

Pension reforms, the generational welfare contract and preferences for pro-old welfare policies in Europe

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Abstract

This study investigates how various types of pension reforms affect the age-related policy preferences of different cohorts and whether they reinforce or undermine the generational welfare contract. It uses detailed descriptions from OECD Pensions at a Glance reports to create indicators for pension reforms in 18 European countries between 2008 and 2016. These indicators are combined with European Social Survey data from 2008 and 2016 to measure preferences towards welfare programmes that benefit the old compared to policies that benefit the working population and families with children. A difference-in-difference design is applied to test whether there are differences between reform and non-reform countries and between cohorts. Pension reforms were found to be associated with stronger declines in pro-old policy preferences in countries that raised the retirement age or introduced private pensions. The results show that although support for pro-old welfare policies has declined in almost all countries, this has not necessarily undermined the generational welfare contract. Rather, there has been a rebalancing of preferences towards policies that also favour other generations in other life-course stages.

KEYWORDS

generational welfare contract, life course, pensions, policy feedback, reform

1 | INTRODUCTION

Under the generational welfare contract, people support not only policies that favour themselves but also policies that are beneficial to those in other stages of the life course (Birnbbaum, Ferrarini, Nelson, & Palme, 2017). Pensions and other 'pro-old' welfare policies rely perhaps more than others on the generational welfare contract (Svallfors, 2008). Younger generations are willing to contribute to a system that will not benefit them until decades later. In the current times of population ageing and permanent austerity, the generational welfare contract is under mounting pressure. The erosion of intergenerational solidarity could lead to a vicious circle where the polarisation of policy preferences between generations threatens to unbalance the generational welfare contract, increasing inequalities across the life course, which, in turn, might lead to a further polarisation and undermining of the generational welfare contract.

The most obvious route to containing the costs of population ageing is through old-age pensions, which constitute the largest welfare programme in all European countries (Kuitto, 2016; Tepe & Vanhuyse, 2013). Pension systems have been reformed in most countries in recent decades, but there are different types of reforms that can shift the burden of population ageing onto different generations. If the benefits and costs of these reforms affect generations' perceptions of age-related social policies differently, then a particular type of pension reform might be used as an instrument to improve not only public finances but also solidarity between generations. Although pension reforms are rarely motivated by ambitions to reinforce the generational welfare contract, this may well be an important side-effect and therefore warrants close consideration.

This article investigates whether different types of pension reforms potentially reinforce or undermine the generational welfare contract. It does so by examining the impact of the event of a reform on subsequent cohorts' preferences for pro-old welfare policies. The concept of preferences for pro-old policies is operationalised as individuals' support for government responsibility for providing a standard of living for the old as relative to their support for government provision of childcare and a standard of living for the unemployed. The study hypothesises how various pension reforms affect cohorts' preferences for pro-old welfare policies through policy feedback mechanisms (Busemeyer, Abrassart, & Nezi, 2019). The empirical part of the study uses two rounds of cross-sectional data from the European Social Survey (ESS) combined with information on pension reforms from OECD Pensions at a Glance (PaG) reports to explore whether those reforms are associated with changes in consecutive cohorts' preferences for a generational welfare contract that provides support for older people in society.

2 | THEORY AND BACKGROUND

2.1 | An eroding generational welfare contract?

In their recent book, Birnbbaum et al. (2017) approach the generation welfare contract as the 'ways in which welfare state institutions address age-related social risks' (p. 4). They identify three age-related social risks: childhood, working age and old age. Generational welfare contracts can be skewed to each type of risk, meaning that they can be pro-child, pro-work and pro-old. The authors argue that for generational welfare contracts to be sustainable and have productive and equitable outcomes, the welfare state needs to address all three age-related social risks in a balanced manner.

In their preferences for age-related welfare policies, individuals can similarly be relatively pro-child, pro-work and pro-old. Most people display simultaneous support for pro-child (e.g., public childcare), pro-work (e.g., unemployment insurance) and pro-old policies (e.g., pensions), while preferences can be skewed towards a certain type of policies. If preferences become strongly skewed along generational lines, say the working population prefers only pro-work policies while pensioners prefer only pro-old policies, there will be an intergenerational conflict in policy preferences. Although cross-sectional differences in age-related policy preferences between

generations often are found to be small or insignificant (Ebbinghaus & Naumann, 2020; Emery, 2012; Hess, Naumann, & Steinkopf, 2017; Prinzen, 2015), population ageing and the pressure it is putting on limited welfare state resources could alter policy preferences and increase generational cleavages (Naumann, 2017; Tepe & Vanhuysse, 2009).

Age-related welfare preferences have been found to be largely influenced by the individual's gender, age and class as well as by political ideology, and to stem to a certain extent from self-interest in social policies (Ahn & Kim, 2014; Bonoli & Häusermann, 2009). This self-interest does not necessarily need to be short-term: even if people do not currently benefit from certain policies, they might have benefited in the past or they, their parents, children or grandchildren will benefit at some stage in their life (Busemeyer, Goerres, & Weschle, 2009; Busemeyer & Neimanns, 2017; Fernández, 2013; Prinzen, 2015).

In addition to self-interest, people's policy preferences are shaped by norms, and they generally favour policies for those who need and deserve the most (Prinzen, 2015; Svallfors, 2008; Van Oorschot, 2006). For example, Fernández (2013) found that the demand for public pension provision increases when poverty rates among the old are higher, while Ebbinghaus and Naumann (2020) showed that support for public pensions is higher when the needs of pensioners are more pronounced. Moreover, provision of age-related policies should be perceived as proportional and balanced. People often understand that the welfare state's resources are limited and that trade-offs need to be made (Busemeyer & Garritzmann, 2017). However, too much spending on a single programme may incite opposition among those not directly benefiting (Busemeyer & Neimanns, 2017). Finally, there must be trust that policies are sustainable and that 'welfare duties' are reciprocated with 'welfare rights', now or in the future (Ahn & Kim, 2014; Fernández, 2013).

2.2 | From reforms to preferences: The role of policy feedback effects

Preferences are also shaped by existing institutions and policies (Béland & Schlager, 2019; Busemeyer et al., 2019; Busemeyer & Neimanns, 2017; Ebbinghaus & Naumann, 2020). This suggests that if the welfare state's limited resources can be directed or distributed in certain ways, it may be possible to avert intergenerational conflict or at least to curtail its effects. Given the size and importance of pension systems in modern welfare states, there is an incentive for policymakers to implement reforms in ways that are perceived to secure an equitable distribution of the burden of population ageing among generations in order to keep preferences for the generational welfare contract in balance.

Studies on the interactions between specific policies and policy changes at the macro level and attitudes and preferences for those policies at the micro level often operationalise policies as aggregate spending in certain domains (Ahn & Kim, 2014; Busemeyer & Neimanns, 2017; Ebbinghaus & Naumann, 2020). There are two limitations to this approach. First, it assumes that changes in spending are visible to the public and that changes in spending are the outcome of a reform. The current study, however, focuses changes in preferences as a result of the event of the legislation or introduction of a reform.

Second, Fernández and Jaime-Castillo (2013), Naumann (2017) and Hinrichs (2021) emphasise that retrenchment of pension expenditure per se is not a realistic policy option. Rather, it is important to look at pragmatic or parametric pension reform options that are de facto on the political agenda. These include raising the retirement age, increasing pension contributions, decreasing benefits and the marketisation, privatisation or multi-pillarisation of pensions (Ebbinghaus, 2015; Hinrichs, 2021; Jaime-Castillo, 2013; Kuitto & Helmdag, 2021). As each of these reforms redistributes the burden of population ageing differently among groups in society (Grech, 2015), it is possible that they have varying effects on the age-related policy preferences of consecutive generations.

Policy reform as an event can lead to changes in public attitudes and preferences through policy feedback effects (Béland & Schlager, 2019). Often, a distinction is made between 'positive' or self-reinforcing feedback, where the public approves of existing policies or reform trajectories (Pierson, 1993), and 'negative' or self-undermining

feedback, where public opinion disapproves of and moves in the opposite direction of the reform (Wlezien & Soroka, 2012). Busemeyer et al. (2019) argue that this dichotomy is too simplistic and offer a more multidimensional framework that does justice to the time dimension, scope and direction of feedback effects. In the remainder of this section, this framework is used to develop hypotheses of how pension reforms change policy preferences.

First, Busemeyer et al. (2019) distinguish between long-term institutional feedback and short-term dynamic feedback effects from recent policy changes. Concerning pension reforms, the focus is on short-term dynamic feedback effects from recent policy changes. Still, preferences may be 'sticky' as they are shaped by national culture and institutions, even if radical reforms take place. There is substantial cross-country variation in age cleavages in preferences for age-related redistributive spending (Busemeyer et al., 2009; Fernández, 2013; Lynch & Myrskylä, 2009). Busemeyer et al. (2009) noted that these cleavages are more pronounced in countries that have minimalist welfare states, where a large proportion of spending tends to target the old, especially in the form of pensions. Moreover, budget competition between age groups is likely to be stronger in minimalist welfare states (Ahn & Kim, 2014; Busemeyer & Garritzmann, 2017). Countries that are predominantly pro-old in their welfare spending will be more vulnerable to intergenerational conflict due to the disproportional effects of population ageing on welfare spending (Birnbaum et al., 2017; Esping-Andersen & Sarasa, 2002).

Second, the extent or scope of the feedback can be 'general', that is, the effect of an entire welfare state or regime on individual preferences, or 'specific', that is, the effect of particular policies or policy changes on the attitudes towards those policies. Instead of analysing the *specific* policy feedback effects of certain reforms on attitudes towards those reforms (see, e.g., Fernández & Jaime-Castillo, 2013; Naumann, 2014; Naumann, 2017), the current study investigates how reform affects more *general* preferences for policies that benefit the old. These general preferences do not necessarily change through approval or disapproval of the reform itself, but because the policy change strengthens or weakens perceptions of self-interest or norms of deservingness, proportionality and trust in reciprocity.

Third, Busemeyer et al. (2019) identify three possible directions of feedback. 'Self-reinforcing' suggests support for continued provision of a policy, while 'accelerating' feedback indicates support for its expansion. The term 'self-undermining' feedback is used for policies that create opposition to their continued provision. Retrenching pension reforms are commonly unpopular (Lynch & Myrskylä, 2009; Naumann, 2017) and likely to generate self-undermining feedback. It can be expected to translate into changes in preferences for pro-old policies in two opposing ways, depending on whether the reform addresses pension rights or pension duties (Ahn & Kim, 2014). If rights are infringed, for example, access to adequate pension benefits or early retirement are restricted, it is likely that this is countered by a higher demand for compensatory pro-old policies. However, if a reform reinforces duties, for example, by raising costs, it is more likely that individuals oppose further expansion of pro-old policies or favour a reduction.

On the other hand, positive feedback (both self-reinforcing and accelerating) is also possible if a reform is welcomed as improving an individual's own position or as corresponding with the individual's norms of deservingness, proportionality and trust in the government's provision of a standard of living for the old. As a result, individuals may moderate their preferences for pro-old policies and shift their preferences towards policies that benefit other demographics as well.

It should be noted that pension systems are relatively complex and reforms can be difficult for the general public to understand (Busemeyer et al., 2019, p. 23). Therefore, the effects of reforms on policy preferences may be small or non-existent, especially if the reform remains rather invisible or its effects intangible in the short run. For example, indexing pension benefits or contributions is a relatively technical procedure that may easily go unnoticed to the public (Weaver, 2010). However, it is possible that some types of reforms attract more attention and debate, such as raising the retirement age or pension privatisation. In the latter case, the introduction of multi-pillarisation to pay-as-you-go (PAYG) systems may be a path-breaking reform. People tend to prefer the pension system that they know and react more strongly to paradigmatic changes (Van Groezen, Kiiver, & Unger, 2009).

2.3 | Varieties of pension reforms and changing policy preferences

Reforms to raise the retirement age create a need to work longer before reaching pension entitlement. This may lead to self-undermining feedback among the working-age population, as their right to retire at an earlier age is infringed. Particularly older workers might feel that the finish line is moved just as they were getting close (Bütler, 2002; Litwin, Achdut, & Youssim, 2009). This can result in an increasing preference for pro-old policies. On the other hand, among younger workers for whom retirement is still a long way off, it is possible that the reform will increase a sense of sustainability of the system and, therefore, lead to positive feedback effects on preferences. Raising the retirement age is potentially welcomed by current pensioners and may lead to positive feedback effects, as the reform will decrease the number of retirees with whom they share their pension benefits (Naumann, 2014).

Hypothesis 1. Reforms that raise the retirement age increase preferences for pro-old policies among older workers, but moderate preferences for pro-old policies among younger workers and retirees.

Increases in pension contributions likely result in self-undermining feedback among the working-age population. After all, it is they who have to foot the higher bill (Bay & West-Pedersen, 2004). The reform may also induce feelings of disproportionality and injustice. In this case, the reform's self-undermining feedback might lead to lower preferences for pro-old policies, as workers see those policies as the direct cause of the increased costs (Ahn & Kim, 2014). Older workers, nevertheless, have better prospects of seeing those contributions translated into benefits and prefer the government to keep up the standard of living for the old. Increases in contributions can lead to positive feedback effects among current pensioners, if those increases sustain or improve benefit levels.

Hypothesis 2. Reforms that increase contributions reduce preferences for pro-old policies among younger workers and retirees, but reinforce preferences for pro-old policies among older workers.

As pensioners are generally considered 'deserving' welfare recipients (Prinzen, 2015; Van Oorschot, 2006) and perceived need and poverty among old-age pensioners invokes greater preferences for higher pensions (Ebbinghaus & Naumann, 2020; Fernández, 2013), the self-undermining feedback effect of lowering benefits may be present across generations. Among older workers, a lowering of benefits could have an additional self-undermining feedback, as they soon retire and receive lower benefits than anticipated. Obviously, current pensioners will lose the most if their benefits are lowered, although in many countries legislation shields the rights and benefits of current pensioners from reforms.

Hypothesis 3. Reforms that lower pension benefits increase preferences for pro-old policies among all generations, but especially among older workers and pensioners.

Studies have suggested that younger workers are generally more in favour of private pensions (Boeri, Boersch-Supan, & Tabellini, 2002; Van Groezen et al., 2009). Younger generations have more time to accrue a larger private pension. Moreover, if private funded pensions replace public PAYG pensions, they weaken intergenerational transfers (Ebbinghaus, 2015). Pension privatisation or multi-pillarisation can be a signal to the younger generation that it is not the government's responsibility to support older generations. Therefore, self-reinforcing or accelerating effects of pension multi-pillarisation on pro-old welfare preferences can be expected especially among younger age groups. On the other hand, it is possible that multi-pillarisation creates greater uncertainty about future benefits, especially if accompanied with a shift from defined benefits to defined contributions. This may have a self-undermining feedback effect. As the introduction of new private pension schemes usually does not affect the pensions of current or soon-to-be retirees, it is unclear whether it changes their preferences.

Hypothesis 4a. Pension multi-pillarisation reduces preferences for pro-old policies among the younger workforce (the ‘diminishing intergenerational solidarity hypothesis’).

Hypothesis 4b. Pension multi-pillarisation reinforces preferences for pro-old policies among the younger workforce (the ‘future uncertainty hypothesis’).

3 | DATA AND METHODS

3.1 | Individual-level data

Rounds 4 (2008) and 8 (2016) of the ESS contain relevant rotating modules on welfare attitudes, from which the dependent variables were drawn. The countries included in this study were selected based on their participation in both rounds. Moreover, they had to be included in the relevant sections of OECD Pensions at a Glance (PaG) reports (OECD, 2013, 2015, 2017). This restricted the selection to 18 countries: Austria, Belgium, the Czech Republic, Germany, Estonia, Finland, France, Ireland, Israel, the Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. Nevertheless, this selection provides a good balance of geographical regions and welfare state regimes.

3.2 | Dependent variable

ESS rounds, 4 and 8, include a variable where respondents are asked to say to what extent a country's government should be responsible for ensuring ‘a reasonable standard of living for the old’, where 0 means that it should not be the government's responsibility at all and 10 means that it should be entirely the government's responsibility. To create an indicator of preference for pro-old welfare policies, support for government responsibility for the old is compared with two items that measure support for government responsibility in ensuring a reasonable standard of living for the unemployed and government responsibility in ensuring sufficient childcare services. Both items are similarly rated from 0 to 10 and available in both survey rounds. The relative measure of pro-old welfare policy preference was calculated as the preference for government responsibility in ensuring a standard of living for the old, minus the average of preferences for government responsibility in ensuring a reasonable standard of living for the unemployed and sufficient childcare services.

This relative operationalisation of pro-old welfare policy preferences was chosen over an absolute measure for several reasons. Used separately, these items entail a high probability that someone with a strong preference for one type of government policy displays similarly strong support for other types of welfare provision (Emery, 2012; Hess et al., 2017; Prinzen, 2015). When they are used in combination, pro-old policy preferences are operationalised as relative to preferences for typical pro-child and pro-work policies. The distribution of the pro-old policy preference variable is close to normal, albeit with a high concentration of values around zero, that is, balanced preferences for government responsibility for pensions, unemployment benefits and childcare.

Furthermore, this measure incorporates several other dimensions of public attitudes towards welfare policies. Attitudes towards government provision of unemployment benefits and childcare represent preferences towards policies that are typically ‘old’ passive social transfers and ‘new’ social investment, respectively (Busemeyer & Garritzmann, 2017; Busemeyer & Neimanns, 2017; Kuitto, 2016). Moreover, preferences for both pension policies and childcare are characterised by high levels of ‘deservingness’, whereas unemployment benefits usually score low on the deservingness factor (Svallfors, 2008; Van Oorschot, 2006).

3.3 | Individual-level independent variables

This study restricts the analysis to the same cohorts in 2008 and 2016 and follows them as they age. Whereas attitudinal change over time is more likely to happen as a result of generational replacement (Busemeyer et al., 2019, p. 11), we are primarily interested in whether the same cohorts can change their preferences following a reform. In the words of Esping-Andersen and Sarasa (2002, p. 9), 'some cohorts are historically lucky, others less so', emphasising the importance of time of birth and the institutions and societal norms that were influential at various stages of the earlier life course (Prinzen, 2015).

The main individual-level independent variable for cohort distinguishes those born in the years 1979–1993, 1964–1978, 1949–1963 and 1934–1949. This means that the youngest cohort was 15–29 years of age in 2008 and includes mainly students and labour market entrants. Those born between 1964 and 1978 were aged 30–44 in 2008 and are assumed to be in the career-making and family formation phases of their lives. Starting from the age of 45, workers are often considered already 'old'. These workers may already be looking forward to or planning their retirement. Finally, the oldest cohort was aged between 60 and 74 in 2008 (cohort 1934–1948). Although pension ages and possibilities for early retirement differ by country, by the age of 60 most people will be moving into retirement or intend to retire soon.

Controls were introduced for gender, marital status and having children (no children, children in the household or children but not in the household). Being married and having children may lower preferences for pro-old welfare policies and increase preferences for pro-child welfare. To control for socio-economic status, variables for level of education (lower, intermediate or higher), labour market status (employed, self-employed, unemployed/sick/disabled, retired or other) and subjective economic well-being (difficult to cope on current income, yes or no) were included. The latter was used as a dichotomous proxy for income because of the great number of missing values in the disposable household income variable. Finally, a variable, measuring interest in politics (yes or no), was included to control for the possibility that politically interested people are more likely to follow pension policies in more detail. Summary statistics for each of the variables by cohort and survey year are presented in Table 1.

3.4 | Reform indicators

Information from three consecutive OECD PaG reports was used to construct indicators for different types of reforms (OECD, 2013, 2015, 2017). These reports include detailed descriptions of the reforms that have taken place in the pension systems of OECD member countries between 2009 and 2017. Based on these descriptions, dummies were created for four types of pragmatic pension reforms in response to population ageing: raising the retirement age, increasing pension contributions, lowering pension benefits and reducing coverage of public pension insurance or expanding private pension provision. It should be noted that, in some countries, reforms moved in the opposite direction during this period. Especially countries hit hardest by the Great Recession experimented with measures such as re-collectivising private pension pillars to boost public finances and decreasing pension contributions to boost employment (Hinrichs, 2015). Such reforms are not accounted for in the analysis.

The online technical Appendix includes descriptions from the PaG reports of all the reforms that were identified as relevant to this study. Reforms were included if they were implemented before the end of 2016. Although data for ESS round 8 were gathered earlier, it is assumed that the legislative process was on-going and visible to the public at the time of surveying. A reform was classified as raising the retirement age if there is mention of increasing the pensionable age for men, women or both. This can be an immediate change affecting soon-to-retire workers or an incremental change that will only be relevant for younger cohorts. Reforms to reduce benefits included instances where the cuts would come into effect immediately or within a relatively short period of time; the introduction of price or wage indexing; and the introduction of a life expectancy correction term. Changes in taxes that de facto increase contributions or decrease benefits were also counted as relevant reforms. Multi-pillarisation reforms were

TABLE 1 Summary statistics of individual-level independent variables, % within cohorts and years

		Cohort 1979–1993		Cohort 1964–1978		Cohort 1949–1963		Cohort 1934–1948	
		2008	2016	2008	2016	2008	2016	2008	2016
Women		50.7	50.6	52.5	52.9	50.9	49.8	49.9	50.9
Education	Low	34.4	13.8	19.4	20.0	26.9	29.3	42.8	42.3
	Intermediate	47.7	50.3	48.9	51.0	47.0	49.2	38.8	39.9
	High	17.9	35.9	31.7	28.9	26.1	21.5	18.4	17.9
Labour market status	Employed	41.4	64.7	66.0	67.8	59.2	39.8	10.3	1.9
	Self-employed	3.3	8.3	11.2	13.6	14.0	10.0	4.9	1.9
	Unemployed, sick, disabled	7.8	9.0	7.9	9.4	9.9	9.6	4.0	0.9
	Retired	0.2	0.3	0.4	0.7	6.9	32.3	69.2	88.5
	Other	47.3	17.7	14.5	8.5	9.9	8.3	11.5	6.8
Difficult to cope with income		17.7	14.4	20.1	18.3	18.6	16.5	17.8	12.8
Married		14.2	38.4	65.5	66.3	71.2	70.9	70.9	66.3
Children	No of children	85.1	53.4	25.4	16.6	15.8	15.5	16.8	14.3
	Children living in the household	13.1	42.8	69.3	70.5	54.7	31.3	17.7	11.0
	Children, but not living in the household	1.9	3.8	5.3	12.9	29.5	53.3	65.6	74.8
Interested in politics		37.3	46.7	48.1	52.2	55.7	59.7	58.4	61.3
N		7,557	7,503	9,135	8,646	9,060	8,860	7,020	5,435

classified as such if they included the marketisation or privatisation of (parts of) pension schemes (Ebbinghaus, 2015).

Table 2 summarises the occurrence of these types of reforms by country. It shows that the most common reform during the observation period was raising the retirement age. Increasing contributions, decreasing benefits and reducing public coverage occurred in only 5, 8 and 5 out of the 18 countries, respectively. Table 2 also shows that the reform packages, that is, combinations of reform types, differed by country. A measure for the intensity of reform indicates that none of the countries introduced all four types of reforms. Sweden introduced no relevant reforms at all.

3.5 | Analytical strategy

Following descriptive analysis and OLS regression to explore the association of the independent and control variables with the response variable, a quasi-experimental difference-in-difference (DID) approach was used to estimate the impact of each type of reform on preferences for pro-old welfare policies in each cohort. In DID, a distinction is made between a treatment group (in this case, countries that introduced a type of reform between 2008 and 2016) and a control group (countries without such reform). The outcome variable was measured in both groups before (2008, $t = 0$) and after the treatment (2016, $t = 1$). In the regression models, while controlling for initial differences between the treatment and control groups and overall time-effects of $t = 0$ and $t = 1$, an interaction of a treatment

TABLE 2 Varieties of pension reforms in 18 European countries 2008–2016, based on OECD PaG reports

Country	Raise retirement age	Increase contributions	Decrease benefits	Multi-pillarisation	Intensity of reforms
Austria				X	1
Belgium	X		X	X	3
Czech Republic	X			X	2
Germany	X				1
Estonia	X				1
Finland	X	X	X		3
France	X	X	X		3
Ireland	X	X			2
Israel		X		X	2
Netherlands	X	X			2
Norway			X		1
Poland	X			X	2
Portugal	X	X	X		3
Slovenia			X		1
Spain	X		X		2
Sweden					0
Switzerland			X		1
United Kingdom	X	X			2
Total	12	7	8	5	32

dummy with a $t = 1$ -dummy should indicate whether the reform had a significant effect on the outcome variable. As the main interest goes out to the effect of the reforms on differences in preferences between cohorts, three-term interactions were included for treatment, time and cohort. This can be referred to as a difference-in-difference-in-difference approach.

Some caveats apply. It should be noted that the treatment dummy was not included in the analysis on its own, but only in the interactions with the time and cohort dummies. This was done because country dummies were included in the models to account for unobserved variance between countries (Möhrling, 2012). This approach was chosen to control for the substantial differences between national contexts. Country dummies absorb all inter-country differences, including for belonging to the control and treatment groups. For reforms that were found to have a significant impact, margins were plotted. These also show the initial differences between control and treatment countries. Finally, it should be noted that, in this specific research setting, it is not strictly possible to identify causal effects, as it uses repeated cross-sectional data, not panel data.

4 | FINDINGS

4.1 | Descriptive analysis

Figure 1 shows how preferences for pro-old welfare policies changed in the 18 countries included in this study. Preferences clearly declined between 2008 and 2016 in all countries except Israel and Austria. Relative preferences

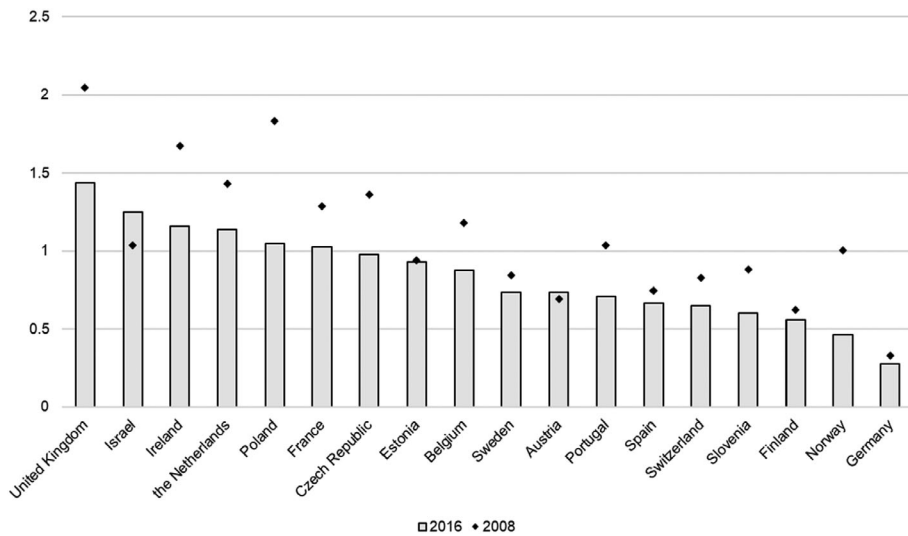


FIGURE 1 Levels of preference for pro-old welfare policies by country, 2008 and 2016

dropped most considerably in the United Kingdom, Ireland, Poland, the Czech Republic and Norway. These decreases cannot be explained only by a decline in support for government policies for the old, but also by increased preference for other age-related welfare policies, especially childcare (see Figures S1–S3 in the online Appendix). The results confirm that in liberal or minimal welfare states, like the United Kingdom, Israel and Ireland, preference for pro-old welfare was and remained the highest. Larger and more social-investment oriented welfare states such as Finland, Norway and Germany displayed the smallest pro-old bias in welfare policy preferences.

Table 3 shows the average levels of preference for pro-old welfare policies by country and cohort. In most countries, preference levels in 2008 were highest among the oldest cohorts and lowest among the youngest. The picture for 2016 is more mixed. In most countries, pro-old policy preferences declined among all cohorts, but the strongest decline was found among the oldest cohorts. Preferences for pro-old welfare policies increased in all four cohorts in only one country, Israel.

4.2 | Regression analysis

Table 4 shows the results for the OLS regression analysis of preferences for pro-old welfare policies. The *R*-squared of the empty model with only country dummies indicates that 7.6% of the variance in the dependent variable can be explained by country of residence. Considering that in the full model *R*-squared reaches only 8.9%, it appears that factors at the country level considerably shape preferences for pro-old welfare policies. The controls in Model 1 indicate that women, those with higher education and those who are interested in politics have an overall lower preference for pro-old welfare policies. Those who are employed and self-employed have a higher preference for pro-old welfare, even higher than retirees. Subjective income, marital status and having children show no statistically significant effects.

Table 4 confirms that initially pro-old preferences were highest among the oldest cohort and lowest among the youngest. Looking at changes occurring between 2008 and 2016, the dummy for the year 2016 indicates a decline in the preference for pro-old welfare policies. The interaction term coefficients confirm that there was no inter-generational divergence of preferences, but that there seems to be convergence between cohorts, especially due to a decline among the oldest cohorts.

TABLE 3 Preference for pro-old welfare policies in 2008 and 2016, by birth cohorts

	Cohort 1979–1993			Cohort 1964–1978			Cohort 1949–1963			Cohort 1934–1948		
	2008	2016	Change	2008	2016	Change	2008	2016	Change	2008	2016	Change
Austria	0.59	0.56	-0.03	0.55	0.67	+0.12	0.74	0.80	+0.06	1.11	1.05	-0.06
Belgium	0.90	0.91	+0.01	1.18	0.68	-0.50	1.28	0.98	-0.30	1.43	1.03	-0.40
Czech R.	1.43	0.81	-0.62	1.43	1.03	-0.40	1.23	1.08	-0.15	1.38	1.01	-0.37
Germany	0.23	0.44	+0.21	0.30	0.28	-0.02	0.32	0.27	-0.05	0.46	0.08	-0.38
Estonia	0.99	0.91	-0.08	0.87	0.75	-0.12	0.95	1.01	+0.06	0.94	1.07	+0.13
Finland	0.59	0.73	+0.14	0.69	0.63	-0.06	0.60	0.52	-0.08	0.60	0.33	-0.27
France	1.18	0.90	-0.28	1.19	0.99	-0.20	1.34	1.18	-0.16	1.49	0.96	-0.53
Ireland	1.54	0.83	-0.71	1.64	1.13	-0.51	1.63	1.30	-0.33	1.81	1.59	-0.22
Israel	1.04	1.32	+0.28	1.00	1.21	+0.21	1.09	1.24	+0.15	1.01	1.21	+0.20
Netherlands	1.12	1.08	-0.04	1.45	1.25	-0.20	1.61	1.13	-0.48	1.44	1.02	-0.42
Norway	0.90	0.49	-0.41	1.03	0.43	-0.60	1.02	0.57	-0.45	1.05	0.29	-0.76
Poland	1.78	1.13	-0.65	1.94	0.98	-0.96	1.77	1.14	-0.63	1.87	0.83	-1.04
Portugal	1.08	1.06	-0.02	1.12	0.66	-0.46	1.02	0.66	-0.36	0.95	0.46	-0.49
Slovenia	0.70	0.44	-0.26	0.92	0.63	-0.29	0.92	0.69	-0.23	1.00	0.63	-0.37
Spain	0.72	0.65	-0.07	0.70	0.70	-0.00	0.73	0.64	-0.09	0.90	0.66	-0.24
Sweden	0.68	0.74	+0.06	0.95	0.73	-0.22	0.82	0.77	-0.05	0.90	0.70	-0.20
Switzerland	0.75	0.69	-0.06	0.64	0.52	-0.12	0.95	0.67	-0.28	1.04	0.80	-0.24
U.K.	1.74	1.23	-0.51	1.95	1.57	-0.38	2.28	1.56	-0.72	2.25	1.34	-0.91

TABLE 4 OLS regression, preference for pro-old welfare policies

		1
Female (ref. Male)		-0.062** (0.022)
Education (ref. Lower)	Intermediate	0.029 (0.029)
	Higher	-0.196*** (0.032)
Labour market status (ref. Employed)	Self-employed	0.096* (0.043)
	Unemployed/sick/disabled	-0.183*** (0.044)
	Retired	-0.114** (0.042)
	Other	-0.073* (0.034)
Difficult to cope with income (ref. Not difficult)		0.013 (0.030)
Married (ref. Not married)		-0.036 (0.025)
Children (ref. No children)	Children living in household	-0.016 (0.031)
	Children, but not living in household	0.006 (0.036)
Interested in politics (ref. Not interested)		-0.063** (0.023)
Cohort (ref. 1964–1978)	1979–1993	-0.104* (0.045)
	1949–1963	0.078* (0.040)
	1934–1948	0.209*** (0.053)
Year 2016 (ref. 2008)		-0.249*** (0.040)
Cohort 1979–1993 × 2016		0.080 (0.059)
Cohort 1949–1963 × 2016		-0.009 (0.057)
Cohort 1934–1948 × 2016		-0.243*** (0.064)
Constant		0.957*** (0.057)
R ² empty model		0.076
R ² full model		0.089
N		61,246

Note: Reported are coefficients, SE between brackets. Country-fixed effects included, but not reported.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 5 shows that introducing reforms was associated with a reduced preference for pro-old welfare policies, except in the case of decreasing benefits. However, the coefficients of the interactions between the year and reform dummies were statistically significant only for raising the retirement age and multi-pillarisation reforms. In the former case, Figure 2 shows that there were no substantial changes in preferences among any of the cohorts in the group of non-reform countries (Austria, Israel, Norway, Slovenia, Sweden and Switzerland). Figure 3 shows a strong downward convergence in the preferences of countries that introduced or reinforced multi-pillarisation (Austria, Belgium, Czech Republic, Israel and Poland) towards the levels in non-reform countries. This decline in preferences was driven especially by declines in Poland, the Czech Republic and Belgium, whereas Israel showed an opposite trend towards greater preference for pro-old welfare policies (see also Figure 1 and Table 3). In addition, Model 6 in Table 5 indicates that the greater the number of reforms introduced, the greater the decrease in preference for pro-old policies.

In Table 5, interaction terms of the year and reform dummies with the cohort dummies are included to analyse the impact of reforms on pro-old welfare policy preferences among specific cohorts. The results show that reforms had only minor impact on cohort differences in policy preferences, as almost all three-way interaction terms are non-significant. However, in the case of countries raising the retirement age, the oldest cohort's preference for pro-old welfare declined more than among the same cohorts in the control group (Model 2 in Table 5 and Figure 2). In the case of pension privatisation reforms, the cohort of older workers born in 1949–1963 displayed a relatively smaller

TABLE 5 OLS regression, estimating the impact of reforms on preference for pro-old welfare policies

	2	3	4	5	6
	Raise retirement age	Increase contributions	Decrease benefits	Multi-pillarisation	Reform intensity
Year 2016	-0.117* (0.050)	-0.198*** (0.048)	-0.296*** (0.055)	-0.180*** (0.045)	-0.022 (0.103)
2016 × Reform	-0.146* (0.066)	-0.119 (0.081)	0.118 (0.077)	-0.381*** (0.084)	-0.118* (0.050)
Cohort 1979–1993	-0.109* (0.053)	-0.063 (0.055)	-0.147* (0.060)	-0.120* (0.051)	-0.163 (0.111)
Cohort 1949–1963	0.079 (0.048)	0.0073 (0.050)	0.063 (0.054)	0.103* (0.045)	0.001 (0.103)
Cohort 1934–1948	0.232*** (0.061)	0.190** (0.064)	0.180** (0.068)	0.221*** (0.058)	0.181 (0.116)
Cohort 1979–1993 × 2016	0.147* (0.073)	0.114 (0.071)	0.099 (0.081)	0.078 (0.069)	0.030 (0.052)
Cohort 1949–1963 × 2016	0.0287 (0.072)	0.041 (0.069)	-0.023 (0.076)	-0.054 (0.066)	0.042 (0.049)
Cohort 1934–1948 × 2016	-0.050 (0.081)	-0.211** (0.082)	-0.262** (0.090)	-0.283*** (0.073)	0.017 (0.052)
Cohort 1979–1993 × Reform	0.007 (0.066)	-0.088 (0.083)	0.109 (0.079)	0.014 (0.088)	0.207 (0.151)
Cohort 1949–1963 × Reform	-0.002 (0.064)	0.167* (0.078)	0.030 (0.075)	-0.151 (0.088)	-0.065 (0.144)
Cohort 1934–1948 × Reform	-0.026 (0.070)	0.047 (0.085)	0.071 (0.081)	-0.089 (0.101)	-0.285 (0.161)
Cohort 1979–1993 × 2016 × Reform	-0.078 (0.097)	-0.092 (0.121)	-0.042 (0.115)	0.102 (0.123)	-0.068 (0.074)
Cohort 1949–1963 × 2016 × Reform	-0.041 (0.094)	-0.117 (0.115)	0.045 (0.110)	0.253* (0.120)	0.029 (0.070)
Cohort 1934–1948 × 2016 × Reform	-0.216* (0.106)	-0.071 (0.129)	0.054 (0.122)	0.211 (0.140)	0.021 (0.075)
R ²	.090	.091	.090	.090	.090
N	61,246	61,246	61,246	61,246	61,246

Note: Reported are coefficients, SE between brackets. Country-fixed effects and controls for gender, education, labour market status, subjective income, marital status, children and political interest included, but not reported.

* $p < .05$; ** $p < .01$; *** $p < .001$.

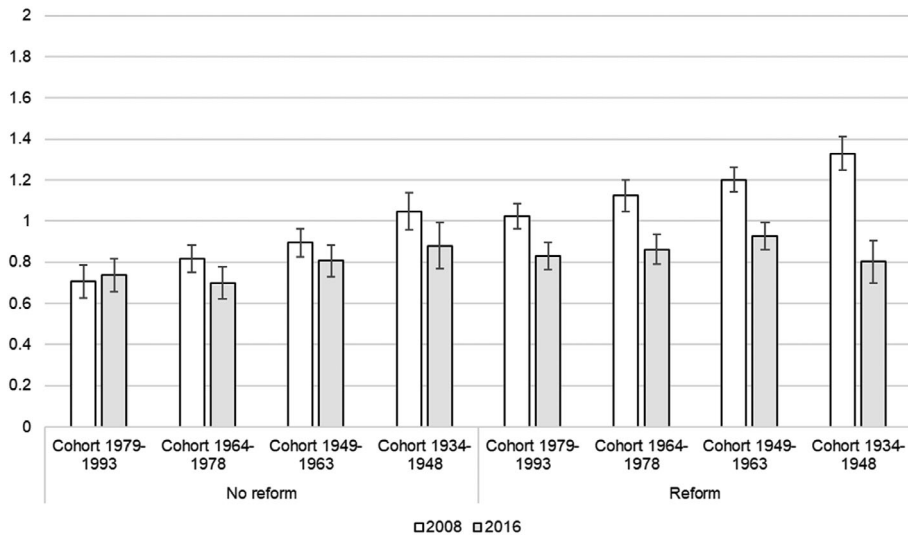


FIGURE 2 Margins with 95% confidence intervals for raising retirement age and preferences for pro-old welfare policies by cohort, year and incidence of reform (based on Model 2 in Table 5)

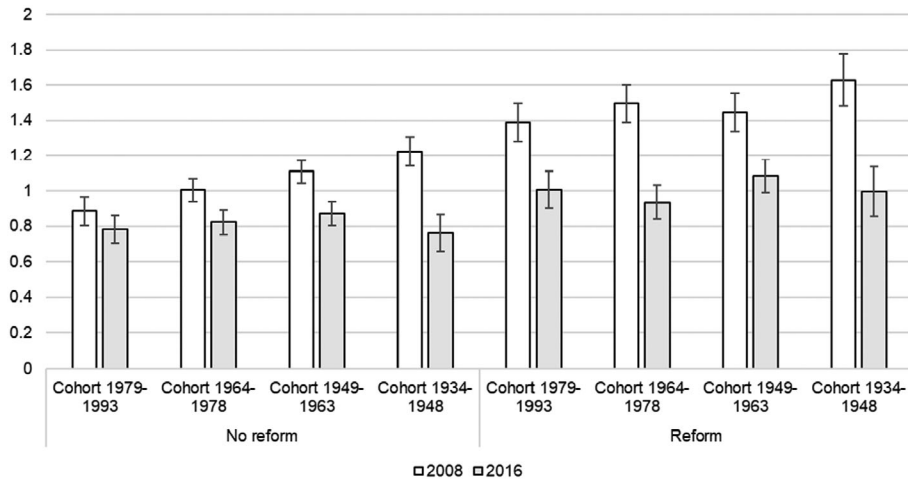


FIGURE 3 Margins with 95% confidence intervals for multi-pillarisation and preferences for pro-old welfare policies by cohort, year and incidence of reform (based on Model 5 in Table 5)

decline in preferences for pro-old welfare policies than their peers in non-reform countries (Model 5 in Table 5 and Figure 3).

Figures 2 and 3 also show the selection bias of belonging to the treatment group, which could not be controlled for with a treatment group dummy in the OLS regression models. Countries that introduced reforms initially had higher levels of preference for pro-old welfare policies and converged to the levels of non-reform countries. Although there is some overlap between the countries that introduced reforms to raise the pensionable age and private pensions, it should be noted that these are two different sets of countries. As Table 2 showed, retirement ages were raised in 12 countries, while privatisation took place in only five. Among countries that introduced or reinforced private pillars, Austria and Israel did not further raise their retirement ages. Among the countries raising retirement

ages, only Belgium, the Czech Republic and Poland introduced or reinforced private pension pillars during the same period.

To check the robustness of these results, the same analyses were performed with the pro-old welfare policy indicator as compared to preferences for childcare only and unemployment only separately (Table S1 in the online Appendix). Women and those with children preferred childcare to support the old but displayed lower support for unemployment benefits. Those who were unemployed, sick or disabled had a strong preference for unemployment benefits. Younger cohorts were more pro-childcare in their welfare orientations, whereas older cohorts were more pro-unemployed. Both variations on the dependent variable show a decline between 2008 and 2016, with the strongest decline among the oldest cohort. Tables S2 and S3 show similar effects for the various reforms. In these models too, the greatest effect is exerted by reforms introducing multi-pillarisation, yet with the two oldest cohorts being less affected in their preferences.

5 | DISCUSSION

This study investigated the association between different types of pension reform and preferences for pro-old welfare policies in Europe between 2008 and 2016. One of its main concerns was to analyse whether the design of pension reforms can reinforce or mitigate preferences for such policies among different generations. It used an innovative research design with reform indicators based on OECD PaG reports combined with two rounds of survey data. The results contribute to the rare literature on pension reforms and changes in welfare attitudes across time (Ebbinghaus & Naumann, 2020; Lynch & Myrskylä, 2009; Naumann, 2014).

In line with previous studies, the national institutional setting emerged as one of the strongest predictors of policy preferences (Busemeyer et al., 2009; Fernández & Jaime-Castillo, 2013; Goerres & Tepe, 2010; Lynch & Myrskylä, 2009). This finding confirms the importance of long-term institutional feedback effects (Busemeyer et al., 2019). The results showed that support for pro-old policies declined in most European countries, although absolute support for government provision of a reasonable standard of living for the old remained high. Decreases in relative preferences for pro-old policies were due not only to decreases in absolute support, but also to increases especially in support for government provision of childcare. This indicates that while the generational welfare contrast may not be under any immediate threat, age-related policy preferences are certainly being re-calibrated in many countries.

The results showed signs of cohort convergence in preferences for pro-old policies rather than growing intergenerational conflict. Whereas in 2008, the oldest cohort had the highest preference for pro-old welfare policies, by 2016 this preference had declined to levels similar to those in the younger cohorts or even lower. The youngest cohort showed no change or even a small increase in pro-old welfare policy preferences between 2008 and 2016. This absence of growing intergenerational conflict is in line with other studies (Busemeyer et al., 2009; Ebbinghaus & Naumann, 2020; Emery, 2012; Hess et al., 2017).

Rather than pursuing any single type of reform package, countries chose different reform trajectories to adjust their specific pension systems. Support for pro-old welfare policies declined to a greater degree in countries that raised the retirement age and increased multi-pillarisation compared to countries where such reforms were absent. Studies have found that increases to the retirement age are particularly liable to raise opposition, possibly due to feelings of injustice (Büttler, 2002; Litwin et al., 2009). In the case of pension privatisation, the reform may signal that providing a reasonable standard of living is no longer the government's responsibility and, therefore, their preferences will shift to other policies. It is likely that both types of reforms have attracted more public exposure and debate than changes in pension contributions and benefits. The latter types of reform are often more complex or take effect incrementally; indexation is a case in point.

At the same time, countries where reforms raised the retirement age and introduced multi-pillarisation had, on average, higher levels of preference for pro-old welfare policies in 2008. As a result, preferences converged between

reform and non-reform countries. One possible explanation is that these reform countries are in fact latecomers. Countries like Germany and Sweden had implemented their more far-reaching pension reforms before 2008, which possibly explains their lower levels of initial support.

The results lend only partial support to the main hypotheses of the study that, due to short-term dynamic feedback effects, different types of reform affect the policy preferences of younger and older generations in different ways. In line with Hypothesis 1, the oldest cohort showed the greatest decline in pro-old welfare preferences in countries that raised the retirement age. This is somewhat counter-intuitive as the oldest cohort predominantly consisted of people who were already retired and, therefore, not directly affected by the reform. However, this may be the result of a self-undermining feedback effect: pensioners accept that raising the retirement age is legitimate (Fernández & Jaime-Castillo, 2013), resulting in a shift towards preferences for the provision of other age-related social policies. In contrast to expectations, increasing contributions did not statistically significantly moderate preferences for pro-old welfare policies in the working-age population (Hypothesis 2). Moreover, it was expected that reforms to decrease benefits will increase preferences for pro-old welfare policies among older workers and pensioners in particular (Hypothesis 3), but no differences between cohorts in reform and non-reform countries were found.

There was support for neither Hypotheses 4a nor 4b: the association of multi-pillarisation with pro-old policy preferences of younger workers was not different than for other cohorts. However, older workers born in 1949–1963 showed a statistically significantly smaller decline in preferences for pro-old welfare policies following pension privatisation than their peers in non-reform countries. This effect might be due to older workers' pensions being less affected by the introduction of private pensions than younger workers' (Ebbinghaus & Naumann, 2020). However, it is also possible that this is a self-undermining feedback effect and that the uncertainty created by the reform affected older workers preferences rather than those of younger workers (Hypothesis 4b).

There are several limitations to this study. Although it moves beyond studies that use government spending as an indicator of policy change, the use of reform dummies is not unproblematic. Whereas extreme care was taken in the categorisation of reforms based on the PaG reports, some of the classifications may be subject to discussion. The classifications did not consider the timing of the reform. A reform that took place in 2009 might have been forgotten by 2016, whereas changes introduced in 2015 will still have been fresh in people's minds. Moreover, the reform's effects might take long to be felt.

Furthermore, although knowledge, self-interest and norms play a role in shaping age-related policy preferences (Fernández, 2013; Goerres & Tepe, 2010; Prinzen, 2014, 2015), the data and analytical approach did not allow directly controlling for this. More research is needed on the mediating role of knowledge of pension systems, self-interest and norms. At the macro level, this study did not directly account for the Great Recession that took place between 2008 and 2016 and pushed certain countries into fast and far-reaching reforms without seeking public approval (Hinrichs, 2015).

Nevertheless, this study provides new insights into the links between pension reform design, the generational welfare contract and inequalities across the life course. The sustainability of the pension system depends not only on the ability of governments and society to finance the system, but also on the willingness of subsequent generations to continue to do so. As confidence in the pension system diminishes, people who can afford to do so will search other ways to ensure their retirement income; for instance, through private savings or life insurances. As the results showed, pension privatisation may be particularly detrimental to support for government provision of old-age security, especially by making the younger generation less amenable to redistribute to the old (Ebbinghaus, 2015). The findings also suggest that policymakers should consider the public exposure given to reforms and inform the public about their consequences.

At the same time, a well-functioning generational welfare contract is not only about providing welfare to the old. This study indicated that relative preferences for policies that support the working population and those with children have increased in many countries. Social investment in policies that support (women's) employment and children's development will be much needed in the foreseeable future. A re-balancing of the generational welfare contract can provide a sustainable basis for adequate pension policies.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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