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Generational Conflict?

Some Cross-Country Evidence

by

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Abstract

The generational conflict hypothesis predicts that the elderly might use their political power to reduce public resources allocated to children. It is usually tested by exploiting the localized nature of school funding in the US. This paper takes a different approach using cross-country data on family benefits. The evidence points to a positive relation between the generosity of these benefits and the share of the elderly in the electorate of the country. The effects that other studies have found at the local level are thus not observed at the national one. The difference in approach and findings between this paper and previous ones can contribute to the debate on local school funding. The paper also suggests that the effect of the elderly may reflect the larger proportion of women in that age group.

1. Introduction

The share of the elderly in the population of many developed countries is rising and is expected to continue doing so in the coming decades. Much attention has been devoted to the implications of this trend for the scale of old-age related public spending (such as Social Security and health care). Yet another concern is the potential ramifications for the allocation of public funds among the different groups. Children and the elderly are the major beneficiaries of social spending. Thus a conflict, sometimes referred to as a "generational conflict", between the two age groups may arise. Funds for children may be particularly vulnerable if the eldelry behave as a self-interested group. In that case, their growing numbers, reinforced by a voter turnout higher than that of younger people, might increase political support for reallocating public resources in favor of the elderly at the expense of children.

Lower public spending on children may have at least two consequences of interest. The first is a likely negative effect on the quality and quantity of education, as measured say, by public educational expenditure per child. This is typically the focus of the related literature. A second potential effect stems from the nature of any public spending on children. Such spending, in the form of public education and perhaps even more so in the form of transfer programs (child allowances, maternity leave benefits etc.,) is in fact a subsidy for child rearing. If indeed political support for subsidizing children declines as the proportion of eldelry in the population rises, then the aging of societies could become a self-reinforcing process. Families facing a higher cost of raising children, might choose to have fewer of them.

Several papers have examined the empirical relation between the proportion of the elderly and educational spending in the United States. Using state-level data for the period 1960-1990 Poterba (1996) finds a negative correlation between the two. Fernandez and Rogerson (1997) report a similar result. Yet, Ladd and Murray (1999) conclude from county-level data (1970-1990) that the share of the eldelry does not have a direct effect on public school spending. Harris, Evans, and Schwab (1999) offer an even finer disaggregation, using data at the school-district level. Their results suggest that the negative effect of the elderly is much smaller than the one documented at the state level. Furthermore, Goldin and Katz (1997) find that during 1910-1940 states with higher shares of the elderly had higher secondary school enrollment and graduation rates. Hoxby (1998) exploits district-level data to show that at the beginning of the century the elderly had a positive effect on educational spending per pupil but that relation had turned into a negative one by 1990. Poterba (1998) surveys additional evidence.

The findings of these studies are all at the local level, whether the state,

the county, or the school district. Thus an important question is whether their implications also apply to the more aggregate level. In other words, do aging countries as a whole tend to reduce the amount of national resources devoted to children? Furthemore, it was noted that the results of the previous papers vary substantially with the level of disaggregation used and even with the time period examined. An inquiry at the national level would therefore provide an additional test of the hypothesis' robustness.

While data at the disaggregated level have obvious advantages, a cross-country examination may help address some concerns that the former raise. The papers just mentioned all exploit the localized nature of school funding in the US. But this feature also poses two difficulties for using US data on age structure and educational spending to test for a generational conflict or quantify its effect. One is that education is the dominant component of local government expenditures and property taxes are a major source of revenue particularly at the district level. Hence, a substantial part of the property taxes paid by the elderly is devoted to education. It is therefore difficult to distinguish whether an observed negative relation between the proportion of the elderly and educational outlays reflects their aversion to such spending or a distaste for taxes in general.

The second problem is potential endogeneity, namely, the possibility that the elderly respond to high educational spending, and thus high property taxes, by moving to another place (a Tiebout effect). That the elderly choose to incur the cost of relocating is of course an indication of their aversion to paying for schools, thus testimony to a generational conflict. Nonetheless, estimates that ignore sorting may err in quantifying the impact of the conflict. Goldin and Katz (1997) argue that greater mobility of the elderly at present can explain the change in their effect on education over time. Harris, Evans, and Schwab (1999) demonstrate that the estimated effect of the eldelry is smaller when the Tiebout sorting is accounted for. Things are further complicated by the ambiguity of the evidence on the Tiebout effect. Conway and Houtenville (1998) find that educational spending and property taxes have a significant impact on elderly migration into and out of US states. Yet, the relation is not always of the expected sign. Educational spending has a negative effect on in-migration and property taxes have a positive effect on out-migration. The surprising finding is the negative relation between educational spending and out-migration and the positive one between in-migration and property taxes.

Families with school-age children may also engage in sorting. If such families move into localities with high educational expenditures, they will reduce the proportion elderly there even if the latter do not leave. In this case it is wrong to interpret a negative correlation between school funds and the fraction of elderly as evidence of a generational conflict.

The current paper tests the generational conflict hypothesis using cross-country data on child-targeted public spending other than education. It examines the relation between family benefits (in cash and in kind) and the share of the elderly in the voting age population. The data cover 20 OECD countries over the period 1980-1995.

This exercise reveals whether a generational conflict is evident at the national level. It also addresses the concerns just mentioned. An international comparison is robust to the Tiebout effect since the elderly are not likely to migrate to another country in response to higher taxes. Furthermore, transfer programs such as child allowances are often financed by the central government. The elderly cannot avoid its taxes by relocating within the country. In particular, note that sorting at the local level need not imply that the elderly will vote to reduce educational spending at the national level. The reason is that sorting has a free-rider element. It allows the elderly to reduce their personal tax burden without necessarily lowering public spending on education. They cannot do the same with respect to national taxes. In that case, whether they choose to reduce spending in order to pay lower taxes is an empirical question. Finally, income taxes are the main source of revenue for central governments. These apply to retirees far less than property taxes do. Hence child-related expenditure in this context is indeed for the elderly a question of allocating public funds among competing objectives rather than a major determinant of their own tax burden.

The results do not support the notion of a generational conflict at the country level. They indicate that an increase in the proportion of those aged 70 and older has a positive and significant effect on the generosity of family benefits whether measured as a percentage of GDP or per-child. The finding is consistent with Lindert's (1996) of a positive relation between educational outlays and the proportion elderly in 19 OECD countries (1962-1981). Taken together with the US local-level studies, the results demonstrate that micro-level effects of aging need not carry over to the more aggregated units of analysis. They may also suggest a considerable policy implication. The aging of a society appears to have a negative effect on funds for children when their tax basis is local or includes the elderly (e.g., property taxes). The effect turns into a positive one when such expenditures are financed by national taxes which largely exclude retirees (e.g., labor-income taxes). If public resources devoted to children are considered lower than optimal, a shift to the latter tax base may be advisable. This point has already been made in the debate on school funding in the US. Indeed, some US states have been moving away from local property tax as the source of school finance as noted in Poterba (1998).

A further finding is that a higher proportion of elderly increases transfer payments not only to children but also to other non-elderly groups e.g., the unem-

ployed. The share of the elderly does not affect the relative allocation between children and such groups. Therefore, the positive relation between the number of elderly and family benefits might just reflect a more general tendency of old people to support any social spending. The fact that this spending is financed primarily by workers or by an increase in the public debt rather than by the taxes on retirees could further motivate the tendency. A qualification to the previous policy implication is thus warranted. Tensions are already apparent between tax paying workers and retirees, regarding elderly-specific spending such as Social Security. Shifting the tax base away from the elderly while their political power is rising may increase public spending even on items not directly related to them. That might exacerbate the noted tensions or inflate the public debt.

The results also indicate that the positive relation between the fraction of people 70 or older and family benefits, is contrasted by a negative one between younger groups among the elderly, namely ages 65-69 or 60-69, and those benefits. This is somewhat puzzling as one would expect the policy impact of these groups to be similar. Specifically, if attitudes towards family benefits change with age it should occur around the retirement age of 65, perhaps earlier, not 70. I offer some evidence that the difference between the elderly sub-groups may be due to the larger share of women among those 70 and older. The explanation is based on women's well documented tendency to be more supportive than men of welfare programs aimed at children.

Some theories predict the opposite of a generational conflict. Apart from intergenerational altruism several reasons [as discussed e.g., in Poterba (1998)] have been suggested as to why the elderly might support educational spending out of self-interest. Improved education may raise the value of the elderly's property. It could enhance the earning capacity of the future labor force thus the tax basis that finances programs for the elderly. In the current context aging countries may be more inclined to respond to the demographic trend by offering family benefits as an incentive for having children. Additionally, an elderly's own grandchildren will enjoy the benefits, which is not the case with school funds in the US if the grandchildren reside in a different locality. The ambiguity of the theoretical predictions furthers the cause for the current empirical effort.

The paper proceeds as follows. Section 2 presents the data and the main findings. Section 3 discusses whether the effect of the elderly is unique to child-related spending. The possibility that the gender mix may be driving some of the results is explored in Section 4. Section 5 concludes.

2. Empirical Evidence

The panel consists of 20 OECD countries over the period 1980-1995 (quinquennial years).[1] The OECD Social Expenditure Database (1999b) provides the data on family benefits and additional categories of social expenditure. Family benefits include cash transfer payments as well as the provision of various child care services.[2] However, the data do not account for child related tax-breaks.

I consider two measures for the size of family benefits to allow for comparability over time and across countries. The first is benefits as a percent of GDP. The second is the log of benefits per child. For the latter, total benefits are at constant 1990 prices in US dollars (converted by Purchasing Power Parities) and children are the population aged 0-19. The log specification lends itself to an elasticity interpretation.

Public spending on family benefits is not negligible. The sample mean of family benefits as a percent of GDP is 1.9. For comparison, the sample mean of the share of public educational expenditure in GDP is 5.5 percent.[3] Benefits as a percent of GDP grew from a cross-country average of 1.8 percent in 1980 to 2.1 percent in 1995 even though the average ratio of children to working age population declined from 55.7 to 43.1 percent between those years. The share of public education in GDP in 1995 was almost identical to that in 1980. These figures may reflect an increasing importance of family benefits in public policy.

Figure 1 plots family benefits per child against the share of voters 70 and older for each of the four years in the panel. A positive relation is quite clear, particularly in the earlier years of the sample. Plotting benefits as a percent of GDP, yields a similar picture (not shown).

Several demographic variables are used in the regressions. Voters are defined as the population of age 20 and older. The size of any voting-age subgroup is measured relative to the entire voting-age population. V70up, V65up, V6569, V6069 are the relative size of the age groups of 70 and older, 65 and older, 65 to 69, and 60 to 69 respectively. CHILD is the ratio of children (ages 0-19) to the working age population (ages 20-64). The age structure variables are based on United Nations (1997) data.

GDP is per capita GDP (PPP, constant US dollars) obtained from the World Bank's World Development Indicators. Its square is denoted GDP^2.

[1] The countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Greece (excluding 1995), Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, United Kingdom, United States.

[2] Family cash benefits include, among other things, allowances for children, and maternity and parental leave. Family services relate to items such as formal day care and other benefits in kind.

[3] Educational expenditure data are from the World Bank's World Development Indicators.

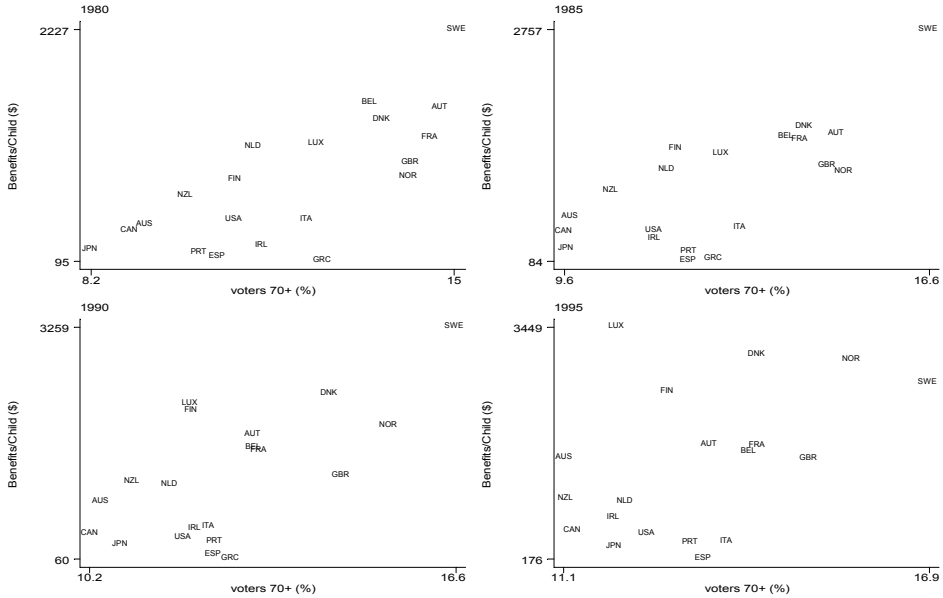

Figure 2.1: The Proportion Elderly and Family Benefits

Tables 1 and 2 present regression results when the dependent variable is family benefits as a percent of GDP and log benefits per child respectively. Both random effects and fixed effects estimates are reported in each table.[4] Fixed effects exploit only the variation within countries over time. The short time span of the data limits the usefulness of this specification. Yet it is important in addressing the concern that the proportion elderly and the scale of family benefits are both driven by unobservable country-specific features such as social norms, strength of family ties or the overall attitude toward public spending. These may all influence the amount of care and resources given to children as well as the elderly. Resources allocated to the latter could in turn affect their life expectancy and hence their numbers. The random effects procedure also makes use of the variation among countries. This specification would be inappropriate if the country-specific effects were correlated with the error terms. A Hausman specification test [5] indicates that this is not a concern in most of the specifications reported in the following tables.[6] All regressions include year dummies, which are not reported in the

[4]Results are reported for a random effects procedure that is equivalent to Generalized Least Squares in a balanced panel. However the panel is slightly unbalanced.

[5]The test was applied to a fixed effects versus a random effects GLS model with non-robust standard errors.

[6]The exceptions are the first, second and fourth columns in Table 2.

tables. It was noted earlier that the share of benefits in GDP has risen over time. The dummies exclude the time trend as well as year - specific events from the estimated effect of the elderly on benefits. While Sweden may seem an outlier in the plots in Figure 1, the results are robust to its exclusion.

The tables indicate that the generosity of family benefits is positively and significantly correlated with the share of those 70 and older in the voting age population. This is true using either definition of the dependent variable, although most of the fixed effects coefficients on the age variables in Table 2 are not significant at the 5 percent level.

The results actually yield two observations. First, they are not favorable to the notion of an intergenerational conflict. An increase in the relative number of older voters is not associated with a reduction of funds allocated to children, at least as reflected in family benefits. In fact, the contrary holds. As noted earlier, this observation is consistent with Lindert's (1996) finding that for a panel of 19 OECD countries over the period 1962-1981, public expenditure on education is positively and significantly correlated with the fraction of those 65 and older.

The second observation is that perhaps not all elderly are alike. The literature typically defines elderly as all those 65 and above. When only the share of this group is included in the regressions (V65up), it has a positive but statistically insignificant effect. However, when the share of those aged 65 to 69 or 60 to 69 is added, these groups have a significantly negative effect on family benefits, and the positive coefficient on V65up becomes significant. Furthermore, when the share of those 70 and older (V70up) is included instead of V65up then it is significant. In short, the positive relation between the elderly and child benefits is driven by the older among the elderly. Section 4 explores a possible explanation for this result.

The fraction of people aged 25-44, those most likely with dependent children, has no significant effect on family benefits (not reported in the tables). Similarly, Lindert (1996) finds that the age group of 20-39 does not affect educational spending in OECD countries.

A potential concern is that the regressions may fail to account for various country-specific features that could be important in explaining the differences in the scale of family benefits. The fixed effects specification is one way of addressing this concern. That the age variables are often significant under this specification is an indication of the results' robustness to such a worry. Yet, as most of the variation is in the cross section, an alternative approach is to include observable country-specific characteristics in the random effects regressions. Several such variables are discussed below. The related literature on public educational spending has looked at some of them (religious composition, ethnic homogeneity, and income inequality) in addition to the age structure. I also examine two population policy indicators that may reflect governmental support for having children. The

Table 1: Dependent Variable: Family Benefits as % of GDP

Random Effects								
V70up						0.297	0.291	0.194
						(3.941)	(3.893)	(2.398)
V65up	0.132	0.137	0.310	0.231	0.217			
	(1.861)	(1.891)	(4.531)	(4.102)	(3.226)			
V6569			-0.442		-0.347			
			(-2.881)		(-2.515)			
V6069				-0.208				
				(-2.147)				
CHILD	0.028	0.048	0.044	0.031	0.045	0.035	0.048	0.046
	(1.499)	(1.877)	(1.765)	(1.031)	(2.256)	(1.948)	(2.039)	(2.372)
GDP	0.112	0.387	0.278	0.234	0.095	0.133	0.325	0.094
	(2.334)	(2.438)	(1.729)	(1.257)	(1.864)	(2.447)	(2.322)	(1.911)
GDP^2		-0.008	-0.004	-0.003			-0.006	
		(-1.802)	(-0.807)	(-0.477)			(-1.331)	
Policy					0.775			0.787
					(2.783)			(2.791)
Prtst					0.020			0.020
					(5.332)			(5.137)
Ineql					-0.213			-0.212
					(-1.709)			(-1.750)
Fixed Effects								
V70up						0.202	0.191	
						(2.284)	(2.172)	
V65up	0.049	0.053	0.210	0.143				
	(0.692)	(0.735)	(2.542)	(2.296)				
V6569			-0.342					
			(-2.515)					
V6069				-0.173				
				(-2.277)				
CHILD	0.044	0.069	0.064	0.048		0.049	0.070	
	(1.888)	(1.981)	(1.741)	(1.170)		(2.141)	(2.073)	
GDP	0.083	0.414	0.338	0.288		0.109	0.382	
	(1.720)	(1.838)	(1.481)	(1.220)		(2.050)	(1.723)	
GDP^2		-0.009	-0.006	-0.005			-0.008	
		(-1.511)	(-0.947)	(-0.650)			(-1.295)	
R^2	0.909	0.913	0.920	0.923		0.916	0.918	

t statistic in parentheses. All regressions include year dummies.

N=20, Sample=79. N=19, Sample=75 when Policy, Prtst, Ineql are included.

Robust standard errors adjusted for clustering on countries.

Table 2: Dependent Variable: Log Family Benefits per Child

Random Effects								
V70up						0.126	0.116	0.089
						(2.897)	(2.665)	(1.959)
V65up	0.048	0.054	0.121	0.101	0.099			
	(1.497)	(1.628)	(2.906)	(3.066)	(2.430)			
V6569			-0.155		-0.160			
			(-2.257)		(-2.635)			
V6069				-0.100				
				(-2.249)				
CHILD	-0.004	0.022	0.020	0.012	0.004	-0.001	0.022	0.005
	(-0.311)	(1.505)	(1.369)	(0.749)	(0.352)	(-0.047)	(1.515)	(0.406)
GDP	0.122	0.468	0.433	0.393	0.125	0.136	0.446	0.123
	(3.848)	(3.846)	(3.422)	(3.147)	(3.612)	(4.008)	(3.812)	(3.477)
GDP^2		-0.010	-0.009	-0.007			-0.009	
		(-3.246)	(-2.570)	(-2.012)			(-3.013)	
Policy					0.548			0.553
					(1.594)			(1.595)
Prtst					0.014			0.014
					(4.652)			(4.506)
Ineql					-0.102			-0.102
					(-1.019)			(-1.044)
Fixed Effects								
V70up						0.082	0.069	
						(1.935)	(1.567)	
V65up	0.020	0.024	0.074	0.070				
	(0.633)	(0.738)	(1.746)	(1.989)				
V6569			-0.110					
			(-1.797)					
V6069				-0.089				
				(-2.518)				
CHILD	-0.001	0.025	0.023	0.014		0.001	0.025	
	(-0.068)	(1.545)	(1.375)	(0.764)		(0.108)	(1.540)	
GDP	0.103	0.434	0.410	0.370		0.114	0.422	
	(4.404)	(3.654)	(3.327)	(3.001)		(4.637)	(3.561)	
GDP^2		-0.009	-0.008	-0.007			-0.009	
		(-3.011)	(-2.537)	(-1.967)			(-2.835)	
R^2	0.964	0.968	0.969	0.972		0.965	0.969	

t statistic in parentheses. All regressions include year dummies.

N=20 Sample=79. N=19 Sample=75 when Policy, Prtst, Ineql are included.

Robust standard errors adjusted for clustering on countries.

results are robust to the inclusion of all of these variables. With one exception (the stock of foreigners), they were introduced as time invariant (mainly due to data constraints). Three of them (population policy, share of Protestants, and income inequality) have a significant effect, and their random effects results are reported in the tables.

Lindert (1994) notes that the share of Catholics (Protestants) in the population had a negative (positive) and significant effect on total social transfers in 21 countries over the period 1880-1930. He suggests that Catholic church charity substituting for government outlays may provide only a partial explanation. The effect of the religion variable on school enrollment rates in that sample was insignificant. For the OECD countries (1962-1981) considered in Lindert (1996) Catholicism has no effect on social spending. Goldin and Katz (1997) find a negative correlation between the percent of Catholics and secondary school attainment in the United States in the beginning of the century. The share of Protestants has a positive and significant effect on family benefits in the current sample. The effect of Catholics (not reported in the tables) is insignificant.[7]

Goldin and Katz (1997) report a positive effect of income or wealth equality (indirectly measured) on educational attainment. They interpret this as evidence that homogeneous societies are more willing to fund public education. On the other hand, one might expect family benefits to increase with income inequality, if such benefits are used as a means of poverty alleviation. Lindert (1996) finds that the relation between overall inequality and educatonal spending is insignificant. I tested for the effect of income inequality using two measures: the Gini coefficient and the income share of the highest quintile relative to that of the lowest one.[8] The first measure is insignificant. The negative effect of the second (denoted INEQL in the tables) is significant at the 10 percent level (Table 1).

Another variable which may reflect a society's homogeneity is its ethnic or racial mix. Poterba (1996) finds that educational expenditures per child in the US are lower in states where the racial composition of the elderly differs from that of the school age population. Ladd and Murray (1999) obtain a similar result using US data at the county level. Goldin and Katz (1997) note that a low percent of immigrants in a region's population was associated with a wider provision of secondary schooling. Again they attribute it to social cohesion. To test for a possible role of ethnic homogeneity in voters' willingness to support children, I looked at the stock of foreign nationals as a percentage of the total

[7]Figures on the fraction of Catholics and Protestants for most countries are from the CIA *World Factbook* (1985, 1995). *Britannica* (1994) and national statistical yearbooks provide data for the remaining countries. Data on the share of Protestants were not available for Belgium.

[8]Inequality data are from Deininger and Squire (1996). Figures are the average over any 1980-1995 years available.

population. In many European countries and Japan this includes not just first-generation immigrants but also subsequent generations born in the absorbing country. Comparable data are available for 13 countries only.[9] The effect of this variable is insignificant.

Finally I tested for the possible effect of government population policies. Greater child benefits may reflect a government policy of encouraging population growth. The United Nations (1998) provides an assessment on whether a government is intervening to raise the rate of population growth or the level of fertility. Intervention is reported in six of the countries included in the sample. I constructed a dummy (denoted POLICY in the tables) that equals 1 if a country had such policies and 0 otherwise. The coefficient on that dummy is significant in Table 1. Additionally, sparsely populated countries may wish to increase their population. The inclusion of population density in the regressions yielded nothing.[10]

As noted, one might argue that the positive relation between the share of the elderly and the generosity of family benefits is not causal. Rather, both reflect the country's welfare system in general. A society that maintains a more generous welfare system will allocate larger funds to children and will also take better care of the elderly thus extending their life expectancy. This would raise their proportion in the population. The findings are not favorable to this argument for several reasons. First, such an argument likely focuses on differences in the nature of welfare systems across countries. Yet, the results presented here hold even in the fixed effects specification, which only makes use of changes within countries over time, not of differences among them. Second, if the positive coefficient on the proportion 70 and older reflects the contribution of the welfare sytem to life expectancy, then the coefficients on the shares of those aged 65-69 or 60-69 should also be positive. But, in fact, they are negative and significantly so. Third, one would expect the welfare system to extend the lives of both men and women. Section 4 shows that while the share of old women is positively correlated with family benefits, the share of old men is not.

The positive correlation between the proportion elderly and family benefits could motivate yet another explanation. This one focuses on the self-interested behaviour of the working-age population. As long as the median voter belongs to this group it will exploit the tax system to take advantage of any increase in the elderly's numbers to expand the net transfers from them to the children. Again,

[9] These data do not exist for countries in which only first generation immigrants are considered foreigners. In particular, typical immigrant-countries such as Australia, Canada, and the United States only record the foreign-born. For data and definitions see OECD, *Trends in International Migration* (1998) and other years.

[10] Figures on country area are from CIA (1995).

this explanation is not supported by the empirical findings. It is inconsistent with the opposite effects of the elderly sub-groups (ages 60-69 versus 70 plus) and with the difference in the impact of old women compared to old men, to be discussed later.

3. The Effect on Other Groups

The previous findings raise the question of whether the positive relation between the share of the elderly and the generosity of family benefits is unique or perhaps such a relation applies to other kinds of transfer payments as well. To answer this question one should look at transfers that benefit groups in need other than the elderly (and children). The dependent variables in the first two columns of Table 3 offer such examples. TRANSFERS is the sum of disability cash benefits, sickness benefits, and survivors benefits as a percent of GDP. Several more categories that are similarly not targeted at the eldelry were excluded because of incomprehensive data coverage. The second dependent variable is the log of unemployment benefits per unemployed (in constant dollars, PPP adjusted). UNEMP included as an explanatory variable in that column is the rate of unemployment.[11] The results indicate that a larger proportion of the elderly is associated with higher spending on other social items not just family benefits. This may reflect a tendency of older voters to favor social spending in general. Alternatively the large public expenditures associated with old age (e.g., social security, health services) may for some other reason (such as easily available tax revenues) increase a country's tendency to spend on all kinds of social programs. Lindert (1996) too finds that social and total government spending rise with the share of the elderly. His figures however also include old-age-related spending. Button (1992) shows that while the elderly in Florida resent school bond issues, they do not oppose other local taxes. Yet note again that many of these taxes also benefit the elderly themselves.

Next I tested whether a higher fraction of old people works in favor of child-related spending at the expense of other non-old beneficiaries of social programs. The dependent variable was defined in two ways. First, family benefits as a percent of GDP relative to the above-mentioned TRANSFERS. Second, family benefits per child relative to unemployment benefits per unemployed. In both cases the share of elderly (whether 65 and older or 70 and older) did not have a significant effect or that effect was not robust to slight changes in specification (results are not reported in the table). This further supports the notion that a larger proportion of old people is favorable to social spending in general rather than to children in particular. Children gain from being one of those needy groups.

[11] Unemployment data are from OECD (1999a).

Table 3: Various Dependent Variables

Random Effects				
Dep.Var.	Transfers	U Benefits	Family/Old Age Benefits	
V70up				1.870
				(2.795)
V65up	0.160	0.087	2.018	
	(2.080)	(2.072)	(3.323)	
V6569	-0.070	-0.110	-2.798	
	(-0.471)	(-1.112)	(-1.800)	
CHILD	0.011	0.036	0.172	0.194
	(0.343)	(1.869)	(0.895)	(1.046)
GDP	-0.169	0.583	0.674	0.992
	(-0.733)	(3.605)	(0.397)	(0.623)
GDP^2	0.001	-0.016	0.000	-0.009
	(0.108)	(-3.485)	(0.008)	(-0.183)
Policy			3.658	3.771
			(1.486)	(1.555)
Prtst	0.002	0.001	0.188	0.187
	(0.244)	(0.376)	(6.693)	(6.523)
Ineql	-0.610	-0.199	-0.891	-0.920
	(-2.153)	(-1.979)	(-0.651)	(-0.695)
Unemp		-0.024		
		(-1.820)		
Fixed Effects				
V70up				1.509
				(1.782)
V65up	0.110	0.108	1.691	
	(1.451)	(1.407)	(2.107)	
V6569	0.020	-0.103	-2.752	
	(0.145)	(-0.928)	(-2.048)	
CHILD	0.016	0.029	0.279	0.339
	(0.444)	(1.215)	(0.966)	(1.199)
GDP	-0.302	0.423	2.873	3.289
	(-1.256)	(2.023)	(1.644)	(1.831)
GDP^2	0.002	-0.013	-0.044	-0.058
	(0.341)	(-2.321)	(-0.932)	(-1.246)
Unemp		-0.032		
		(-1.779)		
R^2	0.960	0.927	0.914	0.912

t statistic in parentheses. All regressions include year dummies.
Countries/observations = 20/79, 20/76, 19/75, 19/75.
Robust standard errors adjusted for clustering on countries.

The third and fourth columns in Table 3 examine the effect of the age structure on the relative per member benefits of the two groups that are supposedly in conflict. The dependent variable is the ratio of family benefits per child to old age cash benefits per person 65 and older (both benefits in constant dollars, PPP adjusted). Note that these old age benefits are only one of the categories of public spending on that age group. The table shows that an increase in the fraction of the elderly raises the benefits per child relative to the benefits per old person. This may not seem surprising if one expects a budget constraint to imply that funds per elderly should fall with a rise in their numbers. However some political economy models view the elderly as a self-interested pressure group. Hence their growing political power should allow them to maintain and even increase benefits per old age person. Lindert (1996) presents some evidence in this direction. More pointedly, if a generational conflict exists between children and the elderly, so that the latter are able to shift public resources from children to themselves, then a larger fraction of old age voters should reduce or at least not increase the benefits per child compared to those per old. As Vinovskis (1995) notes there is a widespread view that the elderly have been using their influence to increase their own benefits at the expense of children. Yet the positive relation reported in the table between the ratio of per child to per elderly benefits and the fraction of elderly voters does not support such arguments. Indeed, even Preston (1984), who claims that the reallocation from children to the elderly is substantial, cites evidence that between 1960 and 1979 US public expenditure per child relative to that per old did not change.

4. A Gender Effect?

This section discusses an interesting finding that was reported in Tables 1 and 2. It was noted that the elderly may not be a homogeneous age group in terms of their effect on child-related public spending. The age groups of 65-69, or 60-69, have a significantly negative effect on child benefits, while the age group of 70 and older has a significantly positive effect. This reversal in the effect of the elderly is puzzling. In particular, retirement, a "defining" feature of the elderly, peaks around the age of 60-65. At this age they begin enjoying publicly provided benefits such as Social Security. The eligibility may increase their support for transfers to other groups as well (a more sympathetic view of the welfare state) or their objection to such transfers (competition for limited public funds). In either case one would expect a change of attitude, if any, to occur around the age of 65 (perhaps earlier as workers approach retirement) rather than 70.[12] The direction

[12] According to Button (1992), the change in attitudes as reflected at the polls starts at age 55.

of change from a negative effect on family benefits into a positive one poses a further challenge. If the younger and the older among the elderly indeed have different preferences, then the political implications of a larger old-age population may vary over time and across countries. The relative importance of the sub-groups will depend on cohort sizes on the one hand and on increases in longevity of the older on the other hand.

Various explanations for this finding may come to mind. One is a cohort effect: the older generation (above 70) is more supportive of the welfare state. Another is that as people get older they are more likely to have grandchildren and thus to support programs targeted at them. However, many of these programs (maternity leave, child care) apply to the very young. Thus they are more likely to benefit the grandchildren of the younger rather than the older among the elderly. These explanations are not testable in the current framework. In what follows I suggest an explanation that is testable, though the evidence is suggestive rather than conclusive.

I suggest that the positive relation between the share of those 70 and older and family benefits may be due to the large increase in the share of women in this age group relative to younger groups. In the sample considered, women account for only 54.8 percent of the 65-69 age group, but their proportion rises to 61.3 percent in the 70 plus age group. The political significance of women's higher proportion may be further enhanced by their increased level of political involvement at old age. Borre and Andersen (1997) report that while men consistently show more interest in politics than women do, the difference is much smaller among the elderly than among younger voters. Sapiro (1988) notes that the presence of young children discourages women's voting turnout and political activity.

There is wide evidence that, compared with men, women are more supportive of social spending, and of child-targeted programs in particular. The evidence is based on voting behavior, opinions expressed in surveys, and the correlation between women suffrage and actual policy. A brief review of some of these findings follows.

Borre and Andersen (1997) show that in all six election campaigns in Denmark during the years 1981-1994 the socialists received more support among women than among men. They note however that the gender differences are mainly due to the younger women. Hernes (1987) points to the importance of women's vote for socialist and social-democratic parties in Denmark, Norway and Sweden. Thomas (1994) provides evidence that in the US women legislators (in state legislatures) are more likely than men to support state-sponsored child care, they assign a higher priority to family and welfare issues and vote more often in favor of such bills.

Public opinion surveys can provide a direct indication of gender differences in

attitude. Using the 1992 National Election Study,[13] I examine whether women are more likely than men to support an increase in federal spending on child care. It should be noted however, that beyond any gender differences in the concern for children, such funds probably have a stronger direct effect on women in terms of facilitating their participation in the labor market. Table 4 presents the results.[14] The dependent variable equals 1 if the respondent favored an increase in the said spending, and 0 otherwise. A linear probability model (LPM) and a probit model are estimated. Note that the results reported for the probit model are not the coefficients but rather the estimated change in probability. In the case of dummies, that refers to a discrete change in the respective explanatory variable from 0 to 1.

The LPM and probit models yield very similar estimates. Women are 12-14 percent more likely than men to favor increased child care funds and the coefficient is highly significant. The elderly are considerably more objectionable to such spending. In the first two columns the age effect is captured by a single dummy, which equals 1 if the respondent is 65 or older. The third and fourth columns test the effect of two old age sub-categories, ages 60-69 and ages 70 or older. The impact of both is negative and significant. A Wald test indicates that their coefficients are not significantly different from each other. This supports the argument made earlier that the contrast between the negative effect on family benefits of the share of voters aged 60-69 (or 65-69) and the positive effect of those 70 and older (Tables 1-3) is unlikely to be driven by changes in an individual's opinion as he passes the age of 70. For comparison, age and its square are included as continuous variables in the last two columns. Other variables that have a significant effect are also reported in the table. The first two are dummies indicating whether the respondent's annual family income was less than $25,000, and whether he was black. The other three dummies are measures of the respondent's ideology or overall attitude toward government spending. One indicates whether he identified with the Republican party, another whether he considered himself a conservative. The last dummy equals 1 if the person said he was willing to pay more in taxes so that the government could spend more on services he favored. Income higher than $75,000, Hispanic origin, and low education were examined for robustness checks and found insignificant. The regressions include state dummies, which a Wald test indicates are jointly significant. The results are consistent with Vinoskis (1995) who uses another National Election Study. She finds that women are more likely than men to favor an increase in federal funding

[13] American National Election Study, 1992: Pre- and Post-Election Survey. ICPSR Study No. 6067. The study population is defined as all US citizens of voting age in the 48 coterminous states.

[14] The regression results account for the survey design by assigning sampling weights to the observations and by clustering on primary sampling units (PSUs). The LPM specification is also corrected for stratification.

Table 4: Individual Attitudes toward Child-Care Spending

	LPM	Probit	LPM	Probit	LPM	Probit
Age					-0.009	-0.010
					(-2.320)	(-2.080)
Age^2					0.000	0.000
					(0.874)	(0.720)
Age 60-69			-0.174	-0.197		
			(-4.181)	(-4.000)		
Age 70 +			-0.213	-0.240		
			(-7.672)	(-7.200)		
Age 65 +	-0.175	-0.199				
	(-6.284)	(-5.940)				
Female	0.121	0.139	0.120	0.139	0.121	0.141
	(5.724)	(5.520)	(5.705)	(5.470)	(5.792)	(5.530)
Income $< 25,000$	0.126	0.143	0.133	0.154	0.109	0.129
	(4.848)	(4.940)	(5.162)	(5.260)	(4.135)	(4.240)
Race	0.162	0.185	0.156	0.179	0.164	0.189
	(4.298)	(3.950)	(4.094)	(3.790)	(4.386)	(4.060)
Republican	-0.078	-0.089	-0.080	-0.092	-0.079	-0.091
	(-2.773)	(-2.720)	(-2.826)	(-2.790)	(-2.869)	(-2.780)
Conservative	-0.131	-0.146	-0.127	-0.143	-0.116	-0.131
	(-5.902)	(-5.950)	(-5.622)	(-5.710)	(-5.038)	(-5.030)
Government	0.163	0.181	0.166	0.185	0.165	0.187
	(5.335)	(5.230)	(5.372)	(5.200)	(5.454)	(5.270)
R^2, Psuedo R^2	0.178	0.139	0.185	0.146	0.196	0.155

t-statistic in parentheses. Based on robust standard errors. State dummies included. $N = 1835$.
Probit results for dummies are the estimated change in probability for a discrete change in x from 0 to 1.
LPM predicts values outside the [0,1] interval for 17, 23, 37 observations in columns 1, 3, 5.

for public education. Yet, the difference is small.

Do gender differences in attitude translate into actual policy choices? Using historical data (1880-1930) for 21 countries, Lindert (1994) finds that the extension of suffrage to women had a positive and significant effect on social spending. However, he notes the possibility that men who were more favorable to such spending were also more likely to let women vote. Abrams and Settle (1999) report that Switzerland's 1971 enfranchisement of women raised social welfare spending by 28 percent and also increased the overall size of the government.

Returning to the OECD family benefits data, Table 5 presents some evidence in favor of the gender-based argument. The proportion elderly is now replaced by two variables: the fraction of women aged 65 and over in the entire voting age population and the share of men 65 and older in that same population. The results show that the share of old women in the voting age population has a positive effect on family benefits as a percent of GDP. The coefficient is often significant at the 10 percent level in the random effects specifications. The effect of old men is insignificant but negatively signed. This choice of variables avoids full multicollinearity since the sum of the two old-age regressors is the share of the elderly in the electorate, which varies over time and across countries. Yet the correlation between the two variables is still quite high, 0.76. Multicollinearity tends to inflate standard errors so the results would probably be stronger absent this problem. The table reports the results for regressions that include year dummies. These dummies however are not significant and if excluded the coefficient on women in some of the specifications is significant even at the 5 percent level. In the fixed effects procedure the coefficients on the share of old men and old women also have opposite signs but are both insignificant. Note that only two models are reported for this procedure since fixed effects drop all time - invariant regressors.

A note is in order on the inadequacy of several alternative specifications. A regression with just one of the two gender-age variables is inappropriate because by itself such a variable (old men or old women) would mainly capture the overall age structure of the society. When the fraction of old voters (V65up) and of old women are both included in the regression the coefficient on the first is negative while that on the latter is positive. That is consistent with the gender effect argument. However the coefficients are not at all significant given the very high correlation (0.96) between the two variables. When the share of women (of all ages) in the electorate was included in the regressions instead of the fraction of elderly women, it had no significant effect. This is not surprising as the impact of the elderly women reflects not just their proportion in the voting age population but also the fact that old people vote more than young ones and that this is particularly so for women.

The results in Table 5 are also instructive in addressing two concerns mentioned

Table 5: Dependent Variable: Family Benefits as % of GDP

	Random Effects				Fixed Effects	
Women 65+	0.400	0.397	0.217	0.332	0.250	0.210
	(1.770)	(1.739)	(1.034)	(1.754)	(0.920)	(0.761)
Men 65 +	-0.223	-0.205	-0.063	-0.197	-0.221	-0.159
	(-0.611)	(-0.553)	(-0.198)	(-0.646)	(-0.561)	(-0.394)
CHILD	0.035	0.053	0.061	0.034	0.047	0.070
	(1.576)	(1.824)	(2.112)	(1.597)	(1.839)	(1.926)
GDP	0.084	0.349	0.296	0.055	0.060	0.374
	(1.338)	(2.299)	(1.522)	(0.944)	(0.903)	(1.653)
GDP^2		-0.008	-0.007			-0.009
		(-1.801)	(-1.240)			(-1.441)
Policy			0.792	0.682		
			(2.384)	(1.958)		
Prtst			0.021	0.020		
			(4.014)	(4.514)		
Ineql			-0.244			
			(-1.729)			
R^2					0.911	0.913

t statistic in parentheses. All regressions include year dummies.
N=20, Sample=79. N=19, Sample=75 when Prtst included.
Robust standard errors adjusted for clustering on countries.

earlier. It is possible that the positive relation between the proportion elderly and family benefits just reflects the fact that both children and the elderly benefit from a generous welfare system. Yet such a system should improve the prospects of both genders. Hence, the table's result that the coefficients on the share of old men and of old women have opposite signs, does not support the said concern. The same applies to the hypothesis that working - age voters might take advantage of a larger number of elderly tax payers to increase the transfer of resources from the latter to children.

5. Conclusion

This paper has presented evidence that in a cross-country comparison the generosity of family benefits is positively correlated with the share of the elderly in the voting age population. The finding fails to support the predictions of the generational conflict hypothesis, which argues that the elderly will use their political power to redistribute public resources from children to themselves.

The present findings contrast with several studies that have shown educational spending at the local level in the US to be negatively affected by the proportion elderly. The micro-level effects are thus not translated into a similar relation at the national level.

A possible explanation for the different results is that the current paper uses data on family benefits which are often financed by the central government. Much of public education in the US on the other hand is financed at the local level. The implications for the elderly's tax liabilities, and potentially for their voting patterns, are thus quite different. This observation may shed further light on the debate concerning local school funding in the US.

The positive effect of the elderly on child-targeted spending appears to be part of a more general positive relation between their numbers and a variety of transfer programs.

The paper also provides some evidence that the impact of the elderly could be driven by the larger share of women in that age group. The shifting gender composition may dominate changes in individuals' attitudes over the life cycle in terms of the overall impact of the elderly on policy choices.

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