

Economic Shocks, Inequality, and Popular Support for Redistribution

THOMAS R. CUSACK, TORBEN IVERSEN, AND PHILIPP REHM

Despite numerous predictions to the contrary, globalization has not led to convergence in redistribution policies in different countries. This chapter argues that this does not come as a surprise, at least if we conceptualize the politics of redistribution as interaction between exogenous shocks, popular demand for compensation, and government responsiveness to such demand. Such an approach improves on the existing literature, which usually relies on cross-sectional evidence or fixed-effects regressions that ignore the role of political institutions.

The chapter uses a data set that combines public opinion and labor force survey data to test theoretically derived hypotheses about the effects of exogenous shocks on both individual preferences and government policies. Contrary to popular beliefs, our analysis shows that preferences for redistribution continue to be closely related to people's position in the economy and that governments respond very differently to economic shocks depending on their institutional and political context.

More specifically, we argue that redistributional demand—preferences for redistribution at the individual level—is shaped by actual or threatened unemployment. Job loss or the risk of job loss has two effects. The first is that it reduces income and adds to the ranks of those at the bottom end of the income distribution, who have a self-interest in redistribution. Second, the risk of job loss may raise the demand for redistribution among employed workers since redistributive spending serves as an insurance against the risk of future income loss. The latter, in turn, depends on the portability of workers' skills and hence their ability to successfully navigate through the dynamics of labor markets. We show that

exposure to risk, combined with relative income, is a remarkably strong predictor of redistributive preferences.

The supply of redistribution—redistributional policies—responds to these demands, but the relationship between supply and demand depends on two additional factors: first, the distribution of risks and how they are linked to salient political cleavages, and, second, the impact of institutions on interest aggregation, particularly the manner in which institutions allocate influence to workers with different levels of risk exposure. Assuming that redistribution of income is the main axis of political competition, the effects of government partisanship on responses to shocks depend on the distribution of shocks across the income scale. We provide clear and strong evidence of such a link, which implies that economic cleavages and government partisanship continue to matter a great deal for public policies.

Regarding institutions, this chapter concentrates on the role of national training systems and electoral systems. The training system shapes the composition of skills in the labor force, which in turn affects the level of demand for social insurance. Second, proportional representation (PR) tends to advantage the center-left, whereas majoritarian systems do the opposite. PR also facilitates the ability of political parties to make long-term social policy commitments (Iversen and Soskice, this volume). Our evidence clearly shows that these institutional differences, as well as government partisanship, affect how aggressively governments respond to economic shocks.

The next section presents a simple organizing model with testable implications for both the structure of individual-level preferences and for how these preferences are aggregated into actual policies. The succeeding section has two parts. In the first part, we use a data set that combines public opinion and labor force survey data to test the individual-level hypotheses; in the second part, we explore how national institutions and partisanship condition the transmission of preferences into policy outcomes. The last section discusses the implication of our findings and points out possible extensions to this work.

A Framework for the Analysis of Shocks and Policies

This section introduces the general structure of our argument. It highlights the importance of risks in labor markets for shaping redistributional preferences and discusses the lack of uniformity across democracies in the translation of redistributional demands into actual redistributional policies. The section also illuminates how the supply of redistribution is

affected by institutions, especially national training systems, electoral systems, and the partisan governments that tend to accompany them.

The Demand for Redistribution

In the Meltzer-Richard model, a flat-rate benefit paid through a proportional tax implies that those below the mean prefer redistributive spending up to the point where the benefit to them is exactly outweighed by the efficiency cost of taxation (assuming a typical right-skewed distribution of income) (Meltzer and Richard 1981). This implies that income is negatively related to support for redistribution. However, redistributive spending also serves insurance purposes by cushioning the effects of income losses, and this affects the shape of the relationship between income and preferences. If those with higher incomes are also exposed to risks, they will demand some redistributive spending for insurance purposes.¹

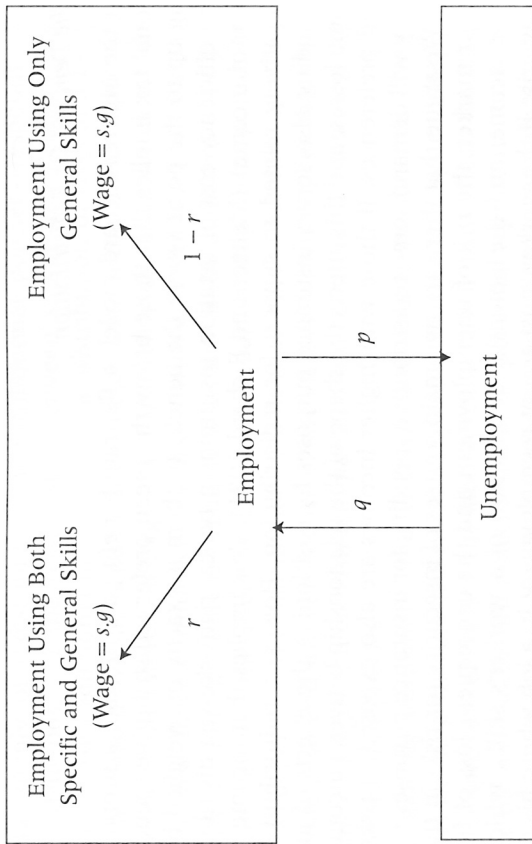
We argue that there are two main sources of insecurity (or risk) in the labor market: the risk of unemployment and the consequent loss of future income, and the potential devaluation of a worker's skills, which may arise if the worker must accept reemployment in a job where his or her skills are not fully utilized.

Rising unemployment risks induce individuals to demand higher protection against future income loss. One of the clearest signals of exposure to the loss of employment occurs when others with similar occupations become unemployed. As these numbers rise, so does the observant individual's insecurity. Therefore, individuals in occupations with high unemployment rates will demand greater insurance against these risks. One form this insurance takes is redistributive policies, manifested in income redistribution by the government.

The more specific workers' skills are, the less portable they are. Individuals with specific skills are therefore more sensitive to adverse conditions in labor markets: they may have to accept reemployment into jobs where their skills are not fully utilized and may thus suffer significant income loss. To insure against this risk, workers with specific skills are more predisposed to support redistributive policies (Iversen and Soskice 2001).

The basic logic of the latter point is illustrated in figure 7.1. Those who are employed derive income from their general (g) and specific (s) skills. The former are assumed to be fully portable across firms, industries, and occupations, and there is an economy-wide market wage for these skills. In a perfectly competitive (neoclassical) labor market with only general skills, risks are minimal because the loss of one job is always matched by the availability of another at exactly the same wage (g). Specific skills, by

Figure 7.1 Transition Between Different Labor Market Situations



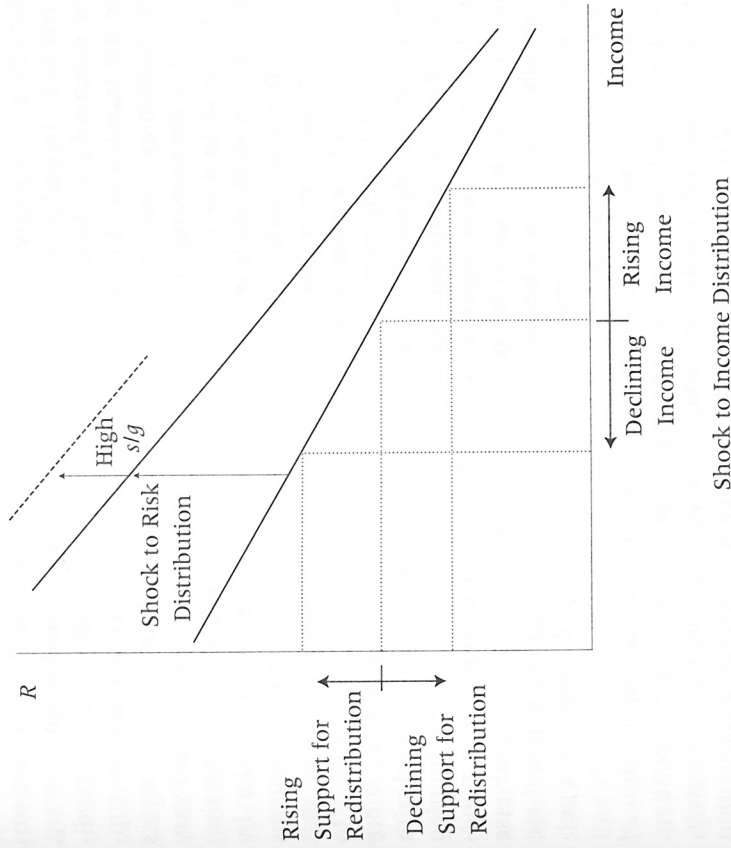
Source: Authors' compilation.

contrast, are employable only in a particular firm, industry, or occupation, and losing a job presents a serious risk if another job in the same firm, industry, or occupation is unavailable. Specificity of skills limits an individual's reemployment potential regardless of levels of unemployment—even in his or her own occupation. As a consequence, there is a potential loss of income that risk-averse individuals try to insure against by demanding income protection through public policies.

If the risk of unemployment is denoted p , the probability of reemployment q , and the probability of reemployment in a job using a worker's combined specific and general skills r ; q , the long-term probabilities of being in different labor market situations (unemployment and good or bad jobs) is determined by the combination of these parameters, as is expected income.² If the government taxes income and spends it on a flat-rate benefit R (as in the Meltzer-Richard model), workers' level of demand for redistributive spending will depend on their location in the income distribution. The level of exposure to risk, which shapes insurance preferences, will affect redistributive preferences as well.

Figure 7.2 shows the level of R that maximizes the current value of income from both wages and redistributive spending for workers with dif-

Figure 7.2 Support for Redistribution as a Function of Income and Risk



Source: Authors' compilation.

ferent income. The relationship between income and preferences for redistribution is downward sloping. Our focus is on the effects of a shock to the economy that raises the exposure of some workers to risks and reduces the income of others because of loss of employment and income. While declining income increases support for redistribution, greater exposure to risk raises demand for insurance. R captures both.

Needless to say, there are other forces shaping individual preferences for redistribution. Here the focus has been exclusively on individuals in the labor market and the forces that affect them. A significant number of voters do not participate directly in this market, but the differences among them predispose these voters to be more or less supportive of governmental redistribution. We address these issues briefly in a later section.

The Supply of Redistribution

There is no Say's Law in politics. Although demand and supply are unlikely to be in perfect accord, in democracies they should at least covary. The extent of covariation is likely to be shaped by institutions that mediate the translation of redistributive demand into redistributive supply. Insofar as there are differences in the composition of skills across countries, the demand for—and hence supply of—protection should vary in response to a given shock. Systems of production and training that emphasize specific skills should be associated with a stronger reaction by governments to shocks than the reaction from governments in systems that emphasize general skills. In particular, it is sensible to assume that economies with extensive vocational training systems, as opposed to economies that rely more on general education, tend to produce more people with highly specific skills. Insofar as such skills are associated with greater demand for insurance, systems with extensive vocational training should produce higher aggregate demand for redistribution. Correspondingly, the rise in demand for such redistribution in response to adverse economic shocks should be greater in specific-skills systems, where these shocks may expose workers to a longer spell of unemployment or a permanent drop in income.

But the effects of demand on supply depend on the distribution of risk, how closely tied it is with the main cleavage of party competition, and how political institutions shape the aggregation of preferences. Specifically, if the main axis of political competition is over redistribution of income, the effect of shocks on policies will depend on the distribution of risks across income, as well as on the segment of the income distribution the government represents. We have assumed—and will show later—that risk exposure is decreasing in income (that is, the effect of a shock is greater at lower income levels). There are several reasons this is likely to be true. First, low-skilled workers are more likely to be replaced by competition from low-wage countries. Second, it is easier to develop technologies that replace low-skilled workers than ones that replace high-skilled workers. Finally, the skills of low-income workers are likely to be acquired through short-term vocational and on-the-job training, whereas high-skill workers are likely to have more formal education that is not tied to a particular employer or job. If income and risk *are* related, then government responses to shocks should depend on partisanship. Left governments representing lower-income workers should respond with greater increases in transfers than right governments. In the end, of course, whether risk exposure and income are related is an empirical matter that we explicitly test.

The partisan logic also suggests a role for electoral institutions because

PR has been associated with more left-leaning governments and majoritarian institutions with more right-leaning governments (Crepaz 1998; Iversen and Soskice, this volume; Powell 2002). A likely reason for the conjunction between electoral institutions and partisanship is that if net transfers cannot be regressive, the poor and the middle class have an incentive to form coalition governments under PR for the purpose of “robbing” the rich and sharing the “booty.” In a two-party majoritarian system, by contrast, both parties must appeal to the preferences of the median voter. If parties cannot fully commit to a median voter platform, the median voter must worry about what each party will do should its core constituents—the poor and the rich, respectively—get to set policies. With nonregressivity, the greater worry would be that the poor will exploit the middle class, which produces a conservative bias in the voting behavior of middle class voters.

Electoral institutions can also facilitate credible commitments by political parties. Under PR systems—and the party coalitions they tend to produce—radical policy changes are unlikely. In contrast, majoritarian electoral systems are generally conducive to one-party governments. The fundamental problem in the provision of social insurance is that when a shock hits, those who are directly affected are not likely to be those setting the policy. Although the “decisive voters” will update their subjective assessment of risks, they have an interest in compensatory policies only if such policies can be seen as an insurance premium for protection against future shocks. Yet current voters can commit the government for only one electoral term at a time, and there is no way to bind future voters to the policy preferences of current voters. This time inconsistency problem in social insurance provision means that shocks that raise demand for protection, as in figure 7.2, would not necessarily be translated into “revealed” preferences for actual policies.

One likely remedy for the time inconsistency problem is to have programmatic and responsible political parties that limit the ability of leaders to give in to short-term electoral incentives. It is difficult to build such parties in majoritarian systems because the reward for winning the next election is very high. Under PR, by contrast, a low threshold of representation makes it less tempting for parties to abandon the long-term interests of their constituents for short-term electoral gains. Another reason PR is likely to produce greater commitments to long-term compensation goes back to the argument that PR electoral systems give centrist parties an incentive to ally with left parties. If left parties tend to represent voters who are at greater risk, the preferences of these voters will be better represented in coalition bargaining. Redistributive policies in turn serve insurance functions because those who experience unemployment will benefit from income replacement. This center-left “bias” of PR is also

likely to cause center-right parties to commit to more pro-welfare platform forms in order to increase their electoral fortunes.

In summary, we would expect left partisanship and PR to amplify policy responses to exogenous shocks provided that political competition is organized around income redistribution, exposure to risks is declining in income, and individual preferences for redistribution are determined by income and exposure to risk. Because the last condition is likely to depend on the composition of workers' skills, the structure of national training systems matters for how responsive policies are to exogenous shocks.

Evidence

The empirical analysis in this chapter has two parts. The first examines the relationship between risk exposure and redistributive preferences as well as the joint distribution of income and exposure to risks. The second tests whether shocks lead to different government responses depending on national training systems, partisanship, and electoral institutions.

Microlevel Evidence

The Statistical Model and the Data To examine the relationship between exposure to risks and preferences for redistribution, we regress redistribution preferences on a constructed measure of risk exposure plus a set of controls. The following ordered logit model is estimated using country and year dummies:

$$RD_{i,t} = \alpha + \beta_1 S_{i,t} + \beta_2 U_{i,t} + \sum_j \gamma^j X_{i,t}^j + \epsilon_{i,t} \quad (7.1)$$

where RD is individual-level preferences or demands for redistribution, S is skill-specificity, and U is exposure to unemployment risks as measured by occupational unemployment rates. (We also include a control variable for those who are unemployed.) The regressions include a vector of controls, X .³

We rely on a new data set that combines public opinion and labor force survey data from a variety of national and international sources. The public opinion data are from several waves of the International Social Survey Program (ISSP), which asks people directly about their preferences for redistribution.⁴ Specifically, many of the ISSP surveys contain two similar questions about redistribution. One reads:

It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes.

The possible answer categories range from 1 ("agree strongly") to 5 ("disagree strongly").⁵ This question was asked in eight ISSP studies between 1985 and 2000. The other reads:

On the whole, do you think it should be or should not be the government's responsibility to: Reduce income differences between the rich and poor?

The possible answer categories range from 1 ("definitely should be") to 4 ("probably should not be").⁶ This question was included in five ISSP waves from 1985 to 1998.

Our key explanatory variables, skill-specificity and exposure to unemployment risk, both rely on occupational data based on the International Standard Classification of Occupations (1988) (ISCO88) at the two-digit level. As in Torben Iversen and David Soskice (2001), we calculated the skill-specificity of an individual's occupation by dividing (a) the share of occupational groups in the broadest ISCO occupational class to which that occupation belonged by (b) the share of the labor force in that class. To get a measure of specificity that was relative to an individual's general skills (s_1) or to his or her total skills (s_2), it was then weighted by either the individual's reported level of education or by the International Labor Office's (ILO) measure of the occupational skill level.⁷ The measure used in this chapter is Iversen and Soskice's composite indicator, which is the average of s_1 and s_2 . Skill-specificity is high if an individual is in a very specialized occupation but has relatively low levels of education or skills. It is low if the individual's occupation is not very specialized but his or her level of education or skills is high.

Second, as in Phillip Rehm (2005), we extracted information from labor force surveys that allows for the calculation of occupational unemployment rates.⁸ Such a rate is analogous to national unemployment rates but is specific to an occupational category. The rate is calculated in the following way: the number of unemployed in an ISCO category is taken as a percentage of the sum of the employed and unemployed in that ISCO category. If possible, this is done for women and men separately. In the optimal case, this results in a measure that distinguishes among fifty-two occupational unemployment rates per country-year (twenty-six occupations—at the ISCO88 two-digit level—times two genders).⁹

Realized Risk In conjunction with the two risk variables, measures that capture exposure to *potential* loss or adverse circumstances, an indicator that captures *realized* risk is also included in the equation. This variable indicates whether the individual is unemployed. Because the unemployed already are the victims of the vagaries of the labor market, they are more supportive of income redistribution than those who are employed.

In addition to the risk variables, we control for the following characteristics:¹⁰

Income: Income is the central variable in the Meltzer-Richard model, in which those with incomes above the mean oppose governmental redistribution, while others support it.

Age: Should they lose their current jobs, older workers are disadvantaged in seeking reemployment.¹¹ This puts them at greater risk than younger workers, and we should correspondingly expect them to have a higher predisposition for redistribution.

Gender: Because women tend to be the primary caregivers, they are in a disadvantaged position within the labor market compared to men. This is particularly true in the event of divorce, when transfers from the state often become the wife's only source of income. Correspondingly, we should expect women to be more supportive of redistribution by the government.

Students: Students are often the direct as well as indirect beneficiaries of governmental redistribution. As such, it is in their interest to embrace such policies. On the other hand, their preferences might be determined in part by their expected future earnings.¹²

Retired: In the main, the retired are beneficiaries of government redistributive policies. It seems only natural, then, to anticipate that these individuals will favor income redistribution.

Self-employed: The self-employed depend on flexible labor markets and frequently rely on the ability to hire relatively low-paid labor. They would stand to lose from most governmental redistributive efforts. As a consequence, we would expect these individuals to oppose most redistributive policies.

Publicly employed: There are multiple ways to argue that the publicly employed would favor governmental redistributive policies.¹³ For example, William Niskanen (1971) argued that bureaucrats maximize rents by increasing their budgets. André Blais, Donald Blake, and Stéphane Dion (1990) described public opinion

studies showing a general tendency for public employees to be more supportive of larger governments than private sector employees. Paul Pierson's (1996) feedback loops suggest that the publicly employed are a constituency of the welfare state since their jobs often depend on its vitality. Hence, the publicly employed would be in favor of redistribution by the government.

Union membership: Union members, particularly where joining a union is a matter of choice, are likely to be in a union precisely because they are concerned with the security of their jobs and income. Such worries should prompt support for redistribution.

Nonemployed: This is a residual category intended to pick up any effects of not being in the labor market that are not captured by the student, retired, and unemployed variables. Since the group is heterogeneous, there are no clear expectations regarding the effect of this variable on redistributive preferences.

Findings Table 7.1 displays the results of four ordered logit regressions. In models 1 and 2, the question on redistributive preferences with five answer categories is the dependent variable. In models 3 and 4, the question with four answer categories is the dependent variable. Models 1 and 3 share the same, more restricted, set of independent variables to maximize the number of observations. The two additional control variables included in models 2 and 4 exclude a number of country-year surveys from the regressions.

There are no indications from the summary statistics that the models should be rejected. Our general expectations with respect to control variables are borne out. The only exception to this is age: in three of four instances, the variable's coefficient is not statistically significant. We should note that with respect to the nonemployed variable, for which we had no a priori expectation, the coefficient is consistently positive and statistically significant.

The focus of this chapter is on the two variables capturing risk exposure. Both variables' coefficients are statistically significant and take on the predicted signs. In other words, risks in the labor market influence preferences over redistribution: the greater the risk an individual experiences in the labor market, the more supportive of government redistribution that individual is.

But how important are these variables in substantive terms? We rely on simulations to answer this question.¹⁴ Figures 7.3 to 7.6 show the simulated substantive effects of changes in some of the important independent variables on redistributive preferences. These simulations re-

Risks	(1)		(2)		(3)		(4)	
	Pro Redistribution (Five Answer Categories)		Pro Redistribution (Four Answer Categories)		Pro Redistribution (Four Answer Categories)		Pro Redistribution (Four Answer Categories)	
Occupational unemployment rate ^a	0.021*** [0.003]	0.021*** [0.003]	0.025*** [0.004]	0.029*** [0.004]	0.025*** [0.004]	0.029*** [0.004]	0.025*** [0.004]	0.029*** [0.004]
Skill-specificity ^b	0.135*** [0.017]	0.146*** [0.019]	0.137*** [0.024]	0.143*** [0.027]	0.137*** [0.024]	0.143*** [0.027]	0.137*** [0.024]	0.143*** [0.027]
Realized risk								
Unemployed	0.585*** [0.053]	0.689*** [0.059]	0.695*** [0.073]	0.823*** [0.081]	0.695*** [0.073]	0.823*** [0.081]	0.695*** [0.073]	0.823*** [0.081]
Controls								
Income ^c	-0.145*** [0.004]	-0.146*** [0.005]	-0.156*** [0.005]	-0.155*** [0.006]	-0.156*** [0.005]	-0.155*** [0.006]	-0.156*** [0.005]	-0.155*** [0.006]
Age	0 [0.001]	0.001 [0.001]	0.001 [0.001]	0.003** [0.001]	0.001 [0.001]	0.003** [0.001]	0.001 [0.001]	0.003** [0.001]
Gender (female)	0.160*** [0.019]	0.155*** [0.021]	0.213*** [0.026]	0.211*** [0.029]	0.213*** [0.026]	0.211*** [0.029]	0.213*** [0.026]	0.211*** [0.029]
Nonemployed	0.289*** [0.040]	0.424*** [0.047]	0.389*** [0.054]	0.524*** [0.063]	0.389*** [0.054]	0.524*** [0.063]	0.389*** [0.054]	0.524*** [0.063]
Student	0.259*** [0.055]	0.406*** [0.061]	0.210*** [0.074]	0.376*** [0.084]	0.210*** [0.074]	0.376*** [0.084]	0.210*** [0.074]	0.376*** [0.084]
Retired	0.269*** [0.046]	0.387*** [0.053]	0.315*** [0.062]	0.442*** [0.071]	0.315*** [0.062]	0.442*** [0.071]	0.315*** [0.062]	0.442*** [0.071]
Self-employed	-0.366*** [0.033]	-0.239*** [0.037]	-0.474*** [0.042]	-0.325*** [0.049]	-0.474*** [0.042]	-0.325*** [0.049]	-0.474*** [0.042]	-0.325*** [0.049]
Publicly employed	—	0.152*** [0.027]	—	0.241*** [0.037]	—	0.241*** [0.037]	—	0.241*** [0.037]
Union membership	—	0.286*** [0.027]	—	0.264*** [0.036]	—	0.264*** [0.036]	—	0.264*** [0.036]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes	yes	yes	yes	yes
Observations	52,027	45,429	29,152	24,992	29,152	24,992	29,152	24,992
Pseudo-R-squared	0.06	0.06	0.08	0.08	0.08	0.08	0.08	0.08
Log pseudo-likelihood	-73,462.9	-63,582.6	-35,148.1	-29,469.7	-35,148.1	-29,469.7	-35,148.1	-29,469.7
Wald χ^2 (degrees of freedom)	7,550.71 (36)	5,681.12 (38)	5,120.28 (30)	3,842.87 (32)	5,120.28 (30)	3,842.87 (32)	5,120.28 (30)	3,842.87 (32)

Source: Authors' compilation from International Social Survey Programme (ISSP) data for the United States, Canada, the United Kingdom, Ireland, Switzerland, Spain, Portugal, East Germany, West Germany, Austria, Finland (not in models 3 and 4), Sweden, Norway, Denmark, Australia, and New Zealand, for various survey years.

Notes: Ordered logit regressions, using weights (design weights*sample weights). Robust standard errors in brackets.

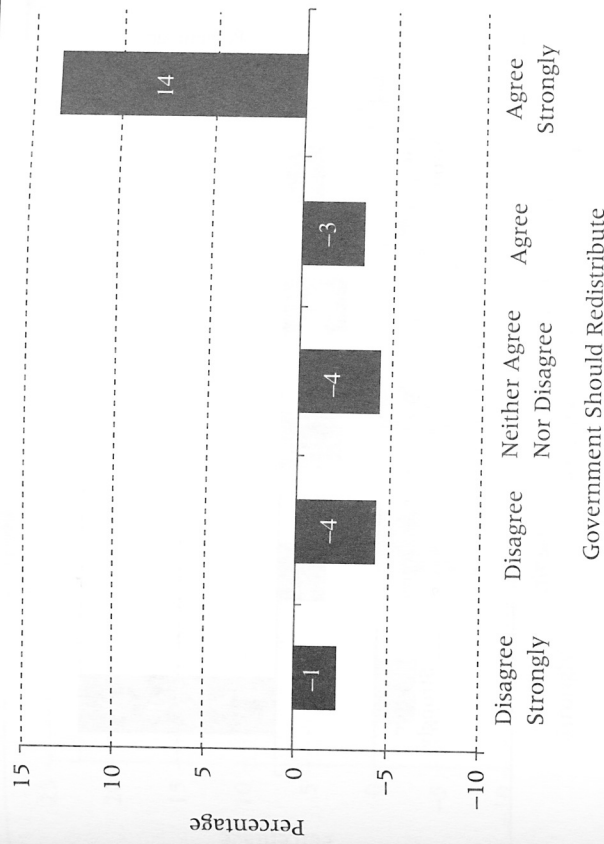
^a Right-censored at 20 percent (circa 95th centile), at the most detailed occupational level. Zeros for people not in the labor force.

^b Right-censored at 3.33 (circa 95th centile). Zeros for people not in the labor force.

^c In nine (national) quantiles.

* p < .10; ** p < .05; *** p < .01

Figure 7.3 Changes in Redistributive Preferences as a Function of Job Loss



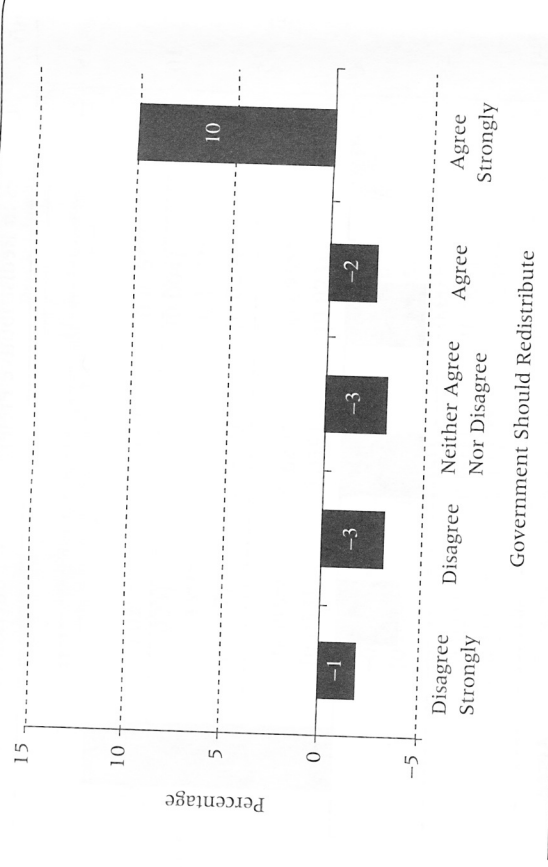
Source: Authors' compilation. Simulations based on model 1 in table 7.1.
Note: Differences in redistributive preferences comparing an employed with an unemployed individual.

veal how the probability of falling into a certain answer category changes, depending on the values of an independent variable, holding everything else constant. For example, figure 7.3 shows that the probability of "strongly agreeing" with redistribution by the government for an unemployed individual is around fourteen percentage points higher than the probability for an employed individual. In this and all other simulations, the values of the variables not being simulated are held constant.

The contrast between being employed and unemployed, the latter being a "realized" risk, is a good benchmark for assessing the effects of exposure to risks—our central independent variables. Figure 7.4 presents the simulation results connected to skill-specificity, one of our postulated risk factors, and preferences regarding redistribution. Using a 95 percentile range, the difference between having general skills and having very specific skills is nearly comparable in its magnitude on redistributive preferences to the difference between being employed and being unemployed (shown in figure 7.3).

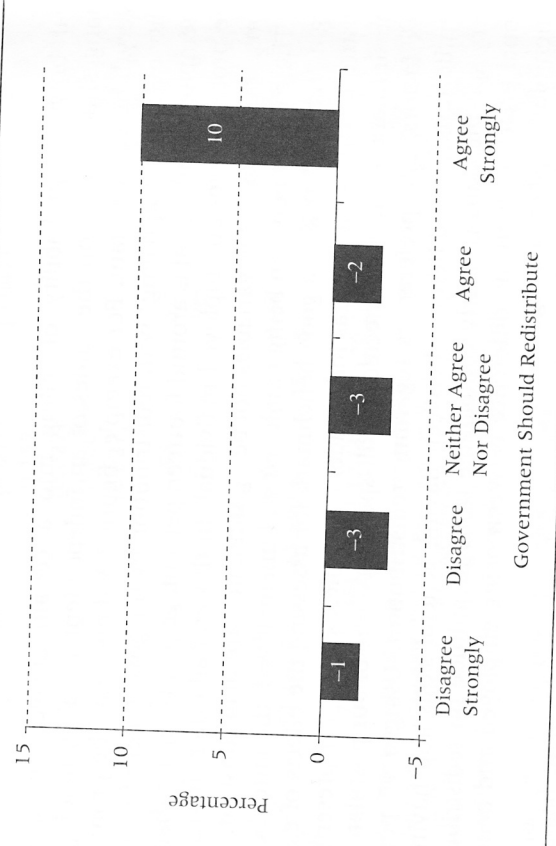
Likewise, simply being exposed to the risk of unemployment has an impact nearly as great as actually being unemployed (figure 7.5). While

Figure 7.4 Changes in Redistributive Preferences as a Function of Differences in Skill-Specificity



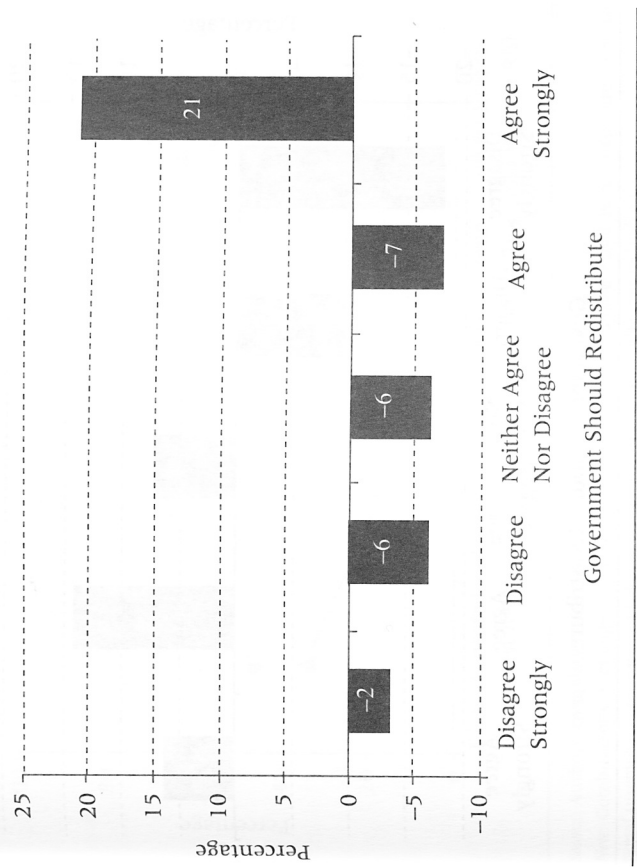
Source: Authors' compilation. Simulations based on model 1 in table 7.1.
 Note: Change in skill-specificity from 0 to 3.33 (95th centile).

Figure 7.5 Changes in Redistributive Preferences as a Function of an Increase in Occupational Unemployment Rates



Source: Authors' compilation. Simulations based on model 1 in table 7.1.
 Note: Change in risk from 0 to 20 (95th centile).

Figure 7.6 Changes in Redistributive Preferences as a Function of an Increase in Occupational Unemployment Rates and Skill-Specificity



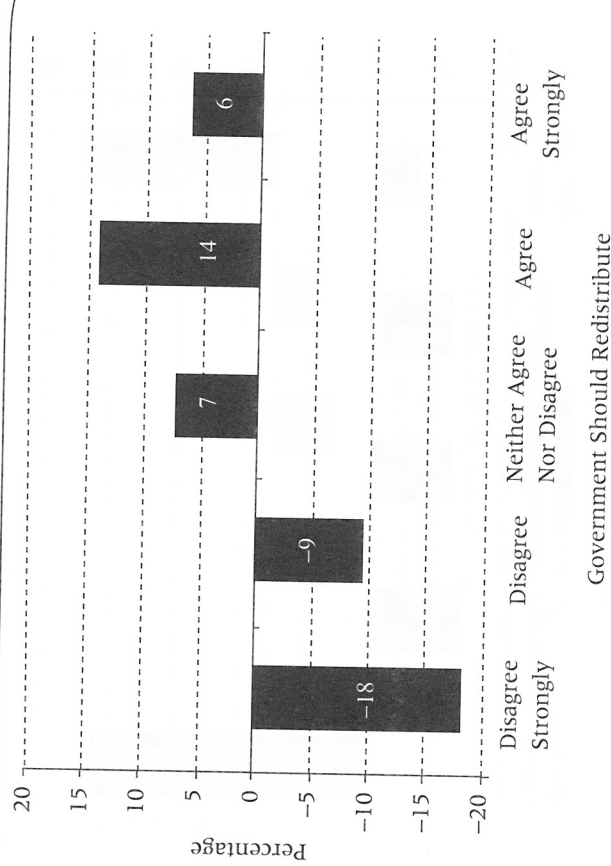
Source: Authors' compilation. Simulations based on model 1 in table 7.1.
 Note: Change in occupational unemployment risk from 0 to 20 (95th centile) and change in skill-specificity from 0 to 3.33 (95th centile).

being unemployed increases the probability of strongly agreeing with government redistribution by fourteen percentage points, a high risk of unemployment elevates this probability by ten percentage points. Similarly, individuals with high skill-specificity are ten percentage points more likely to strongly support government redistribution than are individuals with general skills.

When taken together, these two elements of risk exposure in the labor markets appear to have a powerful impact on individuals' preferences for redistribution. Figure 7.6 plots the combined simulated effects of moving from a situation in which an individual is not exposed to risk on both the skill-specificity and unemployment dimensions to a situation of maximal skill-specificity and occupational unemployment risk. The impact of moving from minimum to maximum risk exposure increases the likelihood that an individual will strongly agree with government redistribution by twenty-one percentage points.

It is useful to assess the impact of the risk variables relative to the

Figure 7.7 Changes in Redistributive Preferences as a Function of Moving from the Bottom to the Top Income Quantile



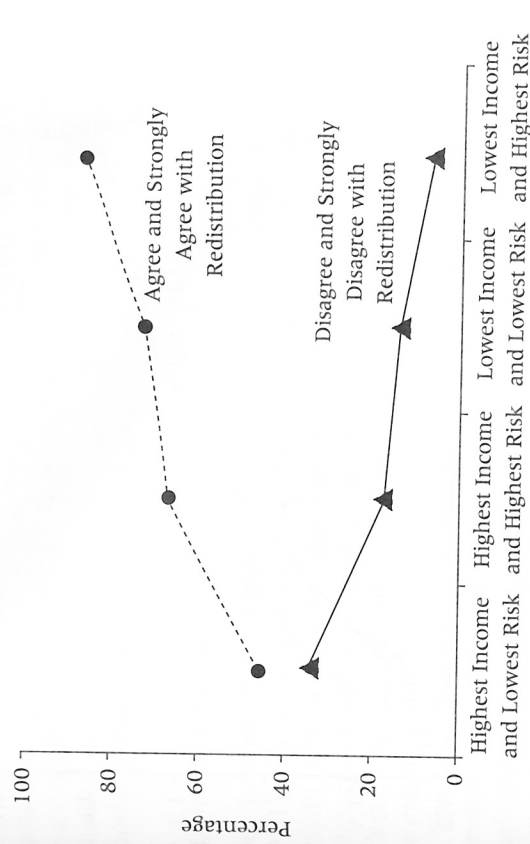
Source: Authors' compilation. Simulations based on model 1 in table 7.1.

Note: Change in income from quantile 1 to quantile 9. Horizontal axis reversed in comparison to previous figures.

Meltzer-Richard effect captured by the income variable. Figure 7.7 contrasts the differences in preferences for redistribution between those well below the mean income and those well above it. According to the Meltzer-Richard argument, the former are far more supportive of egalitarian redistribution by the government than the latter. This is indeed the case when we examine the results produced in table 7.1. Substantively, we can observe marked differences in redistributive preferences between individuals with very low and very high incomes.

Our results indicate that preferences for redistribution are very much in line with what we would expect from people's "objective" economic positions. Poor people as well as individuals exposed to high risks favor governmental redistribution, while the rich and those in secure labor market positions tend to be less supportive of such policies. Figure 7.8 shows that, together, income and risk exposure leave a strong imprint on redistributive preferences. Simulations with combinations of the extremes on these variables reveal that individuals have markedly different

Figure 7.8 Changes in Redistributive Preferences as a Function of Different Combinations of Income and Risk Exposure



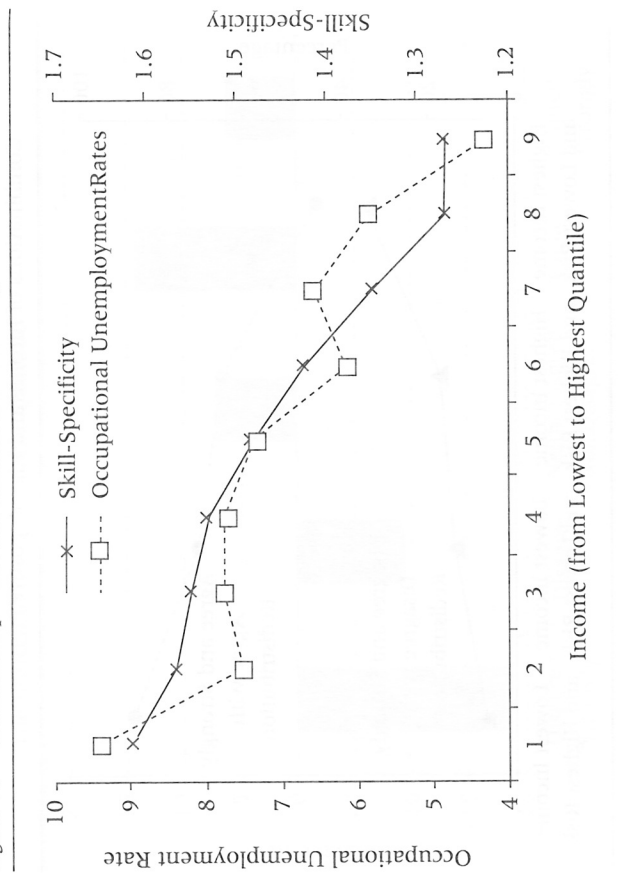
Source: Authors' compilation. Simulations based on model 1 in table 7.1.

Note: Combinations of income from quantile 1 to quantile 9 and in risk exposure (occupational unemployment rates and skill-specificity combined) from lowest to highest.

preference profiles depending on their exposure to risk and their earnings. For example, individuals with high income and low risk are, as a group, ambivalent in their redistributive preferences. While about 45 percent support redistribution, 35 percent oppose it, and the remaining 20 percent express indifference. At the same time, those misfortunate enough to be both at high risk in the labor market and poor in terms of income overwhelmingly support redistribution: 86 percent favor it, 6 percent are opposed, and the remaining 8 percent express no preference in either direction. It is hard to imagine clearer evidence that economic interests are critical in explaining redistributive policy preferences. Though some people may be "rationally ignorant" about their interests, most are not.

But the salience of these preferences for partisan politics depends on their association with electoral cleavages. Many political economists follow the lead of Downs, Hibbs, and Meltzer and Richard in assuming that income redistribution is the principal dimension of partisan competition. This raises the question, then, of the relationship between income and risk exposure and how this influences parties' reactions to shocks. If the

Figure 7.9 Relationship Between Income and Risk Exposure



Source: Authors' compilation. Simulations based on model 1 in table 7.1.

poor are also exposed to high labor market risks, we would expect that shocks to the labor market would produce different responses by governments dominated by left or by right parties. Risk exposure, in this scenario, reinforces the demand for redistribution due to income differences. But whether risk exposure and income are reinforcing or cross-cutting cleavages is, of course, an empirical question.

One way to answer this question is simply to correlate income and risk exposure at the individual level within the data set. The Pearson correlation coefficient between income and skill-specificity at this level is -0.15 ($N = 96,416$), and the one between income and occupational category unemployment rates is -0.23 ($N = 71,179$). Because of the large sample sizes, both correlations are highly statistically significant, but they may appear quite low. In fact, when using individual-level data sets, we find that correlations at this magnitude between conceptually distinct variables are quite rare (Gelissen 2002, 159–60). They indicate very strong systematic relationships, which become clearer when we look at the relationship between income and risk exposure for different income groups.

Figure 7.9 depicts the relationship between income and the risk exposure measures for each income group. At this level of aggregation, it becomes quite apparent that our risk measures are highly correlated with

income. The correlation coefficient between income and skill-specificity (occupational unemployment rates) is -0.98 (-0.93). This strongly suggests that risks in the labor market and income are reinforcing and not cross-cutting cleavages. In light of these findings, we should expect marked partisan differences in government reactions to labor market shocks. We address this issue in the next section.

Macrolevel Evidence

The Statistical Model and the Data The estimation strategy at the macro level follows the approach taken by Olivier Blanchard and Justin Wolfers (2000), who include political-institutional variables in the regression as interactions with the shocks that are supposed to condition the shocks' effects.¹⁵ Blanchard and Wolfers propose two versions of the model, and we estimate both.

The first assumes that countries are exposed to uniform, and unobservable, exogenous shocks. Since the nature of the shocks is left unspecified, the purpose is simply to determine whether countries with different institutions respond differently to them. The shocks are proxied by a set of year dummies (D_t) that are interacted with the institutional variables (I_i):

$$RS_{i,t} = \alpha_i + D_t \cdot (1 + \beta \cdot I_i) + \sum \gamma^j \cdot X_{i,t}^j + \varepsilon_{i,t} \quad (7.2)$$

where RS (redistributional supply) refers to actual government transfers. The common unobserved shocks in this formulation are captured by the time dummies, and the political-institutional effect by the parameter β . If β is zero, it means that the effects of the shocks are identical across political-institutional configurations. If it is positive (negative), it means that the relevant institutional feature magnifies (reduces) the effect of the common shocks. The model uses country-specific intercepts so that differences observed between countries can be attributed entirely to policy changes.

The second formulation identifies the nature of the shock and allows it to vary across countries. The shock variables, $S_{i,t}$, are simply substituted in for the time dummies in the first model:

$$RS_{i,t} = \alpha_i + S_{i,t} \cdot (1 + \beta \cdot I_i) + \sum \gamma^j \cdot X_{i,t}^j + \varepsilon_{i,t} \quad (7.3)$$

The data for the estimations of the two models are from sixteen OECD countries over a thirty-six-year period from 1960 to 1995.¹⁶ This period

covers both the golden age of welfare state expansion as well as what Pierson (1996) calls the "new politics" of retrenchment. The following describes the variables and measures we used in detail:

Government transfers: The dependent spending variable is proxied by total government transfers to private households as a share of GDP. The data are described in Thomas Cusack (1991) and are drawn mainly from OECD, *National Accounts* (various years).¹⁷

Shock variables: Following the microlevel analysis, we employ two different shock variables. One is unemployment as a percentage of the labor force, and the other is deindustrialization.¹⁸ The former corresponds directly to one of our individual-level risk measures. The latter is meant to serve as a summary measure of job losses as a result of technological change. As argued in Torben Iversen and Thomas Cusack (2000), deindustrialization is a particularly dramatic, and easily measured, instance of labor market change that forces some workers to find jobs outside the sector for which their skills were originally developed. The variable is defined as 100 minus the sum of manufacturing and agricultural employment as a percentage of the working-age population.¹⁹ The raw data constructing these variables are drawn from OECD, *Labor Force Statistics* (various years).

Partisanship: The political-institutional variables are government partisanship, the electoral system, and the training system. The partisanship measure is Cusack's "government center of gravity," which is the average of three expert surveys of the left-right position of parties, weighted by the share of parties' seats in government (see Cusack and Engelhardt 2002). The variable goes from left to right and is standardized to have a range of one and a mean of zero. We may think of partisanship as capturing the structural advantage of the left or right in a political economy. As such, it can be treated as an institutional variable, *I*. But since partisanship varies over time, it can also be entered as an independent, "conjunctural" variable, *X*.

Electoral systems: For "electoral system" we use a simple classification of electoral systems into majoritarian (0) and PR (1). The categorization is based on Arend Lijphart's (1994) analysis of democratic institutions. Since this variable does not change over time, it is treated as a conditioning institutional variable.

Vocational training systems: The training system is measured as the share of an age cohort going through a vocational training, assum-

ing that vocational training is a measure of specific skills acquisition. The data are taken from UNESCO (1999). This measure, which starts in the 1980s, is in principle annual, but it exhibits little meaningful variation over time and is treated here as an institutional variable. We simply extrapolate it back in time to cover earlier periods.

Dependency ratio: In the estimations of equation 7.2, where time dummies are used, we control for the size of the dependent population, which is the sum of the unemployed and people over the age of sixty-four as a percentage of the total population. In the models where the shock variables are unemployment or deindustrialization, we control only for the size of the senior population (as a percentage of the total population), since unemployment is the shock variable, or closely related to it. The source for the unemployment and population figures is OECD, *Labor Force Statistics* (various years).

Findings Table 7.2 shows the results of estimating the regression equation 7.2, using nonlinear least squares.²⁰ The first line is the total time effect, or the total effect of the exogenous shocks. It is found by taking the difference between the parameter on the 1995 time dummy and the parameter on the 1960 time dummy after all variables have been defined as deviations from their cross-country means. With all variables defined as deviations from their mean, the effect of the time dummies captures the change over time. We want to know whether governments in countries with strong vocational training systems, PR electoral systems, or left governments react differently to shocks than governments in countries with weak vocational training systems, majoritarian institutions, or right governments. And again, the parameter β on the interaction terms provides the answer. If it is positive, it means that shocks cause spending to increase *more* in countries with high values on the political-institutional variables.

More specifically, by adding to and subtracting from the time effect the product between this effect and β times the minimum and maximum values on the institutional variables, respectively, we can distinguish the spending effects of the shocks in countries with extreme values on the institutional variables. For example, model 1 in table 7.2 shows that the effect on transfers of the exogenous shocks that occurred between 1960 and 1995 has been to raise spending as a percentage of GDP by 5 percent in a country with the weakest vocational training system, but by nearly 12 percent in a country with the strongest vocational training system.

Table 7.2 Common Shocks, National Institutions, and Government Transfers (Equation 7.2)

	(1)	(2)	(3)	(4)
Time effect (shock)	7.20*** (0.86)	7.67*** (0.87)	6.53*** (0.90)	7.42*** (0.53)
Vocational training*time dummies	0.013*** (0.002)	—	—	0.006*** (0.002)
PR*time dummies	—	0.53*** (0.08)	—	0.35*** (0.10)
Partisanship*time dummies	—	—	-0.75*** (0.21)	-0.11 (0.77)
Partisanship	0.93** (0.40)	0.81** (0.40)	3.91*** (0.86)	1.23 (0.77)
Dependency ratio _t	0.54*** (0.07)	0.58*** (0.07)	0.64*** (0.08)	0.58*** (0.07)
Minimum	5.17	5.16	4.41	4.59
Maximum	11.72	9.22	8.32	11.11
Effect	6.56	4.07	3.91	6.57
Adjusted R-squared	0.92	0.92	0.92	0.92
Observations	564	564	564	564

Source: OECD Labor Force Statistics (various years); OECD National Accounts Yearbook Vol. II (various years); UNESCO Yearbook (1999); Cusack (1991); Cusack and Engelhardt (2002); Lijphart (1994).

Notes: Standard errors are in parentheses. The results for the interactive terms correspond to β in the statistical model. The results for country and time dummies are not shown.

* $p < .10$; ** $p < .05$; *** $p < .01$

These numbers are referred to as the "minimum" and the "maximum" at the base of the table, and what is called the "effect" is the difference between the two. The effect can be read as a summary measure of the impact of an institution on any particular spending variable. In the case of the vocational training systems, this effect is 6.6 percent, which is about 90 percent of the total time effect (and easily significant at a .01 level).

Countries with PR electoral systems (table 7.2, model 2) also responded to shocks by increasing spending more than did countries with majoritarian systems. The effect is about 4 percent, or roughly half the total time effect. The effect of partisanship (table 7.2, model 3) is more complicated because right governments actually spend more on transfers than left governments in the absence of shocks, but left governments respond to shocks by increasing spending more than right governments. If we focus only on the responses to shocks, the effect of having a left government is roughly the same as having PR (about 4 percent). One plausi-

Table 7.3 Shocks and Government Transfers in Two Periods

	1960 to 1979	1980 to 1995
Vocational training	0.015***	0.054***
Time effect	7.44***	0.84**
PR	0.364***	1.51***
Time effect	6.76***	1.44***
Partisanship	0.37**	1.27*
Time effect	6.19**	1.18***

Source: Authors' compilation. Estimation results and data used in table 7.2.

* $p < .10$; ** $p < .05$; *** $p < .01$

ble interpretation of this pattern is that there are transfers, such as pensions, that are not redistributive and for which demand is high among right-party constituencies, whereas transfers that respond to labor market shocks tend primarily to affect left-party constituencies.

In a model where all three conditioning variables are entered simultaneously (table 7.2, model 4), vocational training and PR account for roughly the same share of the cross-time variation, and for about 90 percent together. However, since the two variables are highly correlated (0.8), small measurement errors could have a significant impact on how much of the variance is attributed to each variable. The estimated effect of the partisan variable is notably reduced in the combined model. A reasonable interpretation is that the institutions affect both partisanship and responses to shocks. But again, since all three variables are correlated and subject to measurement error, we must be careful in attributing exact weights to each variable. In addition, the big standard errors on the partisanship variables could be a result of multicollinearity.

Did governments respond differently to the changing economic environment during the 1980s and 1990s than they did during the 1960s and 1970s? The question is difficult to answer with precision because government spending did not change very much in the second period, leaving very little variance to be explained. In itself this suggests that governments either became more constrained or reached an equilibrium level of spending by the early 1980s where shocks were adequately addressed through automatic disbursements of transfers. Either way, the implication is that small measurement errors can have big effects on the results. With that caveat, table 7.3 reports the results by period (omitting the controls for presentational economy).

Looking across periods, we see no indication that the distinctiveness of government responses has diminished. In fact, all the parameters are larger in the second period. But again, since the time effect is dramati-

cally smaller in the second period, the overall effect is also much smaller. Coupled with the measurement error issue, we would be well advised not to draw strong conclusions about changes in the relative responsiveness of governments over time. Still, it is notable that there is no evidence of convergence.

The results presented so far all refer to equation 7.2, which does not model shocks explicitly. This is a virtue in the sense that the results do not depend on any particular conceptualization of the exogenous forces of change. On the other hand, we do care about the identity of the shocks and how domestic institutions may induce different responses to each type. Also, because the model treats shocks as common, we do not allow for the possibility that some countries have been more exposed to shocks than others. If the extent of shocks is correlated with the institutions, the shocks rather than the institutions could explain the divergence in policies. Therefore, we also estimate equation 7.3 and consider two different sources of shocks: unemployment and deindustrialization. The results are shown in table 7.4.

The presentation in table 7.4 is similar to that in table 7.2, except that the "shock effect" is now the difference between the observed value on each shock variable at the beginning of the period (1960) and at the end of the period (1995) *times* the estimated coefficient on the shock variable. The exception is unemployment, which is the difference between the year with the lowest and the year with the highest average unemployment rate across the sixteen cases. This difference is 6.98 percent, and the estimated parameter is .73, so the total shock effect of unemployment is $6.98 \times .73 = 5.10$. The calculation of the political-institutional effects then proceeds as before, using the extremes on the institutional and partisan variables to determine the minimum and maximum effects.

In the case of unemployment, the combined effect of vocational training, PR, and partisanship (calculated as before) is greater than the total shock effect—an outcome that is possible because the total shock effect is based on the average change in unemployment over time, while some countries experienced changes that were greater than the average. Note that vocational training and left partisanship sharply magnify the response to unemployment, whereas PR appears to be less important. Specifically, a country with a strong vocational training system (defined as one that is one standard deviation *above* the mean) responds to a 5 percent increase in unemployment by increasing transfers as a percentage of GDP by 1.7 *more* than a country with a weak vocational training system (defined as one that is one standard deviation *below* the mean). The comparable figure for the difference between left and right governments (also defined in standard deviations) is 1.1, whereas the difference between a PR system and a majoritarian system is only 0.5. The

Table 7.4 Shocks, National Institutions, and Government Transfers (Equation 7.3)

	Exogenous Source of Shock	
	Unemployment	Deindustrialization
Shock effect	5.10*** (0.22)	8.15*** (0.43)
Vocational training*shock	0.011*** (0.004)	0.0012*** (0.0005)
PR*shock	0.119 (0.109)	0.206*** (0.074)
Partisanship*shock	-0.489*** (0.180)	0.128 (0.128)
Partisanship	0.656 (0.435)	-3.629 (4.471)
Population over age sixty-four	0.826*** (0.039)	0.325*** (0.059)
Minimum	2.22	6.52
Maximum	7.94	9.68
Effect	5.72	3.17
Adjusted R-squared	0.91	0.92
Observations	564	564

Source: OECD Labor Force Statistics (various years); OECD National Accounts Yearbook Vol. II (various years); UNESCO (1999); Cusack (1991); Cusack and Engelhardt (2002); Lijphart (1994).

Note: Standard errors are in parentheses. The results for the interactive terms correspond to β in the statistical model. The results for country and time dummies are not shown.

* $p < .10$; ** $p < .05$; *** $p < .01$

fact that partisanship now records a strong effect makes good sense because we know from the microlevel analysis that income and exposure to unemployment risks are negatively related. If left parties represent low-income workers, they *should* be more responsive to unemployment shocks.

Partisanship, however, does not appear to matter for responses to deindustrialization. The reason may be that deindustrialization affects workers across the income scale and therefore does not sharply differentiate left and right constituencies. This interpretation is consistent with the results in Torben Iversen and Thomas Cusack (2000) but leaves open the possibility that left governments are more ideologically inclined to expand public sector employment, which is not captured by the transfer variable. In fact, if we use government spending on goods and services as

the response variable, it turns out that left governments raise spending significantly more than right governments in response to deindustrialization (see also Iversen and Cusack 2000).

Viewed in combination, the results in tables 7.2 to 7.4 paint a very clear picture. Exogenous economic shocks lead to greater government spending, but the effects are conditioned by government partisanship and domestic institutions. If we look at the summary measures of the effects at the bottom of tables 7.2 and 7.4, governments (especially left ones) seem to respond much more forcefully to exogenous shocks in countries with proportional representation and strong vocational training systems.

Conclusions

To understand the politics of redistribution, both the demand side and the supply side of redistribution need to be taken into account. Regarding individual-level preferences for redistribution—the demand side—we show that preferences for redistribution are closely related to economic self-interest. The poor favor redistribution, and individuals respond to the risks of losing future employment or income—measured by occupational unemployment rates and specific skills—with increased demands for redistribution. A national vocational training system (and the variation in an economy's skill compositions it produces) affects the overall level of risk exposure and hence leads to different intensities of redistribution demands across countries.

Regarding the supply side, institutions play a crucial role. Electoral systems affect governments' responses to economic shocks if the main axis of political competition is redistribution and if income and risk exposure are related. This is so because PR systems tend to produce left-center coalitions—representing the poor and middle class—while majoritarian systems tend to produce center-right governments—representing the rich and middle class. The chapter shows that income and risk exposure are strongly negatively related, leading left governments to react more aggressively than right governments to economic shocks.

A key implication of our findings is that structural change and economic shocks such as those arising from globalization are unlikely to threaten the existing levels of redistribution. This is so because globalization is likely to increase popular demand for redistribution, and depending on the institutional setting, these demands are translated into the supply of redistribution policies. Contrary to conventional wisdom, we find that there is no evidence of convergence, no evidence for the end of old (redistribution) politics, and no evidence for decreased differences between governments of different colors.

Notes

1. Indeed, if risk aversion is sufficiently high, it is possible for those with higher incomes to prefer *more* spending because they have more to lose (Moene and Wallerstein 2001). In the empirical section, we show, however, that the relationship between income and preference for redistribution is negative.
2. Specifically, the long-term probability of unemployment is $p/(p + q)$, the probability of employment in jobs utilizing both the specific and general skills of a worker is $r.q/(p + q)$, and the probability of employment in jobs using only a worker's general skills is $(1 - r)/(p + q)$.
3. All variables included in the equation are described in a working paper version of this chapter; see Thomas Cusack, Torben Iversen, and Philipp Rehm (2005).
4. For details on the original ISSP data, see <http://www.issp.org/data.shtml>.
5. The complete answer categories are: "agree strongly" (1); "agree" (2); "neither agree nor disagree" (3); "disagree" (4); "disagree strongly" (5); "can't choose" (8); and "NA" (9). We changed the last two categories to missing values. For presentational purposes, we reversed the scale.
6. The complete answer categories are: "definitely should be" (1); "probably should be" (2); "probably should not be" (3); "definitely should not be" (4); "can't choose" (8); and "NA" (9). We changed the last two categories to missing values. For presentational purposes, we reversed the scale.
7. The skill levels are assigned by the ILO. A mapping of ISCO88 one-digit codes and skill levels can be found at Warwick Institute for Employment Research, "Major Groups and Skill Levels," <http://www2.warwick.ac.uk/fac/soc/ier/research/isco88/english/s2>. We assign "legislators, senior officials, and managers" (ISCO88 major group 1) the highest skill level, while the ILO does not assign any skill level for that group. For details on the skill-specificity measure, see Torben Iversen's web page, "Individual-Level Measures of Skill Specificity," <http://www.people.fas.harvard.edu/~iversen/SkillSpecificity.htm>.
8. The occupational unemployment risk variable we employ here combines the most detailed data we have for each country. This ranges from ISCO88-2d by gender to ISCO88-1d by gender.
9. Making the two measures consistent over time and across countries presented some challenges, since different countries use different occupational classifications at different points in time. But for the countries in our sample we were able to derive comparable occupational codes.
10. Because it is used for the operationalization of skill-specificity, we do not control for education.
11. Older workers are more likely to have outdated skills, and neither they nor employers have a strong incentive to invest in new ones.
12. The inclusion of students or other groups not participating in the labor market does not change the findings.

13. Because of many missing values, we performed the regression analyses both including and excluding the control variables "public employment" and "union membership."
14. All simulations are performed with SPSS inside Stata; see Long and Freese (2001).
15. The dependent variable in Blanchard and Wolfers's (2000) analysis is unemployment.
16. The countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, West Germany, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and the United States. The end of the time period we studied was dictated by data availability.
17. Government transfers are an output variable, as opposed to the outcome variables discussed in Brandolini and Smeeding (this volume) and Scruggs (this volume). Since we are interested in governments' reactions to shocks, an output variable is more appropriate for our analysis.
18. The correlation between unemployment and deindustrialization is 0.7.
19. The base of 100 is arbitrary. For example, we could have used the peak of employment in agriculture and manufacturing as the base instead, and this is a number that varies across countries. However, since the statistical model includes a full set of country dummies, the base does not matter.
20. In Stata, it is the nl procedure.

References

- Blais, André, Donald Blake, and Stéphane Dion. 1990. "The Public/Private-Sector Cleavage in North America." *Comparative Political Studies* 23(3): 381-403.
- Blanchard, Olivier, and Justin Wolfers. 2000. "The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence." *Economic Journal* 100(462): C1-33.
- Crepaz, Marcus M. L. 1998. "Inclusion Versus Exclusion: Political Institutions and Welfare Expenditures." *Comparative Politics* 31(1): 61-80.
- Cusack, Thomas. 1991. "The Changing Contours of Government." Discussion paper. Berlin: Social Science Research Center Berlin (WZB).
- Cusack, Thomas R., and Lutz Engelhardt. 2002. "The PGL File Collection: File Structures and Procedures." Berlin: Social Science Research Center Berlin (WZB).
- Cusack, Thomas R., Torben Iversen, and Philipp Rehm. 2005. "Risks at Work: The Demand and Supply Sides of Government Redistribution." Discussion paper SP II 2005-15. Berlin: Social Science Research Center Berlin (WZB).
- Gelissen, John. 2002. *Worlds of Welfare, Worlds of Consent? Public Opinion on the Welfare State*. Boston, Mass.: Brill.

- Iversen, Torben, and Thomas R. Cusack. 2000. "The Causes of Welfare State Expansion: Deindustrialization or Globalization?" *World Politics* 52(3): 313-49.
- Iversen, Torben, and David Soskice. 2001. "An Asset Theory of Social Policy Preferences." *American Political Science Review* 95(4): 875-93.
- Lijphart, Arend. 1994. *Electoral Systems and Party Systems: A Study of Twenty-seven Democracies, 1945-1990*. New York: Oxford University Press.
- Long, Scott J., and Jeremy Freese. 2001. *Regression Models for Categorical Dependent Variables Using Stata*. College Station, Tex.: Stata Corp.
- Meltzer, Alan 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.
- Niskanen, William A. 1971. *Bureaucracy and Representative Government*. Chicago, Ill.: Aldine.
- Organization for Economic Cooperation and Development (OECD). Various years. *OECD Labor Force Statistics*. Paris: OECD.
- . Various years. *OECD National Accounts*. Paris: OECD.
- Pierson, Paul. 1996. "The New Politics of the Welfare State." *World Politics* 48(2): 143-79.
- Powell, G. Bingham, Jr. 2002. "PR, the Median Voter, and Economic Policy: An Exploration." Paper presented to the annual meeting of the American Political Science Association, Boston, Mass., September 2002.
- Rehm, Philipp. 2005. "Citizen Support for the Welfare State: Determinants of Preferences for Income Redistribution." Discussion paper SP II 2005-02. Berlin: Social Science Research Center Berlin (WZB).
- UNESCO. 1999. *UNESCO Statistical Yearbook*. Paris: UNESCO.