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Challenges and Strategies for Reforming Publicly Funded Pension Systems

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Contents

Executive Summary

There are various policy levers that can be utilised to ensure pension systems are financially sustainable. Initial recalibrations of publicly funded pension schemes tended to increase employment-related pension contributions or, alternatively, increase the subsidies from general tax revenue.

As the proportion of pension recipients significantly increased relative to the proportion of current workers, the limits for increasing contributions or general tax funded subsidies became apparent. This was clearly illustrated by estimates based on the EU 15 countries in 2000 which identified that, if average pension benefits remained unchanged, average pension contributions from employees would need to increase to 26% of gross earnings by 2050. Such levels of employment-related contributions solely for funding retirement benefits was considered unsustainable and the issue of intergenerational fairness also emerged as a political consideration.

Despite the emerging consensus on the need for reducing public expenditure on pensions, many countries initially demonstrated a reluctance to implement sufficient reforms. Several academic papers from the 1980s (or earlier) suggested that it was not possible to reform publicly funded pension systems primarily due to the emergence of a self-interested "grey vote".

However since 1990, most OECD countries have implemented at least one substantial expenditure-reducing public pension reform. This suggests that the political costs of pension reforms are not insurmountable, as was previously suggested in some academic papers. It is now recognised that it is possible to implement expenditure-reducing pension reforms, and a number of strategies have been identified to overcome the difficulties that remain.

Key Findings

- Pension reforms are constrained by legal considerations and require a strong evidence base and clear public interest basis before they can be implemented.
- Academic papers (Boeri *et al*, 2002, 2012) reveal that the general public do not understand pensions. This lack of understanding contributes to a "status quo bias" where individuals are more likely to resist reforms (Boeri and Tabellini, 2012).
- Where individuals understand and accept pension reforms are necessary, the preferred reform tends to vary with personal circumstances (e.g. older employees tend to favour increased pension contributions relative to middle-aged workers who are more favourable to benefit cuts).
- In the context of pension reforms, Pierson (1998) and Boeri *et al* (2002) identify the basic axiom of political science that concentrated groups (e.g. those who oppose any pension reform) will generally be advantaged over diffuse ones (e.g. those who recognise pension reforms are required, but have different preferences).
- Public institutions have a very important role in implementing (or preventing) pension reforms. This is more so the case where countries have relatively large existing publicly funded pension obligations.

- Where countries have large levels of accrued pension expenditure / obligations, there is also likely to be more public resistance to pension reforms. This is chiefly attributable to larger numbers of existing and near-term beneficiaries.

- Academic literature has identified the following strategies as aiding in overcoming the obstacles to implementing sustainability-improving pension reforms*:
    - Phasing implementation of reforms;
    - Incorporating more actuarial features;
    - Providing options and incentives within reforms;
    - Improving the public's understanding of pension systems;
    - Developing a broad political consensus;
    - Including some offsetting measures; and
    - Obfuscation and creating division (Kohli and Arza, 2011)

- Although implementing pension reforms remains difficult, it is now recognised a number of strategies can be implemented to overcome the political, institutional and legal challenges to ensure needed pension reforms are implemented in a meaningful way.

* *These strategies are identified in various academic literature. The inclusion of an identified strategy in this list should not be interpreted as a recommendation from the authors.*

1. Introduction

This paper is the third in a series of pension reform papers prepared by the Single Scheme policy team. The first paper, *The Single Scheme - Improving the Sustainability of Public Service Pensions,* was published in October 2020 as part of the 2020 Spending Review process. This paper analysed the reforms previously implemented in Ireland to improve the sustainability of the Irish public service occupational pension schemes.

The second paper, *An Analysis of International Pension Reforms and Supportive Factors* was published in May 2021 as an IGEES policy paper. This second paper identified the increasing incidence of sustainability-improving pension reforms implemented across EU and OECD countries, as well as the factors or country characteristics that academic literature has identified as supporting such reforms. Consistent with most of the academic literature reviewed, our second paper analysed all reforms of publicly funded pension systems (i.e. social security-type pension systems and public service occupational pension schemes).

The purpose of this paper is to summarise the challenges in reforming publicly funded pension systems and the possible strategies for overcoming such challenges that have been identified in the academic literature. Consistent with the academic literature, this paper also addresses reforms of both social security-type pension systems and public service occupational pension schemes.

For clarity, this paper does not intend to address or evaluate whether the Irish publicly funded pension system is currently sustainable or otherwise. This sustainability of the Irish pension system has been extensively analysed previously (e.g. Green Paper on Pensions (2007), Report of the Interdepartmental Group on Fuller Working Lives (2016), and the Roadmap for Pensions Reform 2018 – 2023 (2019)). Additionally, the Pensions Commission has been established to provide a more recent detailed evaluation of the sustainability of the Irish pension system.

Section 2 describes the data sources and limitations used in this analysis.

Section 3 provides a brief summary of the increasing incidence of pension reforms in European and OECD countries. This information is provided in more detail in our previous paper; An Analysis of International Pension Reforms and Supportive Factors.

Section 4 describes the challenges for implementing pension reforms that have been identified in academic literature. This section also provides an overview of the Institutional Analysis and Development (IAD) framework.

Section 5 describes the main strategies that have been identified in academic literature for overcoming the obstacles and resistance to sustainability-improving pension reforms.

Section 6 concludes with a summary of the main findings in this paper.

2. Data

This paper incorporates data from various academic papers. The classification of heterogeneous international pension reforms is subjective and, as a consequence, will reflect the judgement of the authors of those academic papers. This paper accepts no responsibility for any errors or misrepresentations in the data presented from these academic papers.

This paper also summarises survey results on pension reform preferences from Italy, Germany and Finland. These survey results are influenced by the existing pension systems and individual attitudes and social policy preferences in each country at that time. Preferences regarding pension reforms indicated by survey results in one country may not apply on the same basis to another country, and caution is advised against making such inferences.

3. Increasing Incidence of International Public Pension Reforms

The vast majority of public pension systems in European and OECD countries were initially designed with a pay-as-you-go (PAYG) structure, where the pension payments to current retirees were to be funded through contributions from current employees and, if required, supplemented by revenues from general taxation.

A publicly funded PAYG pension system can be deemed to be financially sustainable when the following equation is expected to balance over the long-term:

$$\sum_{i=1}^{N} s_i W_i + T = PR$$

Where -

s = contribution rates (both employee and employer),
W = nominal wage levels,
i = persons in employment liable for contributions to pension scheme(s)
T = transfers from general tax revenue,
P = average nominal value of retirement payments,
and
R = the number of individuals receiving retirement payments.

As life expectancies have increased across European and OECD countries[1], the number of individuals receiving pension benefits (on the right hand side of the above equation) has increased. Fertility rates have also declined over recent decades, reducing the number of workers that can contribute to the PAYG system (on the left hand side of the above equation). Primarily[2] as a consequence of these demographic pressures, it became clear from the 1980s (if not earlier) that reforms were needed to ensure the expected payment levels from publicly funded pension schemes continued to be sustainable.

The initial policy response in many countries was to increase the rates of contributions from current and future employees. As examples, the combined employer and employee mandatory pension scheme contributions in Germany increased from 16% of earnings in 1960 to 20.3% by 1998. In France, the rate of pension contributions employees were required to remit increased from 4.7% to 6.55% between 1985 and 1991. Italy initially adopted the alternative approach of increasing the contribution from general tax revenue. In the context of the above equation, such measures are recalibrations on the left hand side.

While these approaches may have been the most convenient at that time, there are clearly practical limits (Bonoli and Palier, 2007). More specifically, the EU Commission's analysis of pension benefits

[1] Further information on Ireland's demographics, and context on Ireland's demographics relative to the EU and OECD is provided in section 7 of *An Analysis of International Pension Reforms and Supportive Factors*.
[2] Fornero and Lo Prete (2019) also identify poor pension system design and excessive political generosity as causes for the sustainability issues that emerged for most publicly funded pension systems. Pierson (1998) identifies lower long-term economic growth rates as another factor.

in the EU 15 Member States in 2000 estimated that, unless publicly-funded pension benefits were reduced, the level of contributions would need to increase from the prevailing average level of 16% of total earnings to an average level of 27% of total earnings by 2050[3]. Such levels of payroll based contributions for publicly-funded pensions leave little room for additional employment-based taxation to fund other social policies.

With regard to the policy of increasing transfers from general taxation to fund pension payments initially adopted by Italy, Boeri, T. and Tabellini, G. (2012) estimated that pension expenditure alone imposed a 45% taxation of labour in Italy. Again, such levels of taxation to fund pension payments leaves little room for expenditure on other policies. This is illustrated by the authors' observation that Italy had relatively low public expenditure levels for unemployment insurance and social assistance in spite of a relatively high jobless rate.

Another difficulty with further pension contribution or tax-funded subsidisation increases was an increasing focus on intergenerational fairness. More specifically, the concept of intergenerational transfers from younger and future generations to fund pension payments to older generations became an important political consideration. Accordingly, it became increasingly clear that future pension reforms would require measures to reduce the level of expenditure in public pension systems (i.e. a focus on the right hand side of the above equation).

Despite this emerging realisation, many countries initially exhibited a reluctance to implement expenditure-reducing reforms of publicly funded pension schemes. Perhaps this is best illustrated by the words of former German Minister of Labour and Social Affairs, Walter Riester, who stated the following:

> "*For much too long, policy-makers have evaded political solutions by asserting that they were not politically feasible. The problems of old-age pension provision had been deferred for a long time and the whole social fabric was on the verge of collapsing*[4]."

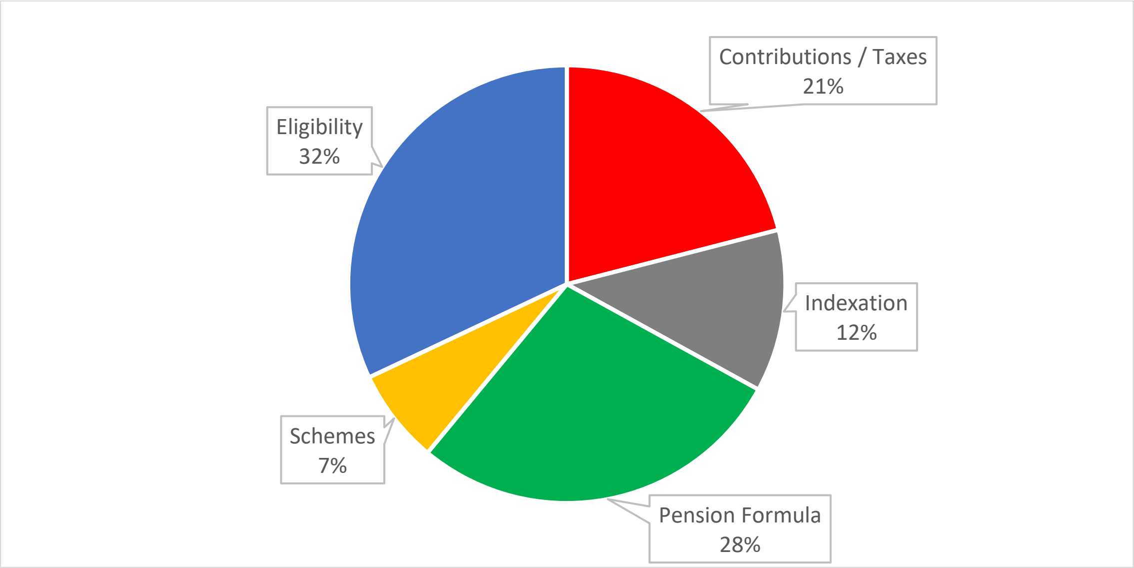
However, various analyses (e.g. Beetsma *et al,* 2019, Kohli and Arza, 2011) illustrate that there are now many instances where the perceived obstacles and difficulties for implementing expenditure reducing reforms were overcome (to some extent), with most European and OECD countries having implemented at least one such reform over the last 30 years[5].

Carone *et al* provides a useful summary of the nature of pension reforms in EU countries since 2000, categorising pension reforms into five groups:

1. Eligibility measures (e.g. pension ages, required contributory period);
2. Pension formula (e.g. accrual rates, valorisation, definition of pensionable earnings);
3. Indexation (for pensions in payment);
4. Contributions / taxes; and
5. Schemes (merger or closure of pension schemes)

[3] EU Commission (2001) *Reforms of Pension Systems in the EU – An Analysis of the Policy Options.*
[4] Stiller, S., (2010) Book Title: Ideational Leadership in German Welfare State Reform Book, Subtitle: How Politicians and Policy Ideas Transform Resilient Institutions, Chapter: Transforming Public Pensions: the Riester Pension Reform
[5] Section 4 of An Analysis of International Pension Reforms and Supportive Factors provides a more detailed analysis on the increasing incidence of expenditure-reducing pension reforms in EU and OECD countries.

Figure 1: Categorisation of EU Pension Reforms since 2000



Source: Carone *et al* (2016)

4. Obstacles to Public Pension Reforms

Implementing substantial reforms is a political process that requires the mobilisation of political resources to overcome several obstacles (Pierson, 1998; Swagel, 2015). This section summarises obstacles identified in academic literature specific to implementing substantial sustainability-improving pension reforms. This section subsequently outlines the Institutional Analysis and Development (IAD) framework which, among other things, identifies the important role of institutions in successful (or unsuccessful) policy implementations.

4.1. Perceived Political Costs

Much of the pension literature from before the 1990s predicted that publicly funded pension benefits would avoid reform in spite of the increasing public expenditure, primarily because of potential political costs. European pension systems were referred to as "immovable objects" (Pierson, 1998) or as part of the "frozen landscapes" of welfare regimes (Esping-Andersen, cited in Kohli and Arza, 2011). In summary it was postulated that, as populations aged and the proportion of pension beneficiaries and soon-to-be pension beneficiaries increased, a significant "grey vote" would emerge (Wilensky, cited in Arza and Kohli 2011). This grey vote would oppose any reductions to pension benefits and the associated potential political costs would prevent such reforms from being implemented (Sinn and Uebelmesser, 2003).

Reflecting the fact that most countries have implemented at least one substantial expenditure-reducing pension reform over the last 30 years, Kohli and Arza (2011) state:

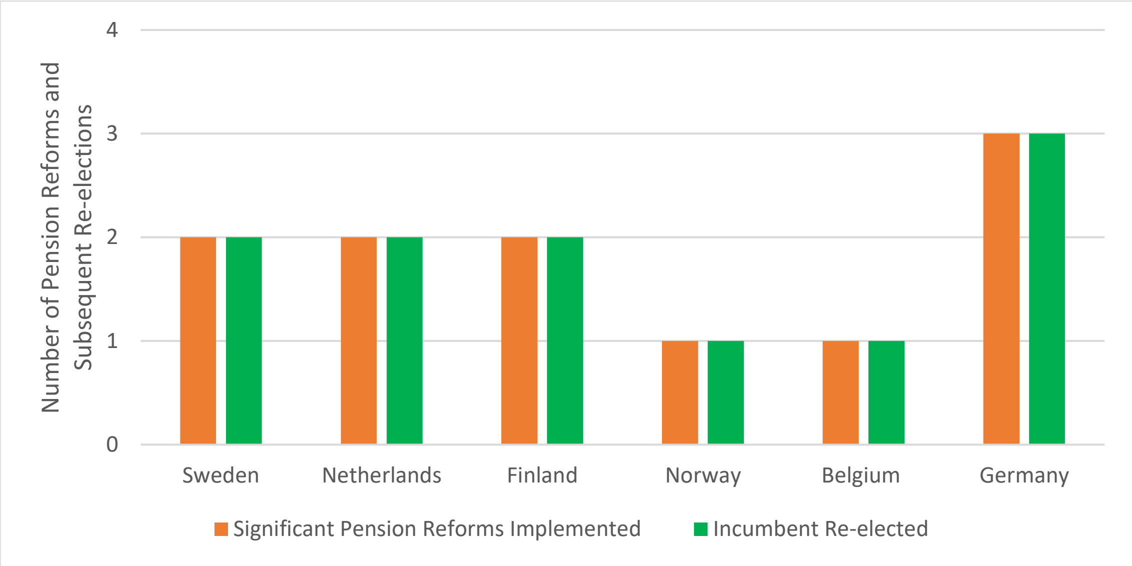
"*The reality of the two past decades has largely falsified the grey power thesis*"

Fornero and Lo Prete (2018) further explore the impact of significant sustainability-improving pension reforms on electoral success in economically advanced countries. The authors find the probability of the incumbent government winning the elections is not significantly related to the introduction of pension reforms during its previous years of office. More specifically, the authors do find a negative relationship in the sample used, but this negative relationship is not statistically significant when other control factors are included in their analysis. A further finding from this analysis is that the electoral cost of pension reforms is lower in countries where the population have high levels of financial literacy.

The following chart illustrates the electoral outcomes for a sample of European countries where the population is considered to have a high level of financial literacy and significant pension reforms have previously been introduced by the incumbent Government[6].

[6] Ireland is not represented in this chart because no significant sustainability-improving pension reforms were implemented in the period analysed by these authors (1990-2010). However, Ireland had the second highest level financial literacy in the sample of 21 countries in 2008.

Figure 2: Significant Sustainability-Improving Pension Reforms and Subsequent Election Results in EU Countries with High Levels of Financial Literacy, 1990-2010



Source: Fornero and Lo Prete (2018)

As can be seen, on two or more occasions, governments in Germany, Finland, Sweden and the Netherlands managed to achieve electoral success despite having introduced substantial sustainability-improving pension reforms during their previous political term.

While it is important to note that election results depend on many factors, Figure 2 clearly illustrates that it is possible to implement significant sustainability-improving pension reforms and not experience the significant political costs previously predicted by the grey power hypothesis.

Arza and Kohli (2011) summarise a further reason why the political costs from the "grey vote" did not prevent the re-election of governments that previously initiated or implemented substantial pension reforms as "*elderly voters do not only vote in their narrow self-interest*" (Goerres, cited in Kohli and Arza 2011), but also consider the well-being of their descendants and society more broadly (Kohli, 1999).

While pension reforms have now proven to be politically feasible in many countries, it is still the case that in most contexts such reforms, similar to other expenditure reductions or taxation increases, will erode political support. Section 5 details a number of strategies that academic literature has identified to reduce such political costs.

4.2. Legislative Constraints

Reforms of pension systems are subject to a number of legal constraints, including constitutional protection of property rights and employment law. As a consequence, any reform or recalibration of pension systems must have a legally sound basis.

For example, in response to the financial crisis that emerged in 2008, Ireland enacted legislation to impose temporary reductions to pensions in payment from public service occupational pension schemes (the Public Service Pension Reduction - PSPR). As pensions in payment are recognised as a "property right" with the associated protection provided by the Irish Constitution, the legality of these pension reductions relied on the existence of a financial crisis, as well as the measures being proportionate and consistent with other measures imposed. If these conditions did not exist, PSPR would not have withstood the legal challenges it faced, and the savings delivered from reduced public service pension expenditure would not have been achieved.

In contrast, the public service occupational pension reforms introduced in the UK in 2013 provide an example of legal constraints overturning intended pension reforms. These proposed reforms were designed to freeze and preserve the retirement benefits accrued by public servants up to the implementation date, but the accrual of pension entitlements after the implementation date would be on a less beneficial career-average basis.

When this reform was legislated, an exemption was incorporated that completely exempted public servants who could retire within 10 years of the implementation date. Also, public servants who could retire between 10 and 14 years benefitted from "tapering measures". A 2018 ruling by the UK Court of Appeal determined that these exemptions were unlawful as they discriminated on age grounds and that there was insufficient evidence to demonstrate a justifiable social or political aim required when implementing this age-based discrimination[7].

Some of the pension reforms implemented by Greece serve as another example of legal constraints overturning pension reforms. Although most of the Greek pension reforms were legally upheld when challenged in the Greek courts, some were found to be illegal. One example of pension reform that was not deemed to have a sufficient legal basis was the third round of pension reductions introduced in 2012. The Greek Council of State concluded that there was a lack of actuarial evidence to justify these reductions. This judgement contrasts with the ruling on the first round of pension reductions in 2010 in particular, where the Court accepted the absence of adequate actuarial analysis due to the immediacy of the situation, however in 2012 the Court found that the Greek Government had adequate time to provide clear evidence to justify reductions in pensions payable, but had failed to do so.

4.3. Lack of Public Understanding of Pension Systems

One of the main purposes of publicly funded pension systems is to address and minimise impacts of individuals' general tendency to overvalue the short-term relative to the long-term (termed "myopic preferences" in economic literature). More specifically, individuals tend to be more focused on increasing current and near-term consumption levels rather than setting aside sufficient resources to provide for adequate levels of long-term consumption[8]. As a consequence, if public policies that required a level of saving in return for income support in retirement were not implemented, then large numbers of individuals would likely not have sufficient resources to support an adequate standard of living in old-age.

While publicly funded pension systems have largely been successful in increasing individuals' savings toward retirement (mostly through mandatory contribution rates, and more recently through tax reliefs or other publicly funded subsidies), they have not addressed the underlying myopic preferences of individuals. Accordingly, as individuals continue to undervalue consumption in the distant future, they are also less likely to take sufficient time to fully understand the pension systems that will fund a significant proportion of their future long-term consumption. The complexity that has developed around publicly funded pension systems further contributes to a general lack of understanding of these systems.

[7] EWCA Civ 2844 The Lord Chancellor & Anor v McCloud & Ors [2018]
[8] Thaler and Bernatzi (2004) provide a useful summary of the behavioural economics framework that explains individuals' tendency to underweight future consumption.

Analysis by Boeri, Borsch-Supan and Tabellini (2002), which is based on surveys of currently working German and Italians in 2002, as well as Boeri and Tabellini (2012), which incorporates survey results of Italians aged between 16 and 80 in 2004, explored the extent to which citizens do not understand public pension systems. The responses provided in these surveys revealed that:

- Although there was widespread awareness of the unsustainability of public pension schemes in both Germany and Italy, the majority of respondents under-estimated the actual cost of these systems.

- For both Italy and Germany, more than 80% of the respondents that made pension contributions did not know the approximate levels of pension contributions paid in respect of their employments (i.e. the combined proportion of employer and employee contributions).

- Participants in the 2004 Italian survey that confused pay-as-you-go systems with funded systems were more likely to oppose reforms[9].

- Individuals who declared to be more exposed to pension coverage in the media were not found to be more informed about the basic features of the pension system.

- Respondents did not recognise the benefits of previously introduced reforms. For example, the "Riester reforms" implemented measures to improve the sustainability of the German pension system in 2001. However, comparisons of survey results prior to and post these reforms surprisingly revealed that German respondents became more concerned about the possibility of a pension crisis in the next 10-15 years after the reforms were introduced (76% pre-reforms, compared to 85% post-reforms)[10].

Importantly, Boeri and Tabellini (2012) also identified that;

> *"Not only are voters vastly uninformed, but their lack of information has a systematic impact on policy preferences and induces a bias in favour of the status quo".*

4.4. Lack of Consensus on Preferred Pension Reforms

A further difficulty to reforming pension systems identified by Boeri *et al* (2002) is the lack of consensus on the preferred pension reform options. This is in contrast to the concentrated preference to maintain the status quo (Pierson, 1998).

Within the 2001 surveys of German and Italian populations, four options of pension reform were provided. Of the survey respondents that did approve of one of the four pension reform options, the preferred option tended to vary depending on personal characteristics and relativities. For example:

[9] Boeri and Tabellini (2012) posit that this finding may be explained by individuals who incorrectly believe that their pensions are funded by their past contributions feel "*more entitled to receive higher compensations*".
[10] Boeri, Borsch-Supan and Tabellini (2002) offer a potential explanation of this surprising finding as an increased awareness of pension difficulties caused by coverage of the reforms while being developed as well as an under-estimation of the impact of the reforms after implementation.

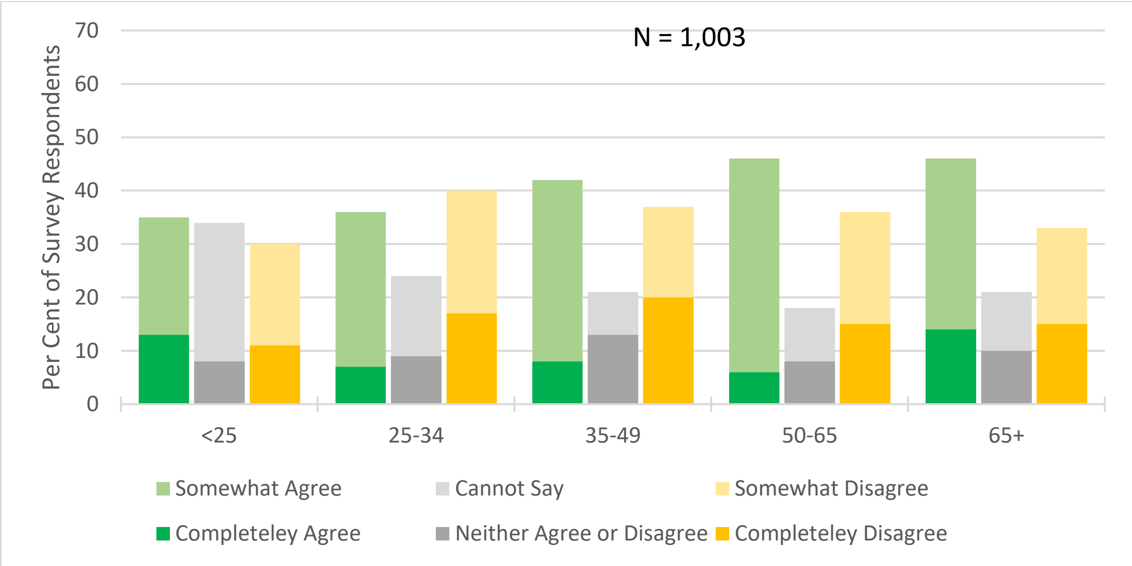
- Younger people tended to be more in favour of cutting pension benefits rather than increasing contributions, whereas older respondents preferred higher contributions rather than reducing benefits.

- Individuals with lower incomes tended to be more in favour of higher pension contributions relative to individuals with higher incomes, who preferred pension cuts rather than higher contributions.

- Where the retirement ages were relatively low (i.e. Italy), respondents tended to prefer increasing retirement ages and, where benefits were relatively high (i.e. Germany), respondents tended to prefer reforms that reduce pension values.

More recent survey results of Finnish citizens in 2019 (Kantar TNS Oy, 2020) also reveal that the level of support and resistance to specific pension reform options vary with age and other personal characteristics. For example, as illustrated in Figure 3, survey participants from the 50-65 and 65+ age cohorts were 11% more likely to agree with a policy of increasing pension contributions to address pension sustainability issues than survey participants aged less than 25 years (46% of respondents aged between 50-65 and 65+ either completely agreed or somewhat agreed, compared to 35% of those aged less than 25 years).

Figure 3: 2019 Finnish Survey Response to Increasing Pension Contributions, by Age Cohort



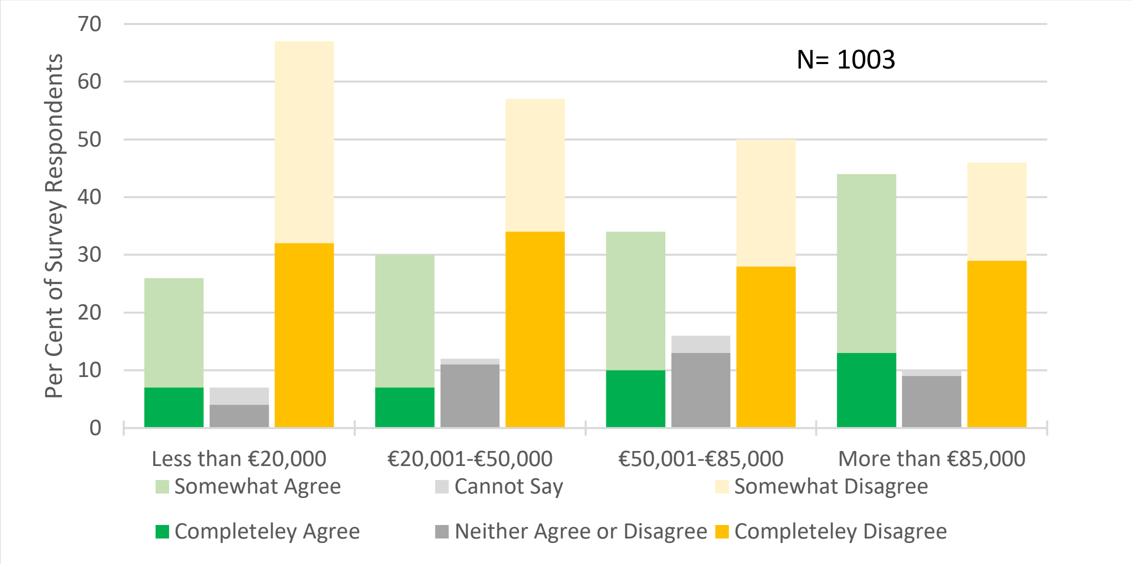
Source: Finnish Centre for Pensions

Another finding from the 2019 Finnish survey[11] that is consistent with the earlier Boeri *et al* analysis is that individuals with higher incomes tend to have a higher preference for later retirement ages than individuals with lower incomes. As illustrated in Figure 4, 44% of survey respondents with

[11] Other findings from this Finnish survey can be summarised as follows: Males and those with highest education are more often in favour of increasing pension contribution rates. The youngest, as well as the oldest (who are more likely to already be retired) are more in favour of increasing the retirement age. Entrepreneurs and those with the highest income and the highest education are most often in favour of cutting the pension benefits of future retirees. Females, those aged 50 and over and those with the lowest education are more often against cutting pension benefits of current retirees, whereas the self-employed and those with the highest income are more often in favour of reducing current pension benefits.

incomes above €85,000 completely or somewhat agreed with the policy of increasing retirement ages as a possible policy response to future pension sustainability issues, some 18% more than survey respondents with incomes of less than €20,000.

Figure 4: Finnish Survey Response to Increasing Retirement Ages, by Income Cohort



Source: Finnish Centre for Pensions

Both Boeri *et al*'s analysis and the results of the Finnish survey illustrate that preferences (or relative opposition to) pension reforms tend to vary with personal circumstances. However, the revealed preference for each country also reflect the pension systems as they exist in that country, as well as the social policy preferences of that country. Accordingly, it is not appropriate to infer that the identified preferences of one country will necessarily apply to another country.

Herzberg and Wilson (1987) provide a more detailed framework of the difficulties in achieving a policy equilibrium where stakeholders have different preferences. This analysis further illustrates that where various cohorts have differing preferences, the eventual outcome can be more influenced by the cohort with the most leverage (e.g. blocking power), rather than an outcome that is closer to the overall (or average) preference. Pierson (1998) further supports this finding.

4.5. Existing High Public Pension Debt (Implicit or Explicit)

Where countries have high pension debts, there is likely to be a greater need for, and benefit from, reforming pension systems. However this greater need / benefit does not reduce the challenges to implementing such reforms. To the contrary, James and Brooks (2001) suggest that countries with high public pension debts may face more difficulties in implementing pension reforms for the following reasons:

- Where large publically funded pension debts have developed, there are likely to be a large number of current beneficiaries, as well as near-term beneficiaries, who are more likely to resist reductions to their retirement benefits; and

- Where large publically funded pension debts have emerged, a large amount of public servants are likely to be employed in administrating the existing pension schemes and policies. The public servants involved are also likely to resist changes to pension policy that diminish their role, budget or perceived status. Pierson (1998) describes this behaviour as "institutional stickiness". The Institutional Analysis and Development (IAD) framework, summarised later in this section, provides further insights on the potential blocking role of institutions.

James and Brooks (2001) also suggest that where very large pension debts exist, and where pension reforms are implemented, the reforms are more likely to be tweaks within existing systems / structures ("parametric changes"), rather than fundamental reforms that may be more appropriate (a finding described as "path dependency" in academic literature).

4.6. Large Public Debts (non-pension related)

Brooks and James (2001) explore the idea that when Governments are fiscally constrained it is possible that the extent of the pension reforms that are introduced will be constrained[12]. A possible reasoning for this idea is that substantial pension reforms are commonly facilitated with transitory measures that may require short-term increases in public debt levels.

Brooks and James provide the anecdotal example of Brazil in the 1990s, where substantial long-term pension savings were delayed because "*officials in the Ministry of Finance and Central Bank insisted that the government put aside the structural reform model until its borrowing constraints eased*".

In contrast to the above example, an analysis of pension reforms implemented in EU countries since the 2007 global financial crisis indicates that substantial pension reforms were implemented in highly indebted countries that required financial support from supranational organisations such as the IMF or the Troika. This would suggest the possibility of this obstacle is effectively bypassed when financial circumstances deteriorate to crisis levels (i.e. a "tipping point" is reached where sizeable levels of public debt will induce major expenditure-reducing pension reforms).

Importantly, Brooks and James' analysis did not find a statistically significant relationship between the levels of non-pension public debt and the probability of a country implementing a pension reform, or the extent of the pension reform that was implemented.

4.7. The Institutional Analysis and Development Framework

Much of the challenges identified above can be identified through the Institutional Analysis and Development (IAD) framework. This framework, pioneered by Elinor Ostrom, has gained an increased significance in public policy analysis in recent decades[13]. As summarised by Polski and Ostrom (1999):

> *In most policy settings, participants have differing amounts of information, endowments, experience, and processing capabilities. Uncertainty is rampant and preferences are often radically opposed. Search and negotiation impose substantial costs on coordination, problem solving, and decision making. These conditions mean that social behaviour will have a strategic character as self-interested individuals square-off with those who have broader social objectives.*

Consequently, the IAD framework places an emphasis on moving beyond standard economic assumptions of the rational decision making model (i.e. utility maximising, homogenous individuals with perfect information) when designing public policy. Instead, factors such as the current environment and social values, the nature of the different institutions involved in implementing a

[12] In contrast to most of the papers analysed for this paper which focus on advanced EU or OECD economies, Brooks and James (2001) analyse both Developing Countries and Developed Countries.
[13] Elinor Ostrom was awarded the 2009 Nobel Memorial Prize in Economic Science.

policy, the governance systems and levels of control institutions have, the number and patterns of interactions required to implement a policy, as well as the varying perceptions different stakeholders may have of the same situation (with differing levels of accuracy), are identified as important considerations (among others).

5. Possible Strategies to Implement Sustainability-Improving Pension Reforms

Informed by an increasing sample of successfully implemented sustainability-improving pension reforms, academic literature has also identified a number of strategies which can be used to overcome obstacles to pension reforms. This section summarises seven of these identified strategies, many of which complement each other and may have a degree of overlap. Conversely some strategies identified may conflict or contradict with others. As a point of clarification, this section is intended to summarise the different strategies identified in the academic literature and the strategies summarised should not be interpreted as recommended strategies.

5.1. Phased Implementation of Reforms

Implementing pension reforms on a phased basis has many practical advantages, as well as political advantages. One advantage of designing and legislating for pension reforms that will be implemented at a certain time in the future (e.g. 10 years) is that it allows individuals time to adjust their behaviours to best adopt to the new expected circumstances. This approach could also reduce resistance to the reforms as, depending on the nature of reforms, those who have already retired, as well as those who will retire before implementation, may be less adversely impacted. Furthermore, those who may be most impacted by phased-in reforms will be younger[14] and, due to the tendency to underweight future consumption as described in section 4.3 above, may only provide weak resistance, or a resistance that can be overcome by less costly offsetting measures.

However, there are also many possible disadvantages to incorporating long delays to pension reform implementation. Firstly, the costs that are deemed to be unsustainable will continue to accrue until the proposed implementation date. For example, Italy introduced reforms in 1999 that were not intended to be fully effective until 2035. As referenced in section 3 above, Boeri, T. and Tabellini, G. (2012) estimated that pension expenditure alone imposed a 45% taxation of labour in Italy. Secondly, the demographic (or other factors) that created the need for pension reforms might move at a faster rate than the implementation of the agreed reforms (e.g. life expectancy increasing at a faster rate than increased minimum retirement ages). Thirdly, incorporating a delay could be interpreted as passing the political costs onto future governments who will be in power at the intended implementation date. This in turn creates a risk that the future government will further delay or choose not to implement the reforms as intended[15]. Lastly, incorporating long delays before pension reforms are implemented may also raise concerns regarding intergenerational equity.

5.2. Incorporate more Actuarial Features ("Quasi-Actuary Systems")

Linbeck, A. and Persson, M. (2003) propose that if some actuarial features intended to improve financial sustainability are incorporated as automatic adjustments, the public may be more likely to accept such adjustments. This view is based on the premise that the public will be less resistant to "actuarial rules" compared to similar changes that are viewed as "policy decisions".

This "automatic adjustment" approach would effectively remove the political and institutional process from enacting future pension reforms deemed actuarially necessary to safeguard the pension system's sustainability. Removal of the political and institutional process may also enable more responsive implementations of reforms.

[14] This strategy also contains elements of creating division covered in 5.7 below.

[15] The OECD Pensions at a Glance 2019 report identified a number of countries that delayed or reversed pension reforms first agreed during the Great Financial Crisis.

A further advantage of incorporating actuarial features to pension reforms is it may reduce legal risks. As described in section 4.2 above, some of the pension reforms introduced in the U.K. and Greece were challenged and found to be illegal. In both these legal judgements, the absence of a sufficient evidence base for the approach adopted was provided as a reason why the reforms were judged to be illegal[16].

5.3. Provide Options and Incentives Over Mandatory Rule Changes

By allowing individuals to choose the approach most suitable to their specific circumstances, any resistance to the pension reform that emerges will be less concentrated. A basic axiom in political science is that diffuse resistance is less likely to succeed than concentrated resistance (Pierson, 1998; Boeri et al, 2002). Possible features of such an approach are:

- Allow members to choose between higher contributions for the same benefit, or the same contributions for a lower benefit at retirement (as per Riester reforms in Germany);

- Allow people to retire at the current age of eligibility with reduced benefits or work longer for the same benefits; and

- Allow opt-outs of some elements of pension schemes (e.g. members may opt-out of occupational pension schemes but be required to remain in pension provisions solely intended to prevent old-age poverty[17]).

5.4. Improve Public Understanding of Pension Systems and Reasons for Reform

Several authors have proposed that improving the public's understanding of pension systems, and the associated sustainability issues, will result in the public being more accepting of needed reforms.

As an example, Kohli and Arza (2011) suggest that, if it was effectively communicated that pension reforms are intended to strengthen the link between contributions made over a career and benefits payable in retirement (a feature termed "actuarial fairness" by Linbeck and Persson (2003)), then the public are likely to be more accepting of such reforms.

Boeri and Tabellini (2012), using the example of Sweden, recommend that an increased understanding of pension systems can be achieved by introducing annual communications of an individual's pension contributions and expected pension benefits (similar to an end of year tax statement)[18].

Fornero and Lo Prete (2018) also identified that increasing the financial literacy of the general population decreases the political costs of introducing pension reforms. In summary, countries where populations had relatively high financial literacy (e.g. Scandinavian countries, the Netherlands and Germany), tended to demonstrate lower political costs from implementing sustainability-improving pension reforms than countries with lower levels of financial literacy (e.g. Eastern and Southern European countries).

[16] The UK Court of Appeal disagreed with the evidence provided by the Ministry of Justice on behalf of the UK Government, while the Greek Council of State identified that, in the context of the long timeframe available, sufficient evidence was not provided.
[17] Described as Pillar 1 pensions in the multi-pillared "World Bank" model.
[18] The implementation of the IORPS II Directive will go some way to achieving this in Ireland.

5.5. Develop Broad Political Consensus

Developing a broad consensus among political parties and broader stakeholders about the need for reforms, while difficult to achieve, has proven to be very effective for successfully implementing sustainability-improving pension reforms. Where a broad political consensus can be established, it diminishes the political costs for each political party (and individuals) associated with introducing the reforms (a concept labelled "blame-sharing" in academic literature).

"Blame sharing", and the associated lower political costs, can also be achieved where pension reforms are recommended (or required) by supranational organisations such as the IMF, EU or OECD.

The preferred pension policies of supranational organisations can also be utilised to create an understanding on all sides that certain reforms are "inevitable", a concept explored by Cox (2001). In this analysis, Cox argued that policy makers in both Denmark and the Netherlands succeeded in creating a broad understanding that welfare reform was needed. Having achieved this, the political discourse was then largely focused on how best and when to implement the reforms considered to be required. The extent to which a broad political consensus was created in Denmark is illustrated by the implementation of the same welfare reforms despite a change of government[19].

In contrast, Cox argues that German policy makers did not initially succeed in creating this broad understanding in the early 1990s (perhaps constrained by the variety of issues associated with re-unification) and, as a consequence, discussions around pension reform remained adversarial. However, Cox found that a widespread understanding of the requirement for German welfare reforms was eventually achieved in the late 1990s and early 2000s. This is illustrated by both main political parties (the CSU and SPD) supporting the 2007 reforms (which increased the normal retirement age from 65 to 67). The relatively low resistance from other German political parties is further evidence of the political consensus achieved.

5.6. Include Some Offsetting Measures

Beetsma *et al* (2019) identified the increasing incidence of pension reforms containing both expansionary and contractionary measures in OECD countries. In the 23 year period from 1970 to 1993, there were 20 pension reforms that contained both cost increasing and cost reducing measures. In the 23 year period from 1994 to 2017, there were 89 such reforms (an increase of over 345%)[20].

Importantly, this paper also identified that **the net impacts of pension reforms that contained both cost-increasing and cost-saving pension measures tended to deliver higher savings than pension reforms that contained only contractionary measures**. This finding supports the idea that it is helpful to introduce some compensatory measures while imposing more impactful reductions - an idea the authors describe as "buying-off" resistance to contractionary measures.

As examples of offsetting pension measures, the 2001 German pension reforms ("the Riester reforms") incorporated tax incentives for private pension savings, as well as establishing a basic

[19] A coalition headed by the Social Democrat party replaced the incumbent coalition headed by the Conservative party in 1993.

[20] The previous paper of this series of papers; An Analysis of International Pension Reforms and Supportive Factors explores the Beetsma et al (2019) analysis in more detail.

means-tested pension for individuals that did not have the required contributions to qualify for an adequate earnings-related publicly funded pension.

Similarly, the 2007 French pension reforms overcame resistance by establishing a minimum pension of 85% the minimum salary, as well as introducing tax exemption for private retirement savings.

5.7. Obfuscate and Divide[21]

Kohli and Arza (2011) identify an alternative strategy for overcoming resistance to pension reforms is to construct the reforms in such a way that it is difficult for citizens to understand how it will impact them. Kohli and Arza propose that if the comparable outcomes are not clear, then there is likely to be less resistance[22].

Kohli and Arza also identify an alternative strategy is to divide the possible oppositions by applying different measures to different groups, or exempting some groups from the reforms (e.g. French public servants were exempted from the pension reforms introduced in 1993, but were subsequently encapsulated in 2003).

While both of these strategies may be considered pragmatic in overcoming immediate hurdles, Nektarios and Tinios (2019) identify possible medium-term (or even near-term) problems from such strategies. In their analysis of the Greek pension reforms, the authors find that:

> *"A cyclical process was repeated four times, in 2010, 2013, 2015, and 2017. The Troika, setting off the process, first pushed for decisive action to address fiscal problems; the government attempted to protect those close to retirement, favoring dual systems differentiating incumbents from new entrants. However, attempts to protect incumbents led to early retirement; as government grants to the pension system were strictly controlled, this increased cash shortfalls. These in turn were addressed by cutting pensions-in-payment. This was added to by passing new laws extending the application of the new system retroactively to categories of the population previously protected."*

Nektarios and Tinios further describe the preferential treatment of certain occupations over others in the context of overall sustainability issues as "*a pay-while-you-can, or even a pay-what-you-grab, system*".

[21] These strategies are included in this section for completeness, reflecting our analysis of the academic literature. This should not be interpreted as recommendation.

[22] The authors of this paper recognise that this strategy conflicts with the previously summarised strategy of increasing the public understanding of pension systems. For clarity, the authors of this paper consider the other strategies outlined to be more appropriate as approaches for implementing pension reform policies.

6. Conclusion

While there are many possible policy levers that can be used to ensure public pension systems are financially sustainable, many countries showed an initial reluctance to implement expenditure-reducing pension reforms prior to the 1990s. Choosing instead to increase the rate of pension contributions from current (and future) employees or increasing the subsidisation from general taxation revenue.

Early academic literature postulated that it would not prove possible to substantially reform publicly funded pension systems in spite of the apparent need do to so. The main consideration behind this hypothesis was the emerging “grey vote” who would veto such reforms out of self-interest.

Informed by the increasing prevalence internationally of expenditure-reducing public pension reforms, it is now recognised that the predicted resistance to pension reforms from the “grey-vote” was overstated, and that it is possible to implement expenditure-reducing reforms of publicly funded pension systems.

In the context of the improved feasibility for reforming publicly funded pension systems, the more recent pension academic literature (i.e. from 1998 onwards) has identified a number of obstacles to pension reforms that remain to be overcome. These obstacles are as follows;

- legal constraints;
- lack of public understanding of existing pension systems;
- lack of public consensus on preferred pension reforms; and
- large accrued public pension obligations (implicit or explicit) and the possibly associated “institutional stickiness”.

The recently emerging Institutional Analysis and Development framework provides an analytical tool to further evaluate such challenges.

Academic literature has also identified a number of strategies to overcome obstacles to sustainability-improving pension reforms. These strategies include;

- phasing the implementation of reforms;
- incorporating actuarial “rules”;
- providing options;
- improving the public’s understanding;
- creating a broad political consensus;
- incorporating some off-setting features, and alternatively;
- obfuscating the reforms and creating divisions within potential resistance (Kohli and Arza , 2011).

Although implementing expenditure-reducing reforms of public pensions systems remains difficult, it is no longer considered to be impossible. A number of strategies can be implemented to overcome the political, institutional and legal challenges that exist and ensure needed pension reforms are implemented in a meaningful way. A large number of countries have successfully adopted such strategies over the past 30 years.

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To ensure accuracy and methodological rigour, the author engaged in the following quality assurance process.

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  - ✓ Other divisions/sections
  - ☐ Peer review (IGEES network, seminars, conferences etc.)

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