# Population Ageing and Distributive Conflicts: Age Distributive Divisions in Western Europe

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*Advanced industrial societies are facing pressures to spend more on pensions and services for the elderly, at the same time as they need to invest more in the raising participation of younger population in the labour force and the integration of immigrants needed to replenish the ageing labour force. This sets the stage for distributive conflicts between groups favouring different types of welfare spending. The paper argues that the strength and the nature of distributive conflicts depend to a large extent on the spending focus of the welfare system, the type of the pension system and the importance of the family within the welfare system. While in countries with occupation-based pension systems and welfare systems with spending tilted toward the elderly we can expect to observe the strong presence of age based divisions, in countries with universalist pension systems and welfare systems with more balanced spending patterns we can expect age to have much smaller effects. The paper tests these propositions using the Eurobarometer data. The findings support the proposition concerning the importance of age based distributive divisions and their variation across national contexts. This variation seems to be linked with the spending focus of the welfare state, but in a way that is not in accordance with our expectations.*

**Key words:** pension system, pension reform, distributive divisions, population ageing, attitudes toward pension systems, social spending focus.

## INTRODUCTION

Population ageing is one of the trends that have defined the development of advanced industrialized societies for already more than half a century. Not only is it increasing the ratio of the dependent to active population in the labour force, thus putting pensions systems of advanced industrialized countries under a great strain, but it is also causing an increase in the costs of health and elderly care services needed to accommodate growing demands of ageing population. At the same time, advanced industrialized societies face the demands to maintain sufficient levels of spending on child care and education in order to support the demographic reproduction (Esping Anderson 2005b), do more to increase labour force participation among women and the younger population, and deal with the consequences of declining industrial

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employment (see Iversen 2001). As population ageing is likely to be followed with an increased demand for immigrant labour, these societies will also face pressure to allocate more resources to policies aimed at immigrant integration.

All these developments lead to a significant pressure on contemporary welfare states at a time when they are operating under circumstances Paul Pierson (2001) calls "the conditions of permanent austerity". Due to serious financial constraints, it is to be expected that modern welfare states will not be able to answer all the additional demands placed upon them and at the same time keep current levels of social benefits (Castles 2004). Therefore, we could expect to see the emergence of a redistributive conflict between social groups that differ in their consumption of social services and dependency on income transfers. In the light of demographic trends, current spending patterns and reform measures, age is likely to feature prominently among the distributive divisions in mature welfare states.

On the one hand, the emergence of age-based distributive divisions is likely to be linked to the changes in distributive outcomes of pension systems, and, on the other, to the magnitude of welfare state spending bias toward the elderly. As previous research demonstrated, increase in pension spending over the last half a century is not exclusively related to population ageing (see Castles 2004). According to Castles, the largest impact on the increase in overall pension spending is more due to steady increases in benefit levels over the last several decades than to population ageing itself. This makes the current level of benefits the obvious target for reform.

Since in most western societies extended families do not play an economic and social role they once did, the capacity of family ties to provide a glue of solidarity between generations is likely to weaken

significantly. The fact that current systems of pension and social security were introduced a generation or two ago and are now in a process of reform, means that the experiences (or expectations) related to a particular form of social security system and its redistributive effects are likely to differ between generations. Current members of old and young age cohorts are likely to face different and less generous pension systems when they retire. Therefore, their preferences for intergenerational redistribution could end up being very different. We could also expect to see stronger demands of the younger segments of population for more social spending on services and transfers oriented toward younger population.

This paper investigates whether we can observe the differences in spending preferences based on age, which could provide a foundation for conflicts over distribution of spending in advanced industrial societies. The analysis of preferences for spending on a number of specific social policies (education, health, pensions), conducted by Kitschelt and Rehm (2004), did not find systematic differences in preferences between younger and older segments of the population. However, our ability to observe the existence of distributive divisions is highly dependent on the measure of distributive preferences we use. Kitschelt and Rehm used a dependent variable that measures preferences for lower or higher spending for various social programs. Here I use a dependent variable that measures respondent preferences when faced with a trade-off between pension and other types of social spending. As the development of particular national patterns of age-based distributive divisions is expected to be highly dependent on the characteristics of national welfare systems, the importance of age as the source of distributive divisions is very likely to vary across national contexts.

To answer these questions, on individual level I use survey data from Eurobarometer

56.1 (2001). This survey is purposefully designed for the collection of data about the attitudes toward pension systems, pension reforms and social inequality. The analysis includes nine countries (Germany, Italy, France, the Netherlands, Sweden, Austria, Greece, Denmark and Spain).

I proceed by outlining some important aspects of national welfare and pension systems and their distributive effects. This part is followed by hypotheses outlining the impact of individual level variables in different national contexts. Finally, these propositions are tested with statistical analysis using Eurobarometer data.

## NATIONAL WELFARE SYSTEMS AND DISTRIBUTIVE DIVISIONS

### Welfare system spending bias and distributive divisions

The spending focus of welfare systems of advanced capitalist countries is highly dependent on the nature and the size of different welfare programs (Lynch 2001). It is a well-known fact that welfare programs of countries such as Germany, Austria or Italy, have spending programs heavily biased toward the elderly. This spending bias is mostly due to high spending on generous occupational public pension schemes and underdevelopment of services aimed at younger segments of the population. On the other hand, countries such as Sweden, the Netherlands, France and Denmark, are characterized by generous spending on service provision and transfers directed towards younger segments of the population, producing a welfare system with only with marginal, if any, age bias (Esping Anderson 1999, Lynch 2001, 2006).

It can be expected that intergenerational distributive conflicts will be stronger in the countries that have visible spending bias toward the elderly. As the sustainability of current spending levels is coming under scrutiny, reform moves in these countries are directed - albeit in some of them still only marginally - at reducing the current level of entitlements and benefits (see Scruggs and Allen 2004, Huber and Stephens 2001 for an overview of general trends and Galasso 2006 and Schludi 2005 for the effects of pension reforms). At the same time, these countries are faced with demands to divert more resources to child care, especially in pre-school segment, as well as to provide for other services that would free women from their current caring duties and allow them to participate fully in the labour market (Castles 2003). This is likely to become a pressing concern quite soon, as recent research on variation in fertility patterns suggests that visibly lower fertility rates in those countries are mainly due to the lack of suitable child care and flexible work arrangements for working parents (Castles 2003).

It is therefore logical to expect that in those countries we will see very different spending preferences of older and younger population. This does not necessarily mean that we will observe a development of full distributional cleavage based on age in the foreseeable future. This will in part depend on the direction of future reforms and the willingness of political actors to politicise differences in spending preferences based on age. However, it is likely that we will be able to observe significantly different patterns of attitudes toward social spending between older and younger segments of the population.

The logic just described can be somewhat different in countries where familial links are strong and important in social and economic sense. In countries such as Italy, Greece or Spain, large number younger people are dependent on their families for housing provision and income, as high levels of social protection awarded to older workers and retirees are also used for sup-

porting younger unemployed workers and those employed in precarious jobs (see Esping Anderson 1999). Yet on the other hand, social policies of those countries are least favourable for the younger segments of the population. In Italy, to take just one example, unemployment benefits are designed to protect insider industrial workers with stable employment (Esping Anderson 1999). Social services supporting participation of younger workers in the labour market are undeveloped, and the structure of labour, housing and credit markets make young people highly dependent on resources provided by their parents or relatives (Castles 2004). In Spain, Greece and Italy, pension systems are still heavily biased toward male industrial workers and early retirement was highly prevalent in 1980s and 1990s. In such a context, the impact of intergenerational distributive divisions is likely to be muted by the dependence of younger seg-ments of the population on benefits awarded to their older parents and relatives. The magnitude of this dependence is reflected in significantly higher rates of co-residence of adult children with their parents in countries of Southern Europe[2] (Hank 2005). As the figure 1 shows, the magnitude of welfare system spending bias toward the elderly is very strongly correlated with the rate of co-residence of adult children with their parents.

Spending bias of the welfare system shown in figure 1 is measured with elderly non-elderly spending ratio. This ratio measures relative share of spending on programs for the elderly over spending of programs for the non-elderly. The measure includes all types of direct social transfers (pensions, unemployment and sickness benefits, child and family allowances, social assistance) and spending on health and education (Lynch 2001).

Figure 1.

*Relationship between welfare system spending focus and the importance of family as provider of social security*



$y = 28.242x - 13.681$
$R^2 = 0.8415$

(y-axis) % of Adult Children Living With Parents

(x-axis) Elderly Spending Focus

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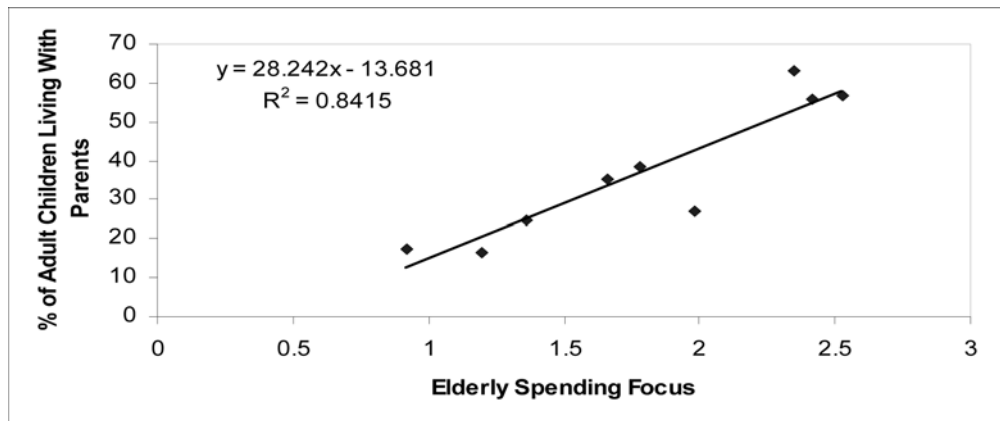
[2] Percentage of adult children co-residing with their parents ranges from 63% in Italy, 57% in Greece, 56% in Spain at the higher end of the range to 38% in Austria, 35% in Germany, 27% in France and 25% in the Netherlands in the middle to 18% in Sweden and 17% in Denmark at lower end of the range (Source: Hank 2005).

[3] Alternatively, we could also argue that younger segments of the population, instead of being focused on maintaining their parents' social benefits would strongly prefer increased spending on programs focused on their age group, even if faced with distributive trade-off. But given that in the existing system actors are well informed about the distributive effects and have a system of expectations and obligation in place which is not limited to solely to pure transfer of money and property, I find the logic stated in the text to be more likely.

Given the fact that the elderly spending focus and the importance of family in the welfare system are so strongly correlated, we could expect that the effect of welfare system spending bias on spending preferences would be somewhat reduced[3].

Since we can reasonably expect these two variables to pull in different directions, they might in the end cancel each other out reducing the effect of age close to zero. However, identifying whether this is the case is not a particular problem, since in countries with elderly spending bias and weaker familial links the effect of age should be in accordance with the expectations stated.

In countries where welfare system is characterized by small or weak spending bias, the distributive divisions based on age

effect of age based differences in spending preferences is expected to be small.

To illustrate the distributive differences between systems with different spending focus, we can take a look at the data describing the link between welfare regime spending focus and distributive consequences, in this case poverty, for different population segments. The argument advanced here is that these distributive results, through their social consequences, affect preferences of different age groups concerning the allocation of public spending. As correlation coefficients in table 1 show, poverty rates among younger segments of the population are significantly lower in welfare systems with balanced spending focus than in systems that are visibly biased toward the elderly.

Table 1.
*Correlation coefficients between Elderly Spending Focus and measures of poverty among different social groups*

|  | Poverty Rate -Working Age Population | Poverty Rate -Single Mothers | Poverty Rate -Children | Poverty Rate - Elderly |
|---|---|---|---|---|
| Elderly Spending Focus | 0.743 (0.000) | 0.601 (0.002) | 0.720 (0.000) | 0.312 (0.121) |
| Correlation coefficients after outliers are removed | | | | |
| Elderly Spending Focus | 0.491 (0.020) | 0.459 (0.032) | 0.377 (0.084) | 0.071 (0.740) |

Coefficients are computed for 11 countries using data from two time points indicating average values of variables for 1980s and 1990s. N=24, after removal of outliers (two time points for US) N= 22. Values in parentheses denote statistical significance of correlation coefficients. Source of poverty data Huber and Stephens (2004), source of elderly spending focus Lynch (2001).

are likely to be less prominent compared to the divisions based on the exposure to labour market risk, socio-economic status or sector of employment. This does not imply that these countries will not experience politically potent competition for resources between social spending programs. However, in countries where spending trade-off is less likely and where elderly are not visibly better-off than younger segments of the population in terms of public spending, the

We can see that poverty is generally higher in countries with spending bias toward the elderly. This can be accounted for by the fact that liberal welfare systems, which generally have higher poverty rates, have systems featuring universal pension's schemes and very limited programs oriented toward the younger segments of the population. This makes their spending ratio highly biased toward the elderly. However, correlation coefficients between measures

of elderly spending bias and poverty rates among children, single mothers and working age population are twice the size of correlation coefficients between the measures of elderly spending bias and poverty rate among the elderly. Removing the US as an outlier from the calculation of correlation coefficients reduces the size of all coefficients visibly, and the correlation between old age poverty and elderly spending bias becomes insignificantly small. However, the finding that the elderly spending bias is strongly correlated with poverty among children, single mothers and working-age population remains.

The differences in poverty rates are just a manifestation of the effects of a number of policy measures that affect distributive outcomes. Looking at spending on child care, family spending, enrolment in child care for children under three, maternity spending per birth and long term unemployment rates for youth, to take just a number of indicators affecting the measures of elderly spending bias (see table 2), it is visible that younger segments of the population are visibly better off in terms of social policy measures in countries that do not exhibit elderly spending bias (Sweden, Denmark, Netherlands, France), than in those that do (Greece, Spain, Italy, Austria, Germany).

It is the strength of these differences among countries that I expect to condition the strength of distributive divisions based on age as, at the end of the day, these differences have effects on the distributive outcomes and lives of citizens.

**Pension system and distributive divisions**

The impact of pension systems on distributive divisions based on age depends on the level of discontinuity in distributive outcomes between generations produced by pension reforms. The effect is conditional on two factors. The first is the actual size of difference in distributive effects between younger and older generations as a consequence of pension reform. The second factor is the ability of interest groups to mobilize collective action and make the actual or perceived effects of reform more visible to affected social groups.

To facilitate the sustainability of pensions systems, most reform packages proposed in advanced industrialized societies comprise some combination of benefit cuts, increases in retirement age, increases in duration of contribution needed to qualify for full pensions, changes in benefit calculation formula, extension of period used to

Table 2.
*Cross-country differences in selected indicators of policies and distributive outcomes among nine countries*

|  | Spending Child Care % GDP | % Children 0-3 Enrolled in Child Care | Family Spending % GDP | Maternity Spending % GDP/capita per Birth | Long Term Unemployment as % of all Employed |
|---|---|---|---|---|---|
| Denmark | 2.25 | 61.7 | 4 | 55 | 23.4 |
| Sweden | 1.5 | 39.5 | 3.5 | 65 | 15.8 |
| Netherlands | 0.5 | 39 | 1.6 | 22 | 40.2 |
| France | 1.5 | 26 | 3 | 31 | 41.2 |
| Austria | 0.5 | 4.1 | 3.1 | 35 | 25.3 |
| Germany | 1.1 | 9 | 2 | 27 | 53 |
| Italy | 0.6 | 6.3 | 1.2 | 25 | 49.9 |
| Spain | 0.6 | 20.7 | 1 | 17 | 24.5 |
| Greece | 0.4 | 7 | 1.3 | 11 | 52.2 |

Source: OECD Family data base (2004)

calculate reference salary and elimination of special provisions for some occupational groups or occupational pension programs (see Schludi 2005 and Galasso 2006 for details). Most pension reform packages actually enacted have implemented to a different degree a certain mix of these measures (Schludi 2005, Myles 2002, Rhodes and Natali 2003, Galasso 2006).

The implementation of these reforms creates a situation where future generation of retirees are likely to retire under a different system than the current generation of retirees, usually at lower benefit levels and at an older age, while at the same time paying transition costs for relatively comfortable benefit levels of current retirees. How large will these effects be depends on the changes in the elements of the pension system, such as minimum retirement age, benefit calculation formula, required contribution period and reference earnings for benefit calculation. Another important factor is a fragmentation of pension system in the occupational schemes, whether separate schemes for public employees exist and whether these schemes have separate rules regarding required contribution periods, retirement age and benefit calculation formula and so on.

While calculating differences in the distributive outcomes before and after pension reform would go way beyond the scope of this article, some elements of reforms important for distributive outcomes can be highlighted and this can allow us to assess the amount of discontinuity in the system.

The largest distributive effects can be expected in countries of continental Europe with occupational pension systems. Italy, France, Germany, Spain and Austria had pension systems that were characterized by generous protection of labour market insiders (Schludi 2005). Benefit calculation formula guaranteed high replacement rates, a reference salary was calculated on the basis of best earning years, required contribution period allowed workers to retire in their 50s and provisions for early retirement allowed this to take place without a significant loss of income. In addition, these countries had a special pillar for public sector employees that usually guaranteed even more favourable conditions in terms of retirement age, replacement rate and contribution requirements for those employed in the public sector. Since the system was designed for workers with stable work histories and increasing earnings, it could not cope well with the rising number of workers with less stable work histories who relied on part-time or temporary work and those with long unemployment spells.

Reforms in these systems were bound to change the distributive outcomes between generations substantially. In all countries, except perhaps Spain and Greece (see Galasso 2006), reform measures aimed at, and for largest part succeeded in increasing the retirement age, the lengthening of contribution period, extending the period for calculation of reference salary and changing the formula that would link pension benefits closer to work histories, thereby penalizing early retirement, and reducing replacement rate (Schludi 2005, Galasso 2006). The reforms, with varying success, also aimed at eliminating the special position of public sector workers and bringing their pensions in line with those for the rest of the population. Galasso (2006) and Schludi (2005) give an extensive overview of reforms in Italy, Germany, France and Austria, and both conclude that implemented reforms will not significantly affect current retirees and workers due to retire shortly. However, the effects of reforms will affect younger generations, as they will have to work longer, pay for the transition costs and will certainly have lower pension benefits relative to their salary than current retirees.

Similar measures aimed at increasing contribution period, linking benefits closer

to work history, raising retirement age and reducing replacement rate were implemented in Denmark, Sweden and the Netherlands as well (Schludi 2005, van Riel, Hemerijck and Visser 2002). However, the Netherlands, given its highly solvent and largely funded pension system based on a large number of occupational schemes, did not need to implement reform that would substantially alter distributive outcomes. Sweden and Denmark had significantly higher effective retirement age and much higher level of labour market participation, both of which somewhat reduced the effect of changes in system parameters (Galasso and Profeta 2004). Moreover, these countries do not have significant population of outsiders that exists in occupation based pension systems, and reforms included the implementation of measures to equalize position of those with unstable work histories with labour market insiders. Therefore, as reforms are less likely to bring sizable changes in conditions under which younger and older generation retire, the level of discontinuity in universalist systems is likely to be lower.

Public opinion research on pension reform in advanced industrial countries shows that there is a large degree of awareness about the current situation of pension systems (Boeri and Tabellini 2005, Boeri, Borsch-Suppan and Tabellini 2002). The bulk of the public perceives that problem exists, links it with population ageing and is aware of the need for reform. However, the actual knowledge about pension systems and reform programs is very low (Boeri and Tabellini 2005). This is somewhat problematic if one wants to argue that the expectations about redistributive effects of pension reform between generations are likely to cause differences in support for social spending. However, there exist a number of factors that are likely to increase the awareness of general public about the state of pension systems.

Some of the measures implemented in pension reforms are very visible and have easily understandable distributive consequences, such as the increase in the retirement age, the extension of the contribution period needed to qualify for full pension and the extension of period for calculating reference salary (Galasso and Profeta 2004, Schludi 2005). More importantly, occupational pension systems have clearly defined their clientele and are governed by corporatist bodies where interest groups, most notably trade unions, with a stake in the system are represented (Schludi 2005).

This particular arrangement is likely to make it easier to mobilize the opposition and increase the visibility of the distributive effects of pension reform. Therefore, the public does not need to be informed about all the details of pension reform to be aware that it is likely to have substantial distributive effects. Interest groups representing various client groups of pension system will act as opinion leaders on the issue providing information and articulating positions about changes happening as a consequence of reforms (Galasso 2006).

The universalist nature of the system in Sweden and Denmark, or extreme fragmentation in the Dutch case, prevents the creation of powerful special interest groups formed by the clients of particular occupational programs. Lower potentials of collective actors to mobilize public opinion are likely to make distributive effects of the reform less visible to the public.

The political struggles and public protests over pension reform in Italy, Germany, France, Greece and Austria (see Schludi 2005 for details for each country) and the absence of large-scale problems in Sweden, Denmark or Netherlands suggest that interest group mobilization mechanism in particularistic systems might indeed be at work.

## HYPOTHESES

The effects of age are expected to vary according to contextual differences across countries, namely spending bias of the welfare system, the type of the pension system and the importance of family in the provisions of social services and income security to younger members of the population. While overall we can expect spending preferences to vary across age groups, this effect is likely to be stronger in those countries exhibiting stronger spending bias toward the elderly, in the countries with an important role of the family in the provision of services and income security to younger population and in the countries with fragmented occupational pension systems. This leads us to the following hypothesis.

*H1: Older individuals are likely to support increasing spending on elderly related programs, even if this includes redistribution of resources from other social programs. The opposite effect can be expected from younger individuals.*

The strength of the age effect described is likely to depend on contextual factors which define national welfare system.

*H2: The effect of age is expected to be stronger in countries with welfare systems exhibiting spending bias toward the elderly.*

*H3: The effect of age is likely to be stronger in countries where pension reforms produced a high level of discontinuity in the institutional arrangements and distributive outcomes, and where interest groups were able to increase the visibility of pension reform.*

*H4: In countries where family provides large share of social services and income security for younger population, the effect of age is likely to be dampened.*

While the paper primarily focuses on age and the differences in the effect of age across countries, we can identify a number of additional variables likely to influence spending preferences. These variables are

included in the analysis as controls and their expected effects are briefly outlined as well. Members of social groups dependent on public spending, such as parents with young children dependent on public child care and education, or the unemployed and those exposed to high labour market risk dependent on unemployment benefits and active labour market programs, are expected to exhibit opposition to increasing spending on programs focused on the elderly at the expense of other programs. Spending preferences of public sector employees are likely to depend on the nature of welfare system. In systems with highly developed public services, public sector employees are likely to oppose the increases in spending for the elderly if these are likely to reduce spending on other services. On the other hand, in systems with low level of public sector service provision and smaller public sector, we can expect that public sector workers will support stronger elderly spending, mainly in order to safeguard their pension benefits (Rothenbacher 2005). Therefore we can expect that the effect of employment in public sector is likely to vary in accordance with the spending focus of welfare state, which is itself highly correlated with the size of public sector services (Lynch 2006). The individuals who own significant private pension assets, and are less dependent on public pension programs, are likely to oppose the increased spending for the elderly, as opposed to those without additional private pension assets. Women are expected to be more opposed to increases in spending for programs oriented toward the elderly at the cost of other social spending than men, as they are in greater need of publicly funded social services, such as child care and care for frail elderly persons, and are more likely to work in the public sector. The effect of socio-economic status and education on preferences for increasing spending for the elderly is likely to be negative, as respondents featuring high income and education are less likely to support any type of in-

197

creased social spending, and especially the one not focused on human capital formation (see Kitschelt and Rehm 2004).

Lastly, I consider the impact of perception that population ageing might pose a problem for the future of pension systems and value position that pension provision should be an individual responsibility. I expect those respondents who perceive population ageing to be a problem to be more inclined to oppose the increased spending on the elderly at the expense of other social programs. I also expect those respondents who believe that securing adequate pension income is a responsibility of an each individual to be opposed to an increased pension spending.

## DATA, VARIABLES AND METHOD

### Data

The data for the analysis are taken from the Eurobarometer survey number 56.1. This survey is designed with the purpose to collect the data on attitudes toward pension systems crisis and reform. The data used here include samples of population from nine countries that are characterized by sufficient variation with respect to all relevant contextual variables. These countries are Italy, France, Germany, Sweden, the Netherlands, Greece, Denmark, Spain

and Austria. Selected countries not only differ in the type of their pension systems, but also in the spending focus and institutional characteristics of their welfare systems. Within the sample, we have countries with spending focus that is heavily oriented towards the elderly, such as Spain, Greece and Italy, and those with spending focus more oriented toward the young, such as Sweden, Denmark and the Netherlands (see Lynch 2001). Concerning pension systems, Germany, Spain, Italy, Austria, Greece and France all have occupational systems where social partners play important role in administration, Sweden, Denmark and the Netherlands have system where funded public and private pillars are added to universalist first pillar (Rhodes and Natali 2003). All countries have implemented pension reform of some type, but the distributive consequences are considered to be largest is France, Italy and Germany (Rothenbacher 2004, Galasso and Profeta 2003, Schludi 2005, Galasso 2006).

Within the sample, there are countries whose welfare systems assign very different roles to families in the provision of social services. In Denmark and Sweden this role is very small, while in Italy, Greece and Spain it is quite large (Esping Anderson 1999). The overview of the position of each country on individual contextual variables is provided in table 3.

Table 3.

*Approximate distribution of contextual characteristics among nine countries*

|  | Elderly-Non elderly spending ratio | Discontinuity of distributive outcomes of pension system/interest group mobilization potential | Importance of family for provision of social services |
|---|---|---|---|
| Austria | medium | medium/high | high |
| Germany | medium | high/high | medium |
| Sweden | low | medium/low | low |
| Netherlands | medium | low/low | medium |
| Spain | high | medium/high | high |
| Italy | high | high/high | high |
| France | medium | high/high | low |
| Denmark | low | medium/low | low |
| Greece | high | low/high | high |

Sources: (Lynch 2001), Galasso (2006), Schludi (2005), SSA overview of national social security systems and Hank (2005). Entries are author's own estimates based on data from named sources.

The size of every sample is around 1000 respondents. The respondents from Eastern Germany are excluded from the German sample to avoid potential problems of comparability in attitudes between samples from the Eastern and Western parts of the country, as the respondents from the Eastern part of Germany were part of the welfare and pension systems for only a decade at the time this survey was conducted. To eliminate the problem of missing values, I used Amelia software for a multiple imputation of missing data.

## METHOD

Since I expect the effects of individual level variables, both as slopes and intercepts, to vary across national contexts, the analysis is conducted on individual country samples to control the effects of contextual variables. This will allow us to isolate the effect of contextual characteristics and get a clear picture about the effects of our key independent variables across countries. The downside is that this method does not allow us to assess the full information about the importance of contextual variables that some other method including contextual variables, such as multilevel cross-country pooled analysis, would. However, I maintain that the amount of information that can be gained about the performance of independent variables of interest, age in this case, is actually higher with the use of country by country analysis than through the use of some type of two level regressions with pooled data. Using country by country, OLS regression analysis allows us to see how the effect of age behaves across countries and allows us to spot effects, if those exist even in one country, that are not in accordance with the expected effects of contextual variables. At the same time, with the use of statistical simulation techniques, we can still see whether the effect of age, both intercept and slope, varies across countries and how.

Since the dependent variable is measured as an ordinal scale, ordinal logit or probit are seemingly more appropriate regression methods than OLS. However, I choose OLS for the following reasons. Substantive results do not change whether OLS or the ordered logit and probit are used. Patterns of coefficients and their statistical power are very similar. Since I simulate results by transferring parameters values into actual values using Clarify module of STATA, the simulation based on OLS gives the actual value of the variable as opposed to logit and probit that allow the simulation of changes in standard values. The use of simulation based on OLS makes the interpretation of findings more intuitive and easier. Finally, the imputation of missing data with the use of Amelia software transfers the ordinal variable into continuous by imputing values that are in between the original values of the variable.

Apart from age, the model includes measures of socio-economic position, namely income, education, public sector employment, sex and union membership; measures of dependence on social security system, namely ownership of private pension assets, unemployment risk and dependence on child care services and measures of perception of consequences of population aging and attitudes toward the importance of individual provision for old age. The model can be expressed with the following equation.

$$Y = \alpha + \beta x_{1\,social\ service\ dependence} + \beta x_{2\,unemployment\ risk} + \beta x_{3\,public\ employment} + \beta x_{4\,union\ membership} + \beta x_{5\,sex} + \beta x_{6\,age}$$

$$+ \beta x_{7\,education} + \beta x_{8\,private\ pension\ assets} + \beta x_{9\,income} + \beta x_{10\,individual\ pension\ responsibility} + \beta x_{11\,ageing\ crisis\ perception} + \mu$$

### VARIABLES

The **dependent variable** measures whether a respondent would be willing to increase pension spending even if it would imply cuts in spending for other public programs. Such wording implies a distributive trade-off between spending on pensions and other public spending, however, its downside is that question wording does not specify whether spending cuts should cover just social spending or spending on a wider range of government programs. The dependent variable is measured as a scale ranging from 1 to 4, with 1 indicating strong agreement with increases in pension spending over spending on other programs, and 4 indicating strong opposition to it.

**Independent variables** are operationalized in the following way:

- Age is measured as a continuous variable indicating respondent's age.

- Employment in the public sector is measured as a dummy variable in which 1 stands for those employed in the public sector and 0 for others.

- Union membership is measured as a dummy variable in which 1 is for union members and 0 for others.

- Ownership and private pension assets are measured by counting whether the respondent owns any of the alternative sources of retirement income, including private pension accounts, financial assets such as shares and bonds or income from property.

- Risk of unemployment is measured by the number of times the respondent was unemployed in last five years.

- Dependence on social services is measured with a variable indicating the presence of young children in the respondent's household.

- Sex is measured as a dummy variable where 1 indicates women and 0 men.

- Education is measured through a variable recoded from the variable asking respondents when they finished their regular education and indicating three levels of education, roughly corresponding to elementary, high school and university education.

- Income is measured as the position of a respondent in income quartiles in national income distribution.

- Perception of crisis of pensions system is measured with a variable indicating whether a respondent perceives that population ageing is posing a major problem, a minor problem or no problem at all.

- Position toward individual responsibility for pension provision is measured with an additive index formed of two items. The first item asks the respondent whether he or she thinks that the respondent pension should be based strictly on the amount of contribution one has paid in the system, and the second asking whether the respondent thinks an individual should be obliged to make their own pension provision for old age.

### FINDINGS AND DISCUSSION

Though results of the regression analysis in table 4 confirm that some age differences in spending preferences exist in most countries, the pattern of cross-country differences is actually running contrary to the expectations stated above. Age has statistically significant effects in six out of nine countries included in the analysis, the exceptions being Germany, Italy and Greece. In all countries where it reaches statistical significance, the effect of age is in the expected direction, with older respondents showing higher levels of support for pension spending even at the cost of cuts in other types of spending than younger respondents.

Table 4.
*Results of regression analysis in nine selected countries with measure of respondent willingness to increase pension spending at the expense of other spending programs as dependent variable. Entries are OLS regression coefficients with standard errors in parenthesis*

| | Austria | Denmark | France | Germany | Greece | Italy | Netherlands | Spain | Sweden |
|---|---|---|---|---|---|---|---|---|---|
| Small child in the household | 0.037 | -0.044 | -0.015 | -0.047 | -0.089 | 0.097 | -0.028 | 0.136* | 0.005 |
| | (0.065) | (0.085) | (0.053) | (0.063) | (0.059) | (0.081) | (0.071) | (0.071) | (0.093) |
| Unemployment risk | -0.086** | -0.090** | -0.093*** | -0.079* | -0.051** | 0.001 | -0.044 | -0.015 | 0.043 |
| | (0.038) | (0.036) | (0.030) | (0.045) | (0.024) | (0.037) | (0.031) | (0.027) | (0.036) |
| Public sector employee | -0.083 | -0.262*** | -0.051 | 0.095* | -0.045 | -0.034 | 0.119** | 0.125** | -0.002 |
| | (0.051) | (0.061) | (0.046) | (0.049) | (0.045) | (0.049) | (0.057) | (0.052) | (0.068) |
| Union member | 0.036 | 0.107 | 0.026 | 0.039 | -0.035 | -0.019 | -0.212*** | 0.215*** | 0.080 |
| | (0.053) | (0.084) | (0.066) | (0.053) | (0.050) | (0.053) | (0.062) | (0.067) | (0.099) |
| Sex | -0.077 | -0.014 | -0.005 | -0.014 | -0.065 | -0.039 | -0.014 | 0.005 | -0.039 |
| | (0.052) | (0.058) | (0.042) | (0.048) | (0.044) | (0.047) | (0.057) | (0.052) | (0.064) |
| Age | -0.004*** | -0.010*** | -0.003** | -0.001 | 0.000 | -0.001 | -0.004** | -0.003* | -0.010*** |
| | (0.002) | (0.002) | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) |
| Education | 0.075** | 0.074* | 0.096*** | 0.167*** | 0.013 | -0.001 | 0.124*** | 0.002 | 0.143*** |
| | (0.038) | (0.041) | (0.033) | (0.035) | (0.031) | (0.034) | (0.043) | (0.036) | (0.042) |
| Private pension assets | 0.017 | 0.053 | 0.035 | -0.017 | 0.073** | 0.034 | 0.083*** | 0.140*** | 0.063* |
| | (0.030) | (0.034) | (0.028) | (0.025) | (0.034) | (0.034) | (0.030) | (0.035) | (0.035) |
| Income | -0.036 | -0.004 | -0.024 | -0.037 | 0.036 | 0.034 | 0.013 | -0.031 | -0.005 |
| | (0.024) | (0.029) | (0.020) | (0.024) | (0.023) | (0.022) | (0.025) | (0.025) | (0.032) |
| Attitudes toward pension system | -0.026 | -0.034** | 0.017 | -0.039** | 0.036** | -0.019 | -0.047*** | -0.044*** | -0.001 |
| | (0.017) | (0.017) | (0.014) | (0.020) | (0.014) | (0.017) | (0.017) | (0.017) | (0.019) |
| Population ageing crisis | 0.134*** | 0.056 | 0.120*** | 0.042 | -0.011 | 0.013 | 0.135*** | 0.110*** | 0.007 |
| | (0.040) | (0.039) | (0.034) | (0.040) | (0.057) | (0.040) | (0.042) | (0.041) | (0.050) |
| Constant | 1.776*** | 2.311*** | 1.297*** | 1.681*** | 1.476*** | 1.658*** | 1.992*** | 1.098*** | 2.028*** |
| | (0.208) | (0.268) | (0.213) | (0.214) | (0.210) | (0.242) | (0.233) | (0.259) | (0.300) |
| $R^2$ | 0.038 | 0.074 | 0.052 | 0.042 | 0.030 | 0.011 | 0.066 | 0.055 | 0.076 |

***p<0.01, **p<0.05, *p<0.10

However, cross-country variation does not conform to the expected pattern, as the effect of age is strongest in countries where it is expected to be the weakest. The results of regression analysis show that age has the strongest effects in Sweden and Denmark. In the Netherlands, Austria, Spain and France the impact of age is significant, but substantially weaker. It must be noted though that even in Sweden and Denmark the substantive effect of age is not particularly strong.

To provide a better picture of the substantive impact of age, I use a statistical

sis into substantive and easily interpretable values. In this particular case, using parameter estimates from OLS regression Clarify computes changes in the actual values of dependent variables as values of one or more independent variables change.

Figure 2 represents the results of simulations calculated using Clarify, where values of age are changed in ten-year increments, and all other variables are set to their mean value. Figure 2 shows that slopes and intercepts for age vary widely across countries. They also show that some substantive effects exist only in Sweden and Denmark.

Figure 2.
*Changes in respondent willingness to increase pension spending at the expense of other spending programs as age increases*
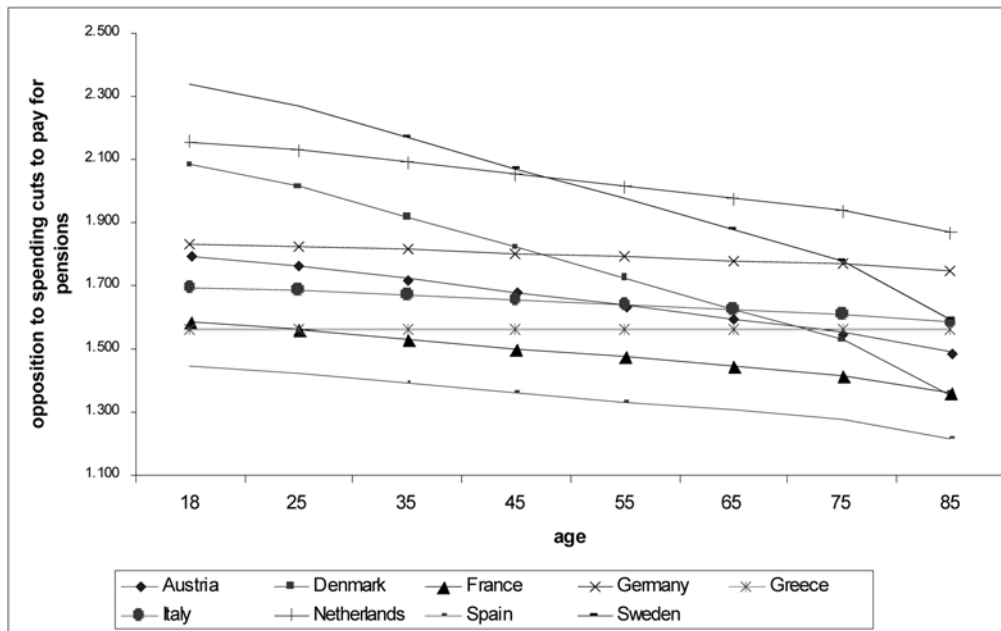


simulation to show how change in the value of age affects support for increased spending on pensions over spending on other programs. For this purpose, I use Clarify software developed by Gary King as a module of STATA statistical package. In short, Clarify turns the results of statistical analy-

But even in those two countries moving from the youngest to the oldest age category would only move a respondent from a position somewhere between mild disagreement and mild agreement to a position between mild and strong agreement to the proposition that pension spending should be in-

creased, even if it implies cuts in spending on other programs. In absolute values, this would indicate a move of around 0.6 on a scale of 1 to 4. It is hardly an overwhelming change considering that we would have to move over the whole age range to reach this value. In other countries with significant regression coefficients for age, the magnitude of change as we move from the lowest to the highest value is not nearly as strong. In fact, for the Netherlands, Austria, Spain and France the change we observe in figure 2 is less than 0.2 on dependent variable that ranges from 1 to 4 as we move from the youngest to the oldest respondent.

In countries where strongest age effects are expected, the simulation shows that as the age of respondent increases, his or her preferences for spending on pensions over other spending programs does not change at all. The line for Germany, Greece and Italy in figure 2 is essentially flat and the average respondent is somewhere between mildly to strongly supportive of increasing spending on pensions, even if that implies cuts in spending on other programs.

This lack of the effect of age on the preferences for spending on pension, even at the price of cuts in other spending, in Italy and Greece could be explained by the high correlation between spending bias and the dependence of adult children on their parents for housing and income security. As these two contextual variables are expected to have the opposite effects on spending preferences, the lack of visible age effect could be due to these two contextual variables cancelling each other out. Cancelling effect could be due, as Esping Anderson (1999) notes, to sizable intergenerational income transfers taking place within family and benefiting younger family members which compensate for inadequacies of social security systems and social services provision, inefficiencies of housing market and low employment levels among youth.

Another reason for this lack of age effect could be because the public perceives public pension system as the most efficient and comprehensive social security program and the only mechanism that can effectively provide security in old age. It could be that because of these reasons even younger segments of the population of these countries are willing to provide additional support for the system, even at the cost of cuts in other spending programs. This argument is not directly opposed to the argument advanced above that discontinuity in pension system is likely to cause differences in preferences between age groups. But rather, it could be argued that our findings reflect an opposition to the creation of discontinuity by keeping the system as it is. Also, as public pension system is in a way a flagship program of welfare state in continental countries (Lynch 2006), the support for increasing pension spending on pensions might, in fact, reflect general public support for social security programs.

The reason why we observe the strongest differences in spending preferences between younger and older segments of the population in Sweden and Denmark could actually be the artefact of the dependent variable used here. Since the wording of an item used as a dependent variable mentions increasing spending on pension, even under price of cuts elsewhere, it is reasonable to expect that younger segments of the population in the countries with extensive spending on programs directed toward the young would be less than enthusiastic to support increases in pensions spending at the price of cuts in services and transfers they are immediately benefiting from.

Other important finding worth noting is the effect of education, significant in six countries out of nine. Regression coefficients show that respondents with higher education are inclined to oppose increases in spending on pensions if that implies

spending cuts elsewhere. This opposition does not seem to be related to the general opposition to spending by the highly educated. The lack of effect of measures of socio-economic position, such as income and ownership of private pension assets, seems to support this conclusion. Income does not register significant effects in any country, while private pension assets have significant effects only in minority of countries analysed, though in all of them their effects are in the expected direction. It seems more likely that the effect of education is due to the opposition of the highly educated to an increased spending on programs which are not in themselves productive investment at the price of cuts in spending on programs that could be important for human capital formation and economic competitiveness such as education and research.

With respect to other control variables, regression results do not reveal the existence of any cross-country pattern that would be related to contextual differences I focus on here. While significant effects are registered for public sector employment, unemployment risk, the attitudes toward individual responsibility for pension provision and the belief that population ageing represents a serious social and economic problem, a clear cross-country pattern is missing and in cases of variables measuring unemployment risk and public sector employment, the direction of these effects is not in accordance with expectations. As these findings cannot be linked to any meaningful cross-country differences, I will not discuss them in detail here.

## CONCLUSION

The aim of this paper was to assess the importance of the differences in spending preferences based on age and to investigate whether the strength of age divisions varies across countries that significantly differ in the design and distributive effects of their

welfare systems. The obvious criticism to the proposition that age could be the source of distributive divisions is that being young or old is not a stable social trait, but something that invariably changes as one gets older. Furthermore, embeddedness in family and social network lengthens the horizon an individual takes into account when forming spending preferences, so that it includes considerations and potential needs of his parents and children. Broadening of horizons and accounting for considerations of a larger number of people when forming preferences over spending policies is likely to prevent individuals from making selfish decisions based on short term calculations. However, the key to the validity of this argument is the existence of expectations about the stability of distributive outcomes. If such stability is missing and distributive outcomes are difficult to predict, than it would be substantially more difficult to reach a decision about what is best for oneself and others over the long term. If declining significance of social links puts lives of children, parents and grandparents in different social setting, their ability to make decisions that will take into account considerations of other generations will surely decline. With changes taking place in pension and welfare systems, and family losing most of its traditional economic and social functions, the conditions for age to become a distributive division seem to be more favourable than at any previous point in history of modern societies.

However, the analysis in this paper shows that the potential for age to become a distributive division is rather weak. The key element of the theory advanced here holds that the effect of age varies across social and economic contexts. This variation seems to depend largely on the differences in distributive outcomes across countries, which are in turn shaped by the characteristics of welfare and pension systems. The

analysis did find cross-country differences in the importance of age, but these are taking the form that is different from the one originally expected.

The strongest divisions based on age are registered in the countries that exhibit smallest spending bias toward the elderly and where pension system reforms did not create sizable discontinuity between pre and post reform distributive outcomes. It seems that the age-based distributive divisions are important only in the countries where further spending on pensions can jeopardize sizable spending on publicly provided social services and transfers focused on younger segments of the population. Where age spending bias already exists, the general support for increased pension spending is higher and there are no divisions between age groups worth pointing out. Perhaps this reflects attitudes among the general public in continental and Mediterranean countries that public pension systems, as arguably the most generous and efficient social security program, should be maintained even if some sacrifices are made in other programs that do not have a comparable level of universalism or generosity.

It remains to be seen whether this insignificance of age will persist if discontinuity in distributive outcomes of social security systems increases. Reforms of social security systems, most notably pension systems, are still in their initial phases and their distributive effects are not so easy to assess for general public. It might well be that, at some future point, the discontinuity and inequality in distributive outcomes between generations will become more visible and the importance of age-based divisions will increase.

Overall, it seems that political potential of age-based divisions is rather small. It seems the strongest potential exists in the countries that are least financially pressed to make hard choices in distributing in-

come between generations. In countries where we could expect this potential to be larger, the divisive potential of age is muted by what can be described as general willingness to preserve what is perceived as a generous and efficient mechanism of providing social security in old age and by seemingly still strong links of intergenerational solidarity.

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*Sažetak*

## STARENJE STANOVNIŠTVA I DISTRIBUTIVNI SUKOBI: DISTRIBUTIVNE PODJELE NA TEMELJU DOBI U ZAPADNOJ EUROPI

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*Razvijena industrijska društva suočena su s pritiscima veće potrošnje na mirovine i na usluge za starije osobe u isto vrijeme kada postoji potreba za većim ulaganjem u rastući udio mlađeg stanovništva u radnoj snazi i u integraciju imigranata potrebnih da se obnovi radna snaga koja stari. To priprema teren za distributivne sukobe između grupa koje su naklonjene različitim tipovima socijalne potrošnje. Članak tvrdi da snaga i priroda distributivnih sukoba uvelike ovisi o usmjerenju potrošnje unutar socijalnog sustava, vrsti mirovinskog sustava i važnosti obitelji unutar socijalnog sustava. Dok u zemljama s mirovinskim sustavima utemeljenim na profesijama i socijalnim sustavima s većom potrošnjom na starije osobe možemo očekivati snažnu prisutnost razlika na temelju dobi, u zemljama s univerzalnim mirovinskim sustavima i sa socijalnim sustavima s uravnoteženijim uzorcima potrošnje možemo očekivati mnogo manje učinke. Članak provjerava te tvrdnje rabeći Eurobarometer podatke. Rezultati potvrđuju tvrdnju u pogledu razlika na temelju dobi i njihovih varijacija u nacionalnim kontekstima. Čini se da su varijacije povezane s preusmjeravanjem troškova u socijalnoj državi, no na način koji nije u skladu s našim očekivanjima.*

**Ključne riječi**: mirovinski sustav, mirovinska reforma, distributivne podjele, starenje stanovništva, stavovi prema mirovinskim sustavima, fokus socijalnih troškova.