

Center for European Studies Working Paper Series #178 (2010)

**Redistribution and the Political Economy of Education:
An Analysis of Individual Preferences in OECD Countries**

Marius R. Busemeyer

Max Planck Institute for the Study of Societies
Paulstr. 3
50676 Cologne, Germany
Email: busemeyer@mpifg.de

Abstract

The issue of skill formation features prominently in the literature on the political economy of redistribution. But surprisingly, the study of the micro foundations of education policy preferences has largely been ignored so far. This paper provides a first step in this direction, relying on survey data for a large number of OCED countries. Challenging the assumptions of established political economy models of the formation of education preferences, it is shown that the individual position on the income scale is not a strong predictor of support for increasing public spending on education. The reason for this non-finding is that the association between income and preferences varies across countries and institutional contexts. The core hypothesis of the paper is that levels of economic inequality and the degree of stratification of the education system strongly affect and shape the redistributive political economy of education on the micro level. The empirical part of the paper employs a two-stage hierarchical model specification to provide evidence for this claim.

Redistribution and the Political Economy of Education: An Analysis of Individual Preferences in OECD Countries

1. Introduction

While the issue of skill formation increasingly occupies a prominent place in the political economy of redistribution (Iversen 2005; Iversen and Soskice 2001, 2009), the literature has surprisingly largely ignored the study of individual-level preferences on education policy and their interaction with macro variables so far. For one, comparative welfare state research has produced important insights into the micro and macro level determinants of social policy preferences (Arts and Gelissen 2001; Blekesaune and Quadagno 2003; Corneo and Grüner 2002; Fong 2001; Hasenfeld and Rafferty 1989; Jaeger 2009; Lynch and Myrskylä 2009; Scheve and Stasavage 2006), but education is not regularly regarded as part of the welfare state package. Scholarship in the sociology of education, on the other hand, is more concerned with studying the determinants of actual educational choices and attainment (Becker and Hecken 2009; Breen and Goldthorpe 1997; Breen and Jonsson 2005; Breen et al. 2009), than the preferences of individuals on policies as such. Thus, simply from an empirical point of view, this paper addresses an important research gap by studying the micro and macro level determinants of individual-preferences on public investments in education.

From a more theoretical perspective, the present paper contributes to an ongoing debate about the role of education in the political economy of redistribution. Starting with the seminal contribution of Meltzer and Richard (Meltzer and Richard 1981), scholarship in political economy has deduced the individual preferences for redistribution from the individuals' position in the distribution of incomes/skills. Work by Boix (1997, 1998) and Ansell (2008) applies this modeling framework to the study of education. However, whether the individual income position influences preferences or not should not be treated as an assumption, but is a question open to empirical investigation. And in fact, as my analysis will show, the individual income position does *not* have a lot of explanatory power as a determinant of education policy preferences, because the association between income and support for increasing public

education spending varies significantly across countries and institutional contexts.

Two macro variables are found to have a strong impact on individual-level preferences for investments in education: the degree of economic inequality and the degree of stratification of the education system. Higher inequality increases the support for public education spending, and turns the conflict over public investments in education into a conflict about redistribution from the rich to the poor. In more egalitarian countries, however, wealthy people are more likely to support the expansion of public education, because in these contexts, investments in education are regarded as the “lesser evil” by the higher income classes as they are less redistributive than other kinds of social policies. When education systems are stratified, class differentials in educational attainment and access to higher levels of education are large. I find that the support for expanding public education spending is higher in stratified systems, because the expansion of public education might help to mitigate class biases. Interestingly, individuals in higher income classes in stratified education systems are more supportive of increasing public education spending, because these investments are more likely to benefit the upper income classes than in systems with high levels of educational mobility.

In addition to examining how macro variables affect the association between income and spending preferences on the micro level, the paper also identifies other important positive determinants of education policy preferences such as a strong educational background, having children, working in the public sector and self-identification with leftist partisan ideology.

The remainder of the paper is structured as follows: The second section provides a brief literature review, followed by a more detailed account of the theoretical framework on the basis of which the hypotheses to be tested are specified. The fourth section puts the previously developed hypotheses to an empirical test, relying on survey data for a large number of OECD countries. The last section discusses the findings in light of the literature and concludes.

2. The political economy of redistribution: Evidence from the macro and micro level

This paper speaks to and extends three strands of literature: first, studies on the political economy of redistribution and skill formation; second, literature in comparative welfare state research on the determinants of attitudes towards and policy preferences on different kinds of social policy; and third, scholarship in educational sociology on the impact of class on educational attainment.

Coming back to the first point, our knowledge of the institutional and partisan factors influencing redistributive politics has expanded significantly in the last years. The model by Meltzer and Richard (1981) is a popular point of departure in the pertinent political economy literature as it provides a clear and compelling thesis: Redistribution is expected to increase with rising levels of inequality, because, at least in industrial democracies, the poor majority can vote to tax the rich. However, the association between redistribution and inequality across countries is not positive as could be expected from the Meltzer and Richard model, but negative, i.e. levels of redistribution are higher in countries with a more egalitarian wage distribution (Iversen and Soskice 2009).

By now, the literature provides several explanations for this “Robin Hood paradox.” Iversen and Soskice (2006, 2009) argue that the set-up of the political system, in particular electoral institutions, shapes redistributive politics and outcomes. Other contributions to the literature have shown that the centralization of wage bargaining lowers inequality (Wallerstein 1999) as does government partisanship under certain conditions (Pontusson et al. 2002; Bradley et al. 2003; Rueda 2008) and the institutional set-up of the economy (Rueda and Pontusson 2000).

In addition to work on the macro-level determinants of inequality and redistribution, scholars have become more interested in exploring the micro level foundations of redistributive preferences. Again, the Meltzer-Richard (1981) model provides clear expectations: demand for redistribution should be decreasing with rising income, i.e. poor people demand more redistribution, rich people less. Empirically, a large literature studying the determinants of individual social policy preferences has shown that this statement is essentially true (despite the negative association between redistribution and inequality on

the macro level). Self-interest, shaped by the individual's position in the economy, the labor market and the transfer classes of the welfare state, strongly affects preferences for different social policies (Hasenfeld and Rafferty 1989; Corneo and Grüner 2002). Iversen and Soskice show that in addition to income, individuals with a skill portfolio that is less easily transferable, i.e. more "specific", are more supportive of redistribution as a form of insurance against income loss (Cusack et al. 2006; Iversen and Soskice 2001). Also, individuals who perceive a greater level of labor market risk in the future demand higher levels of redistribution (Rehm 2009). Moene and Wallerstein go one step further by demonstrating that preferences for redistribution can actually *increase* with rising income, when certain kinds of income-related social policies provide a form of insurance against income losses and the demand for this insurance increases with income (Moene and Wallerstein 2001, 2003). Busemeyer, Goerres and Weschle (2009) demonstrate how the relative impact of income and age varies over different kinds of social policies.

But the literature has also found that there are additional factors explaining the variation in social policy preference above and beyond simple economic self-interest. For one, ideology and value orientations are important. This could be the effects of self-identification with partisan ideologies (Papadakis 1993), religious orientations (Scheve and Stasavage 2006) or beliefs in the "deservingness" of different kinds of recipients of welfare state benefits (Van Oorschot 2006). An influential argument in this literature is that individuals who believe that individual economic outcomes are determined by luck rather than effort are more supportive of redistribution (Corneo and Grüner 2002; Alesina and Angeletos 2005; Fong 2001).

Scholars have also been interested in whether existing welfare state institutions shape individual preferences (Arts and Gelissen 2001; Blekesaune and Quadagno 2003; Kangas 2003; Svallfors 2004, 1997). The expectation is that support for redistribution is higher in universal welfare states (Rothstein 1998). So far, the literature did not reach a final verdict on this question, but recent contributions aided by advances in statistical techniques provides more robust evidence (Jaeger 2009).

Although there is no study solely concerned with studying the determinants of education policy preferences, there is, of course, a sizable literature in sociology studying the individual and institutional determinants of actual educational *attainment*, i.e. whether the individuals' socio-economic background influences the probability of getting access to higher levels of education (Breen and Goldthorpe 1997; Becker 2003; Becker and Hecken 2009; Hillmert and Jacob 2002). But these studies look at choices under constraints such as individual academic ability and the limited range of options offered by the respective educational institutions. Studying *preferences* instead of educational attainment and access to education, however, allows individuals to express their *preferred choice*, deliberately neglecting the constraints relevant in actual educational choices.

This paper addresses significant gaps in the literatures introduced above: First, there is, to the best of my knowledge, no study that is primarily concerned with explaining individual preferences on education policy. Second, the literature has, if at all, looked at the relationship between skill formation and welfare states either from a macro level (Estevez-Abe et al. 2001; Iversen and Stephens 2008) or from a micro level perspective (Iversen and Soskice 2001). What is missing is an account of how macro-level factors such as economic inequality and the stratification of the education system interact with and shape the political economy of education investments on the micro level.

3. Theoretical framework: Determinants of education policy preferences

The following section introduces a theoretical framework in order to explain individual policy preferences on public education spending. The first subsection discusses the contradictory expectations on the impact of income on redistributive preferences in the case of education to be found in existing approaches. The second subsection then proceeds to resolve these ambiguities by clarifying how the macro-institutional context shapes the importance of income as a determinant of preferences over education spending. In the third subsection, I present auxiliary hypotheses on determinants of preferences besides income.

3.1 Income as determinant of preferences on the micro level

Building on the contributions of Boix (Boix 1998, 1997), Ben Ansell (Ansell 2008) has developed the most elaborate model on the formation of individual preferences over different kinds of higher education so far. Following the logic of the Meltzer-Richard (1981) model, investments in (higher) education are evaluated with regard to their distributive consequences for the different income strata in a given political economy. Consequently, preferences are derived from the individual's position on the income scale: When levels of general enrolment in higher education are low (i.e. access to higher education is restricted to the wealthy elite), members of the low income classes enter a formal or informal "ends-against-the-middle" coalition with the rich against the middle classes, because both oppose the expansion of public subsidies to higher education (ibid.: 198): the rich because they want to maintain an elitist system and the poor because they do not want to subsidize a type of education with limited benefits for them.¹ However, when levels of enrolment in higher education increase, more people from the lower income classes get access to higher education and therefore come to support the expansion and public subsidization of higher education. Based on this micro model of preference formation, Ansell then proceeds to demonstrate how the partisan preferences of leftist parties as proponents of the economic interests of the lower income classes change depending on the level of enrolment in higher education from opposing public subsidies for higher education to supporting them (ibid.: 205-208).

Ansell's model is an important first step in developing a more comprehensive theory on the political economy of education, but for the purpose of the present paper it has two shortcomings: First, Ansell is concerned with explaining preferences on different kinds of higher education, whereas I am concerned with preferences on education more generally. Second, Ansell's model hints at the importance of macro level variables such as the general level of enrolment for the formation of preferences, but Ansell is more concerned with

¹ In a similar tone, Boix (1998: 37) argued that the supporters of the left in the lower income classes care more about investments in general education on the primary and secondary level such as vocational training, although he was not able to show this empirically due to data limitations.

explaining the impact of educational expansion on the changing partisan politics of higher education *over time*, essentially assuming that his micro model of preference formation works similarly in different countries. In contrast, the present paper postulates that *differences across country contexts* fundamentally shape the redistributive politics over educational investments. Also, Ansell's model captures just one particular aspect of educational inequalities – the level of enrolment in higher education –, whereas I adopt a broader perspective on the role of stratification of education systems and look at the distinct impact of economic inequalities as well.

Coming back to the first point, the redistributive consequences of general investments in education are much less clear-cut than in the case of higher education as discussed by Ansell, contributing to ambiguous expectations and predictions with regard to the impact of income on individual preferences. On the one hand, it could be argued that the expansion of public education in the long run contributes to mitigating economic inequalities, in particular when the alternative is to resort to expensive private education. Therefore, the less well-off do have an incentive to support increases in public spending on education to improve the conditions for upward social mobility for their offspring. In contrast, the wealthy might oppose such efforts, because they would have to pay for these subsidies in the form of higher taxes and their relatively superior class position is threatened by the enhanced levels of social mobility (Bernasconi and Profeta 2007).

On the other hand, investments in education only have a very indirect impact on the inter- and intra-generational redistribution of resources. Hence, the lower income classes might care more about expanding other social policies with more immediate redistributive consequences instead of education. The wealthy, in contrast, could actually support the expansion of public subsidies to education, because, as a consequence of lingering class biases in access to education, they expect to benefit from it to a greater extent than from other social policies (Fernandez and Rogerson 1995). This redistribution from the poor to the rich is expected to be strongest in the case of public subsidies to higher education as argued by Ansell (2008). In sum, however, the effects of income on education preferences are contradictory (Levy 2005) and could cancel

each other out in the aggregate, so that the individual's income position as such does not emerge as a significant determinant of preferences for education spending.

3.2 The impact of the macro level context

In the following, I am going to argue how taking into account the interaction between micro-level determinants and the macro level context helps to clear up the ambiguities on the role of income as a determinant of preferences over education spending. In particular, I highlight the importance of two macro variables: first, the given level of economic inequality, and, second, the degree of stratification (i.e. educational inequality) in the education system.

Before I present a more detailed account of the argument, I would like to point out that levels of inequality in the distribution of wages and income and the degree of stratification in the education system are *not* necessarily related. In the Scandinavian countries, low levels of economic inequality indeed go along with lower levels of economic inequality and more redistribution (Pfeffer 2008; Bradley et al. 2003). However, countries such as Germany and Switzerland, whose education systems are highly stratified (Allmendinger 1989; Pfeffer 2008), exhibit relatively low levels of economic inequality as well. Finally, the Anglo-Saxon countries combine high levels of economic inequality with comparatively high levels of educational mobility. Clearly, the relationship between labor market inequality and educational stratification is not yet well understood, but the present paper aims to provide at least some new insights into this puzzling relationship.

When considering the interaction of macro level factors with micro level dynamics, countries differ with regard to two factors (which become dependent variables in the second stage of analysis): (predicted) average levels of support for increases in public spending on education and (estimates of) the impact of income on preferences. In other words, countries differ with regard to general levels of support for education spending (see also figure 2) and they differ with regard to the direction and significance of income as determinant of education policy preferences. The research question is then to what extent macro level variables can explain this observed variation.

First, how do levels of economic inequality affect individual preferences over education spending? In a context with high economic inequality, public or private investments in education become both more necessary and more attractive. They become more necessary, because high levels of inequality are associated with deregulated labor markets and low levels of protection due to the lack of generous welfare state programs. Hence, education takes over an insurance function against income loss akin to social policies in comprehensive welfare states.² In addition to being more necessary, high levels of inequality make costly investments in education more attractive, because they are associated with higher wage premiums for skill investments. In a political economy with low levels of inequality, in contrast, incentives to invest in further education are smaller.

Beyond its impact on levels of support, labor market inequality is hypothesized to shape the impact of income on education spending preferences. When levels of economic inequality are low, the rich have a stronger incentive to support public spending on education. In this case, rich individuals cannot expect to be able to opt out of public redistribution schemes and they face a decision between more or less redistributive bundles of public policies. Consequently, the well-off prefer investments in education, because they are less redistributive than other social policies such as unemployment insurance. In a context of high inequality, however, the rich are expected to be more opposed to public education spending, because there are no large-scale redistribution schemes forcing them to choose between different kinds of redistributive policies. Accordingly, the choice is not between increasing public spending for education or other social policies, but between increasing public spending for education or not. In this context, the well-off can be expected to oppose further public spending on education, because despite the lower redistributive potential of

² However, it should be noted that investments in education are a more indirect form of insurance against the risk of income loss, because the working age population does not benefit directly from increased public spending on education (except for spending on further training, active labor market policies etc.). Therefore, a positive association between economic inequality and support for education spending probably reflects large-scale historical and political differences between welfare state regimes (Heidenheimer 1981) rather than different short-term dynamics in the demand for immediate insurance against income loss in the sense of Moene and Wallerstein (Moene and Wallerstein 2001).

education investments, they are still more redistributive than no public spending at all.

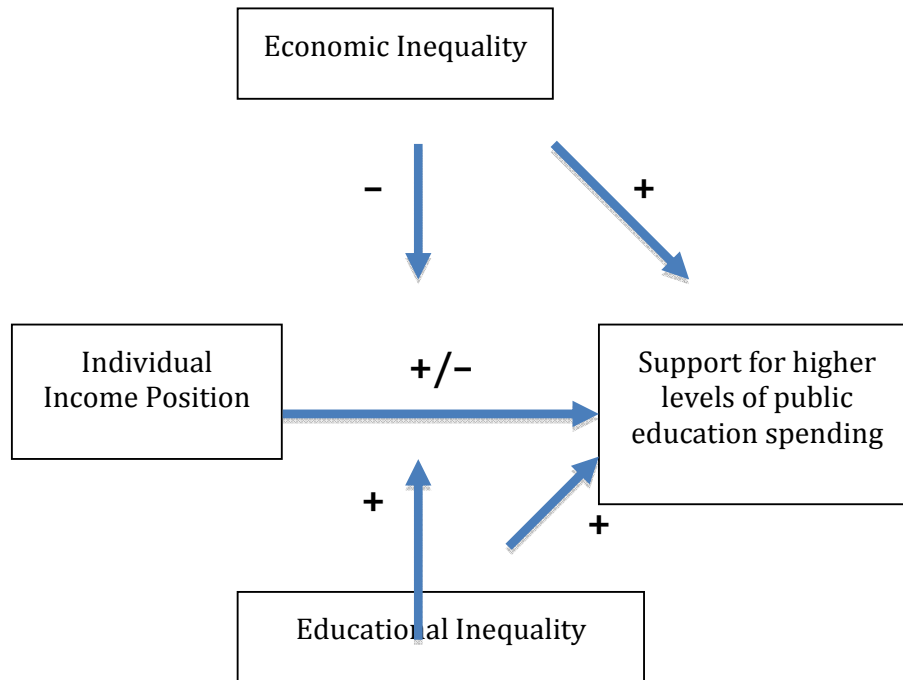
Second, what is the role of stratification of education systems as a determinant of individual policy preferences? Again, I distinguish between levels of support for more spending and the impact of income on spending preferences. Higher levels of stratification of education systems indicate larger class differentials in access to education, i.e. the effect of parental background on educational attainment is stronger and educational mobility is lower. As those effectively excluded from getting access to education are expected to call for opening up access, I posit that the demand for expanding access to education is higher in countries with high levels of educational stratification. In the context of this paper, support for increasing public spending on education should be regarded as an imperfect proxy for demands to expand access to education.

Whereas the association between labor market inequality and the impact of income on preferences is expected to be negative (see above), I hypothesize that educational inequality has a positive impact on the size of the income effect on the micro level. When the degree of stratification of education is high, investments in education are more redistributive than in a context where stratification is low and, as a corollary, educational mobility is high. The rich are more likely to support public investments in education, when educational stratification increases the probability that they (or their children, respectively) will benefit from these investments.

Summing up, I hypothesize the following (see figure 1): The direct impact of income on support for increases in public education spending is ambiguous, because it depends on the macro-level context. High levels of labor market inequality are expected to increase average levels of support for more spending. Furthermore, the size and direction of the income effect will be more positive as inequality decreases, i.e. the rich support public investments in education in contexts of low inequality and they oppose them, when inequality is high. Furthermore, support for increases in public spending on education is expected to be higher in stratified education systems, because more people demand the expansion of access. When the degree of educational stratification is high, the rich will be more supportive of higher levels of public spending, i.e. there is a

positive association between educational inequality and the size of the income effect.

Figure 1: Graphical representation of the main hypotheses.



3.3 Auxiliary hypotheses and control variables

In the literature on welfare state attitudes cited above, it has been shown that individuals' support for different welfare state programs at least in part hinges on whether they believe they will be beneficiaries of the specific programs in the future (Hasenfeld and Rafferty 1989). In the case of education, this kind of self-interest based explanation needs to be modified, because only a sub-set of the population (e.g. the young, teachers,...) are direct beneficiaries of increased public provision of educational services – despite the fact that increases in spending are supported by large majorities in many OECD countries

(see below, figure 2). Self-interest based explanations of preferences need to be based on the more indirect benefits/costs of increased investments in education, e.g. the impact of educational investments on the general productivity of the economy or the consequences of educational investments for the distribution of resources in the subsequent generation.

Besides the individual position on the income scale, other factors are expected to determine education spending preferences on the micro level. Given the dearth of empirical studies on this, the present paper is also designed to shed light on the relevant micro-level determinants of preferences.

First of all, while the distributive consequences of public investments in education might be less clear-cut in the case of income, they are obvious in the case of age. Young people of all income classes benefit from public investments in education, whereas older people do not (or at best, indirectly because investments in education enhance the economic productivity of the society as a whole) (Gradstein and Kaganovich 2004; Cattaneo and Wolter 2007; Busemeyer et al. 2009). Therefore, I expect a strong relationship between the individuals' position in the lifecycle and preferences for education spending.

In a related manner, individuals with children are expected to be more supportive of increases in public education spending as this benefits them and their children directly, e.g. by reducing the private share in the financing of their children's education. Women have been found to be more supportive of redistribution than men (Svallfors 1997: 292); therefore, I also look at the impact of gender on preferences for education spending.

Third, educational background is expected to be a major determinant of education policy preferences. Since the work of Boudon (Boudon 1974), scholarship in the sociology of education has repeatedly shown how educational choices and attainment are shaped by class differentials, in which non-pecuniary resources such as social and cultural capital are at least as important as monetary resources. Simply as a result of their larger stock of human capital, highly educated individuals have an informational advantage over less educated individuals, e.g. in navigating the obstacles of the education system. Due to the class bias in access to education, their children are more likely to attend higher levels of education. Hence, I expect a positive association between individual

educational background and support for increases in public spending on education.

Fourth, individuals employed in the public sector will most likely be more supportive of increasing public education spending, either because this directly affects their wages and employment position or they support the general expansion of the public sector. Individuals in education (students, apprentices, trainees...) can also be expected to be more supportive of increased spending on education. However, it is less clear, whether those currently unemployed or in precarious employment support higher education spending. On the one hand, investments in education might improve their chances of re-employment. On the other hand, labor market outsiders might prefer direct forms of redistribution via social transfer over education.

Besides self-interest based on age, household composition, education and labor market position, another important determinant of spending preferences is partisan ideology. *Ex ante*, it is an open question whether the observed differences in policy output related to government partisanship reflect differing economic interests of parties' electoral constituencies or whether partisan ideologies should be seen as general value orientations (i.e. a "believe in the state or the market") that go beyond purely economic interests. The latter seems more plausible, not only because it is less deterministic than the simple partisan model based on the aggregation of economic interests and leaves more space for strategic competition between parties. In times of ubiquitous partisan dealignment (i.e. the loosening of bonds between the classical electoral constituencies and "their" parties), remaining differences between partisan constituencies, in particular when controlling for the impact of socio-economic variables, should be driven by ideology, not individualistic economic interests. Hence, I hypothesize that partisan ideology has an independent impact on policy preferences above and beyond the influence of socio-economic variables. In particular, self-identification with leftist (rightist) partisanship is expected to be associated with a preference for more (less) public spending on education.

4. Empirical Analysis

4.1 Data and methods

To keep in line with conventions of scholarship in the field and to make the results comparable to other work, I rely on data from the recent 2006 wave of the International Social Survey Programme (ISSP) “Role of Government IV”. In this survey, respondents were asked the following question:

“Listed below are various areas of government spending. Please show whether you would like to see more or less government spending in each area. Remember that if you say ‘much more’, it might require a tax increase to pay for it.”

“Education” is listed as one of several areas, where government spending might be increased. The answers of respondents to these questions are coded on a scale from 1 (spend much more) to 5 (spend much less). To improve on readability, this scale is then reduced to a binary indicator (spend more or much more equals 1, spend the same, less or much less equals 0) as well as a scale with three categories (spend more (3), the same (2) or less(1)) employed in the robustness checks (see appendix).

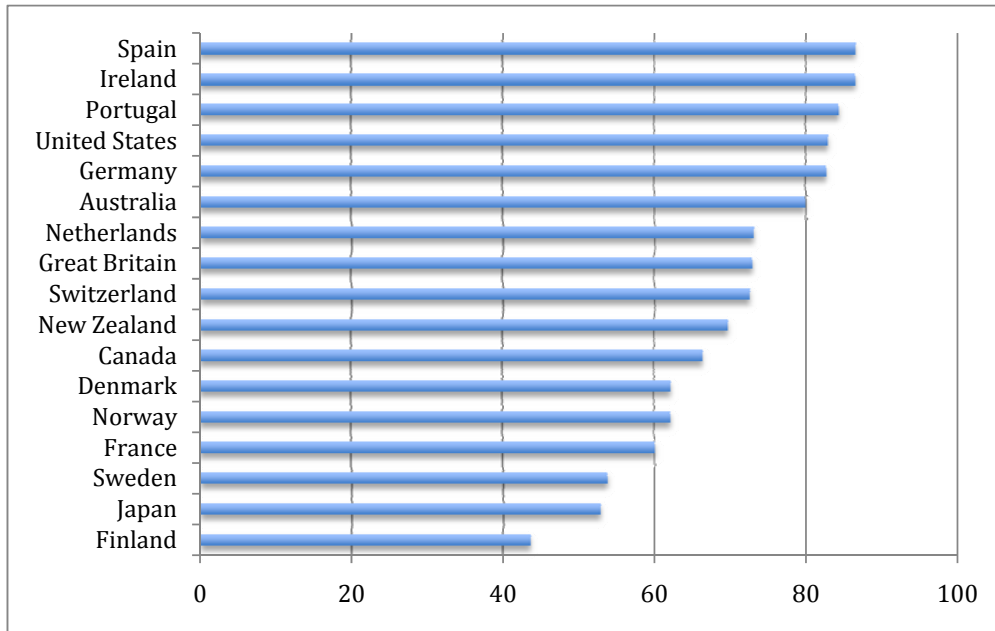
This question seems to be reasonably well-suited to measure preferences for public subsidization of education, but it has several weaknesses that should be kept in mind in the following analysis. For one, although the wording of the question mentions the fact that higher spending has to be paid for via tax increases, the framing of the question and the set-up of the survey in general do not model very strong budget constraints on spending decisions. Therefore, it might well be that preferences for spending increases are overstated. Furthermore, particularly in the case of education, it would be important to ask about the relative contribution of public and private sources to the funding of education. The way the question is framed does not allow to distinguish between the individuals’ willingness to increase (public) spending on education as such or the relative share of public vis-à-vis private sources.

The countries covered by the survey and included in this analysis are Australia, Canada, Denmark, Finland, France, Germany, Great Britain, Ireland,

Japan, New Zealand, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United States. I restrict the sample to Western OECD countries, because the theoretical approaches discussed above are based on the study of mature welfare states in advanced democracies.

Figure 2 presents some descriptive statistics on the variation of education policy preferences in the countries under observation. More specifically, figure 2 depicts the share of the respondents who answered “spend more” or “spend much more” on the question on whether government spending on education should be increased. As can be seen, there is a large amount of variation in this variable with the highest-ranking country (Spain, 86.5 percent) scoring almost twice as much as Finland (43.6 percent), the country at the lower end. Interestingly, countries such as Finland, Norway, Denmark and Sweden that are characterized by the highest levels of education spending in international comparison are to be found at the bottom of the ranking. In contrast, increasing spending on education is very popular in countries suffering from underinvestment in education (such as the United States with regard to primary and secondary education and Germany for higher education). Also, the Mediterranean countries (Spain and Portugal) are close to or at the very top of the ranking. Despite these patterns, no clear clustering of countries is discernible.

Figure 2: Percentage share of respondents being in favor of “more” or “much more” government spending on education, ISSP Role of Government IV, 2006.



The independent variables on the micro level are operationalized as follows: In the ISSP data, income is given as absolute amounts in national currency units. In order to create a common measure of *Income*, I calculated income deciles for the individual countries and then merged these into a joint variable. *Age* is simply the respondents’ age. I also include a dummy variable for retired people in some specifications as an alternative. *Education* is measured as the number of years spent in education (in some regressions, this is collapsed into four groups). This approach is preferable to using specific educational degrees as ambiguities about the mapping of country-specific degrees to internationally comparable classifications remain. *Having children* is captured by a dummy variable (1=yes, 0=no) and based on a question about household composition (HHCYCLE). Gender is indicated by a dummy variable as well (female is equal to 1). Self-identification with *Partisan ideology* is captured as a three-categorical variable (1=left; 2=center; 3=right). In some regression specifications, I include additional control variables. *Labor market status* is measured in three categorical variables: retired; student, school, vocational training, apprentice or trainee; and “outsider”, which equals “1” for those who are unemployed, employed less than part-time and employed part-time and

feeling that “people like me have no say in what government does” (based on Q11). Whether an individual is *employed in the public sector* is included as a dummy variable (1 indicates employment in the public sector).

As macro level variables, I include levels of *economic inequality* (Gini index of household inequality) taken from the Standardized World Income Inequality Database (Solt 2009). Higher values indicate higher levels of inequality. To measure educational inequality, I rely on Pfeffer (2008), who provides a cross-national measure of *educational mobility* across generations based on a large sample of more than 38,000 cases and using data from the OECD International Adult Literacy Survey (IALS). In this measure, higher values indicate higher levels of educational mobility, i.e. a lower degree of stratification. Unfortunately, the Pfeffer measure is not available for all countries covered by the ISSP survey. Therefore, as an alternative, I also use a measure of educational inequality provided by the OECD (OECD 2007: 87), which captures the odds ratio that students expect to complete higher education between a person with a strong socio-economic background to someone with a weak socio-economic background. In my view, this measure is a less convincing indicator of stratification than the Pfeffer measure, because it captures only one specific aspect of educational inequality. Therefore, when possible, I opt for using the Pfeffer (2008) measure.

With regard to methods, I largely rely on simple logit analyses. Because of the high share of positive responses in the ISSP question, it seems advisable to transform the original five-point scale into a binary dependent variable, indicating support or no support for more spending (see above). Nevertheless, I also applied ordered logit as well as general ordered logit models³ to the reduced three-scale variable of spending support. All of the following regression analyses include country dummies, population weights (as given by the WEIGHT variable in the ISSP survey) and clustered standard errors.

The effects of macro-level variables are probed by means of two-step hierarchical estimation (Achen 2005; Duch and Stevenson 2005; Huber et al. 2005; Lewis and Linzer 2005). In the first step of this procedure, separate

³ A significant Brant test indicates that the parallel regression assumption is violated in the simple ordered logit model. (To be included in the appendix.)

regressions are run for the individual units (countries). In the second step, estimates (predicted probabilities as well as coefficient estimates) from the first step are used as dependent variables in simple OLS regressions. This procedure is preferable to pooled models with cross-level interactions, because the latter neglect the uncertainty in estimates stemming from the variation on the macro-level and therefore implicitly assume that the included country-level variables can fully explain the variation of micro-level coefficients across units (Lewis and Linzer 2005; Huber et al. 2005). When the number of observations on the micro level is high and the number of units on the higher level reasonably small, the two-step procedure works just as well as more complex Bayesian hierarchical models (Huber et al. 2005: 366; see Steenbergen and Jones 2002; Western 1998 for an overview over Bayesian approaches to hierarchical modelling).

4.2 Micro level analysis

Table 1 presents the results of the analysis of preferences for education spending.⁴ The most intriguing finding is that the individual position in the income distribution does *not* have an impact on preferences on education spending. The coefficient estimate for the income variable is far from reaching conventional levels of statistical significance despite the large sample size and changes sign across model specifications. Instead of income, other factors determine individual preferences for education spending.

The strongest and most robust effect is the impact of educational background on preferences. The longer an individual stayed in school or university, the higher the support for increased education spending. In the same vein, those still enjoying the benefits of education (students, apprentices, trainees...) are more supportive of further increases in government spending. Also, individuals employed in the public sector support further increases in public education spending. These findings are reminiscent of the self-interest thesis of transfer classes in the welfare state literature. Another important determinant of support for increases in public spending is whether the

⁴ The inclusion of control variables on labor market status, partisan identification and public sector employment significantly reduce the size of the sample. The magnitude and statistical significance of the most important independent variables, however, remains similar across specifications.

respondent has children living in her household. Again, this fits well with the self-interest hypothesis: Parents are more supportive of increasing public funding for education than childless individuals.⁵ Another finding in table 1 is that self-identification with partisan ideologies (left, center, right) is a very strong and robust determinant of policy preferences above and beyond the socio-economic variables discussed so far.

The remaining independent variables do not have a strong impact on support for public education spending. Gender and age do not matter, although, similar to the effect of [?] income, the pooled estimate might mirror significant cross-country variation (Busemeyer et al. 2009). Labor market outsiders (the unemployed and those with temporary or unstable employment) do not care about increases in education spending. Although further investment in their skills might benefit their future prospects on the labor market, investments in initial education and training are a less direct support for them than transfers or unemployment benefits.

Considering the joint impact of all significant predictors, the predicted probability of supporting increased government spending on education for a conservative and little educated man with no children working in the private sector is 57.05 percent (which is still high, showing that education spending is popular). For a left-leaning, well-educated, female student with children, however, the predicted probability is a whopping 87.05 percent. Table 2 present predicted probabilities for support for increased education spending, depending on self-identification with partisan ideologies and educational background. Here, it can clearly be seen that more left-leaning and better educated individuals support spending increases, while the right-leaning and less educated individuals prefer less spending.

⁵ The coefficient estimate for the interaction between having children and educational background has a negative sign, but fails to reach conventional levels of statistical significance. This indicates that having children actually lowers the support of highly educated individuals for more spending on education. Results can be provided upon request.

Table 1: Individual level determinants of preferences on education spending.

Dependent Variable	(1)	(2)	(3)	(4)
	More or Much More Public Spending on Education=1 Same or Less Public Spending=0			
Income	-0.0105 (0.0153)	-0.00612 (0.0216)	0.000489 (0.0195)	0.000739 (0.0269)
Female	0.0736 (0.0587)	0.101 (0.0713)	0.0400 (0.0623)	0.0267 (0.0824)
Education	0.0297*** (0.00726)	0.0247*** (0.00868)	0.0299*** (0.00861)	0.0285*** (0.00981)
Having children	0.348*** (0.0667)	0.345*** (0.0666)	0.327*** (0.0700)	0.311*** (0.0647)
Age	0.00183 (0.00198)		0.00276 (0.00286)	
Partisan identification: Center			-0.341*** (0.0926)	-0.315** (0.124)
Partisan identification: Right			-0.508*** (0.116)	-0.520*** (0.134)
Employed in Public Sector		0.188*** (0.0510)		0.139** (0.0648)
Retired		0.0895 (0.0810)		0.0992 (0.108)
Labor market outsider		-0.0648 (0.0945)		-0.0620 (0.116)
Student, apprentice...		0.418* (0.220)		0.230 (0.269)
Constant	0.778*** (0.215)	0.856*** (0.155)	0.961*** (0.318)	1.142*** (0.252)
Mc Fadden's R ²	0.07	0.07	0.07	0.07
Observations	17520	9774	12697	7238

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2: Predicted probabilities of support for increased education spending, depending on partisan ID and educational background (years of schooling).

Years of schooling	Self-identification with partisan ideology		
	Left	Center	Right
Less than 10 years	0.7327	0.6788	0.6197
More than 10, less than 15 years	0.7639	0.7138	0.6579
More than 15, less than 20 years	0.7925	0.7465	0.6942
More than 20 years	0.8184	0.7765	0.7282

4.3 Macro level analysis

The following section is concerned with analyzing the role of macro-level variables such as the degree of stratification in education system and social inequality in the explanation of education policy preferences. Following the two-step procedure outlined above, I first ran separate regressions on support for increased public spending on education in the 17 countries included in this study, controlling for income, gender, age, education, household composition, public sector employment and partisan self-identification. In the second step, I use predicted probabilities⁶ and coefficient estimates as (estimated) dependent variables in the second stage of analysis. The macro-level regressions are simple OLS regressions with robust standard errors to correct for heteroskedasticity, which according to Lewis and Linzer (2005: 346) is preferable to WLS or FGLS regression in small samples.

Tables 3 and 4 present the results of the macro-level regressions. Several things stand out: First, levels of economic inequality are positively associated with support for more public spending on education (models 1, 3 and 5 in table 3; see also figure 3). This finding provides strong confirmation of the hypothesis that general support for investments in education will be higher in more unequal societies. Going from a Gini coefficient of 24 (roughly the level of Sweden and Denmark) to 37 (the level of the United States) is predicted to increase average support for more public spending on education by 20 percentage points, which is clearly a large effect.

Second, the stratification of the education system has a strong impact on levels of support for more public spending on education as well. In countries with low levels of educational mobility, the support for more public investments in the education system is significantly higher than in countries with high levels of mobility and, consequently, lower class differentials in educational attainment. Again, the magnitude of the effect is large: Moving from a value of -0.27

⁶ In fact, these predicted probabilities are often, though not always quite close to the simple country aggregate averages of individual responses, when, as is done in the present case, the independent variables in the underlying logit regression are set to average levels.

(Germany) to 0.16 (Denmark) is predicted to lower support for more spending by about 20 percentage points.

The extraordinary explanatory power of these two variables is evident from the fact that each can explain a significant part of the variation in predicted levels of support. The R^2 of model 1, including only economic inequality as predictor, is 0.27. When only including educational mobility, the R^2 is even higher (0.34). Including both variables, the R^2 increases to 0.76, and despite the lower number of cases, both variables remain highly significant in statistical terms.

Using the OECD measure of educational inequality (odds ratios that students with different socio-economic background expect to complete tertiary education), I obtain roughly similar results, i.e. higher levels of educational inequality are associated with more support for expanding public education spending.⁷ However, the explanatory power of the OECD measure is slightly weaker than that of the Pfeffer (2008) measure as indicated by lower levels of statistical significance and smaller increases in R^2 .

Table 4 contains the results of macro-level analyses of the determinants of the micro level effect of income on support for more public spending on education. Again, I find economic inequality and educational mobility to be strong predictors of the cross-national variation in the association between income and preferences. In particular, higher levels of economic inequality are associated with more negative estimates of the effect of income on support for spending (see also figure 4). In countries with high levels of economic inequality (see e.g. the position of the US in figure 4), the political economy of public investments in education follows the logic of the Meltzer-Richards model: Rich people are opposed to expanding public spending on education, whereas the poor are supportive. In contrast, rich individuals in countries with low levels of economic inequality (e.g. see the position of the Scandinavian countries in figure 4) are supportive of public spending on education.

⁷ The Pfeffer (2008) and the OECD measure have different scales: positive values on the Pfeffer measure indicate lower stratification, while it is the other way round for the OECD measure.

Germany is a conspicuous outlier in figure 4: Here, rich people support public spending on education to a much stronger extent than rich people in other countries. The finding of a strong positive impact of educational mobility on the size of the income coefficient might explain why that is the case. In highly stratified education systems, public investments in education are much less redistributive and more to the benefit of higher income classes than in systems with high levels of mobility. In other words: The rich are more likely to support the expansion of public investments in education if there is a higher probability that the wealthy or their offspring will benefit from these investments.

The inclusion of economic inequality and educational mobility as predictors of the strength and direction of the micro level effect of income on preferences accounts for an extraordinarily high share of the cross-national variation of this parameter (R^2 equals 0.76). The explanatory power of the OECD measure of educational inequality is in this case, however, significantly lower (see models 4 and 5 in table 4). However, the explanatory power of the Pfeffer (2008) measure of educational mobility is not due to the fact that the sample size is restricted to eleven cases. Model 5 provides a re-estimation of model 3, using the OECD measure and restricting the sample to the same countries as in model 3. The coefficient estimate of the OECD measure remains insignificant, indicating that the significant effect of the Pfeffer (2008) indicates a real and not a spurious association due to the sample selection bias.

Table 3: Macro-level determinants of predicted probabilities of supporting more public spending on education.

Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Predicted probability of supporting more or much more public spending on education				
Economic Inequality	0.0156*** (0.00475)		0.0183*** (0.00510)		0.0156*** (0.00435)
Educational Mobility		-0.451** (0.197)	-0.517*** (0.142)		
Educational Inequality (OECD measure)				0.205** (0.0891)	0.204* (0.0971)
Constant	0.241 (0.155)	0.720*** (0.0333)	0.179 (0.167)	0.326* (0.176)	-0.142 (0.280)
Observations	17	11	11	17	11
R-squared	0.275	0.344	0.759	0.154	0.429

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table 4: Macro-level determinants of the micro level effect of income on support for more public spending on education.

Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Estimate of micro level effect of income on support for more public spending on education				
Economic Inequality	-0.00761* (0.00394)		-0.00903*** (0.00222)	-0.00763* (0.00426)	-0.00977** (0.00308)
Educational Mobility		-0.417** (0.153)	-0.384** (0.160)		
Educational Inequality (OECD measure)				0.126 (0.117)	0.173 (0.153)
Constant	0.247* (0.121)	0.0600** (0.0245)	0.327*** (0.0668)	0.0111 (0.238)	0.000907 (0.286)
Observations	17	11	11	17	11
R-squared	0.116	0.522	0.702	0.220	0.479

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Figure 3: The association between levels of economic inequality and support for more public education spending.

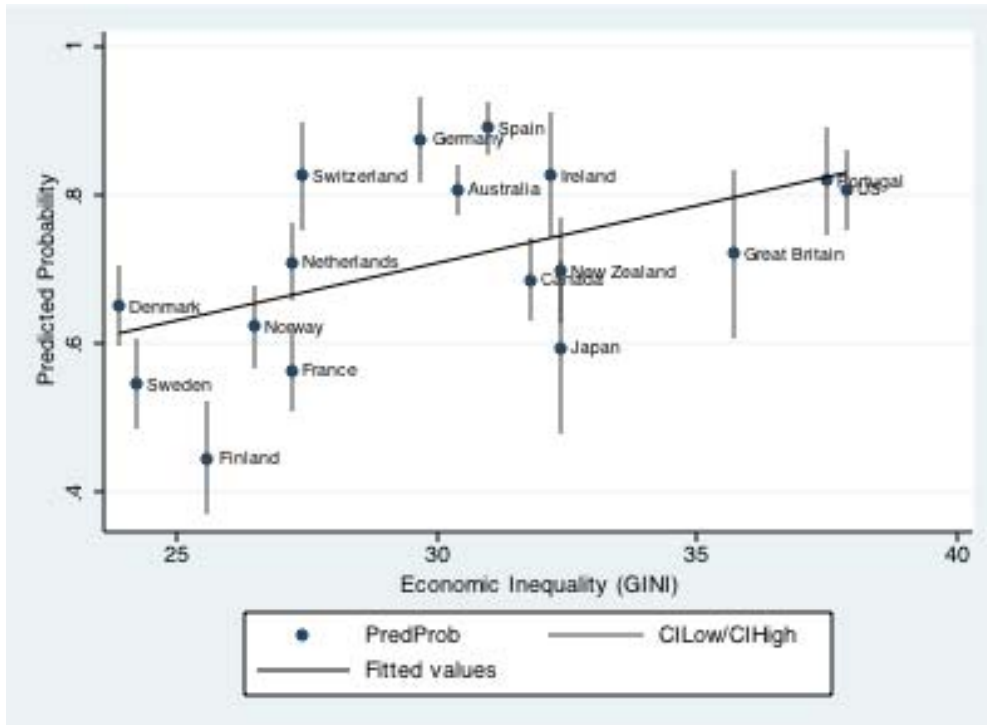
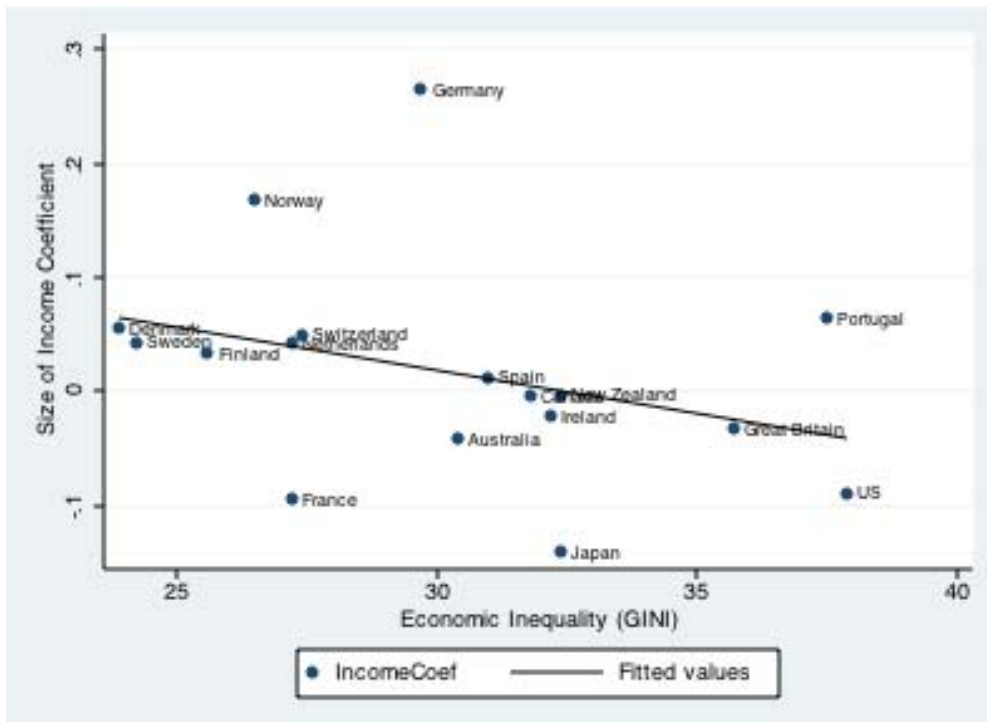


Figure 4: Association between economic inequality and size of the income coefficient.



5. Discussion and conclusions

To sum up the core findings of this paper: Without taking into account the macro-level context, the individual position on the income scale is not a strong predictor of preferences for public investments in education. Other factors such as educational background, having children, working in the public sector and partisan ideology have much more explanatory power on the micro level than income as such. However, my analysis has also shown that the weak overall association between income and preferences masks the significant variation of this relationship across country contexts. In particular, I find that high levels of economic inequality are associated with higher levels of support for public investments in education. Also, a high degree of stratification in the education system increases support for more spending on education, because the demand for expanding access and public education in general is higher in countries with more elitist education systems. Furthermore, the effect of income on support for spending on the micro level is mediated by macro variables. High levels of economic inequality are associated with more negative estimates of the income effect, i.e. rich people in unequal societies oppose public investments in education, because it is regarded as redistribution from the rich to the poor. In contrast, rich people in egalitarian societies support public investments in education, because they are less redistributive than alternative social policies. Finally, a high degree of stratification in the education system enhances the support of the rich for public education spending, because they (or their offspring) benefit to a larger extent from these investments than in systems with lower levels of educational inequality.

What are the implications of these findings for the broader literature on the political economy of redistribution? First of all, it became apparent that preferences on education policies cannot simply be derived by looking at individuals' relative income position without taking into account the interaction between the micro and the macro level. Studying the association between inequality and preferences for investment in education on the micro level yields more general insights with relevance for the political economy of redistribution. Exactly because the association between income and education policy preferences is ambiguous from a theoretical perspective, it is open to diverse

sets of institutional “triggers” that can explain how macro contexts shape the character of redistributive conflicts on the micro level.

Second, the paper has also shown that economic inequality *and* educational stratification both have a distinct, although potentially related impact on welfare state preferences. In this respect, this paper promotes the reintegration of the study of education into comparative welfare state research (Iversen and Stephens 2008) by highlighting the fact that levels of economic inequality, which are themselves related to particular welfare state institutions and production regimes (Bradley et al. 2003; Rueda and Pontusson 2000), are significant determinants of education policy preferences. Future research should further explore the complementarities between education and other welfare state policies, in particular the role of labor market institutions.

References

- Achen, Christopher. 2005. "Two-Step Hierarchical Estimation: Beyond Regression Analysis." *Political Analysis* 13 (4):447-56.
- Alesina, Alberto, and George-Marios Angeletos. 2005. "Fairness and Redistribution." *American Economic Review* 95 (4):960-80.
- Allmendinger, Jutta. 1989. "Educational Systems and Labour Market Outcomes." *European Sociological Review* 5 (3):231-50.
- Ansell, Ben W. 2008. "University Challenges: Explaining Institutional Change in Higher Education." *World Politics* 60 (January 2008):189-230.
- Arts, Wil, and John Gelissen. 2001. "Welfare States, Solidarity and Justice Principles: Does the Type Really Matter?" *Acta Sociologica* 44 (4):283-99.
- Becker, Rolf. 2003. "Educational Expansion and Persistent Inequalities of Education: Utilizing Subjective Expected Utility Theory to Explain Increasing Participation Rates in Upper Secondary School in the Federal Republic of Germany." *European Sociological Review* 19 (1):1-24.
- Becker, Rolf, and Anna Etta Hecken. 2009. "Higher Education or Vocational Training? An Empirical Test of the Rational Action Model of Educational Choices Suggested by Breen and Goldthorpe and Esser." *Acta Sociologica* 52 (1):25-45.
- Bernasconi, Michele, and Paola Profeta. 2007. "Redistribution or Education? The Political Economy of the Social Race." *CESifo Working Paper* 1934.
- Blekesaune, Morten, and Jill Quadagno. 2003. "Public Attitudes toward Welfare State Policies: A Comparative Analysis of 24 Countries." *European Sociological Review* 19 (5):415-27.
- Boix, Carles. 1997. "Political Parties and the Supply Side of the Economy: The Provision of Physical and Human Capital in Advanced Economies, 1960-1990." *American Journal of Political Science* 41 (3):814-45.
- . 1998. *Political parties, growth and equality: Conservative and social democratic economic strategies in the world economy*. Cambridge: Cambridge University Press.
- Boudon, Raymond. 1974. *Education, Opportunity, and Social Inequality*. New York: Wiley.
- Bradley, David, Evelyne Huber, Stephanie Moller, Francois Nielsen, and John D. Stephens. 2003. "Distribution and Redistribution in Postindustrial Democracies." *World Politics* 55 (January 2003):193-228.
- Breen, Richard, and John H. Goldthorpe. 1997. "Explaining Educational Differentials: Towards a Formal Rational Action Theory." *Rationality and Society* 9:275-305.
- Breen, Richard, and Jan O. Jonsson. 2005. "Inequality of Opportunity in Comparative Perspective: Recent Research on Educational Attainment and Social Mobility." *Annual Review of Sociology* 31:223-43.
- Breen, Richard, Ruud Luijkx, Walter Müller, and Reinhard Pollak. 2009. "Nonpersistent Inequality in Educational Attainment: Evidence from Eight European Countries." *American Journal of Sociology* 114 (5):1475-521.
- Busemeyer, Marius R., Achim Goerres, and Simon Weschle. 2009. "Attitudes towards redistributive spending in an era of demographic ageing: The rival pressures from age and income in 14 OECD countries." *Journal of European Social Policy* 19 (3):195-212.

- Cattaneo, M. Alejandra, and Stefan C. Wolter. 2007. "Are the Elderly a Threat to Educational Expenditures?" *CESifo Working Paper* 2089.
- Corneo, Giacomo, and Hans Peter Grüner. 2002. "Individual preferences for political redistribution." *Journal of Public Economics* 83:83-107.
- Cusack, Thomas, Torben Iversen, and Philipp Rehm. 2006. "Risks at Work: The Demand and Supply Sides of Government Redistribution." *Oxford Review of Economic Policy* 22 (3):365-89.
- Duch, Raymond M., and Randy Stevenson. 2005. "Context and the Economic Vote: A Multilevel Analysis." *Political Analysis* 13 (4):387-409.
- Estevez-Abe, Margarita, Torben Iversen, and David Soskice. 2001. "Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State." In *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, ed. P. A. Hall and D. Soskice. Oxford, New York: Oxford University Press.
- Fernandez, Raquel, and Richard Rogerson. 1995. "On the Political Economy of Education Subsidies." *Review of Economic Studies* 62 (2):249-62.
- Fong, Christina. 2001. "Social preferences, self-interest, and the demand for redistribution." *Journal of Public Economics* 82:225-46.
- Gradstein, Mark, and Michael Kaganovich. 2004. "Aging population and education finance." *Journal of Public Economics* 88:2469-85.
- Hasenfeld, Yeheskel, and Jane A. Rafferty. 1989. "The Determinants of Public Attitudes Toward the Welfare State." *Social Forces* 67 (4):1027-48.
- Heidenheimer, Arnold J. 1981. "Education and Social Security Entitlements in Europe and America." In *The Development of Welfare States in Europe and America*, ed. P. Flora and A. J. Heidenheimer. New Brunswick, London: Transaction Books.
- Hillmert, Steffen, and Marita Jacob. 2002. "Social Inequality in Higher Education: Is Vocational Training a Pathway Leading to or Away from University?" *European Sociological Review* 19 (3):319-34.
- Huber, John D., Georgia Kernell, and Eduardo L. Leoni. 2005. "Institutional Context, Cognitive Resources and Party Attachments Across Democracies." *Political Analysis* 13 (4):365-86.
- Iversen, Torben. 2005. *Capitalism, Democracy, and Welfare*. Cambridge: Cambridge University Press.
- Iversen, Torben, and David Soskice. 2001. "An Asset Theory of Social Policy Preferences." *American Political Science Review* 95 (4):875-93.
- . 2006. "Electoral Institutions and the Politics of Coalitions: Why Some Democracies Redistribute More Than Others." *American Political Science Review* 100 (2):165-81.
- . 2009. "Distribution and Redistribution: The Shadow of the Nineteenth Century." *World Politics* 61 (3):438-86.
- Iversen, Torben, and John D. Stephens. 2008. "Partisan Politics, the Welfare State, and Three Worlds of Human Capital Formation." *Comparative Political Studies* 41 (4-5):600-37.
- Jaeger, Mads Meier. 2009. "United but Divided: Welfare Regimes and the Level and Variance in Public Support for Redistribution." *European Sociological Review* 25 (6):723-37.

- Kangas, Olli. 2003. "The grasshopper and the ants: popular opinions of just distribution in Australia and Finland." *Journal of Socio-Economics* 31:721-43.
- Levy, Gilat. 2005. "The Politics of Public Provision of Education." *Quarterly Journal of Economics* 120 (4):1507-34.
- Lewis, Jeffrey B., and Drew A. Linzer. 2005. "Estimating Regression Models in Which the Dependent Variable is Based on Estimates." *Political Analysis* 13 (4):345-64.
- Lynch, Julia, and Mikko Myrskylä. 2009. "Always the Third Rail? Pension Income and Policy Preferences in European Democracies." *Comparative Political Studies* 42 (8):1068-97.
- Meltzer, Allan H., and Scott F. Richard. 1981. "A rational theory of the size of government." *Journal of Political Economy* 89 (5):914-27.
- Moene, Karl Ove, and Michael Wallerstein. 2001. "Inequality, Social Insurance, and Redistribution." *American Political Science Review* 95 (4):859-74.
- . 2003. "Earnings Inequality and Welfare Spending: A Disaggregated Analysis." *World Politics* 55 (4):485-516.
- OECD. 2007. *Education at a Glance 2007: OECD Indicators*. Paris: OECD.
- Papadakis, Elim. 1993. "Class Interests, Class Politics and Welfare State Regimes." *British Journal of Sociology* 44 (2):249-70.
- Pfeffer, Fabian T. 2008. "Persistent Inequality in Educational Attainment and its Institutional Context." *European Sociological Review* 24 (5):543-65.
- Pontusson, Jonas, David Rueda, and Christopher R. Way. 2002. "Comparative Political Economy of Wage Distribution: The Role of Partisanship and Labour Market Institutions." *British Journal of Industrial Relations* 32:281-308.
- Rehm, Philipp. 2009. "Risk and Redistribution: An Individual-Level Analysis." *Comparative Political Studies* 42 (7):855-81.
- Rothstein, Bo. 1998. *Just Institutions Matter: The Moral and Political Logic of the Universal Welfare State*. Cambridge: Cambridge University Press.
- Rueda, David. 2008. "Left Government, Policy, and Corporatism: Explaining the Influence of Partisanship on Inequality." *World Politics* 60 (April 2008):349-89.
- Rueda, David, and Jonas Pontusson. 2000. "Wage Inequality and Varieties of Capitalism." *World Politics* 52 (3):350-83.
- Scheve, Kenneth, and David Stasavage. 2006. "Religion and Preferences for Social Insurance." *Quarterly Journal of Political Science* 1:255-86.
- Solt, Frederick. 2009. "Standardizing the World Income Inequality Database." *Social Science Quarterly* 90 (2):231-42.
- Steenbergen, Marco R., and Bradford S. Jones. 2002. "Modeling Multilevel Data Structures." *American Journal of Political Science* 46 (1):218-37.
- Svallfors, Stefan. 1997. "Worlds of Welfare and Attitudes to Redistribution: A Comparison of Eight Western Nations." *European Sociological Review* 13 (3):283-304.
- . 2004. "Class, Attitudes and the Welfare State: Sweden in Comparative Perspective." *Social Policy & Administration* 38 (2):119-38.
- Van Oorschot, Wim. 2006. "Making the difference in Europe: deservingness perceptions among citizens of European welfare states." *Journal of European Social Policy* 16 (1):23-42.

- Wallerstein, Michael. 1999. "Wage-Setting Institutions and Pay Inequality in Advanced Industrial Societies." *American Journal of Political Science* 43 (3):649-80.
- Western, Bruce. 1998. "Causal Heterogeneity in Comparative Research: A Bayesian Hierarchical Modelling Approach." *American Journal of Political Science* 42 (4):1233-59.