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What Drives Long-Term Trends in Newly Retired Women's and Men's Economic Independence? An Analysis of Contemporary and Historical Determinants

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What drives long-term trends in newly retired women's and men's economic independence? An analysis of contemporary and historical determinants

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Abstract

Concerns about the social sustainability of pension systems are growing. The increasing privatization of pension provision in many OECD countries is expected to have harmful consequences for workers with non-standard working careers, among whom women are overrepresented. Despite much new research, little is known about changes in the incomes of newly retired persons. Using microdata from the Luxembourg Income Study, this study analyzes how the economic independence of newly retired women and men has changed over the years 1986–2018 in fifteen OECD countries and assesses some of its determinants. The results show that economic independence among newly retired women has increased since the 1980s in almost all countries, but decreased among men in half of the countries considered here. Regression analyses show that pension privatization is not associated with worsened economic independence among newly retired women, nor among newly retired men. Minimum public pensions tend to increase the economic independence of both newly retired women and men. Economic independence is also more common among newly retired cohorts of women with gainful work histories and parental leave duration in their prime working years.

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Introduction

Since the 1980s, many OECD countries have implemented pension reforms to address the economic and demographic pressures that challenged the financial sustainability of their pension systems. In many countries, public pension schemes have been retrenched and private pension provision has increased through an expansion (or introduction) of occupational pensions and voluntary personal pensions (Hinrichs, 2021; Queisser et al., 2007; Whiteford & Whitehouse, 2006). This privatization of old-age pension provision has strengthened the role of private actors in securing adequate income in old age, where risks for low income among the retired are increasingly borne by individuals (Ebbinghaus, 2015). The link between previous employment and pension benefits received in retirement is often tighter in occupational pensions (and voluntary personal pensions) than in public pension schemes (Behrendt, 2000). Specific features such as minimum pension benefits or mechanisms of sharing pension rights between spouses in the event of divorce also tend to be less present in private schemes compared to public ones. Thus, past employment history has become more important for old-age incomes, which is likely to reduce the economic well-being of older people whose working careers deviate from the norm of continuous full-time employment (Leitner, 2001).

Scholars, policymakers, and international organizations are increasingly raising concerns about the social sustainability of contemporary old-age pension systems. In this context, social sustainability pertains to how successful old-age pension systems are in fighting low income, economic hardship, poverty, and inequalities among older people. As a result of pension privatization, there are concerns that people with interrupted or precarious work histories will no longer have adequate contribution records to be granted a pension benefit that allows them to maintain reasonable levels of economic independence (Ebbinghaus et al., 2019; Ebbinghaus & Möhring, 2022; European Commission, 2010; European Commission & Directorate General for Employment Social Affairs and Inclusion, 2021; Kuitto, Kuivalainen, et al., 2021; OECD, 2017). Women may be particularly disadvantaged, because their working careers often include lower incomes compared to men, as well as part-time employment and interruptions due to childcare (Arza, 2015; Behrendt & Woodall, 2015; Grødem & Hippe, 2021; Zaidi, 2007). The question of whether women's pension income will suffice to ensure their economic independence in retirement is highly relevant for current and future generations of retirees, for at least two reasons. First, the rise in the number of divorces and women who have not remarried in many Western OECD countries in past decades is likely to make it more common for women to enter retirement alone (OECD, 2018). These women have low opportunity to rely on the economies of scale that usually come with sharing costs in a household. Second, women's longer life expectancy makes them more likely than men to

spend several years alone in retirement. As survivors' pensions are either being phased out or subjected to strengthened eligibility criteria (OECD, 2018), it is reasonable to assume that economic well-being among older women increasingly will depend on their own pension rights.

The purpose of this study is to analyze the economic independence of newly retired women and men in comparative perspective. Two questions are addressed. How has the economic independence of newly retired women and men changed since the 1980s? How do these trends in economic independence relate to the privatization of old-age pension systems and changes in employment patterns? The study covers the period 1986–2018 and includes fifteen OECD countries with similar levels of economic development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Sweden, the United Kingdom, and the United States. The empirical analyses are based on descriptive statistics and regression analyses using microdata from the Luxembourg Income Study (LIS, 2021).

The focus on economic independence rather than income poverty is both theoretically and empirically motivated. Poverty measurements are commonly calculated at the household level, assuming an equal sharing of resources between household members. Income poverty therefore tends to conceal gender differences within the household (Doctrinal & Nieuwenhuis, 2019; Smeeding, 2017) and to underestimate economic vulnerabilities of women who live with a partner (married or else). In contrast, economic independence pertains to self-sufficiency among individuals (not households), and reveals the extent to which individual income is enough to fully participate in social life, regardless of the presence or absence of a partner or other household members. It therefore allows us to distinguish the respective incomes of retired women and men in the same household. Thus, an explicit focus on economic independence makes it possible to assess whether individual incomes among retired women and men are enough to ensure a socially acceptable standard of living.

Spillover effects of pension reforms on social sustainability are seldom investigated in comparative research or over long periods of time (Ebbinghaus et al., 2019). A few publications reveal declining risks of poverty for older women, but they either cover a short period of time or focus on poverty risks of particular types of household (i.e. single households), thus making it difficult to draw general conclusions about trends over longer periods of time for the old-age population in general (Doctrinal & Nieuwenhuis, 2019; European Commission & Social Protection Committee, 2018; European Commission & Directorate General for Employment Social Affairs and Inclusion, 2021). Relatively little is thus known regarding trends in the economic independence of newly retired women and men over longer periods of time. Research on old-age pension systems provides important insights into the determinants of old-age incomes, as pension benefits typically represent

the main component in the income packages of the retired (Pedersen, 2004). Studies on micro-level income data have assessed the interplay of individual employment histories and the institutional design of pension systems, as well as how this interplay affects pension income at single cross-sections (Möhring, 2015, 2021). However, changes in employment patterns, pension systems, and the economic independence of older men and women over longer periods of time remain so far largely unexplored.

The study is organized as follows. The next section describes how changes in contemporary pension systems and in historical employment patterns are likely to affect the trends in economic independence of women and men. Data and methodological considerations are then presented, followed by the results. The study concludes with a discussion.

Contemporary and historical determinants of economic independence in later life

Pension benefits constitute the main part of old-age incomes (OECD, 2019b; Pedersen, 2004). Trends in economic independence in old age are therefore expected to be strongly related to how the level of pension benefits has changed over time as successive generations of women and men enter retirement. In turn, these pension benefits are likely to be determined by two distinct processes (Möhring, 2015). The first relates to institutional changes in the pension system, which determine the size of benefits received during retirement and are contemporary to the assessment of economic independence. The second is linked to historical changes in the labor market, which have taken place over several decades and have shaped and modified the employment histories of women in particular, but also those of men. Below, each process is discussed separately.

Contemporary changes in the institutional structure of old-age pensions

Contemporary pension benefits depend on the pension policies that currently are in place. The reforms of pension systems that have been implemented in OECD countries since the 1980s share a number of common features, including increases in legal retirement ages, longer contribution periods, and new benefit formulas (Hinrichs, 2021; OECD, 2009). In several countries, public pension benefits have been scaled back, leaving greater room for occupational pensions and voluntary personal pensions (Queisser et al., 2007; Whiteford & Whitehouse, 2006). A notable exception pertains to the level of non-contributory minimum public pensions, which seems to have been preserved in several countries (Goedemé & Marchal, 2016).

The expansion of occupational and voluntary personal pensions may have affected the gender balance in the economic independence of new retirees for at least two reasons. The first relates to the coverage of occupational pension plans, which often excludes parts of the workforce that lack collective agreements, including many part-time and temporary workers (Behrendt, 2000; OECD, 2019b). In particular, women tend to be less covered by these schemes (Bardasi & Jenkins, 2010; Bettio et al., 2013; James et al., 2003; OECD, 2021b). Similarly, women tend to participate less in voluntary personal pensions and tend to receive less money from those schemes than men (OECD, 2021b). The second reason relates to the strong link between gainful employment during economically active years and benefits received in old age in occupational pension schemes. Compared to public pensions, occupational pensions (but also voluntary personal pensions) include less strong solidarity mechanisms to compensate for non-standard working careers (Behrendt, 2000). Women tend to have shorter working careers than men, and tend to earn less. They also tend to work part-time more, and move in and out of the labor force to a greater extent than men, at least in fertile ages. It is therefore likely that women are particularly disadvantaged by pension privatization (Arza, 2015; Behrendt & Woodall, 2015; Frericks et al., 2009; Marin & Zólyomi, 2010).

Several studies have highlighted how gender inequalities among the older population increased in Latin American and Eastern European countries following the privatization of pension systems in the 1990s and 2000s (Arza, 2012; Balcerak-Paradowska et al., 2003; Ortiz et al., 2018). Although it may be difficult to generalize findings from emerging welfare states to the long-standing democracies included in this study, it is nonetheless reasonable to formulate a couple of hypotheses already at this stage. For women, it is hypothesized that pension privatization is negatively associated with economic independence of new retirees (*hypothesis 1a*). Things may be different for men who should have easier access to occupational schemes and voluntary personal pensions. Pension privatization is thus expected to neither improve nor worsen their economic independence, and therefore pension privatization is hypothesized to have no effect on economic independence among newly retired men (*hypothesis 1b*).

As discussed above, the design of a pension system matters for economic independence and may contribute to mitigating or amplifying gender inequalities for new retirees, which actually are shaped and modified during working life (Bardasi & Jenkins, 2010; Möhring, 2015). However, parts of the system of public pension benefits may cushion the effects of non-standard employment. Minimum income benefits are one such feature (Ahonen & Bach-Othman, 2010; Möhring, 2015). The Guaranteed Income Supplement in Canada has for example proven to be an efficient safety net that reduces old-age poverty, calculated as disposable household incomes below 50% of national median income (Smeeding & Sandström, 2005). In addition,

comparative research shows that the real incomes (i.e. net of inflation) of older persons who receive the main non-contributory minimum pension benefit have increased in many European countries in recent decades (Goedemé & Marchal, 2016). The real incomes of older person households in the lower part of the income distribution have increased also in Sweden, where the contributory system of old-age benefits otherwise has been on the retreat (Nelson, Nieuwenhuis, et al., 2020).

Minimum pension benefits of this kind should be especially relevant for women, not least because they often tend to be the main beneficiaries of these schemes (Arza, 2015; Behrendt & Woodall, 2015), but also for men with atypical and interrupted working careers. Based on these considerations, it is expected that the generosity of minimum pension benefits is positively associated with new retirees reaching economic independence (*hypothesis 2a*), particularly among women and less so among men (*hypothesis 2b*).

Historical changes in employment patterns

Pension benefits depend on the employment histories of current pensioners, which are important for how pension privatization plays out in reality and how it affects gender inequalities in retirement incomes. Therefore, over and above the effects of major pension reforms in recent decades, changes in employment patterns may play an important role for economic independence in later life. This subsection zooms in on this particular issue and discusses women's and men's employment since World War II. This period approximates the years of economic activity of women and men entering retirement from the late 1980s onwards.

Many people who entered the labor force in the immediate post-war decades have benefited from economic growth and experienced improvements in living standards. Not only wages increased faster than prices, but pension coverage also increased (Neugschwender, 2014). For women, the main labor market change during the past century relates to their increased employment rates (Charles, 2011; Goldin, 2006). In OECD countries, female employment increased on average from 50% for cohorts of women born in the 1930s to 70% for cohorts born in the 1980s (OECD, 2017). Although there are cross-country differences in both timing and magnitude, which to a large extent reflect how countries have organized work within households, coupled with different economic and political developments (Möhring, 2016), the rise in female employment occurred in nearly all long-standing OECD countries.²

² Labor markets in European countries underwent major economic changes under the second half of the 20th century. In particular, the expansion of the service sector and public service employment contributed to favoring female employment. Whereas the service sector started to grow in Scandinavian countries already from the 1970s, it started a decade later in other European countries (Häusermann & Schwander, 2012).

Historically, the sharpest increases in female employment occurred during the 1970s in Northern European countries, but also in Canada and the United States. In Continental and Southern Europe, female employment started to increase substantially a few decades later, in the 1980s and 1990s (Jaumotte, 2003; OECD, 2022a, 2022c). Women today are not only more likely to be in the labor force, they also tend to work more hours and have higher wages compared to previous generations. It is thus reasonable to assume that recent generations of women entering retirement have accumulated more and better pension rights compared to previous generations. Based on these considerations, I expect that increased female employment is associated with greater economic independence for recent generations of women entering retirement (*hypothesis 3a*).

For men, the situation may be different. Compared to women, their employment histories have in all likelihood become less secure and more precarious. The shift from industrial economies to service economies since the 1970s, including the relative decline of traditional manufacturing sectors and an expansion of higher education, contributed to declining employment rates (Charles, 2011). In addition, low inflation replaced full employment as the chief objective of economic policy in many countries, making double-digit unemployment rates more common. Thus, men moving into the precariat is no longer as uncommon as it used to be, as a growing proportion of men are confronted with career instability, loss of income, and loss of status (Standing, 2011). At best, employment rates of cohorts of men born after the 1950s have remained stable, but in many countries the rates have declined (Charles, 2011; OECD, 2019a). Men entering retirement in recent years may therefore have been doing so with similar or somewhat worsened pension rights, which may translate into either a stable or a worsened income position compared to previous generations of men that entered retirement in the late 1980s to 1990s. For men, it is thus expected that changes in employment are unrelated to the degree of economic independence in later life, or that the association is negative (*hypothesis 3b*).

Changes in women's employment throughout the second half of the 20th century are in part related to institutional arrangements that make it easier for women to reconcile employment with motherhood (Jaumotte, 2003). Many women who entered retirement in recent years have during their working life benefited from work–family reconciliation policies that enabled them to return to work after childbearing, while older generations to a greater extent withdrew from the labor force altogether or gave up employment for extended periods of time (OECD, 2013a). Childcare provision and paid parental leave are two major reconciliation policies that in previous research have been linked to increased female labor force participation and employment, particularly in the Nordic countries (Ferrarini, 2006; Korpi, 2000). However, too long paid parental leave may have the opposite effect (Boeckmann et al., 2015; Jaumotte, 2003; Nieuwenhuis et al., 2012; Pettit & Hook, 2005).

Since the time period during which women in this study have used parental leave is limited to the second half of the 20th century and is characterized by family policies that support female labor force participation, it is likely that the benefits of expanding parental leave outweigh the possible reverse effects. With the exception of the Nordic countries, paid parental leave expanded mostly after 1990 (Engeman & Burman, 2022). In many long-standing OECD countries in the mid-2010s, the duration of paid parental leave varied between 0 in the United States and 73 weeks in Austria. Benefit rates varied between 36 percent of previous wages in Ireland and 100 percent in Austria, France, Germany, the Netherlands, Norway, and Switzerland (Nelson, Fredriksson, et al., 2020). For newly retired women, it can therefore be expected that an increased duration of paid parental leave improves economic independence (*hypothesis 4*). In the period studied here, parental leave was scarcely available to fathers, and take-up rates among fathers were very close to zero (Engeman, 2022). Even in the Nordic countries, which were pioneers in introducing fathers' rights to paid parental leave in the 1970s, fathers' use of leave only started to increase in the 1990s (Haataja, 2009). It is thus unlikely that paid parental leave is related to newly retired men's economic independence during the time period observed in this study. The association between paid parental leave and newly retired men's economic independence is therefore not examined.

Data and method

The study covers the period 1986–2018 and includes fifteen high-income countries that all have been uninterrupted democracies since World War II and have faced similar economic and demographic challenges under the observation period, thus rendering cross-national research meaningful: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Sweden, the United Kingdom, and the United States. Due to data availability, the period of observation begins in more recent years in some countries, including Australia (2004), Austria (1994), Finland (1995), France (1996), Ireland (1996), and the Netherlands (1990). For the same reason, the observation period stops in 2005 in Sweden. In total, 238 country-years are observed.

Data and sample

The income data that are used to calculate economic independence are from the Luxembourg Income Study (LIS) database. The LIS provides harmonized income data at the individual and household levels for a large number of countries, spanning up to five decades (LIS, 2021). It includes household and person-level data of labor income, social security, taxes and contributions, and

a host of other background variables. The LIS is therefore particularly well suited for research on economic independence over time and across countries. However, the exact years of observation in the database vary across countries, as do the number of waves included for each country. The country/year LIS files used in the empirical analyses are listed in the Annex, Table A1.

As the focus of this study is on the economic independence of new retirees, several restrictions are applied to the sample. Only individuals aged between 65 and 69 are included. The lower age bound reflects the age after which most individuals receive a pension benefit. Men's retirement age has remained stable at age 65 in most countries included in the analysis (Scruggs, 2022a).³ Women have the same retirement age as men in several countries, including Australia (since 2006), Belgium (since 2009), Canada, Denmark, Finland, France, Germany, Ireland, the Netherlands, Norway, Sweden, and the United States. The upper age bound is used to restrict the influence of other factors affecting old-age incomes, such as widowhood or pension indexation. In order to avoid including senior workers who are not yet fully retired, only individuals who declare being "not employed" are included in the sample. In addition, individuals whose labor income is greater than a third of total personal income are excluded. This sample restriction is used to avoid including individuals who receive partial retirement pensions before the legislated retirement age as well as individuals who continue working after the legislated retirement age.

Outcome variable

Bell et al. (2007) suggest that individual incomes at least should reach the level needed to ensure basic needs and allow individuals to support themselves. In this study, economic independence is operationalized relatively by relating individuals' disposable income to the equivalized disposable median household income in society. Relating individuals' income to equivalized household incomes allows to account for the fact that these individuals need to compete with the incomes of other households, including those with multiple incomes. Incomes are measured net of taxes and social security contributions, adjusted for economies of scale by dividing household incomes by the square root of the number of household members (or "LIS equivalence scale") using normalized person weight. Doing so allows to get results that are representative of the total individual population and to ensure that incomes are comparable across different types of households. The median household income is based on the full sample.

³ Exceptions are Denmark, where the retirement age was 67 until 2004, France (age 60), Italy, where men's retirement age was set at 60 until 1994 and increased progressively to reach 65 in 2001, and Norway (age 67). Men's retirement age increased progressively from 65 to 67 in Italy in the years 2011–2018, and from 65 to 66 in Ireland in 2014, in the Netherlands in the years 2013–2017 and in the United States in the years 2007–2010.

The threshold of median disposable income at which an individual reaches economic independence is essentially arbitrary. Whereas many cross-sectional studies on relative income poverty traditionally set the cut-off point at 50% of the median income, the European Union uses the 60% threshold as target indicator of being at risk of poverty (European Commission & Directorate General for Employment Social Affairs and Inclusion, 2021; OECD, 2019b). In this study, I follow European Union standards in measurements of economic well-being and define economic independence as the percentage of individuals whose disposable income is above 60% of the disposable median income. Sensitivity analyses are conducted using alternative thresholds of economic independence, as discussed further below. An important advantage of this measure is that it allows to assess how the respective income of newly retired women and men has changed. It does not, however, allow for the assessment of the overall level of economic well-being among the retired, as it does not account for other income components such as capital income or other types of transfers such as housing benefits.⁴

Individual level income data from LIS confront us with issues of comparability between gross and net incomes. At individual level, not all countries included in the LIS database report incomes both gross and net of taxes. In our sample of countries, data on income taxes at the individual level are missing for either a few years or the whole observation period in Austria, Belgium, France, Germany, Ireland, Italy, and the Netherlands. To analyze net individual incomes, I apply a so-called netting-down procedure using information on gross and net incomes in the LIS household level data, as suggested by existing literature (Ferrarini & Nelson, 2002; Nieuwenhuis et al., 2017). For each country in LIS with missing information on net individual incomes, the gross amounts are netted down by multiplying individual incomes with the same ratio of net to gross incomes observed for the household. Robustness checks are conducted in countries for which income tax data are available at both individual and household levels, including Australia, Canada, Denmark, Finland, Norway, Sweden, the United Kingdom, and the United States. The netting down procedure produces net disposable incomes at the individual level that differ only slightly from the “true” values observed in LIS for these particular countries.

Explanatory variables

Two variables are used to capture the design of pension systems: pension privatization and minimum level of pension benefits. The operationalization of pension privatization reflects the dynamic process of changes in pension provision involving both public and private pension provision. Pension

⁴ Capital income and public transfers, including housing benefits, are not available at the individual level in the LIS database.

privatization results from the introduction or expansion of private occupational pensions and voluntary personal pensions, as well as from declines in public pension provision that mechanically increase the relative share of private pension provision in retirement income packages. Following the literature (Been et al., 2017; Van Vliet et al., 2012), pension privatization is operationalized as the percentage of private pension expenditure in the total pension expenditure. The combined consequences of all the ways in which pension privatization occurs are thus accounted for. A higher percentage indicates a greater degree of pension privatization. Data are collected from the OECD Social Expenditure (SOCX) database (OECD, 2021a).

Using the percentage of private pension expenditure in total pension expenditure avoids problems related to the sensitivity of expenditure data to demographic and economic changes (Kangas & Palme, 2007). For instance, population aging or economic growth may increase the size of pension expenditure. However, since these developments are likely to affect both public and private pension expenditure in similar ways, the indicator is unaffected by these developments.

Following OECD classifications, the distinction between public and private pension expenditure depends on the institution controlling the financial flows (i.e. state or non-state bodies) (Adema & Fron, 2019). The OECD considers as private all pension expenditure that is not provided by the general government. Private pension expenditure in this study includes mandatory private pension expenditure, including benefits accruing from mandatory contributions to pension plans, and voluntary private pension expenditure, including voluntary tax-advantaged benefits such as individual retirement accounts and occupational pensions (Adema & Fron, 2019:13). Benefits accruing from individual insurance plans that are bought at market prices and that are not tax-advantaged (such as life insurance savings) are not included in the OECD data. Participation in private occupational plans was voluntary for employers in most countries in the late 2010s. Notable exceptions are Australia, Denmark, the Netherlands, Norway, Sweden, and Switzerland, where participation was mandatory or quasi-mandatory (OECD, 2019b).⁵

The distinction between mandatory and voluntary private pension expenditure is important, as the regulation of private pensions matters for pension outcomes (Bridgen & Meyer, 2007). In particular, encompassing occupational pensions (such as mandatory or quasi-mandatory occupational pensions) are sometimes considered to be functionally equivalent to public pensions due to high levels of labor force coverage (Pavolini & Seeleib-Kaiser, 2018). Thus, it is likely that mandatory private pensions are associated with lower levels of inequality and poverty in old age, at least compared to

⁵ Participation is considered as quasi-mandatory in Denmark, the Netherlands, and Sweden, where occupational pensions are based on collective agreements with a very high coverage rate (OECD, 2019b).

voluntary occupational pensions. Unfortunately, it is not possible to account for this distinction in this study. The categorization into mandatory or voluntary private pension expenditure varies somewhat over time in some countries in the OECD data; therefore, the sum of mandatory and voluntary expenditure is used in this study to ensure consistency in the measurement of pension privatization within countries.

Data for minimum pension benefits are from the Comparative Welfare Entitlements Project (CWEP) (Scruggs, 2022b). CWEP data are based on model family estimation techniques, which are often used in welfare state research to make policy indicators comparable across countries and over time (Bradshaw et al., 1993). Benefits are here calculated for stylized households based on national legislative frameworks. For old-age pensions, CWEP uses two model family types: a single person aged 65 and a couple where both spouses are aged 65. The breadwinner in each model family type is assumed to have incomplete contribution records, and thus fails to qualify for full pensions. For each model family, the minimum pension benefit is expressed as a percentage of the same model family where the breadwinner continues in employment and earns an average wage. In the welfare state literature, these indicators are usually referred to as replacement rates. In this study, the replacement rate of the minimum pension is the average of benefits for a single person and for a couple, reflecting the composition of the sample including both individuals living alone and individuals living with a partner. Only public benefits are considered in CWEP (Scruggs, 2022a).

Two variables are used to account for factors affecting contribution histories: the rate of employment and the duration of paid parental leave. In order to approximate the years when women and men were part of the working age population, employment rates are averaged over a period of twenty-five years preceding the observation year. Similarly, the duration of paid parental leave is an average of the years when women were aged 25 to 40, which roughly reflects the period of fertile ages. The employment rate is the number of employed persons 15–64 years old as percentage of the total number of individuals aged 15 to 64. The employment rates are measured separately for men and women. Data are from OECD labor market statistics and historical population statistics (OECD, 2022a, 2022c). Duration of paid parental leave refers to the number of weeks of post-delivery paid parental leave at a minimum of 20% of the national average wage. Data come from the Parental Leave Benefit dataset (PLB), provided as part of the Social Policy Indicators (SPIN) database (Nelson, Fredriksson, et al., 2020).⁶

Finally, existing research on economic hardship commonly controls for country-specific economic characteristics (Been et al., 2017; Kuitto, Madia, et al., 2021). Economic development is therefore used as a control variable

⁶ Although childcare provision is an important determinant of women's employment, its role cannot be tested within the framework of this study because of data availability.

and is measured as the real gross domestic product (GDP) per capita in millions of US dollars at constant 2011 prices (OECD, 2022b). Part-time or temporary work, work intensity, and unemployment are not included due to lack of data in many countries. Data are available in most countries only from the early 1990s, and can therefore not be used as a proxy of the working history of generations that entered retirement during the time period analyzed in this study. Table A2 in the Annex shows descriptive statistics for the outcome and explanatory variables and Table A3 in the Annex shows the changes in pension privatization, minimum pension benefits, male and female employment, and parental leave duration, from the mid-1980s to the late 2010s in the fifteen countries included in the analysis.

Analytical strategy

Time-series cross-sectional (TSCS) models are well suited for datasets including repeated observations on fixed units over a long period of time. In this study, the dataset includes 238 observations for a total of fifteen countries over three decades. Time-series cross-sectional data typically come with a number of issues that need to be dealt with (Beck & Katz, 1995). To account for spatial correlation, country fixed effects are used by introducing country dummies in the regression equation, thus allowing us to assess changes in economic independence within countries over time and to account for time-invariant unobserved heterogeneity. TSCS data come with issues of panel heteroskedasticity and contemporaneous correlations, which are addressed by using panel-corrected standard errors (Beck & Katz, 1995). Another problem relates to serial correlation in the dependent variable, where most of the effects are likely to be related to previous levels of economic independence. Correction for first-order correlation (AR1) is used to address this issue. To make it easier to interpret the results from the regression analyses, all independent variables are standardized to have a mean of 0 and a standard deviation of 1.

To account for the fact that the effect of paid parental leave is likely to work by increasing female employment rates, these two variables are introduced stepwise in the models.

Results

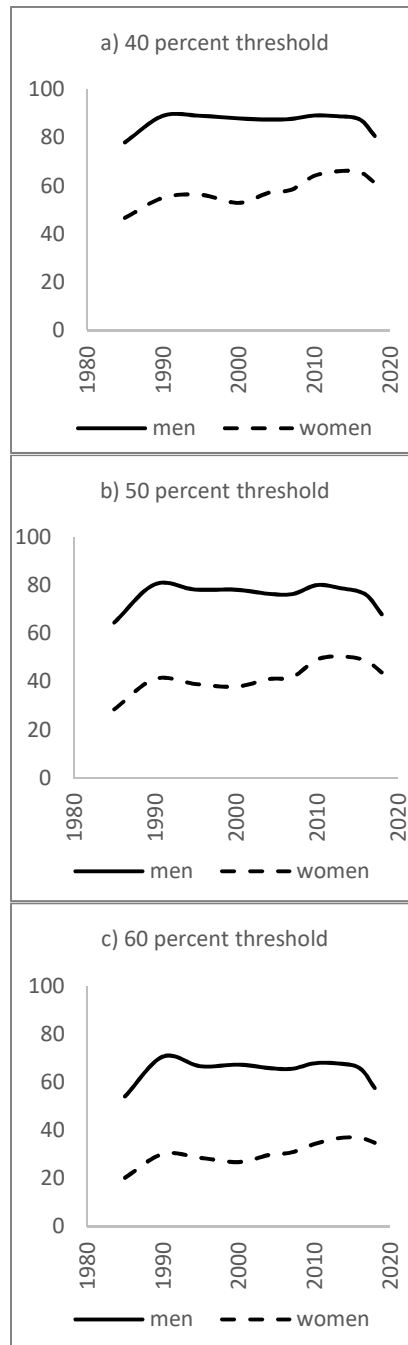
Descriptive analysis

The descriptive analysis focuses on trends in the economic independence of newly retired women and men. After presenting average trends in economic

independence in fifteen OECD countries over the whole period of observation (1986–2018), I focus on country-specific trends.

Figure 1 shows the percentage of economically independent individuals aged 65–69 as an average of the fifteen OECD countries included in the study. The percentages are reported for men and women separately, and for different income thresholds (40%, 50%, and 60% of median income). The period of analysis is 1986–2018. The patterns of economic independence are similar at all three thresholds and show that, on average, the percentage of newly retired women reaching economic independence has increased in recent decades. At the 60 percent threshold, the percentage of newly retired women reaching economic independence increased from around 20 percent in the mid-1980s to around 35 percent in the late 2010s. However, economic independence among newly retired women has been lower than among men over the whole period considered.

Figure 1. Economic independence of newly retired women and men, averages of 15 OECD countries, 1985–2018. (a) 40 percent threshold, (b) 50 percent threshold, (c) 60 percent threshold.

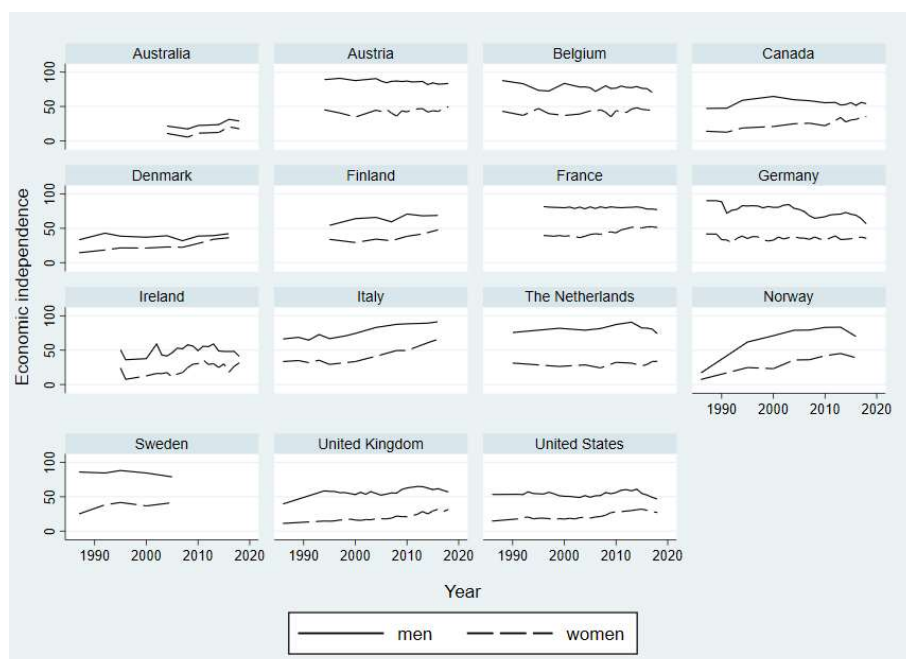


Source: LIS (LIS, 2021), own calculations

By contrast, the percentage of newly retired men reaching economic independence increased on average only by 3.5 percentage points at the 60 percent threshold. This small increase is mostly due to a spike in the late 1980s. The percentage of newly retired men reaching economic independence decreased slightly throughout the 1990s and 2010s and more sharply towards the end of the observation period. Thus, economic independence among newly retired women and men has overall converged in recent decades.

Averages conceal differences between individual countries, of course, which is highlighted in Figure 2 showing the trends of women's and men's economic independence at the 60 percent income threshold over the years 1985–2018 for each country separately. In most countries, trends in economic independence among newly retired women resemble the cross-national patterns described above, although the size of the increase in economic independence varies across countries. The largest increases, at above 20 percentage points, are observed in Canada, Denmark, Finland, Italy, Norway, and the United Kingdom, whereas smaller increases below 5 percentage points are observed in Austria, Belgium, and the Netherlands. Only in Germany has the percentage of newly retired women reaching economic independence decreased.

Figure 2. Trends in economic independence of newly retired older men and women (60 percent threshold) in 15 OECD countries, 1985–2018.



Note: The first year of observation varies in a few countries because of data availability (Australia: 2004; Austria: 1995; Finland: 1995; France: 1996; Ireland: 1995). The last year of observation in Sweden is 2005. Source: LIS (LIS, 2021), own calculations.

Changes in the percentage of newly retired men reaching economic independence are in general of a smaller magnitude, compared to changes in women's economic independence. Important cross-country variations in the trends of men reaching economic independence are, however, visible during the observation period. This percentage increased in about half of the countries considered here, whereas it decreased in the other half. Most increases range between 7 and 17 percentage points, as in Australia, Canada, Denmark, and the United Kingdom. The increase is particularly sharp in Finland, Italy, and Norway, which in all likelihood reflects the maturation of national pension systems and the effective combination of minimum pensions and statutory earnings-related pensions. Quite strikingly, Figure 2 reveals that the percentage of men reaching economic independence actually declined in many countries, including Austria, Belgium, France, Germany, Ireland, the Netherlands, Sweden, and the United States.⁷

⁷ The substantial increase observed in Norway might also partly be related to extremely low levels of economic independence in the first year of observation. The trend nonetheless remains the same even when considering a shorter time period, as observed in Figure 2.

Next, a series of regression analyses are performed to assess the determinants of these changes in economic independence for newly retired women and men.

Regression analyses

Results from time-series cross-sectional analyses assessing determinants of the trends in economic independence are presented separately for newly retired women (Table 1) and men (Table 2). The analyses are conducted in successive steps. First, the role of contemporary determinants (pension privatization and minimum pensions) is tested; then, the role of historical determinants (employment rate and duration of parental leave) is tested; finally, both sets of determinants are tested together.

I begin by reporting the results for women, in Table 1. Increases in pension privatization and minimum pensions are associated with increases in the economic independence of newly retired women when no other determinants are included (model 1). However, once female employment and duration of paid parental leave are added (model 4), the association between pension privatization and economic independence disappears (becomes statistically non-significant). No empirical support is thus found for hypothesis 1a where I expected pension privatization to be negatively associated with the economic independence of newly retired women. Minimum pensions retain their positive association also in these more saturated regression models; thus, hypothesis 2a cannot be falsified.

Increases in female employment and in the duration of paid parental leave both tend to increase the economic independence of newly retired women, irrespective of whether other determinants are included (models 5 and 6) or not (models 2 to 4). Thus, both hypotheses 3a and 4 are supported by the regression analyses. It should be noted that the coefficient of paid parental leave becomes smaller once female employment is included (i.e. comparing regression models 2 and 4), which suggests that female employment explains part of the effect of paid parental leave. However, as the effect of paid parental leave is supposed to work by increasing female employment, the fact that it remains statistically significant also when female employment is included suggests that it also works in other ways than by increasing female employment; for instance, by increasing wages or hours spent in employment. None of these findings are affected by the inclusion of GDP per capita in model 6.

Table 1. Country fixed effect regressions of economic independence among newly retired women on various determinants.

	(1)	(2)	(3)	(4)	(5)	(6)
Pension	4.664*				-2.236	-2.255
privatization	(2.076)				(1.954)	(1.949)
Minimum	7.366***				3.783**	3.697**
pensions	(1.580)				(1.176)	(1.176)
Duration of paid		6.187***		4.474***	4.554***	4.567***
parental leave		(0.454)		(0.359)	(0.354)	(0.344)
Female			8.028***	5.294***	4.917***	5.852***
employment			(0.850)	(0.840)	(0.890)	(1.552)
rate						
GDP per capita						-0.978
						(1.479)
Observations	238	238	238	238	238	238
R-squared	0.772	0.834	0.825	0.865	0.876	0.876

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Independent variables are standardized.

All models include country dummies (not shown), panel-corrected standard errors, and AR1 correction.

For newly retired men, the results are essentially the same as for newly retired women when it comes to private pension expenditures and minimum pensions. Changes in private pension expenditures are unrelated to the economic independence of newly retired men, while the coefficients associated with minimum pensions are both positive and statistically significant in all regression models. Thus, empirical support is found for both hypotheses 1b and 2b.

For the employment-related variables, the results are somewhat different for newly retired men than for newly retired women. As expected according to hypothesis 3b, changes in employment are of less importance for men, as the associated coefficient does not reach statistical significance in any of the regression models.

Table 2. Country fixed effect regressions of economic independence among newly retired men on various determinants.

	(1)	(2)	(3)	(4)
Pension privatization	3.057 (2.025)		2.497 (1.950)	1.778 (2.505)
Minimum pensions	7.607** (2.571)		7.363** (2.454)	7.061** (2.394)
Male employment rate		-2.227 (1.400)	-2.041 (1.365)	-1.501 (1.595)
GDP per capita				0.889 (1.661)
Observations	238	238	238	238
R-squared	0.921	0.903	0.921	0.922

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Independent variables are standardized.

All models include country dummies (not shown), panel-corrected standard errors, and AR1 correction.

Sensitivity analyses

Several alternative specifications were used to evaluate the sensitivity of the measure of economic independence to the chosen income threshold. Regressions were performed using alternative thresholds of 40 and 50 percent of median disposable income (see Tables A4 and A5 in the Annex). The results are consistent and do not differ from the analyses presented above. A notable exception is duration of paid parental leave, for which the associated coefficient becomes statistically insignificant at the 40% threshold.

Further sensitivity checks were conducted using employment rates, lagged twenty years as a proxy of the employment rate of women and men in their late forties, and using paid parental leave, lagged thirty years as a proxy of the family policy that was in place when the women were in their late 30s. These analyses (not shown) yielded similar results to those presented above.

To check for influential cases at the country level, I iteratively excluded one country at the time from the regressions. In general, the main findings described above are not altered. Finally, I conducted jackknife sensitivity analyses that yielded fairly similar results (not shown).

Discussion

This study presented trends in the economic independence of newly retired women and men. The data covered fifteen high-income OECD countries over the period 1986–2018. Time-series cross-sectional regression analyses of these trends were conducted to assess the role of two sets of determinants,

which reflect changes in institutional characteristics of pension systems and changes in employment histories of successive generations of women and men. The study contributes to existing research in two ways. First, it provides an assessment of how the economic independence of newly retired women and men changed over several decades. Second, it distinguishes and assesses the respective role of changes in pension design and employment history in trends in economic independence.

Although newly retired women and men are on average more economically independent than previous generations, the extent to which their economic situation changed over time differs greatly across countries, especially among men. Three main findings are highlighted by the descriptive analysis, which are mostly in line with existing research exploring the poverty trends of single elderly women and men (Doctrinal & Nieuwenhuis, 2019). First, the percentage of newly retired women reaching economic independence increased substantially over time in almost all countries considered here. This indicates that, overall, women entering retirement in most recent years have become more economically independent compared to previous generations.

Second, the small average increase in the economic independence of newly retired men observed in recent decades conceals important cross-country variations, including substantial decreases in economic independence in half of the countries considered here. This indicates that, in many countries, fewer men entering retirement in most recent years are economically independent compared to previous generations, which raises concerns with regard to the adequacy of their pension income.

Third, the increase in the percentage of women who are economically independent in their early retirement years should not conceal that this percentage on average remained lower than that of men over the period 1986–2018. The percentage of women reaching economic independence in their early retirement years has on average remained just above 30 percent, whereas the proportion of men who are economically independent has on average remained above 60 percent. This likely reflects remaining gender differences in the labor market and throughout the working life, such as shorter and more interrupted careers as well as women's overrepresentation in part-time work, which are likely to result in lower pension income for women upon retirement (Arza, 2015; Behrendt & Woodall, 2015).

The regression analyses also revealed interesting findings. Contrary to expectations, there is no evidence that greater pension privatization threatens the economic independence of recent generations of women entering retirement, compared to previous generations. A similar result is found regarding men's economic independence, which confirms expectations. How pension privatization has developed within countries therefore does not seem to be associated with how the economic independence of successive generations of women and men entering retirement has changed over time. Trends in economic independence of newly retired women and men instead

seem to be related to greater levels of minimum public pensions. Finally, increasing levels of employment and longer paid parental leave are associated with greater economic independence for recent generations of women entering retirement, compared to previous generations. In contrast, trends in men's employment over time did not affect the economic independence of successive generations of men entering retirement. This might be related to the fact that men's employment rates overall already were fairly high in the countries considered here.

A possible interpretation of these findings is that the employment histories of women on average became more similar to those of men, and that the substantial increase in women's employment makes the source of earnings-related pension provision (i.e. public or private) somewhat less relevant for ensuring the adequacy of pension income. What matters most for economic independence in the early retirement years seems to a large extent to relate to past employment history and minimum public pensions, as hypothesized by previous literature (Ebbinghaus, 2021; Hinrichs, 2021; Kuitto, Kuivalainen, et al., 2021). One should, however, not hasten to conclude that greater pension privatization does not challenge the social sustainability of pension systems. Another possible explanation for the lack of relationship between changes in pension privatization and economic independence could be related to the increase of pension privatization remaining too small to actually matter, thus reflecting how pension systems still are maturing, so that the effect of pension privatization could not (yet) be fully accounted for.

The study provides important insights that may guide future research. The results highlighted distinct trends in the economic independence of newly retired women and men that make it all the more important to disentangle economic independence by gender in future research. The results also show the need to change our lenses when analyzing economic independence and income poverty in old age and to avoid focusing solely on women's economic well-being. When focusing solely on women, research tends to conceal that women's economic independence has improved in recent decades in most countries, whereas men's economic independence has worsened in many countries. Further research is needed to assess whether this worsening will persist in the coming years and to further explore its determinants.

The study has some limitations, which also suggest directions for future research. The first limitation relates to the risk of committing an ecological fallacy when interpreting the results, i.e. drawing person-level conclusions based on country-level correlations. The design of the study correlates the average working history of a cohort with their average level of economic independence. Thus, the results potentially also include situations where people who were not working and belonged to cohorts with higher employment rates achieved economic independence. It should therefore not be assumed that the correlation between working history and economic independence would be the same for any particular men or women in their

early retirement years. The results of this study should therefore not be considered as informative about the person-level association between trends in employment and economic independence. Another limitation relates to the fact that the data available at the individual level in the LIS database do not include important income components affecting economic well-being in old age, such as capital income. Thus, the levels of economic independence might be underestimated. This should not, however, affect the findings of this study. As capital income is more likely to be concentrated among individuals at the top of the income distribution (OECD, 2013b), it is less likely that individuals who are not economically independent would be lifted above the threshold of economic independence by including capital income.

The results show also that female employment only partially mediates the effect of paid parental leave duration, which suggests that the latter may work in other ways than only increasing the female employment rate, such as increasing wages or hours in employment. It was, however, not possible within the framework of this study to account for more detailed patterns of women's employment and to assess to what extent changes in work intensity or in wages account for changes in economic independence in retirement. Future research using micro-level data could fruitfully explore further how trends in individuals' employment histories across cohorts correlate with trends in economic position in old age, which would thus expand on studies that have explored this association at one point in time (Möhring, 2015, 2018).

The findings of this study have important policy implications. First, the empirical analyses highlighted that changes in women's employment history as well as paid parental leave duration matter for the economic independence of recent generations of women entering retirement. Thus, in line with previous research, work–family reconciliation policies that favor women's employment seem especially relevant to ensure economic independence in the early years of retirement. This suggests that policies addressing economic well-being and gender inequality in old age may need to consider the growing interplay of pension policy with labor-market policy rather than discussing one or the other independently of each other. Second, policies that address gender inequalities in old age need to account for country-specific gendered patterns in economic independence, as the convergence in women's and men's economic independence results from various combinations of economic independence among women and men. This highlights the need for policy makers to avoid replicating other countries' policies without knowledge of their national context, as they may prove irrelevant for the old age gender inequality issues in their own country. Third, even though the percentage of newly retired women reaching economic independence has increased in recent decades, it largely remains below that of men. Thus, policy makers may want to shift focus from policies favoring women's employment to policies addressing gender inequalities in wages, occupational segregation, or work intensity.

Finally, there are two main concerns that suggest that the positive trend in women's economic independence may slow down or even reverse in future decades, unless further efforts are engaged. First, one important determinant of women's economic independence may reach its limits, as the rise in women's employment rates may slow down and come to a halt in the coming years, as already observed in the United States in the most recent decades (England et al., 2020). This is all the more worrying since the proportion of women reaching economic independence in the late 2010s remained below 50% in almost all countries considered here. Second, the study unveils worrying patterns regarding newly retired men's economic well-being, which already might reflect worsened employment histories of men in recent generations. This confirms the existing concerns regarding the future economic adequacy of pension benefits and highlights the necessity for policy makers to further monitor and address these issues. These developments also underscore the role that redistributive pension schemes will play in the future to ensure an adequate safety net not only for women but also for men.

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Annex

Table A1. List of countries and years included in the empirical analyses.

Country	Years
Australia	2004; 2008; 2010; 2014; 2016; 2018
Austria	1994; 1997; 2000; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018
Belgium	1988; 1992; 1995; 1997; 2000; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017
Canada	1987; 1991; 1994; 2000; 2004; 2007; 2010; 2012; 2013; 2014; 2015; 2016; 2017; 2018
Denmark	1987; 1992; 1995; 2000; 2004; 2007; 2010; 2013; 2016
Finland	1995; 2000; 2004; 2007; 2010; 2013; 2016
France	1996; 1997; 1998; 1999; 2000; 2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018
Germany	1987; 1989; 1990; 1991; 1992; 1993; 1994; 1995; 1996; 1997; 1998; 1999; 2000; 2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018
Ireland	1995; 1996; 2000; 2002; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018
Italy	1986; 1989; 1991; 1993; 1995; 1998; 2000; 2004; 2008; 2010; 2014; 2016
The Netherlands	1990; 1999; 2004; 2007; 2010; 2013; 2015; 2016; 2017; 2018
Norway	1986; 1995; 2000; 2004; 2007; 2010; 2013; 2016
Sweden	1987; 1992; 1995; 2000; 2005
United Kingdom	1986; 1994; 1995; 1996; 1997; 1998; 1999; 2000; 2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018
United States	1986; 1991; 1992; 1993; 1994; 1995; 1996; 1997; 1998; 1999; 2000; 2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018

Table A2. Descriptive statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
Economic independence of men	238	66.19	16.48	16.90	91.40
Economic independence of women	238	31.59	11.16	5.48	65.80
Pension privatization	238	21.04	17.12	1.05	53.24
Minimum public pensions	238	42.42	10.51	20	71.50
Average female employment rate	238	54.91	8.99	33.56	72.90
Average male employment rate	238	75.49	4.67	66.16	86.28
Average duration of paid parental leave	238	7.11	5.05	0	30.26
GDP per capita	238	42069.91	9312.34	24301.13	75626.89

Table A3. Pension privatization, minimum public pensions, male and female employment rates and paid parental leave in fifteen OECD countries around 1986 and 2018.

	Pension privatization (%)			Female employment rate (average, in %)			Male employment rate (average, in %)			Minimum public pensions (repl. rate)			Paid parental leave duration (average)		
	1986	2018	change	1986	2018	change	1986	2018	change	1986	2018	change	1986	2018	change
Australia	25.4	50.3	24.9	54.6	63.6	9.0	78.8	78.8	0.0	37.5	42.0	4.5	0.0	0.0	0.0
Austria	3.0	5.0	1.9	49.4	62.2	12.8	79.8	76.6	-3.2	50.5	51.5	1.0	6.0	8.0	2.0
Belgium	4.2	8.5	4.2	39.2	52.0	12.8	76.2	66.9	-9.3	41.5	48.0	6.5	6.0	8.0	2.0
Canada	32.6	52.9	20.4	44.2	66.1	21.9	78.1	75.2	-2.9	50.0	47.5	-2.5	0.0	15.0	15.0
Denmark	16.9	20.5	3.7	60.1	70.7	10.5	84.9	79.8	-5.1	52.5	51.0	-1.5	3.9	11.6	7.7
Finland	3.0	1.3	-1.7	65.3	66.2	0.9	74.4	69.7	-4.7	46.0	45.5	-0.5	1.9	30.3	28.4
France	1.0	1.8	0.7	49.4	56.5	7.1	73.2	66.2	-7.0	49.5	50.5	1.0	8.0	9.5	1.5
Germany	5.4	6.9	1.5	48.0	61.9	13.9	84.5	74.7	-9.8	23.5	21.0	-2.5	6.0	6.0	0.0
Ireland	18.1	19.8	1.7	34.1	53.1	19.0	77.5	72.8	-4.7	40.0	50.0	10.0	5.1	8.9	3.9
Italy	7.4	6.5	-0.8	33.6	42.0	8.5	78.8	69.3	-9.5	43.5	37.5	-6.0	5.9	28.9	23.0
The Netherlands	25.6	43.4	17.7	34.9	62.5	27.6	71.5	79.4	7.9	52.5	57.0	4.5	6.0	6.0	0.0
Norway	6.5	10.1	3.5	49.9	72.4	22.5	84.5	79.0	-5.5	48.5	70.5	22.0	6.8	16.6	9.8
Sweden	12.7	16.3	3.7	65.3	72.9	7.6	86.3	79.2	-7.1	57.5	45.0	-12.5	18.0	27.1	9.1
United Kingdom	34.7	46.7	12.0	51.6	65.2	13.6	85.8	77.2	-8.6	36.5	43.0	6.5	7.0	9.3	2.3
United States	29.0	43.5	14.5	49.1	65.7	16.6	78.4	76.1	-2.4	40.0	32.5	-7.5	0.0	0.0	0.0
<i>Average</i>	<i>15.0</i>	<i>22.2</i>	<i>7.2</i>	<i>48.6</i>	<i>62.2</i>	<i>13.6</i>	<i>79.5</i>	<i>74.7</i>	<i>-4.8</i>	<i>44.6</i>	<i>46.2</i>	<i>1.5</i>	<i>5.4</i>	<i>12.3</i>	<i>7.0</i>

Source: OECD Social Expenditure database (OECD, 2021a); CWEP (Scruggs, 2022b); OECD databases on labor market statistics and on historical population data (OECD, 2022a, 2022c); PLB (Nelson, Fredriksson, et al., 2020).

Table A4. Determinants of economic independence among newly retired women at 50 and 40 percent threshold of economic independence.

	(1)	(2)	(3)	(4)	(5)	(6)
	50 percent threshold	50 percent threshold	50 percent threshold	40 percent threshold	40 percent threshold	40 percent threshold
Pension privatization	2.708 (3.290)		-6.264 (3.856)	1.456 (4.145)		-8.105 (5.491)
Minimum pensions	10.87*** (2.318)		6.204*** (1.880)	14.53*** (3.045)		9.807*** (2.682)
Female employment rate		7.336*** (1.576)	8.880** (2.859)		9.693*** (1.948)	10.10** (3.781)
Duration of paid parental leave		4.076*** (0.536)	4.122*** (0.548)		1.022 (0.711)	1.130 (0.746)
GDP per capita			-1.601 (2.686)			-0.743 (3.528)
Observations	238	238	238	238	238	238
R-squared	0.803	0.843	0.863	0.867	0.869	0.889

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Independent variables are standardized.

All models include country dummies (not shown), panel-corrected standard errors, and AR1 correction.

Table A5. Determinants of economic independence among newly retired men at 50 and 40 percent threshold of economic independence.

	(1)	(2)	(3)	(4)	(5)	(6)
	50 percent threshold	50 percent threshold	50 percent threshold	40 percent threshold	40 percent threshold	40 percent threshold
Pension privatization	-0.0774 (1.016)		-0.818 (1.251)	0.338 (0.801)		-1.007 (0.954)
Minimum pensions	3.268* (1.526)		2.992* (1.433)	2.871* (1.354)		2.452* (1.219)
Male employment rate		-0.312 (0.430)	0.180 (0.569)		-0.510 (0.343)	0.279 (0.489)
GDP per capita			0.786 (0.818)			1.374 (0.721)
Observations	243	243	243	243	243	243
R-squared	0.987	0.984	0.986	0.991	0.986	0.993

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Independent variables are standardized.

All models include country dummies (not shown), panel-corrected standard errors, and AR1 correction.

