela sua reforma, por favor indique quais.

16. Por favor, avalie quanto é que os seguintes fatores condicionam a sua adesão e/ou reforço de complementos da pensão de velhice do regime geral da Segurança Social (como por exemplo, PPR)? *

	Nada importante	Pouco importante	Moderadamente importante	Importante	Muito importante
Rendimentos baixos para garantir o nível de vida no presente	○	○	○	○	○
Dificuldade em poupar e por consequência em investir	○	○	○	○	○
Desconhecimento das diversas opções complementares da pensão de velhice do regime geral da Segurança Social	○	○	○	○	○
Falta de confiança nas instituições privadas provedoras de opções complementares da pensão de velhice do regime geral da Segurança Social	○	○	○	○	○
Falta de incentivos fiscais previsíveis e capazes de incentivar a adesão a estes complementos	○	○	○	○	○

17. Caso considere que outros fatores condicionam a sua adesão a complementos da pensão de velhice do regime geral da Segurança Social (como PPR), por favor indique quais.

Perceção sobre o papel do Estado

Esta secção visa avaliar a sua perceção sobre o papel do Estado no auxílio à preparação da reforma

18. De 1 a 5, acha que o Estado deveria ter um papel mais ativo no auxílio à preparação da reforma? *

1	2	3	4	5

Discordo totalmente — Concordo totalmente

19. Com quais das seguintes medidas públicas mais concorda? *

	Não concordo	Concordo pouco	Concordo moderadamente	Concordo	Concordo plenamente
Melhores e mais consistentes incentivos fiscais à adesão a complementos da reforma	○	○	○	○	○
O Estado devia incrementar as contribuições dos trabalhadores com menores rendimentos para a Segurança Social	○	○	○	○	○
Incentivar os patrões a oferecer complementos da reforma aos seus trabalhadores	○	○	○	○	○
Criar uma disciplina específica de literacia financeira no programa académico dos alunos do ensino obrigatório	○	○	○	○	○

20. Caso considere que outras medidas públicas deviam ser tomadas, por favor sugira quais.

Literacia financeira

Esta secção visa avaliar os seus conhecimentos e comportamentos em matéria de literacia financeira, com especial foco na poupança, no investimento e no planeamento da reforma

21. Quando se reformar, que percentagem do seu rendimento (último salário liquido) tem a expectativa manter? *

- ◯ 100% (não espero qualquer perda de rendimento)
- ◯ Entre 90% e 100%
- ◯ Entre 75% e 90%
- ◯ Entre 50% e 75%
- ◯ Menos de 50%
- ◯ Não consigo estimar

22. De 1 a 5 quanto é que se preocupa com o seu rendimento no período da reforma? *

1	2	3	4	5

Nenhuma preocupação — Grande preocupação

23. Como avalia os seus conhecimentos financeiros (incluindo ações, PPR, fundo de investimento, etc)? *

- ◯ Muito acima da média
- ◯ Acima da média
- ◯ Na média
- ◯ Abaixo da média
- ◯ Não sei responder

24. Quais dos seguintes produtos financeiros conhece? *

- [ ] Depósitos à ordem
- [ ] Depósitos a prazo
- [ ] Certificados do tesouro
- [ ] Ações
- [ ] Obrigações
- [ ] Fundos de investimento
- [ ] Planos de poupança para a reforma (ex.: Planos Poupança-Reforma (PPR))
- [ ] Fundos de pensões não obrigatórios (ex.: Fundos de adesão voluntária)
- [ ] Seguros (ex.: seguro de vida)
- [ ] Cartão de crédito
- [ ] Descoberto bancário
- [ ] Créditos bancários
- [ ] Conta de pagamento associada a telemóvel (ex.: MBWay)
- [ ] Criptoativos
- [ ] Crowdfunding
- [ ] Nenhum dos descritos

25. Quais dos seguintes produtos financeiros detém ou já deteve? *

- [ ] Depósitos à ordem
- [ ] Depósitos a prazo
- [ ] Certificados do tesouro
- [ ] Ações
- [ ] Obrigações
- [ ] Fundos de investimento
- [ ] Planos de poupança para a reforma (ex.: Planos Poupança-Reforma (PPR))
- [ ] Fundos de pensões não obrigatórios (ex.: Fundos de adesão voluntária)
- [ ] Seguros (ex.: seguro de vida)
- [ ] Cartão de crédito
- [ ] Descoberto bancário
- [ ] Créditos bancários
- [ ] Conta de pagamento associada a telemóvel (ex.: MBWay)
- [ ] Criptoativos
- [ ] Crowdfunding
- [ ] Nenhum dos descritos

26. Quais dos seguintes esquemas complementares da pensão de velhice do regime geral da Segurança Social conhece? *

- [ ] Adesão individual a fundos de pensões abertos
- [ ] Regime Público de Capitalização (RPC)
- [ ] Planos de reforma oferecidos pela entidade empregadora (fundos ou seguros pagos pela empresa)
- [ ] Planos Poupança-Reforma (PPR)
- [ ] Fundos de investimento de longo prazo (ex.: ETFs)
- [ ] Nenhum dos descritos

27. Quais dos seguintes esquemas complementares da pensão de velhice do regime geral da Segurança Social detém ou já deteve? *

- [ ] Adesão individual a fundos de pensões abertos
- [ ] Regime Público de Capitalização (RPC)
- [ ] Planos de reforma oferecidos pela entidade empregadora (fundos ou seguros pagos pela empresa)
- [ ] Planos Poupança-Reforma (PPR)
- [ ] Fundos de investimento de longo prazo (ex.: ETFs)
- [ ] Nenhum dos descritos

28. Caso tenha selecionado a opção planos de reforma oferecidos pela entidade empregadora (fundos ou seguros pagos pela empresa), por favor, indique se souber o plano em concreto.

- ◯ Fundos de pensões abertos
- ◯ Fundos de pensões fechados
- ◯ Contratos coletivos de seguros de pensão
- ◯ Não sei ao certo

29. Caso tenha selecionado a opção Planos Poupança-Reforma (PPR), por favor, indique se souber o plano em concreto.

- ◯ Planos Poupança-Reforma como seguros
- ◯ Planos Poupança-Reforma como fundo de investimento
- ◯ Planos Poupança-Reforma como fundo de pensões
- ◯ Não sei ao certo

30. Por favor, indique que importância atribui a cada uma das seguintes formas para financiar a sua reforma, considerando apenas as que conhece. *

	Não conheço	Nada importante	Pouco importante	Moderadamente importante	Importante	Muito importante
Com a pensão do regime geral da Segurança Social	○	○	○	○	○	○
Adesão individual a fundos de pensões abertos	○	○	○	○	○	○
Regime Público de Capitalização (RPC)	○	○	○	○	○	○
Planos de reforma oferecidos pela entidade empregadora (fundos ou seguros pagos pela empresa)	○	○	○	○	○	○
Planos Poupança-Reforma (PPR)	○	○	○	○	○	○
Através de um fundo de pensões constituído por si	○	○	○	○	○	○
Através da venda de ativos financeiros que possuo (ações, obrigações, fundos de investimento, ...)	○	○	○	○	○	○
Através da venda de ativos não financeiros que possuo (carro, propriedades, arte, joias, antiguidades, ...)	○	○	○	○	○	○
Através de rendimentos gerados por ativos financeiros ou não financeiros que possuo	○	○	○	○	○	○
Com a ajuda do meu cônjuge/companheiro(a)	○	○	○	○	○	○
Com a ajuda dos meus filhos ou outros membros da família	○	○	○	○	○	○

14/18

	Não conheço	Nada importante	Pouco importante	Moderadamente importante	Importante	Muito importante
Através do dinheiro que poupei	◯	◯	◯	◯	◯	◯
Continuo a trabalhar	◯	◯	◯	◯	◯	◯
Com o rendimento de um negócio de que sou dono	◯	◯	◯	◯	◯	◯

31. Caso pretenda financiar a sua reforma com outras opções por favor indique quais.

Conhecimento sobre o sistema de pensões da Segurança Social

Esta secção visa avaliar o seu conhecimento sobre as regras e mecanismos do primeiro e segundo nível do sistema público de pensões em Portugal.

32. Se um individuo nunca descontou para a Segurança Social, pode receber uma pensão? *

- ○ Não
- ○ Sim, pensão mínima do regime geral da Segurança Social
- ○ Sim, pensão Social de Velhice
- ○ Sim, Complemento Solidário para Idosos (CSI)
- ○ Não sei responder

33. Se um indivíduo receber uma pensão inferior a 205€ pode ter direito a: *

- ○ Pensão mínima do regime geral da Segurança Social
- ○ Pensão Social de Velhice
- ○ Complemento Solidário para Idosos (CSI)
- ○ Não sei responder

34. Atualmente os novos trabalhadores do setor público descontam para: *

- ○ Caixa Geral de Aposentações (CGA)
- ○ Regime Geral da Segurança Social
- ○ Não sei responder

35. O regime geral da Segurança Social é um sistema: *

- ○ Onde o dinheiro dos trabalhadores atuais serve para pagar a pensão dos reformados (redistributivo/PAYG)
- ○ Onde cada pessoa junta o seu próprio dinheiro para a sua reforma (sistema de capitalização individual)
- ○ Não sei responder

36. O regime geral da Segurança Social é principalmente financiado por: *

- Jogos sociais
- Contribuições de empregadores e empregados
- Dinheiro do Orçamento de Estado
- Não sei responder

37. Se um trabalhador médio ganhar 1000€ brutos qual é o valor da sua contribuição e da contribuição do seu empregador para a Segurança Social? *

- 237,50€
- 300,50€
- 347,50€
- 350,50€
- Não sei responder

Agradecimento Final

Muito obrigado por ter participado neste inquérito.

A sua colaboração é fundamental para a realização desta investigação no âmbito de uma dissertação de mestrado em Economia, contribuindo para uma melhor compreensão da literacia financeira da população portuguesa e das condições de preparação para a reforma.

As respostas recolhidas serão analisadas de forma anónima e exclusivamente para fins estatísticos.