Economic Shocks and Varieties of Government Responses

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1. Introduction

There is a widespread perception that the welfare state and policies of the left have been eroding in the past several decades as a result of globalization, technological change, and other forces of change. Also, it has been argued that government responses to these changes are quite similar across institutional “varieties” (Pontusson 2002). If so, it challenges the idea, central to the varieties of capitalism (VoC) perspective, that large welfare states are complements to the system of production (Estevez et al. 2001; Iversen 2005). In a VoC framework, exogenous economic shocks are expected to lead to different government responses depending on existing institutional frameworks. Yet, there is little in the original versions of this theory that explains the *politics* of how shocks get translated into policy. The focus, instead, is on equilibrium conditions. This paper seeks to fill some of the gap by examining the relationship between social spending in different institutional environments and shocks to the income and risk structure. The broader objective is to develop a dynamic model of government responses to change – something that the VoC approach is often accused of being unable to capture (Howell 2003).

Building on Iversen and Soskice (2001), the analysis begins at the level of individual preferences, and focuses on two mechanisms linking shocks to policies. It then shows how the translation of these mechanisms into policy, in response to external shocks, is mediated by economic and political institutions.

The first mechanism concerns popular preferences for redistribution and takes off from Meltzer and Richard’s well-known model in which those with income below the mean prefer at least some redistribution (Meltzer and Richard 1981). Assuming a right-skewed distribution of income, and that the median voter is decisive, the implication is that greater income inequality leads to more redistribution as the gap between the mean and median incomes increases. From this perspective the median voter preference is “counter-cyclical” in the sense that support for redistribution rises in line with inequality and thus acts as a “automatic stabilizer” in the face of growing inequality.
In the Rawlsian framework, \textit{ex ante}, people behind the veil of ignorance may support policies for purely insurance reasons, but \textit{ex post} (after the veil is raised) these policies produce redistribution. Since there are people who have been exposed to misfortune at any given moment, preferences for insurance will show up as preferences for redistribution. The former is almost certainly influenced by the latter, and vise versa.

The second mechanism is rooted in the notion that support for redistributive spending is at least partly driven by the desire of people to insure themselves against income losses. Even if the intention is not to redistribute, insurance tends to be redistributive because it compensates those who have lost income as a result of unemployment, sickness, etc. Conversely, policies that are deliberately redistributive will at the same time serve an insurance function. The unemployed, the sick, the old, and those with low pre-fisc income more generally, will rationally press for redistribution. By doing so many of those who are employed, healthy, young, and enjoying a high incomes will be insured against the risks of joining the ranks of the unemployed, the sick, etc. There is thus an intimate relationship between preferences for redistribution are preferences for insurance.

The next step in the analysis is to link differences in popular preferences and their translation into policy to differences in institutions. Preferences are affected by the distribution of skills, which is a function of the national training and production system. Essentially, the more the production system relies on non-transferable, or specific, skills the higher the demand for insurance in response to exogenous shocks.

Demand must be met by supply, and the latter will be affected by political institutions. I focus on the role of the electoral system. There are two parts to the story. One concerns a shock to the income distribution. In a majoritarian two-party system a rise in inequality will (usually) increase the median voter’s preference for redistribution. However, if pre-election platforms are not binding, the left party may implement the preferred policy of its poor constituents, and this will hurt the median voter more the greater the level of inequality. By contrast, the rich constituents of the right party will always want taxation to be as low as possible, so the “threat” from the right to middle class interests is constant. The actual effect of a shock to the income distribution in a

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majoritarian system is therefore ambiguous: stronger preferences of redistribution by greater fear of what an “ideological” left party might do. In a multiparty PR system, by contrast, a rise in inequality will increase the incentives of the center and left to form a coalition to tax the rich (Iversen and Soskice 2006).

The second part of the institutional story concerns the insurance aspects of social protection. Shocks typically affect only a minority of people, even through compensation of these people can serve as an insurance for the majority. If the current median voter is not among those being affected by the shock, she has an incentive to support compensation only if future median voters do the same. The current median voter, therefore, faces a problem of how to commit future median voters. This translates into a time-inconsistency problem for the government because it has an incentive to renege on its promise to the current median voter when it seeks to attract the support of the future median voter (Iversen and Soskice 2006). PR helps solve this problem insofar as it leads to redistribution since redistribution also serves insurance purposes. Any institution that promote redistribution serves as an (imperfect) solution to the time-inconsistency problem. Electoral system is also closely associated with responsible and programmatic parties, which reduces voter concerns about governments’ commitment to the future (Carey and Shugart 1999). A related argument is that PR promotes the effective representation of disadvantaged minorities and therefore facilitate the compensation of such minorities (Katzentstein 1985; Crepaz 1998).

The paper is divided into four sections. The first is a theoretical discussion of how economic shocks are likely to affect the demand for social insurance under different institutional conditions. The next section tests the hypotheses on time series on spending data, focusing on the mediating role of institutions. I then asks if the results are consistent with individual-level evidence on preferences. The conclusion draws out the implications for studying the politics of adjustment in a varieties of capitalism framework, and suggests the relationship between political, social, and economic institutions.
2. A framework for the analysis of shocks and policies

In the Meltzer-Richard (M-R) model, a flat-rate benefit paid through a proportional tax implies that those below the mean will 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). The Iversen-Soskice preference model retains this redistributive logic, but it adds an insurance motive by assuming that income (wages and employment-related benefits) can be lost through unemployment and re-employment into jobs where a workers’ skills are not fully utilized. The possibility of income loss provides risk-averse workers across the wage scale with an incentive to support redistributive spending. 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).

The Iversen-Soskice (I-S) model assumes that people are concerned with their material welfare and will favor policies which increase and protect their income. Income, in turn, is derived from the assets that people own, and for the vast majority the most important asset is their human capital, or skills. We can distinguish between two types of skills: general (g) and specific (s). 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 job at exactly the same wage. Specific skills, by contrast, are employable only in a particular firm, industry, or occupation, and losing a job is therefore a serious risk if another job in the same firm, industry, or occupation is unavailable. By implication, when demand for labor in industries or occupations using specific skills decline (because of technological change, foreign competition, or other changes in demand and supply conditions), some workers will find themselves unable to find a job that is suitable for their skills. Of course, in the real world people possess a mix of more or less specific skills. The model captures this by assuming that every worker is endowed with a ratio of specific to general skills (s/g) (or specific to total skills (s/(s+g))).
If we now assume that redistributive spending comes in the form of a flat-rate benefit \( R \) that accrues to all workers regardless of income or labor market status (as in the Meltzer-Richard model), we can account for redistributive preferences as a function of income and exposure to risk. Analytically it is useful to distinguish between shocks to the income distribution and shocks to the risk distribution. The different possibilities are illustrated in Figure 1. Panel A shows the relationship between income and the preferred level of redistributive spending \( R \) for different levels of risk-aversion. The downward-sloping solid line is the relationship we would expect from an M-R model, and it holds in the general I-S model when the redistributive motive dominates the insurance motive. As risk aversion rises, the support for redistributive spending among high-income workers will also rise while it will decline among low-income voters. Higher risk-aversion therefore reduces the class polarization implied by the M-R model. Indeed, if risk-aversion is sufficiently high the relationship between income and preferences turns positive and shown by Moene-Wallerstein (2001). However, the evidence presented below clearly shows that income is always negatively related to the preferred level of spending, so we can exclude this possibility.

My focus is on the dynamic implications of the model. The effect of a shock to the income distribution that reduces income at the low end and raises it at the high end is to increase support for redistribution among those with low income and reduce it among those with high income – assuming that risk-aversion is not too high (in which case the change in preferences would be the reverse). Shocks to the income distribution are likely to have the greatest effects at the tails of the distribution, but if the median voter \( M \) in the figure sets policy, the critical question is what happens to the median voter’s income (indicated on the x-axis). Since the median voter is likely to have an income below the mean, a means-preserving rise in inequality would cause relative income to decline and redistributive spending to go up.

This simple result is modified if we introduce political parties and if spending is not constrained to a flat-rate benefit \( R \). Specifically, assume that any transfer is possible from the rich to the low
and middle classes, or from the rich and middle class to the poor, subject to the constraint that net transfers (after taxes and transfers) are not regressive (going from poorer to richer people). This Meltzer-Richard flat-rate benefit constitutes one such transfer, but it also opens the possibility that the poor can take from the middle class. This matters in a two-party majoritarian system if parties cannot fully commit to electoral platforms. Although both parties will seek to cater to the median voter in the election, they might deviate from their platform after the election to please core constituents. This is a well-known phenomenon in the party literature, and there are good reasons why this can happen, including the need of party leaders to at least occasionally mobilizing the party base in order to maximize voter turnout among prospective supporters (Aldrich 1993, 1995, ch. 6; Schlesinger 1984; Kitschelt 1994).

Iversen and Soskice (2006) show that under these conditions, the middle class has a bias against the center-left party because it fears that it might be exploited by the poor, whereas the rich cannot do the same due to the non-regressivity constraint. This does not mean that the median voter will always vote center-right, but if the actual policies of the two parties over time are conceived as the revealed preferences of the median voter, these preferences will be more moderate than the median voter’s ideal policies. One of the implications of this bias is that center-left parties in majoritarian systems must seek to convince voters that they are credibly committed to a moderate platform by concentrating power in a leader with a reputation for being moderate or even slightly to the right of center (think Tony Blair or Bill Clinton). When they succeed they are competitive with center-right parties, but the platform is of course also correspondingly less

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2 Evidence from the Luxembourg Income study shows that redistribution is always at least mildly progressive in the sense that there is a reduction in the Gini coefficient from before to after taxes and transfers (although the size of the reduction varies a great deal). This means that the rich are always worse off, and the poor always better off, as a result of redistribution. See Osberg, Smeeding, and Schwabisch (2003).

3 There are numerous justifications for the non-regressivity assumption, including normative, historical (relating to the origins of democracy), and empirical (see previous note). Suffice it here to note that virtually all models of the welfare state assumes or implies it (including Meltzer-Richard and Esping-Andersen’s well-known work).
redistributive.

Compared to a simple M-R model, where benefits are flat-rate and there is no commitment problem (i.e., parties always represent the median voter), the “revealed” demand for social spending is thus lower. This is indicated in the figure by the lower dashed line around the position of $M$. But the preferences of $M$ is also less likely to be sensitive to shocks to the income distribution (hence the “flatter line”). This is because higher inequality comes with a greater fear by $M$ of heavy taxation imposed by the poor. The poor, if they are allowed to set the policies of the center-left party, will tax both the rich and the middle class up to the point where the gains from such taxation are outweighed by the efficiency losses of higher taxation. The lower the relative income of the poor the higher the level of taxation before this point is reached (in an exactly analogous manner to a lower income by the median voter in the M-R model). While the middle class will also prefer more redistribution, the effect of its revealed preference is thus muted by a greater fear of what will happen if the center-left party deviates to the left from its electoral platform.

A very striking set of empirical results consistent with this conjecture has been found in a new study of income and voting in the US by McCarty, Poole, and Rosenthal (2006). They find that although class voting has actually increased over time, and although inequality has been on the rise, the Republican Party has seen its electoral fortunes among middle class voters improve. Although middle class voters have reason to vote for more redistribution from the rich as inequality rises – as a simple M-R logic would predict – they are apparently more concerned about the prospects of being taxed for the purpose of redistributing to the poor. At least this is one plausible explanation for the trend, consistent with the argument presented here.

Proportional representation (PR) is different. First, since the threshold for representation is low, each class can be represented by its own party, which removes (or reduces) the agency problem. Second, governments are not chosen directly though the election but through coalition bargaining. If the center party, representing the middle class, cannot govern alone it has an incentive to form a
coalition with the left because the poor and the middle class have a common interest in taxig the rich, whereas the middle class has nothing or little to gain by allying with the rich and taxing the poor. This is clearly true if democratic governments cannot engage in regressive taxation, but it is true as long as the ability to raise revenues from the excluded group is proportional to the income of that group. The notorious American bank robber, Willie Sutton, made the point nicely when he was asked why he robbed banks: “Because that’s where the money is.”

The implication of this logic for PR multiparty systems is the exact opposite of what it is for majoritarian systems: the median voter, represented by a center party, is more likely to favor center-left governments. Redistributive government spending is accordingly expected to be higher under PR, as illustrated by the second dashed line in Figure 1 (panel a) being above the M-R baseline model. More importantly for our purposes, a rise in inequality is also likely to be associated with a sharper spending response than under majoritarian institutions. A means-preserving increase in inequality will give both the poor and the middle class a stronger incentive to tax the rich and to ally with one another in order to accomplish that. Even if rising inequality is concentrated at the tails of the distribution, since low income will share power it will also tend raise redistributive spending. In the majoritarian case, on the other hand, increased dispersion at the tails acts as a deterrent against the middle class voting for the center-left.

Now turn to the relationship between employment risks and support for redistributive spending in panel B of Figure 1. Greater risks always raises support for spending, as long as risk-aversion is greater than zero. Exposure to risk is a positive function of the probability of unemployment ($p$) and a negative function of the probability of re-employment ($q$). Because those who have highly specific skills (a high $s/g$ ratio) will suffer a greater income loss if they are re-employed into a job that does not require their existing skills, they have a preference for more insurance and redistribution. Total risk-exposure can now be conceptualized as a function of the risk of job loss times the specificity of skills.

As in the case of income we can hypothesize the relationship between shocks to the risk-
distribution and preferences for redistribution in the middle class. Shocks that cause employment risks to rise (decline) are expected to lead to a rise (decline) in support for redistribution. The magnitude of the effect will depend on the specificity of skills, which may vary across individuals and across countries (compare the responses on the $R$-axis). Skills are in principle less important for shocks to the income distribution because they affect the demand for insurance, not redistribution. But as noted above, the two are intimately related in reality. Increased income inequality means that the technological change that renders skills obsolete is likely to produce a greater drop in income. In fact, this is one of the reasons that specific skills tent to have collective wage-bargaining arrangements where wage dispersion is contained (see Estevez-Abe et al. 2001).

As for redistribution, political institutions also matter for insurance. The fundamental problem in the provision of social insurance is that when a shock hits, those who are affected will not likely be the ones setting policy. Those who have not been directly affected will update their subjective assessment of risks, but they only have an interest in compensatory policies if such policies can be seen as a premium for protection against future shocks. Yet, current voters can only commit the government for one 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 can lead to serious under-provision of social protection compared to the long-term preferences of voters. It also means that shocks that would raise demand for protection, as in panel B of Figure 1, will not necessarily be translated into “revealed” preferences for actual policies.

Generally speaking there are two institutional remedies for the time-inconsistency problem. The first is that political parties with detailed policy programs and highly developed party organizations, especially links to unions, limit the ability of leaders to give into short-term electoral incentives and constrain the choice set of voters to alternatives that are optimal in the long run. However, this solution does not eliminate the temptation for party leaders to offer tax cuts and to shun long-term investment in social protection. And this temptation is particularly high in majoritarian systems where the reward for winning the next election is great.
The second argument goes back to the argument that PR electoral systems give centrist parties an incentive to ally with left parties for current redistributive purposes. If left parties tend to represent voters who are at greater risk, the preferences of these voters will be represented in coalition bargaining. Also, redistributive policies will themselves serve insurance functions because those who are experiencing a complete or partial unemployment of their assets as a result of adverse labor market conditions or technological change, will also benefit. Redistributive social spending serves as a protection of income.

In practice the organization of parties and the electoral system are closely related. Precisely because parties in majoritarian systems have to present an electoral platform that deviates from the preferences of their core constituents, parties tends to be leadership-dominated and less constrained by interest groups and internal party politics. Electoral system is also closely related to the skill system, which likely reflect the importance of credible commitment to social insurance for people making heavy investments in specific skills (Estevez-Abe et al 2001).

3. Complementaries between economic and political institutions

How does the linkage between economic shocks, political and economic institutions, and government responses relate to the idea in the varieties of capitalism literature that institutions are complements to one another? Very little is said in this literature on the role of democratic institutions, but in fact they are quite closely related to economic coordination. Using a composite
measure of PR⁴ and two measures of non-market coordination.⁵ Figure 2 illustrates how countries cluster into a PR-coordinated group and a majoritarian-uncoordinated group -- even if there are some questions about where Ireland and France (according to one of the measures) belong. The correlation between PR and a measure of specific skills, namely the proportion of a cohort going through a vocational training, is even higher (0.7), so that intensity of specific skills training is much higher on average under PR than under majoritarian institutions.

[Figure 2 about here]

Based on the analysis in the previous section, this clustering is not surprising. A requirement for heavy investment in specific skills is the existence of institutions that protect such investments, and much welfare spending can be seen as providing such protection (Estevez-Abe et al. 2001, Iversen 2005). This includes aggressive government responses to shocks that significantly raise labor market insecurity. If such responses are more likely under PR, which essentially offers a powerful commitment technology to ensure that demands are met (at least in mature democracies with responsible and programmatic parties), then the incentives to invest in specific skills are higher under PR. Under majoritarian institutions, by contrast, the difficulty of parties making commitments, both to particular constituents and to the future, means that there is less political protection of specific assets and greater incentives to invest in general skills as an insurance

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⁴ The proportionality of the electoral system measure in the last column is a composite index of two widely used indices of electoral system. One is Lijphart’s measure of the effective threshold of representation based on national election laws. It indicates the actual threshold of electoral support that a party must get in order to secure representation. The other is Gallagher’s measure of the disproportionality between votes and seats, which is an indication of the extent to which smaller parties are being represented at their full strength. The data are from Lijphart (1994).

⁵ One (marked by triangles) is Hall and Gingerich’s (2004) measure of nonmarket coordination, based on the existence of coordinating institutions in industrial relations and the corporate governance system. The other (market by squares) is Hicks and Kenworthy’s (1998) index of cooperation, which measures the extent to which interactions between firms, unions, and the state are cooperative as opposed to adversarial.
against labor market risks.

This does not mean that the causal story is a simple one running from PR to investment in specific skills, although this is a complementarity that is consistent with the VoC story and help sustain coordinated forms of capitalism. Historically, however, the story probably runs in the opposite direction as argued in detail in Cusack et al (2003). Countries in which there is now a high degree of coordination, and in which economic coordination was beginning to move to the national level and sectoral levels as industrialization developed through the second half of the nineteenth and the start of the twentieth centuries, had previously been primarily coordinated at the local and regional level. Locally coordinated economies favored the development of specific assets and activities. The choice of PR – occurring in most of these economies between the 1890s and the 1920s – reflected the need for local and regional economic interests to ensure representation at the national level, as industrialization proceeded, to protect their (co-)specific assets. PR permits the representation of specific interests, and facilitates compromise between workers and employers with co-specific asset investments in skills and capital, while majoritarian institutions encourage party leaders to shun close ties with constituents to appear more committed to the median voter (except when interests are locally concentrated as they were before nation-level industrialization got underway). Once the transition to PR has occurred, it helps sustain non-market economic coordination through the mechanisms explained above.

4. Data and statistical model

The evidence is based on data from sixteen OECD countries over a 35-year period from 1960 to 1995. This period covers both the Golden Age of welfare state expansion and what Pierson calls the “new politics” of retrenchment (Pierson 1996). The dependent variable is government

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6 The countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, west Germany, Italy, Japan, Netherlands, Norway, Sweden, Switzerland, United Kingdom, and United States.
transfers to individuals, which is made up of spending on health insurance, unemployment insurance, pensions, welfare, family allowances, and related social spending. Although much of this spending is not deliberately redistributive, it is highly correlated with redistribution. Measured as the percentage reduction in the Gini coefficient from before to after taxes and transfers for working-age households, redistribution and an index of transfers plus taxes is correlated at 0.68. (see Iversen 2005, ch. 1 for details). Transfers are also highly correlated with measures of social spending from the IMF and the OECD, but the latter are more restricted to in terms of time coverage. Moreover, I am focusing exclusively on inter-temporal change in social spending, which will be captured well with any of these measures.

The question the analysis attempts to answer is whether exogenous shocks to the risk and income structure produce different outcomes depending on the institutional framework. I use an estimation strategy first proposed by Blanchard and Wolfers (2000), and generalized by Persson, and Tabellini (2003). The model absorbs all cross-country differences into fixed effects, but it includes invariant institutional variables as interactions with different measures of the exogenous shocks. Blanchard and Wolfers propose two versions of the model, and I estimate both. The first assumes that countries are exposed to uniform unobserved exogenous shocks. Since the nature of the shocks are 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 time dummies ($D_t$) that are interacted with the institutional variables ($I_i$):

$$Y_{i,t} = \lambda_1 \cdot Y_{i,t-1} + \lambda_2 \cdot I_i \cdot Y_{i,t-1} + \delta_t \cdot D_t \cdot (I + \beta \cdot I_i) + \sum \beta_j \cdot X_{i,t} + \alpha_i + \epsilon_{i,t}.$$  

The main variable of interest is $\beta$. If it is zero it means that the effects of the shocks are identical

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7 The “shocks” can be thought of very broadly to include deindustrialization, which started around 1960 (see Iversen and Cusack 2000), union militancy and civil unrest in the late 1960s (Eichengreen 1997), the integration of international financial markets (Garrett 1998), the two oil shocks (Goldthorpe 1985), technological change (Freeman 1995), the slowdown of productivity (Pierson 2001), and even broad ideological changes (Hall 1993).
across national institutions. If it is positive it means that the relevant institutional feature magnifies the effect of the common shocks. Again, since the model has country-specific intercepts, differences observed between countries can only be due to differences in government responses to shocks.\footnote{This means that the (invariant) institutional variables cannot be included as independent controls (X variables). All direct effects of invariant institutions, however, are picked up by the country dummies.} In Blanchard and Wolfers, it is assumed that $\lambda_1=\lambda_2=0$, which makes the results very easy to interpret (as we will see). But serial correlation is a problem, and the $\lambda$-parameters carry potentially useful information about the persistence in policies under different institutional conditions. If $\lambda>0$ it means that policies do not adjust instantaneously. If $\lambda_2>0$, it means that policy persistence is higher in countries with higher values on the institutional variable.

The institutional variables of interest are the skill system and the electoral system. For the latter I use the simple classification of electoral systems into majoritarian (0) and PR (1) based on Lijphart (1994). For the former I use the share of an age cohort going through a vocational training, assuming that vocational training (as opposed to general education) is a measure of specific skills acquisition. The measure only begins in 1980s, but since it exhibits little meaningful variation over time I treat it as a constant institutional variable and assume that it has not changed since the early 1960s. As explained in detail in Iversen (2005), the variable captures what appears to be meaningful differences across countries in the structure of training systems.

The second version of the statistical model identifies the nature of shocks, and allows these to vary in magnitude across countries. Shocks ($S_{i,t}$) are measured as (changes in) unemployment, deindustrialization, and (changes in) wage inequality. Changes in unemployment is the most obvious variable since it is bound to raise the perception of workers of labor market risks, and cause demand for unemployment compensation (and perhaps other cash benefits) to rise. Although unemployment only directly affects a fraction of workers, changes in unemployment is known to affect union wage behavior, and this is a clear sign that unemployment affects the perceived level of risks of the majority. It is also important to note that unemployment is not
simply a cyclical problem, but that it rose from a low of less than 2 percent in the mid-1960s to a high of almost 9 percent in the early 1990s (with a temporary trough of 5.8 percent in 1990). The data are from the OECD Labour Force Statistics (various years).

Deindustrialization refers to the phenomenon of secular job loss in industry and agriculture that started in the early 1960s. In 1960 about 60 percent of the labor force in the OECD area was employed in the primary sectors; 35 years later this figure was down to about 30 percent. This massive shift in employment is the outgrow of deep forces of technological change coupled with progressive market saturation in manufactured goods and shifts in demand towards services – structural-technological conditions that also characterized the great transformation from agriculture to industry (see Iversen and Cusack 1998). The change is correlated with change in unemployment ($r = .37$), but the effect on risk is not simply through unemployment. Even if job losses are being compensated for by job gains in services, the skills which are required in services are typically very different from manufacturing. This is one reason that early retirement (a component of the dependent variable) became such a widespread (and very expensive) policy in many European countries. Early retirement helped industrial companies to unload some of their older workers, while at the same time making sure that these workers did not have to compete for jobs where their skills were ill suited.

Perhaps surprisingly, there is considerable variance in the speed of deindustrialization across countries. For example, in an early industrializing country like the United States, industrial employment as a percentage of the adult population declined by only 3 percentage points between 1960 and 1995, whereas for a late industrializer like Sweden, the figure is 13 percent. If we add to these figures the decline of agricultural employment, the numbers increase to 6 and 22 percent, respectively. The difference in these numbers translates into 23 million lost jobs if the US had gone through the same process of deindustrialization as Sweden did from 1960 to 1995. I use changes in employment in industry and agriculture as a percentage of the working age populations as a measure of deindustrialization (higher numbers mean higher job losses). Data are from the OECD Labour Force Statistics (various years).
Shocks to the income distribution are captured by changes in the earnings of a full time worker (or equivalent) in the top decile of the earnings distribution relative to the earnings of a worker in the bottom decile (d9/d1-ratios). The data are from the OECD electronic data files (different versions; undated). For most countries, data are post-1975, and Norway is excluded with only two observations. In this period, there was a modest increase in average inequality of 12 percent (.28 on the d9/d1 scale), but there is a fair amount of variance across countries. The US and Britain experienced sharp rises (22 and 15 percent, respectively), whereas continental European countries experienced more muted changes. In the cases of Belgium and Germany wage inequality actually dropped slightly. Yet, because wages are only for employed full time workers, the rise of unemployment and part-time employment implies that income inequality will have risen more than the wage data suggest. Correspondingly, data on pre-fisc household income from the Luxembourg Income Study show that inequality rose significantly everywhere during the 1980s and 1990s, including Belgium and Germany. There are too few observations over time in the LIS data to use these in our (longitudinal) regressions, but some of this rise in inequality will be captured by the unemployment and deindustrialization variables (as well as the period dummies, of course).

In addition to these variables, the analysis includes the following set of controls:

**Government partisanship.** The measure is the 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. The variable goes from left to right and is standardized to have a range of 1 and a mean of 0. This measure is described in Cusack, 1997. For details on the data used in its construction, see Cusack and Engelhardt (2002).

**Unionization.** The strength of unions changes over time and might account for differences in the demand for government spending. Unionization is union members divided by number of workers. The data are from Ebbinghaus and Visser (2000).
**Unexpected growth.** This is a variable emphasized in Roubini and Sachs (1989) and is defined as per capita real GDP growth at time $t$ minus average real per capita growth in the preceding three years. It is intended to capture the logic that budgeting relies on GDP forecasts based on performance in the recent past. If growth is unexpectedly high it reduces spending as a proportion of GDP. Sources: Cusack (1991) and OECD, *National Accounts, Part II: Detailed Tables* (various years).

**Size of dependent population.** Since replacement rates for unemployment and pensions are fixed over short periods of time, changes in unemployment and demographics will generate “automatic” disbursements of payments. To control for this effect I include the sum of unemployed and people over the age of 64 (who are also the ones accounting for most medical expenditures) divided by the total population. When unemployment is used as a shock variable, the dependent population refers to those over 64. The source is OECD, *Labour Force Statistics* (various years).

### 5. Findings

Table 1 shows the results of estimating the regression equation using non-linear least squares. The dependent variable is level of spending while time dummies serve as proxies for the exogenous shocks. The key issue, of course, is whether governments in countries with PR or strong vocational training systems react differently to shocks than governments in countries with weak vocational training systems and majoritarian institutions.

The parameter $\beta$ on the institutional interaction term provides the answer. If it is positive it means that shocks raise spending *more* in countries with PR or vocational training systems. It turns out that, across specifications, countries with PR and strong vocational training systems respond to shocks by increasing spending *more* than in countries with majoritarian or weak vocational
training systems. The results do not change very much when lagged dependent variables are added to the model, although the level of statistical significance (not surprisingly) drops (although still significant on at least a 5-percent level). Evidently, there is much persistence in spending ($\lambda = .9$), which means that much current spending is not only responses to contemporaneous shocks but also past ones. Because the interaction between the institutional variables and the lagged spending variable is positive (the last variable in Table 1), policy persistence is greater in countries with PR and developed vocational training systems. That is consistent with expectations, but the differences are very small.

To gauge the substantive impact of institutions, all variables have been defined as deviations from their cross-country means. When there is no lagged dependent variable, this means that the effects of the time dummies refer to the cumulative effects of shocks over for time for a country with average values (0) on the independent variables. The total time effect, shown in the first line of Table 1, is then simply the parameter on the 1995 time dummy. This can be interpreted as the total average effect on spending over the 35-year period from common exogenous shocks that are not captured by the controls.

But note that the effect varies across countries with different institutions. This variance is captured at the bottom of the table, where the minimum is the predicted effect in a country with the lowest value on the institutional variable (majoritarian electoral system or weak vocational training system) and the maximum is the predicted effect in a country with the highest value (PR or strong vocational training system). So in the first column, for example, the predicted increase in spending for a PR systems is 8.44 percent, while it is 3.69 for a majoritarian system. The difference between predicted spending under PR and majoritarian systems is a summary measure of the effect of institutions. The institutional effect of electoral system is somewhere between 3.5 and 4.75 percent, while for training system it is about 7 percent (using the extreme values on the

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9 For PR the effect is equal to the average time effect ($6.63$) plus the “additional” effect under PR, which is the estimated institutional parameter $\beta$ ($0.77$) times the value on the (centered) institutional variable ($0.38$) times the time effect ($0.77 \times 0.38 \times 6.63 = 1.81$) – for a total of 8.44.
vocational training variable). These are very large effects, and they strongly suggest that countries with different economic and political institutions respond differently to shocks.

A possible competing interpretation, however, is that countries were exposed to different levels of shocks and that this variance, not institutions, explains the observed differences across institutional settings. While it seems implausible that countries should have had such different experiences, and while it is unclear why such differences should be correlated with institutional differences, we cannot entirely exclude the possibility. We do know after all know that three of the most obvious sources of shocks – rising unemployment, deindustrialization, and growing wage inequality – did vary across countries. By adding these to the model (Table 2), we can test whether controlling for this variance affects the effects of institutional differences. Of course, the substantive effects of these shocks are also interesting in their own right.

The estimated parameters ($\beta$) for the institutional effects are shown in the first row of the table, first for PR and then vocational training. Since the number of observations on the wage equality variable is less than half, the results when this variable is included are shown separately (columns 2 and 4). Finally, since there are no significant differences in the persistence of spending across institutions, the model assumes that $\lambda_1 = \lambda_2$ (i.e., there is only one lagged dependent variable).

With these presentational issues in mind, the results in columns (1) and (3) of Table 2 are directly comparable to those in columns (2) and (4) of Table 1.

\[ \text{[Table 2]} \]

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10 Globalization is also a frequently mentioned force of change, but if the effects of globalization do not go through the above variables it is hard to see that the nature of globalization would be radically different across countries. Globalization is almost by definition a common external shock, and trade and international capital market liberalization did indeed occur pretty much simultaneously across developed democracies. I am not arguing here that globalization is unimportant, but that it is a common, rather than a nationally-specific, type of shock.
Note first that while both unemployment and deindustrialization matter, the parameters on the institutional variables ($\beta$s) are very similar to before (the one for PR drops slightly from 0.53 to 0.47, while the one for vocational training is identical). It is therefore not the case that the differences in government responses are attenuated when the nationally-specific sources of shocks are taken into account. Countries with PR and developed vocational training systems tend to raise spending in response to shocks much more than countries with majoritarian systems with weak vocational training systems. Again, the magnitudes of the differences between institutions are captured by the institutional effects in Table 1. But we can now say something about the extent to which the shocks are caused by unemployment and deindustrialization (noted at the base of Table 2).

For the full data set (columns 1 and 3), the institutional effects for these range between 0.7 and 2.3 percent if we use the average change in unemployment and deindustrialization from the early 1960s to the mid 1990s as the measure of the total “shock”. The direct effect of unemployment is somewhat larger, but some of the effect of deindustrialization goes through unemployment (the two are correlated at .37). Together the two variables account for roughly half of the total institutional effect that we estimated in Table 1. The rest is due to common unobserved shocks captured by the time dummies. Some of these unaccounted sources of spending increases may also be nationally specific, but we can almost certainly exclude the possibility that these would cancel out the institutional effects.

As for the controls, the dependency ratio has a strong positive effect on spending as predicted. Unexpected growth also notably reduces spending in all models with a lagged dependent variable. The reason is that when past spending is controlled for, unexpected growth produces an “automatic” increase in the denominator of the dependent variable that reduces current spending.

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11 Note that unemployment and deindustrialization also have direct effects, so the fact that they vary across countries will mean that some of the observed cross-national differences in spending patterns will be due to the direct effects of these variables. The point here is simply that this does not reduce the effects of the institutional variables.
as a share of GDP. By contrast, in none of the models with lagged dependent variables do either partisanship or unionization matter. This may seem surprising, but probably reflects that the dependent variable is heavily oriented toward insurance as opposed to redistribution. The latter is a partisan issue, and it has been shown in several studies that partisanship matters for redistribution (see Bradley et al 2003).

Columns (2) and (4) in Table 2 include the change in wage inequality as a shock variable. This variable turns out to have no significant relationship to spending (and the sign is also unstable). The institutional effects in these regressions are actually bigger than before, but this is simply due to a compositional effect (changes in the sample), not any effect of the inequality variable. Is this lack of effect from shocks to the wage distribution contrary to the theory? Not necessarily. First, such shocks are partly captured by rising unemployment and deindustrialization (the latter through an increase in part-time employment). Second, by far the largest changes in wage structure occur in two countries, the US and Britain, which have majoritarian institutions and general skills systems. In this institutional contexts rising inequality should not trigger more redistributive spending. And in the PR/vocational training cases the changes in wage inequality are so small that the effects on insurance spending may be swamped by measurement error. Most importantly, the differences in the extent of changes in wage structure are themselves affected by domestic institutions. In particular, if avoiding big swings in relative wages is itself a form of social insurance, it may be more appropriate to treat wage inequality as a dependent variable (see Estevez et al, 2001).

To test the latter possibility I use d9d1 ratios as the dependent variable and use centralization of collective wage bargaining as the institutional variable. Past studies have shown that centralization is closely related to wage compression (Wallerstein 1999, Rueda and Pontusson 2000). In our data, the correlation between centralization and d9d1 ratios is .70, and centralization is also moderately related to PR (.59) and to vocational training (.30). The question is whether the

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12 The centralization index is from Iversen (1999) and is based on the concentration of union membership at each bargaining level, weighted by the bargaining authority vested at that
wage structure of countries with centralized wage-setting systems are less sensitive to pressures for rising inequality than countries with decentralized wage setting. Using the same statistical model as before, Table 3 gives the answer using common exogenous shocks (time dummies). The only difference from before is that the unemployment rate is substituted for the dependency ratio (there is no reason the size of the old age population should matter).

Note that the time effect is to raise $d_9/d_1$ ratios by 0.28, which is equivalent to a 9 percent increase in inequality between 1975 and 1995. But the effect is much greater in decentralized bargaining systems (such as the US and Britain) than in centralized ones. In the former the predicted effect is a rise in inequality of 0.49 or 16 percent, while in the latter there is no significant effect on inequality (indeed, the prediction for a country with the highest centralization score is actually a slight reduction in inequality). The interpretation seems to be that countries with decentralized bargaining systems have no institutional buffer against shocks to the wage structure, whereas centralized systems do. Of course, it is possible that a lack of response raises unemployment, but we know that the same countries also respond more aggressively to increases in unemployment. In short, inequality goes up less, and transfers more, in countries with PR, developed vocational training systems, and centralized wage bargaining. This is very consistent with the thesis that there are distinct varieties of government responses to economic shocks.

A final issue is whether this conclusion is equally true for 1980s and 90s as for the 1960s and 70s. While countries may not be converging in terms of total spending, their responses to external shocks may have become more similar as a result of fiscal constrains or a general neo-liberal shift in ideology. Government spending increased much less in the second than in the first period, which seems to support this view. But this may also simply indicate that countries reached an equilibrium level of spending by the early 1980s where shocks were adequately addressed through level.
automatic disbursements of transfers. This would be compatible with continued (or even increasing) differences in the responsiveness of governments to unforeseen shocks. To test this, Table 4 reports the results by period, omitting the controls (and the lagged dependent variable) for presentational economy.

Note that while the time effects in the second period are less than one half of the first period, the estimated parameters for the institutional variables give no indication that the distinctiveness of government responses across institutional systems has diminished. To the contrary, the parameters are larger in the second period, although they are so imprecisely estimated that we cannot be confident of a true difference. Still, there is no indication that the distinctiveness of government responses to shocks have declined, even as we cannot exclude the possibility that governments are generally less sensitive to such shocks.

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6. The individual-level mechanism.

As explained in the theoretical section, the supply of policies should be related to the demand under democratic institutions. At least some of this demand is expressed through electoral politics, and we should expect policy preferences to be systematically related to institutionally “induced” economic interests. In principle we should therefore be able to link individual-level preferences for social protection to macro-level differences in institutions using a multi-level regression approach. In practice this is rendered impossible by what may be called the status quo problem. When surveys ask people about their policy preferences, there respondents almost invariably express those relative to current political status quo. If we assume that the status quo represents a political equilibrium, institutionally-induced differences over what that equilibrium should be will be “invisible” in the answers. What we can do is to examine whether economic interests, defined by income, skill assets, and exposure to unemployment risks are systematically
related to individual policy preferences. If they are, it is support for the micro-level mechanisms supposedly driving the macro-level relationships.

The linkage between economic interest and social policy preferences has been the focus of three recent papers (Iversen and Soskice 2001, Rehm 2005; Cusack et al 2006), and I will simply present some of the key results from one of these (Cusack et al 2006). They are are based on data from several waves of the “International Social Survey Programme” (ISSP), which ask people about whether they agree with policies to redistribute more. The data are combined with labor force survey data, which makes it possible to calculate unemployment risk by occupational group, using ILO’s classification of occupations (ISCO-88).\(^1\) Risk is simply assumed to be proportional to the unemployment rate for each occupation. Actual unemployment is used as a measure of “realized” risk. The occupational classification can also be used to measure relative skill specificity, which is the specialization of skills used in a particular occupation (as implied by ISCO-88) divided by the level of skills required in that occupation. Finally, pre-tax income captures distributive motives (as opposed to insurance motives) for supporting redistribution.

The model is estimated using ordered logit regression, including a full set of country and year dummies. In addition, there is control for age, gender, employment status (whether the respondent is a student, retired, self-employed, or non-employed), union membership, and private or public sector employment. There are well over 40,000 observations in the complete data set so getting precisely estimated parameters is never an issue. Correspondingly, all the results shown in Figure 3 have narrow confidence intervals and are highly statistically significant.

[Figure 3 about here]

The figure shows the effect on the probability of “strongly agreeing” with more government redistribution when the risk and income variables are changed from low to high values (or high to

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\(^1\) This is done at the ISCO-88 2-digit level, producing 27 different occupational unemployment rates. See Rehm (2005) for details.
low values in the case of income). Having specific skills, or high exposure to the risk of unemployment, each raises the probability of “strongly agreeing” with more redistribution 9-10 percent. This is similar to the effect of actually being unemployed, so they suggest very meaningful effects. Taken together, these two variables increase the probability of ‘strongly agreeing” by about 20 percent, which is similar to the effect of going from the top to the bottom decile of income. In combination, it turns out that those misfortunate enough to have both at high risk and low income have a 89 percent probability of agreeing or strongly agreeing that the government should redistribute more. If political institutions affect who influence policy, this is bound to affect policy. Likewise, shocks that raise risks are likely to increase demand for redistributive spending, and the effect should be greater in countries where the training system emphasizes specific skills.

Although we cannot directly relate individual preferences to the macro-level findings, the micro-level evidence thus lends credibility to these. People at different levels of risk and income have different preferences, and skills powerfully affect both income and risk-exposure. If there are systematic differences in national training systems, and if these affect the composition of individual skills, we should expect such differences to shape government responses. Likewise, if the electoral system affects whose interests are represented, government sensitivity to risk should also be affected.

In-so-far as employers have made co-investments in these skills (directly through training, and indirectly through particular product market strategies) this logic suggests that PR may be supported by a cross-class alliance of skilled workers and employers who employ these workers. Where such co-specific assets are missing, employers and higher-income earners would be better off with majoritarian institutions. In this manner economic interests translate into institutional preferences. The obvious implication is that the correlation of varieties of capitalism, varieties of political institutions, and varieties of government responses to shocks is not accidental by created by deliberate attempts to shape the design of political institutions.
7. Conclusion

A common charge against the VoC approach is that it ignores political institutions and that it is static -- incapable of explaining policy change. In this paper I have tried to show that there is in fact much to be learned about economic policy and political institutions from a VoC approach. Focusing on the role of economic and political institutions in shaping the demand for, and the supply of, redistributive government spending, I have tried to show that there are distinct differences in government responses to economic shocks, and that these differences are closely related to different varieties of capitalism.

But while the evidence clearly shows that differences in government responses persist over time, the rate of change has slowed considerably during the 1990s. This may reflect the stabilization of unemployment rates and the slowdown of the process of deindustrialization. But risks have certainly not disappeared from the labor market – they have rather become concentrated on particular segments of the labor force. There is an increasing split between those in secure, high-paid labor market positions and those in long-term unemployment or in insecure, temporary, or part-time jobs, and this bifurcation of the risk structure could produce a very different political adjustment dynamics in the future. On the one hand, support for high protection may be reduced among increasingly secure middle class workers. This would make governments less sensitive to “skill-biased” economic shocks. On the other hand, a growing rift between “insiders” and “outsiders” over the social transfer system may lead the latter to conclude that the only way to improve their labor market chances is to ally with professionals in order to break up the employment protection system for privileged “insiders” – in other words, wholesale liberalization of the labor market. This would be a political “shock” to high protection countries, and one can perhaps see the contours of such a shock in the rise of new right parties. Yet, it is precisely this threat that may bring insiders and outsiders back together – possibly in an alliance that involves partial deregulation of labor markets, but also high protection through transfers as well as active
labor market polices. Understanding the coalitional dynamics of policy reform in a bifurcated labor market is one of the major challenges for any theory of democratic capitalism.

Another important frontier for the VoC approach is to understand the causal relationship between varieties of capitalist institutions and varieties of democratic institutions. The two appears to be closely related empirically, but while political scientists and sociologists have proposed historical explanations for the latter, they have almost completely ignored the role of economic interests and modes of production in the development of particular democratic institutions. It strikes me as deeply implausible that the two are causally independent, and I have here hinted at ways in which economic interests translate into political-institutional preferences. Future research will have to determine whether this “translation” also played a causal role in the historical emergence of particular democratic institutions. It is hard to exaggerate the importance of explaining this coupling between economic and democratic institutions because recent research suggests that most of the variance in inequality and redistribution is not between democracy and non-democracy but within these regime types (Ross 2006).
Bibliography


Howell, C. 2003. ‘Varieties of Capitalism: And Then There Was One?” *Comparative Politics*, (October), 103-124.


Tables and figures

Figure 1. Support for redistribution as a function of income and risk

Panel A: Income and support
- Increasing support for redistribution
- Decreasing support for redistribution
- Very high risk aversion
- Majoritarian model

Shock to the income distribution:
- Declining income
- Rising income

Panel A: Risk and support
- Rising support for redistribution
- Decreasing support for redistribution
- High s/r
- Low s/r

Shock to the risk distribution:
- Reduced exposure
- Increased exposure
- Employment risk
Figure 2. PR and non-market coordination.

Sources: Proportionality of electoral system: Lijphart (1994); non-market coordination index (triangles): Hall and Gingrich (2004); cooperation index (Hicks and Kenworthy).
Figure 3: Increases in the probability of “strongly agreeing” with more government redistribution as a function of low income and high risk.

Notes: Figure displays the change in the probability that the respondent ‘strongly agrees’ with government redistribution, simulating the difference between: Unemployment: being unemployed and employed, Specific skills: having specific as opposed to general skills; High unemployment risk: being in an occupation with a high as opposed to a low unemployment rate; low income: being in the lowest income quantile as opposed to being in the highest income quantile.

Table 1. Common shocks, national institutions, and government spending (standard errors in parentheses).

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Significance levels: * < 0.10; ** < 0.05; *** < 0.01

Note: The results for country and time dummies are not shown.
Table 2. Nationally specific shocks, national institutions, and government spending (standard errors in parentheses).

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**Significance levels**: * < 0.10; ** < 0.05; *** < 0.01

**Notes**: The results for country and time dummies are not shown. The shock variables also include time dummies.
Table 3. Common shocks, centralization of wage bargaining, and wage inequality (standard errors in parentheses).

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<td>(0.002)</td>
</tr>
<tr>
<td>Unexpected growth_t</td>
<td>0.009**</td>
<td>0.008***</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Unemployment_t</td>
<td>-0.029***</td>
<td>-0.014***</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>D9/D1 ratio_t-1</td>
<td>-</td>
<td>0.66***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.04)</td>
</tr>
<tr>
<td>Decentralized</td>
<td>0.49</td>
<td>0.47</td>
</tr>
<tr>
<td>Centralized</td>
<td>-0.04</td>
<td>-0.02</td>
</tr>
<tr>
<td>*Institutional Effect</td>
<td>-0.53</td>
<td>-0.49</td>
</tr>
<tr>
<td>Adjusted R-sq.</td>
<td>0.97</td>
<td>0.98</td>
</tr>
<tr>
<td>N</td>
<td>231</td>
<td>231</td>
</tr>
</tbody>
</table>

Significance levels: * < 0.10; ** < 0.05; *** < 0.01

Notes: The results for country and time dummies are not shown. The shock variables also include time dummies.
Table 4. Shocks and government transfers in two sub-periods.

<table>
<thead>
<tr>
<th></th>
<th>1960-79</th>
<th>1980-95</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PR</strong></td>
<td></td>
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</tr>
<tr>
<td>Time effect</td>
<td>6.15</td>
<td>2.79</td>
</tr>
<tr>
<td>Institutional parameter (β)</td>
<td>0.3</td>
<td>0.47</td>
</tr>
<tr>
<td>Institutional effect</td>
<td>1.84</td>
<td>1.31</td>
</tr>
<tr>
<td><strong>Vocational training</strong></td>
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<td></td>
</tr>
<tr>
<td>Time effect</td>
<td>6.87</td>
<td>2.73</td>
</tr>
<tr>
<td>Institutional parameter (β)</td>
<td>0.007</td>
<td>0.013</td>
</tr>
<tr>
<td>Institutional effect</td>
<td>3.31</td>
<td>2.52</td>
</tr>
</tbody>
</table>

*Notes: Estimated with lagged dependent variable. Effects of controls not shown.*