

## Issue salience and feedback effects: the case of pension reforms

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### ABSTRACT

What is the relationship between social policy reforms and issue salience in public opinion? Extensive research analyses policy feedbacks on policy preferences and the influence of policy preferences on policy change. Scant research, however, considers the link between reforms and issue salience – i.e., the perception of importance citizens attach to a topic. We address this gap in the literature through the comparative study of the salience of the ‘pension issue’. Drawing on a novel dataset covering 2010–2020 and 28 European countries, we argue that the passage of pension reforms shapes pension salience. Multilevel fixed effects models indicate that pension reforms that include either contracting or expansionary provisions are positively related to pension salience. In contrast, expansionary and contracting reforms, by themselves, are not robustly associated with pension salience.


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### INTRODUCTION

Public opinion about the importance that the public attaches to specific issues – the salience of the issue – is crucial for democratic legitimacy. From a democratic theory perspective, governments should address issues the public deems salient to demonstrate their responsiveness to public priorities (Bromley-Trujillo & Poe, 2020). High levels of salience regarding what people perceive as important issues signal to governments the need for action and/or attention and thereby shape government agendas (Bernardi

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et al., 2021; Jennings & Wlezien, 2015). Research on policy responsiveness shows that democratically elected governments respond to public preferences on public expenditure (Jennings & Wlezien, 2015), especially social policies (Brooks & Manza, 2006). But where do public perceptions of issue salience come from? The literature is divided: for some scholars, the public defines issue salience, and legislators follow the public's lead (Barberá et al., 2019). For others, elite cues and political leadership shape public opinion on issue salience (Caughey & Warshaw, 2018; Page & Shapiro, 1983).

This study contributes to this debate by investigating the macro-level (economic, political and social) causes of issue salience. We investigate policy feedback effects on the salience of a core government responsibility in European democracies: pension policy – guaranteeing adequate retirement income. We operationalise pension issue salience through individual perceptions about the importance of ‘pensions’ for the country. Our key questions are: Do people perceive pensions as an important issue when pension reforms are enacted? Do we see any difference between expansionary and contracting pension reforms?

Social policies account for the largest share of government budgets in affluent democracies, and pension policies typically are the largest single spending category. Public pension policies thus reveal much about government activity and priorities, and this should be reflected in public attitudes concerning the salience of ‘pensions’. Our focus on pension issue salience allows us to connect the findings from literature on policy feedback effects with insights from social policy research to better understand the forces shaping attitudes towards issue salience. Research on policy feedback shows that, once adopted, policies that redistribute economic resources across groups shift the incentive structure and political motivations for many voters (Campbell, 2012; Pierson, 1993). Testing hypotheses concerning the drivers of issue salience and the relationship between reforms and issue salience requires a policy field that voters are highly aware of and that undergoes frequent reforms (Arndt et al., 2021). Pension policy meets both criteria; moreover, it is particularly conducive to feedback effects (Lynch & Myrskylä, 2009; Myles & Pierson, 2001), because most citizens are current or future recipients of pension benefits and therefore affected by reforms.

We assess whether the adoption and content of pension reforms foster pension issue salience. Our reasoning is that resource and interpretive effects make people aware of pension reforms, so when they occur, pension salience increases. We also assess whether the type of reform influences pension issue salience. Reforms that reduce pension levels might attract public attention, because voters are more sensitive to losses than to gains and punish politicians for loss imposition. However, we can also expect an increase in pension issue salience for expansionary pension reforms as politicians claim credit by announcing higher benefits to win votes.

This study tests these predictions comparatively and longitudinally by analysing the conditions that influence whether individuals consider ‘pensions’ one of the ‘most important issues’ (MI) in their country. We assemble a novel dataset including 23 Eurobarometers (EBs) with information on whether respondents view ‘pensions’ one of the two most important national issues. The database includes the 27 EU member states plus the UK over 11 years, yielding 308 country-years. Our data analysis relies on multilevel, random-intercept multilevel models with two-way – country and year – fixed effects.

Controlling for demographic, economic and political factors, we find that pension reform adoption (regardless of whether reforms expand or reduce benefits) is positively and significantly related to shifts in pension salience. However, neither expansionary reforms nor retrenching reforms are robustly related to shifts in pension salience. We explain this paradoxical finding by stressing two things: many pension reforms are multidirectional (they expand some aspects of pension provision and retrench others) and individuals’ pension knowledge is limited. By considering all pension reforms, our analysis covers a larger number of legislative events than if we had only included expanding or contracting ones. Beyond the role of policy-related factors, unemployment crises are strongly and negatively related to shifts in pension salience.

Our analysis has three important implications for research on the policy-attitudes nexus. First, most research on issue salience focuses on salience effects rather than the causes of salience (Dennison, 2019). To our knowledge, this paper is the first to demonstrate the potential of comparative analyses of the drivers of social issue salience. This means that future research would benefit from analysing how issue salience in adjacent policy areas (e.g., healthcare, unemployment) is related to reforms and the socio-economic context. Second, we advance research on policy feedback by extending it to the analysis of issue salience. Our focus on salience generates evidence that goes beyond the policy preferences and political engagement focus that dominates research on policy feedback (Larsen, 2019) and demonstrates the potential of analysing the link between policy salience and policy feedback for other issues. Third, our findings inform democratic theory, because knowledge of why people perceive policy issues to be important is crucial for the legitimacy of political processes.

## **Public policies, public attitudes and issue salience**

Research on the link between public policies and individual social and political preferences has grown substantially, generating a nuanced understanding of important aspects of the policies-preferences nexus, particularly concerning *policy responsiveness* and *policy feedback*. This section considers

these research streams, arguing that they provide only partial answers to the research questions posed in this paper. We then discuss how the field of policy feedback research could fill some of the gaps we identify.

*Policy responsiveness* literature investigates whether the existence of certain policies corresponds to public support for them. This is especially important in democracies, as democratic representation assumes that governments respond to public preferences. Comparative work generally reports substantial congruence between majority opinion and existing policies (Hobolt & Klemmensen, 2008; Kang & Powell, 2010; Soroka & Wleziem, 2010). This is especially true in the field of social policy (Brooks & Manza, 2007). More recently, Rasmussen et al. (2019) report a positive association between attitudes and 20 policy issues in 31 European countries.

The extensive literature on *policy feedback* draws on historical institutionalist theorising to argue that policies are formal rules of the game that shape policy preferences (Hacker, 1998, 2002; Pierson, 1993; Weaver, 2010). Central aspects of social policy design like coverage, administrative structure, size, benefit structure and visibility shape the incentive structures, resources and cognitive schemas of non-elite political actors, affecting their attitudes towards the role of government in political life (Busemeyer, 2022; Campbell, 2012). A recent meta-analysis of work on policy feedback (Larsen, 2019, p. 386) reports that ‘positive feedback effects are often found on social policy-attitudes. In other words, social policies more often increase social policy support than undermine the support’.

Research on how policies and preferences are linked, and the influence of policies on preferences has generated important insights. However, focusing on *policy preferences* obscures important dimensions of individual beliefs about social and policy configurations, particularly attitudes towards *issue salience*.<sup>1</sup> Analyses of issue salience are necessary because these perceptions provide roadmaps for governmental action, shape party programmes, and influence voting behaviour.

First, individual evaluations of issue salience influence political agendas by signalling to governments (and the opposition) that something is important and demands government action (Jones & Baumgartner, 2004).<sup>2</sup> Salience defined as issue problem status and attention influences, for example, climate policy adoption (Bromley-Trujillo & Poe, 2020) and the timing of the transposition of EU environmental directives (Spendzharova & Versluis, 2013). Second, political parties adjust their positions in response to changes in their supporters’ perceptions of issue salience (Ibenskas & Polk, 2022), with large parties more, and government parties less, responsive to public issue priorities (Klüver & Spoon, 2016). Third, issue salience influences party attachment (Neundorf & Adams, 2018) and can also affect voting behaviour and election results by influencing changes in party votes (Budge & Farlie, 1983). Research on issue ownership shows that when

voters think a party 'owns' a specific issue they think is especially salient, they are more likely to vote for that party (Bélanger & Meguid, 2008). People who perceive immigration as the most important issue, for example, are more likely to vote for populist radical right parties (Sipma & Berning, 2021).

Taken together, these studies demonstrate that governments heed public evaluations of issue salience and that issue salience is multidimensional. Perceptions of salience thus involve voters' perceptions of the 'importance' and 'urgency' of governmental action in a specific area. But what *causes* individuals' evaluations of issue salience? And what drives changes over time?

### Policy feedbacks, reforms and issue salience

Recent research emphasises how economic crises and political factors affect issue salience. Shocks or periods of socio-economic crisis can threaten existing equilibria and redirect public attention and priorities, changing the status quo (Baumgartner & Jones, 1993; May et al., 2009), for example, in energy issues (Lowry & Joslyn, 2014).<sup>3</sup> Economic crises are especially relevant (Williamson & Haggard, 1994) because they redirect the attention of politicians, interest groups and laypeople to the economic conditions and policies perceived to have the largest impact on economic recovery. Singer (2013) shows that a weak economy reduces public attention to social policy in general. Economic issues and the impact of individual economic insecurity like unemployment crowd out other issues – including social policy issues – when adverse economic developments dominate the political agenda.

Research on issue salience also considers the role of parties (Hobolt & De Vries, 2015). Lowry and Joslyn (2014) find that centre-left politicians (Democrats) in the US Congress are more likely to raise the profile of energy issues. Regarding the issue of immigration, challenger parties' statements affect mainstream party positions, with consequences for issue salience (Williams & Hunger, 2022). Left-wing parties play a similar role for pension salience because they have traditionally had issue ownership of the pension issue and social policy (Bélanger & Meguid, 2008; Jensen, 2010; Petitpas & Sciarini, 2022), and their presence in government may raise the salience of the issue.<sup>4</sup>

We advance research about the role of economic conditions and parties by focusing on policy reforms. Studies that investigate feedback effects, salience, and policy preferences can seldom completely rule out reverse causality, and inverting dependent and independent variables will not change the issue. Nevertheless, several studies of policy feedback effects show that policy regimes, instruments, and policy changes shape policy preferences and political mobilisation because they produce feedback effects (Arndt et al., 2021; Campbell, 2012; Mettler & Sorelle, 2018). Policies and policy reforms determine the allocation of public resources, set popular expectations of future

conditions, and constrain and incentivise different types of political action. In this line, according to the 'thermostatic model' (Wlezien, 1995), policy output (e.g., reforms) affect public inputs. Political leaders respond to public preferences, and citizens alter their policy preferences in reaction to government decisions (public responsiveness), assuming they are informed about ongoing reforms. This relationship, however, requires that a policy is salient to the public. These findings about public responsiveness in social welfare spending (Wlezien & Soroka, 2011) support our reasoning that reforms can drive issue salience.<sup>5</sup>

As Pierson (1993) argues, public policies influence the development of policy by creating *resource effects* and *interpretive effects*. Social policies provide important material *resources* (pensions, child allowances, unemployment insurance) and access to social services like healthcare and childcare. These resources create incentives for beneficiaries to mobilise to protect their benefits and to engage in political activities more generally, by providing beneficiaries with the time and money to engage in political activities (e.g., Campbell, 2003).<sup>6</sup> Moreover, Pierson (1993) argues that social policies can have immaterial, *interpretive* feedback effects in that social policies shape the cognitive structures of evaluation and socio-political identities. Once adopted, policies become politically-sanctioned cues that facilitate citizens' interpretation of reality (Mettler, 2002). Pension policy is a *locus classicus* for feedback effects, as beneficiaries accrue and receive pension entitlements over many decades, encouraging awareness of pension reforms and mobilisation to protect these benefits (Campbell, 2003; Myles & Pierson, 2001).

These insights help us understand social policy issue salience because pension policy rules affect the incentive structure of citizens and perceptions that the pension issue is important. Two mechanisms are relevant. First, individuals are boundedly rational so attention to issues is selective and situative (Mead, 2009; Schroer, 2019). Second, public policies and their reforms can motivate concentrated attention. This shapes individuals' cognitive and behavioural responses to legislated changes to pension benefits. Although our focus is not on the electoral consequences of pension reforms, we use these insights to formulate expectations for pension salience.

According to Pierson (1993, p. 599), 'public policies often create "spoils" that motivate beneficiaries to mobilise in favour of programmatic maintenance or expansion'. People are more sensitive to losses than to gains (Kahneman & Tversky, 1979) and therefore voters punish politicians electorally for loss imposition (Weaver, 1986). This is especially true for pension policy given the long-term nature of pension accumulation and benefit receipt. Sensitivity to material losses means pension retrenchment is generally unpopular with voters, because voters 'blame' politicians for reducing what they view as entitlements and thereby worsening their income (Pierson, 1993). Several studies find that pension retrenchment is politically unpopular (Anderson,

2001), resulting in the political mobilisation of older voters (Campbell, 2003), the formation of parties representing pensioners (Otjes & Krouwel, 2018), and increased attention to pension policy in election campaigns (Sides & Karch, 2008).

Welfare retrenchment does not generate electoral punishment across the board, however, and some parties such as liberal ones claim credit and gain votes (Giger & Nelson, 2011). Several studies also show that citizens are aware of welfare state reforms and often change their political attitudes or reduce government support in response to austerity measures and benefit reductions (Arndt et al., 2021; Giger, 2012; Hübscher et al., 2021). Moreover, media coverage about pension reforms (cutbacks) drives issue salience and lowers government support (Thurm et al., 2023). Independent of electoral punishment, these findings suggest that individuals recognise retrenching pension reforms, and this is often reflected in their opinions or at the next election. We can therefore expect that contracting pension reforms increase pension salience.

H1: Contracting pension reforms increase pension salience

We also test the opposite prediction that expanding pension reforms increase pension salience, because the findings of the electoral punishment literature are ambiguous. Whether or not voters punish governments depends on contextual conditions (Giger, 2012; Horn, 2021; Schumacher et al., 2013) such as opposition parties' and media attention to cuts (Armingeon & Giger, 2008). Social programmes have interpretive effects, so once these programmes are established, citizens are motivated to defend or expand them (Pierson, 1993). Furthermore, governments often engage in 'blame avoidance' by implementing opaque policy instruments (e.g., for pensions, technical cost-cutting measures like benefit indexation with long transition periods) (Jensen et al., 2018) to avoid electoral punishment (Starke, 2006; Vis, 2009, 2016; Wenzelburger, 2014). Blame avoidance is more likely when social policy knowledge is low (Jensen & Zohnhöfer, 2020).

In contrast, governments prefer welfare expansion for vote-seeking reasons and expect benefit expansion to allow credit claiming. Although expansionary reforms increase pension costs, favourable demographic trends and periods of high post-war economic growth mitigated higher costs, making costs less visible (Bonoli, 2012). Periods of austerity around the turn of the millennium complicated pension expansion. However, increasing levels of social inequality and poverty among pensioners in recent decades have prompted calls for benefit improvements (OECD, 2017). After several decades of pension retrenchment, many European governments have expanded pension benefits, ushering in a new period of credit claiming. Expanding pension benefits increases government support (Arndt et al., 2021), and governments strategically use visible instruments

such as nominal benefits for expansionary pension reforms to win votes (Jensen et al., 2018).

H2: Expansionary pension reforms increase pension salience

Any type of pension reform, whether contracting or expanding, may also influence pension salience. Indeed, many pension reforms include both expansionary and contracting measures (see Table A2) which might blur awareness and thus salience of solely expansionary or retrenching reforms. Furthermore, people often lack knowledge about details of social policy programmes (Geiger, 2018; Jensen & Zohlnhöfer, 2020) and the direction of reforms. Hence, pension reforms of any direction will increase salience.

H3: The adoption of any form of pension reform expands pension salience

Finally, we predict that the effect of pension reforms on perceived salience should not be homogeneous across all social groups. Heterogeneous effects may be especially relevant across age groups. Middle-aged and older citizens have stronger short and medium-term dependence on retirement income, which makes them more likely to perceive the pension issue as important (Thurm et al., 2023). Older citizens are more knowledgeable about pension reform content (Kangas et al., 2022) due to intensive attention to this topic, independent of reforms. The perception of young respondents towards the importance of this topic may, in contrast, be more context-dependent and especially sensitive to the passage of pension reforms.

H4: Pension reforms increase pension salience especially for young citizens

## Data and methods

### *Dependent and independent variables*

Policy salience among the public is usually studied through survey questions on either the 'most important issue' (MII) or the 'most important problem' (MIP) in the country (Dennison, 2019), but there is evidence that the distinction is not very consequential (Jennings & Wlezien, 2011, 2015). We draw on the Eurobarometers (EBs) and an MII indicator. Starting in 2002, more than 40 EBs have collected data on public perceptions of the most important issues in their country. The EB question reads 'What do you think are the most important issues facing (OUR COUNTRY) at the moment?' Respondents select a maximum of two topics from a list of 16 closed-ended responses. The list of possible responses was changed in EB 74.2 (2010) to include the item 'government debt', which was selected by as many as 15.2 per cent of the respondents. Since this break in series could affect the likelihood of selecting the 'pensions' item, we restrict the database to 23 EBs (74.2–93.1) and the period 2010–2020 for the main analyses.



Our database includes the 27 EU member states and the UK, yielding 308 country-years. The database includes a dichotomous, dependent *pension issue* variable that identifies whether the respondent selected ‘pensions’ (1) as one of the two most important issues facing the country or not (0). To control for individual-level factors, we include four additional individual-level variables: *female*, *age*, *formal education* and *employment status*. The respondents’ *age* is measured in five different categories: 15–29, 30–44, 45–59, 60–74 and 75+. *Formal education* is captured through three categories: having finished formal education at age 15 or under, between the age of 16 and 19, and at age 20 or older.<sup>7</sup> The *employment status* variable distinguishes between *employees*, *retirees* and *inactive* or *unemployed* workers.

The database includes multiple country-level factors because of our focus on contextual factors. We include eight economic, institutional or social country-level conditions. H1–H4 address the role of pension reforms in shaping pension salience. Here, neither spending data (OECD, 2023) nor data on notional or synthetic entitlements (Scruggs & Tafoya, 2023) are helpful, because changes in those indicators are only loosely related to years of pension reforms. We therefore rely on data on the year a pension reform was legislated – independently of whether the new provisions were implemented in that year.

To identify these reforms, we expanded and updated Beetsma *et al.*’s data (2020) covering 15 countries for 2010–2017 with information for the 12 remaining EU member states and information for the period 2018–2020 (see the technical Appendix). We constructed two basic variables: *expanding pension reform* and *contracting pension reform* indicating pension reforms that include at least one expanding or contracting provision, not whether the net outcome of the reform is expanding or contracting. A third key variable, *expanding or contracting pension reform*, captures any reform that has included either expanding or contracting measures. Table A2 indicates whether a contracting or expanding reform took place in every country-year.

The influence of economic conditions is captured through three economic factors. If, as Singer (2013) predicts, economic crises crowd out concern over social policy, *real GDP growth rate* and *unemployment rate* should be positively and negatively related to pension policy salience, respectively. Public debates on pension policy in European countries are increasingly detailed, and actors often refer to statistics like old-age pension spending to indicate the ‘sustainability’/‘unsustainability’ of pension provision. We therefore control for *old-age pension spending* as a percentage of the GDP.

The analysis includes five political and institutional factors. Left-of-centre (specifically social-democratic) parties have traditionally enjoyed issue ownership on social protection issues (Wolf *et al.*, 2014). Christian-democratic parties have also been historically active in the pension policy field (Garritzmann & Seng, 2020; Huber & Stephens, 2001; Lynch, 2014; Van Kersbergen,

2003). Unlike social-democratic parties, however, they typically advocate status maintenance rather than vertical distribution (Esping-Andersen, 1990; Huber et al., 1993). When either of these two party types have more influence, they may be more likely to initiate debates on pension policy, boosting public pension salience. For these two party families we consider the vote share instead of their presence in the executive because opposition parties have proven freer to focus on issues they find relevant (Green-Pedersen & Mortensen, 2010). The models therefore control for *vote share of social-democratic parties* and *vote share for Christian-democratic parties*.

If political parties have polarised positions concerning welfare policy issues – including pensions –, this policy area may receive more attention by the media and the public. If political parties are, instead, polarised regarding cultural, social and non-economic issues, they may activate less public attention on social welfare topics. We therefore control for *party polarization on social welfare* and *party polarization on GALTAN*. The GALTAN dimension refers to Green, Alternative, Liberal positions versus Traditional, Authoritarian or Nationalist ones (Hooghe et al., 2002).

The models also control for the level of public (and private) pension generosity captured through the *pension replacement rate*. Calculated and defined by EU-SILC, this represents the ratio of a country's median pension income for people aged 64–74 to the median income from work for people aged 50–59. This is the only indicator allowing a comparison of the generosity of pension systems for all countries and years. However, prior research shows that public pensions represent a far larger source of retirement income than private pensions in all EU member states (Brunner et al., 2005; OECD, 2021).<sup>8</sup> The Appendix provides definitions and sources for all variables. Table A1 in the Appendix includes descriptive statistics for all variables.

### **Analytical strategy**

This study examines the relationship between shifts in contextual conditions and shifts in average perceptions of pension salience. Our primary dataset, moreover, has a multilevel structure with 573,450 respondents (level 1) nested in a maximum of 308 country-years (level 2) and 27 EU member states plus the UK. In view of this general interest and the structure of the main dataset, we estimate multilevel random-intercept multilevel models. To minimise the influence of unobserved country-level factors, all models include two-way – country and year – fixed effects and all country-level variables have been country-centred.

Multilevel models have the desirable property of accounting for variance in individual responses across different levels of analysis, allowing researchers to estimate the association of level-2 variables with individual perceptions without underestimating the standard errors (Snijders & Bosker, 2011).

Multilevel models with a small number of supra-individual units (e.g., <30 units) and strict cross-sectional data still face the challenges of biased parameter estimates due to sensitivity to small sample and the influence of time-constant unobserved heterogeneity (Elff et al., 2021). Yet datasets with cross-sectional time-series survey data (TSCS) – like the one used here – enable us to estimate within-multilevel models that minimise these two limitations (Fairbrother, 2014). First, TSCS datasets include representative samples of multiple universes, which are measured at several time points. Multiple time observations per country (in our case, 11-time observations), increase the number of level-2 units and reduce the potential influence of each single supra-individual observation.

Second and more importantly, TSCS data allows researchers to improve causal identification by focusing only on within-country changes over time. Researchers can then estimate strict ‘within models’ which generate parameter estimates only capturing the association between longitudinal changes in a country-level variable of interest and the outcome (Fairbrother, 2014). In doing so, within models have the advantage of preventing any bias in parameter estimates caused by country-level time-constant unobserved heterogeneity during the period of observation (e.g., linked to a Beveridge/Bismarckian pension system, geographical location, political culture) (Allison, 2009; Collischon & Eberl, 2020).

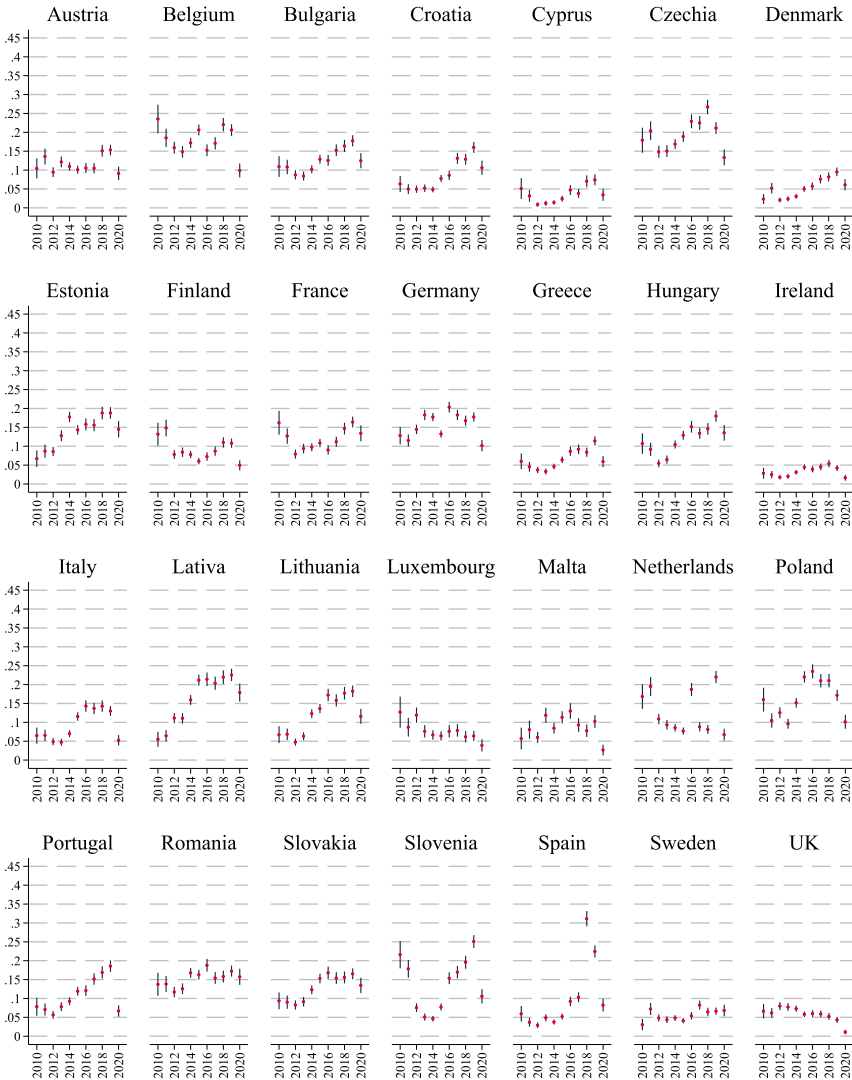
We thus estimate multilevel within models captured in Equation (1). In this equation,  $y$  is the outcome variable – perception that ‘pensions’ is an important issue for the country at the time – of individual  $i$ , country  $j$  and time  $t$ ;  $\beta_0$  is the constant;  $\chi$  the range of individual-level covariates;  $z$  the country-level covariates and  $u_j$  and  $u_{jt}$  the country and country-year error terms, respectively, and  $e_{ijt}$  the individual-country-year error term. The key eight country-year variables  $z_{jt} - \bar{z}_j$  are the country-mean-centred variables and orthogonal to country-constant characteristics. All models also include year fixed effects to capture the association with temporal conditions shared by all 28 countries considered (e.g., the Syrian refugee crisis of 2015 and the COVID pandemic starting in 2020). They also include country fixed effects which capture the correlation of all average country characteristics with the outcome.

$$y_{ijt} = \beta_0 + \beta_1 x_{ijt} + \beta_2 (z_{jt} - \bar{z}_j) + \beta_3 \text{country } FE_j + \beta_4 \text{year } FE_t + u_j + u_{jt} + e_{ijt} \quad (1)$$

Given the dichotomous nature of the outcome and to facilitate the convergence of models, we estimate linear probability models (LPM). Although LPM remains unconventional in certain social sciences, they produce coefficients that are identical or quasi-identical to those from logit models (Mood, 2010).

## Descriptive results

This section discusses the descriptive patterns in the country-level predicted probabilities, hereafter referred to as *pension salience*, as well as patterns in pension reforms. If within-country longitudinal variation in *pension salience* proves small and countries do not differ in within-country trends, the use of multilevel within models would not be warranted. The evidence in **Figure 1** – depicting the average values and 95 per cent confidence intervals



**Figure 1.** Percentage of citizens considering that the pension issue is important for the country, 2010–2020.

for each country-year – displays variation. Pension salience is, on average, highest in Eastern European countries (0.150), followed by Western European (0.135), Southern European (0.100) and Northern-European countries (0.092). More important, [Figure 1](#) also indicates noticeable cross-national differences in within-country variation. This overall longitudinal variation is large in the Netherlands, Spain and Slovenia, and is rather small in Austria, Ireland and Sweden.

Does the level of *pension salience* display a clear, average trend for the 28 countries considered? To answer this, we estimate a fixed effects model at the country level (Table A2) with a single predictor variable: *year*. The evidence indicates that the pension issue has increased its average salience in EU countries between 2010 and 2020, although this is not a universal trend. In the pooled model including all countries, *year* has a positive and significant association with the outcome ( $\beta = 0.004$ ,  $p > 0.05$ ). The trend in *pension salience* is also positive and significant in 13 countries: Bulgaria, Croatia, Denmark, Estonia, Greece, Hungary, Latvia, Lithuania, Portugal, Romania, Slovakia, Spain and Sweden. The association is, moreover, negative and significant in only two countries: Luxembourg and UK. In all other countries the level of pension salience has either fluctuated (e.g., Italy) or remained fairly stable (e.g., Austria), and has not therefore shifted significantly and linearly over time.

Pension reforms were very common during this period (Table A3). A pension reform with either expansionary or contracting provisions occurred in 52.2 per cent of all country-years. Expanding reforms (34.1 per cent) were, furthermore, more common than contracting ones (30.4 per cent). These average values, however, conceal substantial cross-national variation. Austria, Denmark, Finland, Germany and Romania underwent pension reforms very often, whereas Cyprus, Luxembourg and Sweden very rarely. The probability of any type of pension reform did not increase significantly over the considered period. The probability of contracting and expanding reforms declined and increased significantly between 2010 and 2020, respectively.

## Multivariate results

The presence of substantial cross-national variation in the levels and trends in *pension issue salience* warrants using FE multivariate models. Models 1–3 in [Table 1](#) display the predictors of pension salience in 28 countries. Model 1 includes only individual-level factors. Model 2 adds all control variables and *expanding or contracting reform*. Model 3 includes *expanding pension reform* and *contracting pension*, instead of the variable with any type of reform. The overall results are consistent despite different combinations of control variables: *pension replacement rate*, *expanding pension reform* and *contracting*

**Table 1.** Multilevel linear probability models predicting pension salience in 28 European countries, 2010–2020.

	Model 1	Model 2	Model 3
Individual-level variables			
Female (Ref. Male)	0.009*** (0.001)	0.008*** (0.001)	0.008*** (0.001)
Age 30–44 (Ref. 18–29)	–0.001 (0.001)	–0.001 (0.001)	–0.001 (0.001)
Age 45–59	0.019*** (0.001)	0.019*** (0.001)	0.019*** (0.001)
Age 60–74	0.063*** (0.002)	0.062*** (0.002)	0.062*** (0.002)
Age 75–100	0.072*** (0.002)	0.071*** (0.002)	0.071*** (0.002)
Employed (Ref. inactive/unemp.)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)
Retiree	0.042*** (0.002)	0.042*** (0.002)	0.042*** (0.002)
Education until age 16–19 (Ref. age ≤ 15)	–0.029*** (0.001)	–0.029*** (0.001)	–0.029*** (0.001)
Education until age +20	–0.041*** (0.001)	–0.041*** (0.001)	–0.041*** (0.001)
Country-level variables			
Replacement rate		0.034 (0.040)	0.036 (0.040)
Unemployment rate		–0.007*** (0.001)	–0.007*** (0.001)
GDP growth rate		0.001 (0.001)	0.001 (0.001)
Party polarisation on welfare		–0.011 (0.012)	–0.008 (0.012)
Party polarisation on GALTAN		0.000 (0.005)	0.001 (0.005)
Vote share of social-democratic parties		–0.000 (0.000)	–0.000 (0.000)
Vote share of Christian-democratic parties		0.001* (0.001)	0.001* (0.001)
Old-age pension spending		0.000 (0.004)	0.001 (0.004)
Expanding or contracting pension reform		0.011** (0.004)	
Contracting pension reform			0.002 (0.004)
Expanding pension reform			0.008* (0.004)
Constant	0.089*** (0.011)	0.098*** (0.010)	0.099*** (0.010)
Year FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Country-year level variance	0.001 (0.000)	0.001 (0.000)	0.001 (0.000)
N/country-years	573,450/308	556,769/299	556,769/299

Note: Standard errors in parentheses: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

*pension reform* do not prove having a robust association with changes in pension salience, but *expanding or contracting reforms* has a positive and robust association.

Model 1 indicates that perceptions that the pensions issue is important for the country are not distributed uniformly across the population; they are indeed concentrated among certain groups. Women, older individuals, those who are employed or retired and those with lower levels of education are significantly more likely to consider the pension issue salient. Since all variables in Model 1 are, moreover, dichotomous we can easily compare the relevance of these factors. Among them age has the strongest association. Perceptions of pension salience do not increase linearly with respondents' age. Salience perceptions are low for respondents aged 15–44, but they increase rapidly in middle age and peak for old-age citizens (75 or older) who are 78.72 per cent more likely to perceive that the pension issue is salient for the country than respondents 18–29-years-old (probably because they are more directly affected by the pension issue).<sup>9</sup> Respondents who finished their formal education at age 15 or younger are 38.07 per cent more likely to consider the pension issue important for the country than respondents who finished their formal education at age 20 or older, which might be explained by the correlation between education and income (with the former being more concerned about their (old-age) income).<sup>10</sup>

What is the association between changes in economic and socio-political conditions and changes in perceptions of pension salience? Model 2 results indicate that changes in the *GDP per capita growth rate* are not significantly associated with changes in perceptions of pension salience. However, changes in the *unemployment rate* are significantly related to the outcome. Periods of high unemployment are negatively and strongly related to perceptions of pension salience. Hence contrary to crises of economic growth, crises of unemployment do crowd out pension salience. This combined finding is partially consistent with prior research (Singer, 2013) indicating that contextual economic conditions shape the salience of non-directly economic issues. Shifts in *old-age pension spending* are also unrelated to shifts in pension salience.

Changes in the pension *replacement rate* are not significantly associated with changes in pension salience. Three other political factors are also unrelated to shifts in perceptions in pension salience. Neither shifts in *party polarization on welfare* or *GALTAN policies*, nor the *vote share of social-democratic political parties* are related to shifts in perceptions of pension salience. This indicates that the proportional power of the political actors with traditional issue ownership over the pensions topic (left-of-centre parties), hence, per se do not shape pension salience. The *vote share of Christian-democratic parties* is, by contrast, significantly related to the outcome.

Concerning the role of pension reforms, the evidence indicates one main significant association. In line with the new politics approach (Myles & Pierson, 2001; Pierson, 1994), increases in the number of *expanding or contracting pension reforms* are positively significantly related to changes in

pension salience. This evidence is consistent with H3. Yet, as shown in model 3, not all types of pension reforms are relevant for these perceptions. Changes in *contracting pension reforms* are unrelated to the outcome. This is inconsistent with H1. In model 3, furthermore, changes in *expanding pension reforms* are positively significantly related to the outcome. Yet in robustness checks discussed below, this latter finding proves to hinge strongly on particular countries and years. Pensions are significantly more likely considered as an important issue when unemployment rates decrease, the vote share of Christian-democratic parties increases, and when pension reforms are passed.

The findings discussed so far, especially those concerning macro-level associations, could be sensitive to the model specification. The positive relationship of both *expanding or contracting pension reforms* and *expanding pension reforms* to the outcome, may be sensitive to the inclusion of country and year fixed effects. We therefore replicate models 2 and 3 in Table 1 with random effects models and without demeaned variables (Table 2). Second, due to missing information for country-level variables, the models 2 and 3 in Table 1 were estimated with a non-negligible number of missing variables.<sup>11</sup> We therefore replicate those two models using multiple imputation (Table A4).<sup>12</sup> Third, the results discussed so far may be sensitive to particular countries and years. We, therefore, re-estimate the main model excluding one country at a time (results available upon request). Fourth, we reestimated all models using a two-level logit model (Table A5). Fifth, we assess the impact of contracting pension policy through another data source.

In these robustness tests the positive association with *expanding pension reforms* is clearly sensitive to model specification. Excluding several countries (e.g., Spain or Cyprus), the association becomes non-significant. H2 therefore is only weakly supported by the data. More importantly, *expanding or contracting pension reforms*, *vote share of Christian-democratic parties* and *unemployment rate* continue to have a significant association with the outcome even after using random effects models, utilising multiple imputation, excluding one country and one year at a time and using two-level logit models.<sup>13</sup> Since the null effect of contracting pension reform is inconsistent with a core prediction of the policy feedbacks approach, we reestimated the main models using two alternative indicators of contracting public pensions drawn from the Comparative Welfare Entitlement Dataset (Scruggs & Tafoya, 2023). The results of these additional models are in line with the findings discussed above: *decreases in pension generosity* and *substantial decreases in pension generosity* prove unrelated to changes and levels in pension salience (Table A6).

We cannot completely determine whether salience follows reforms or vice versa. Issue salience could appear delayed, meaning after reform adoptions or when they take effect. In models with one-year lags for country-level variables, none of the indicators of pension reform prove significant (Table A7).



**Table 2.** Multilevel linear probability models predicting pension salience in 28 European countries, 2010–2020.

	Model 1	Model 2
Multiple imputation	No	No
Demeaned country-level variables	No	No
Individual-level variables		
Female (Ref. Male)	0.008*** (0.001)	0.008*** (0.001)
Age 30–44 (Ref. 18–29)	–0.002 (0.001)	–0.002 (0.001)
Age 45–59	0.019*** (0.001)	0.019*** (0.001)
Age 60–74	0.062*** (0.002)	0.062*** (0.002)
Age 75–100	0.071*** (0.002)	0.071*** (0.002)
Employed (Ref. inactive/unemp.)	0.009*** (0.001)	0.009*** (0.001)
Retiree	0.042*** (0.002)	0.042*** (0.002)
Education until age 16–19 (Ref. age ≤ 15)	–0.029*** (0.001)	–0.029*** (0.001)
Education until age +20	–0.041*** (0.001)	–0.041*** (0.001)
Country-level variables		
Replacement rate	0.057* (0.027)	0.051+ (0.027)
Unemployment rate	–0.004*** (0.001)	–0.004*** (0.001)
GDP growth rate	0.001 (0.001)	0.001 (0.001)
Party polarisation on welfare	–0.019 (0.015)	–0.020 (0.015)
Party polarisation on GALTAN	–0.002 (0.006)	–0.002 (0.006)
Vote share of social-democratic parties	–0.001*** (0.000)	–0.001*** (0.000)
Vote share of Christian-democratic parties	–0.001*** (0.000)	–0.001*** (0.000)
Old-age pension spending	–0.005*** (0.001)	–0.005*** (0.001)
Expanding or contracting pension reform	0.016** (0.006)	
Contracting pension reform		–0.006 (0.006)
Expanding pension reform		0.023*** (0.006)
Constant	0.195*** (0.021)	0.190*** (0.021)
Year FE	No	No
Country FE	No	No
Country-year level variance	0.002 (0.000)	0.002 (0.000)
<i>N</i> /country-years	556,769/299	556,769

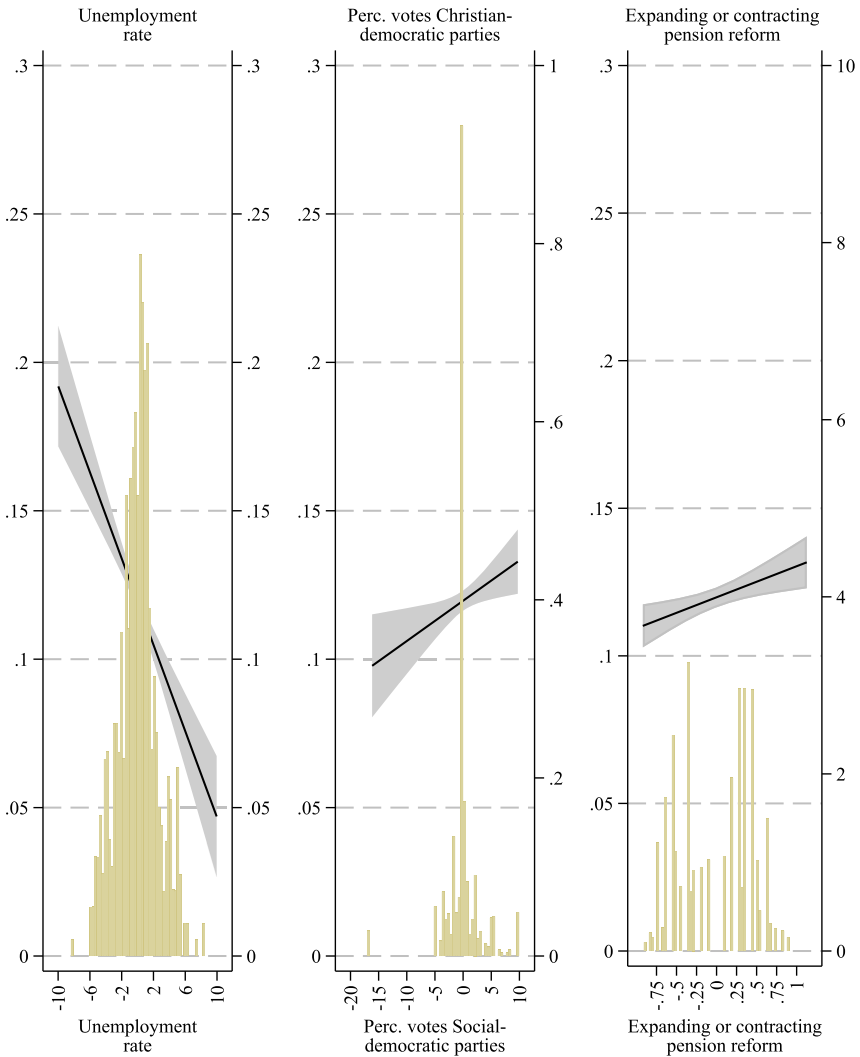
Note: Standard errors in parentheses: + $p < 0.10$ , \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

However, it is more likely that salience follows or at least occurs in tandem with the reform process and discussions before a bill is adopted, rather

than occurring with a delay of one or two years due to common grandfathered effects of pension reforms. Evidence for Germany suggests that people react to pension reform discussions with higher issue salience and changes in the level of government support (Thurm et al., 2023). Moreover, due to the recency bias in vote choice (Healy & Lenz, 2014; Nordhaus, 1975) people react immediately to pension reforms (when reforms are discussed and pass the parliament) and issue salience disappears as time passes (for pensions reforms and support of governments, see Arndt et al., 2021). Since we lack information about grandfathered effects for all reforms, we prefer to keep the variables without lags. However, it might be that salience (again) appears at the date a reform comes into effect.

2020 is a special year because only one EB (93.1) included the question on issue salience, and that EB was conducted during the COVID pandemic, requiring a different data collection strategy. These special circumstances may have affected the data provided by that EB. Models in Table 2 do not set individual-level variables as random, which means that they draw on the assumption that the effects of gender, age, education or occupation are uniform across country-years, which may be unrealistic. Yet excluding the year 2020 and using random effects of all individual independent variables, *unemployment rate*, *vote share of Christian-democratic parties* and *expanding or contracting pension reform* remain significantly correlated with the outcome (Tables A8 and A9).

In sum, at country-level shifts in unemployment rates, the electoral power of Christian-democratic parties and the passage of any type of pension reforms have a robust contemporaneous association with pension salience. How substantial are these three macro-level associations? Which of the three factors has a stronger relationship? To answer these questions, we estimate the predicted probability of *pension salience* at different levels of *unemployment rate*, *vote share of Christian-democratic parties* and *expanding or contracting pension reforms*. The probabilities are plotted in Figure 2. The evidence clearly indicates that *unemployment rate* has the strongest and largest correlation. The predicted probability at two standard deviations above the mean in *unemployment rate* (0.119) is 23.26 per cent lower than the predicted probability at two standard deviations below the mean in *unemployment rate* (0.156). The correlation with changes in the *vote share of Christian democratic parties* is far smaller. The predicted probability at two standard deviations above the mean in *vote share of Christian democratic parties* is 7.91 per cent higher than at two standard deviations below the mean in *vote share of Christian democratic parties*. The correlation of changes in *expanding or contracting pension reforms* lies between the two previous variables. The predicted probability at two standard deviations above the mean in *expanding or contracting pension reforms* is 8.69 per cent higher than at two standard deviations below the mean in *expanding or contracting pension reforms*. Pension salience



**Figure 2.** Predicted value in pension salience at different levels in three independent variables.

is therefore substantially influenced by changes in the unemployment rate, the electoral strength of Christian-democratic parties and the adoption of expansionary or contracting pension reforms.

To assess the possibility of conditional effects, we estimated additional models with interaction effects. In Table A9 we replicate the models using random effects for all individual-level variables and explore potential conditional effects with age. The table indicates that the correlation of *expanding or contracting pension reforms* is significantly larger for respondents aged 15–29 than those aged 30–44. Yet it is not significantly different for respondents

aged 15–29 than those aged 45–59, 60–74 or 75 or older, respectively. This is only partially consistent with H4. In Table A10 we explore if this effect is conditional on the level of GDP growth rate, the electoral power of social-democratic parties or Christian-democratic parties, and depending on whether it is a majority government or not. In Table A11 we use hybrid models (Allison, 2009; Wooldridge, 2010) to explore if the effect is conditional on the average level of the replacement rate. The effect of any type of reform is not conditional on the level of GDP growth, the electoral power of Christian-democratic parties, or whether it is a majority government. Yet, the interaction in Table A10 reveals that the strength of the association between any pension reform and issue salience decreases with the vote share of social-democratic parties. An explanation could be that social-democratic parties enact less radical pension reforms or if so, only incrementally and in a consensual way turning vice into virtue (Levy, 1999), what reduces public attention and therefore issue salience. Furthermore, social-democratic parties with high vote shares are likely to be part of the government, and as issue owners of the pension topic, they are more restricted to follow their own agenda when they are in power (rather than in the opposition).

## Discussion and conclusion

This paper draws on insights from the issue salience and policy feedback literature to investigate the conditions that shape pension salience. Based on a comparative longitudinal analysis of 28 countries in the period 2010–2020, the analysis generates three main findings. First, pension salience varies in both cross-national and longitudinal terms. During the period of observation, it proved highest in Eastern and Western European countries, followed at some distance by Northern and Southern European countries. Pension salience increased on average over the period, and it varied longitudinally in most countries. It increased significantly in 13 countries and decreased significantly in two other countries. Perceptions of pension salience also shifted substantially in most European countries, indicating the sensitivity of this perception to contextual conditions.

Second, the economic cycle – especially the state of the labour market – is significantly related to the outcome. Pension salience is countercyclical with respect to the labour market. All else equal, countries undergoing unemployment crises display lower rates of growth in pension salience. In line with Lowry and Joslyn (2014) and Singer (2013), weak or negative economic developments crowd out the salience of non-economic issues. Although research in political economy conventionally claims that economic crises in general narrow the focus of public attention and redirect collective efforts towards policies widely-perceived as relevant to jumpstart economic growth (e.g., public deficit management or labour market regulation) (Williamson &

Haggard, 1994), this study shows that unemployment crises prove more relevant than declines in average purchasing power. Further research could explore the reasons why unemployment crises are more influential for social policy salience than crises of economic growth. Moreover, partisanship proves related to the salience of the pension issue. Countries undergoing a larger increase in the vote share of Christian-democratic parties display a larger increase in pension salience.

Third, only one of the three reform measures considered here proved robustly associated with pension salience. Neither the passage of contracting pension reforms nor of expanding pension reforms is consistently related to the outcome. Countries undergoing contracting pension reforms do not display significantly higher shifts in pension salience. Although pension cut-backs lead to lower support for governments in Germany (Arndt et al., 2021), this is not necessarily the case for issue salience across countries. This counter-intuitive finding confirms the overstated effect of social policy reforms on electoral outcomes identified by Ahrens and Bandau (2023). An explanation might be that many contracting reforms include grandfathering clauses or affect very restricted groups, limiting public responsiveness to these reforms (Armingeon & Giger, 2008). Furthermore, the absence of this association might result from successful blame avoidance strategies, invisible retrenching policy instruments, and individuals' low pension policy knowledge. Similarly, countries that legislate expansionary pension reforms do not display significantly higher shifts in pension salience. Low levels of pension policy knowledge and in details of reform content might show that people are not able to distinguish between expansionary and contracting pension reforms and instead increase attention to pension reforms in general, independent of their direction.

By contrast, pension reform adoption *in general* is significantly and robustly associated with higher levels of pension salience. Countries that passed any form of pension reform display higher perceptions that 'pensions' is an important issue faced by the country. We explain this paradoxical finding by noting that not all pension reforms include either solely expanding or solely contracting provisions, which means that by considering any form of pension reform our analysis covers a larger number of legislative events than if we only considered expanding or contracting ones. Moreover, considering the public responsiveness arguments for higher salience for either contracting reforms (electoral punishment) or expansionary reforms (credit claiming) together with the limited pension policy knowledge of individuals, people might be in general aware of pension reforms increasing pension salience independent of the direction of reform. Moreover, the association between pension reforms and salience is not consistently contingent on the age of respondents.

Several aspects limit the range of insights provided by the analysis in this paper. Although we theorise that pension reforms trigger changes in public opinion that encourage pension salience, we cannot fully exclude the

possibility that shifts in salience also affect pension reforms. Indeed, the association may hold in both directions. Yet we do not deem this possibility very likely because many reforms have long design periods, hindering the possibility of reacting to often sharp shifts in public attention to the pension issue. Data limitations also prevented us from testing the mechanisms implicit in our theoretical model. We could not assess, for instance, if advertising efforts by government members are larger for expanding than contracting reforms. Furthermore, it may be that only major expansionary reforms affect issue salience, but our data do not permit the evaluation of reform severity, i.e., whether contracting (expanding) reforms mean small or major cuts (extensions). Furthermore, salience effects might differ depending on the target group of pension reforms. Since our coding schemes of reforms and Eurobarometer data do not allow to investigate this, further research might pick this issue up. Although pension expansion did not strongly dominate between 2010 and 2020, our time period is restricted by data availability and we thus need to be careful with generalising our findings to other time periods.

Future research could continue the exploration initiated here, assessing the links between pension generosity, reform content, popular issue attention and the salience of the topic in elite discourse. Until such research is conducted, this study advances our understanding of policy feedback effects and perceptions of issue importance by showing that pension reforms are strongly associated with large increases of pension salience. This might have major implications for governments and parties and their desire to win elections as well as for electoral campaigns. Accountability of elected political representatives is important for the legitimacy of democratic political processes. We complement the findings for electoral consequences of political reforms and show for the case of pension policy that people notice reforms and increase issue salience. This is good news since public responsiveness is key for representative democracies.

## Notes

1. Indeed, in his meta-analysis of work on policy feedback, Larsen's (2019) does not consider any study of feedback on issue salience.
2. Although news media have the potential to get issues onto the public agenda, news coverage is no guarantee of high public issue salience (McCombs, 1999; McCombs & Shaw, 1972).
3. However, contrary to this expectation, research on foreign policies shows that variation in the salience of defence issues over time largely depends on a country's economic situation rather than the importance of the defence issue (Wlezien, 2005).
4. Although in theory individual party attachment could drive issue salience (Neundorf & Adams, 2018), we cannot test it, because Eurobarometer data do not cover party affiliation of individuals.

5. Research using the multiple streams approach argue that the interplay of the problem, policy, and political stream explain agenda setting (Kingdon, 1984), although this is not quite the same as issue salience perceived by the public. Furthermore, although not being part of our analyses, it could be that people change their preferences after the issue of pensions became salient due to reforms and politicians (again) respond to these changes.
6. Social policies also confer potential resources that create incentives for interest group formation based on specific policy configurations.
7. This is the only indicator of education included in EBs.
8. The correlations between macro-level variables are  $<0.33$ , suggesting the absence of multicollinearity in the data. The only exception to this refers to the variables expanding pension reforms, contracting pension reforms and expanding or contracting pension reforms. This latter variable has a correlation of 0.661 and 0.617 with the former variables.
9. The predicted probabilities are 0.092 and 0.164, respectively.
10. The probabilities are 0.147 and 0.107, respectively.
11. Considering the data available for the outcome in the original 2010–2020 dataset, the models in Table 2 have a 4.76 per cent of the missing values.
12. Imputed values were estimated with the program Blimp (Enders, 2022; Keller & Enfers, 2022). Blimp uses a Bayesian fully conditional specification and latent response variables to treat categorical variables. We estimate five imputed datasets (with 20,000 burn-in iterations and five final iterations in five chains) and the values were clustered by country and country-year to reflect the two-levels structure of the data. After the imputation, the models were estimated with Stata.
13. Excluding Ireland, the association with Christian-democratic vote share is significant at the 10 per cent significance level.

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## Replication materials

Supporting data and materials for this article can be accessed on <https://figshare.com/s/6152daa2b3d85b5d58f9>.

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