Employment Performance in OECD Countries: A Test of Neo-Liberal and Institutionalist Hypotheses

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Employment Performance in OECD Countries: A Test of the Deregulation Thesis

Abstract

This paper provides the first comprehensive test of the market liberal recommendations for employment creation embodied in the 1994 *OECD Jobs Study*. The neo-liberal policies of the original Jobs Study are contrasted to the new social democratic policies embodied in European Employment Strategy recommendations and Third Way social and economic policies. The statistical analysis is a pooled time series for 17 advanced capitalist democracies for the period 1960-1999. Consistent with the OECD recommendations, we find that social security taxes, long term unemployment replacement rates, and employment protection laws have negative effects on employment levels. Consistent with both OECD recommendations and social democratic policy, active labor market policy has a strong positive effect on employment. Contrary to OECD recommendations, short term unemployment replacement rates and neo-corporatist bargaining have positive effects on employment levels and wage dispersion is actually negatively, if only weakly, related to employment levels.

The European unemployment problem is well known to students of comparative political economy. Conventional wisdom since at least the early 1990s about Organization for Economic Cooperation and Development (OECD) member countries employment performance attributes high and persistent unemployment in Europe in large part to "labor market rigidities."[1] Starting with *The OECD Jobs Study* in 1994, the OECD itself has been active in diagnosing the unemployment problem and offering prescriptions for change, mainly in the form of greater deregulation and more flexibility. Though the popular press and academic economists have offered similar diagnoses of the employment problems of European countries, the initial Jobs Study remains the most comprehensive and detailed statement of neoliberal prescription for the creation of employment. With the exception of its endorsement of Nordic style active market policy, the OECD Jobs Strategy recommendations – reduce the generosity of unemployment compensation, cut employment protection, reduce union strength, reduce minimum wages, lower taxation, increase wage dispersion – would, if consistently applied, move a country toward the US model of unregulated labor markets, weak unions, and high income inequality.

We present the first comprehensive test of the neoliberal hypothesis on labor market institutions and employment performance using pooled time series data. Earlier analyses, many by the OECD itself, were cross-sectional and, due to degrees of freedom constraints, could not introduce a full range of control variables. In part, this was due to the dearth of pooled time series data on important indicators of employment and labor market regulation, most notably, unemployment compensation replacement rates and employment protection legislation. The OECD can be credited with solving this problem with the release of its database on unemployment benefits and replacement rates in the late 1990s and its employment protection database in late 2004. Our study is the first to take advantage of both of these databases as well as a newly released data base by Scruggs (2004) which makes available a long pooled time series on net unemployment replacement rates for the first time.

In addition to taking advantage of these new data, our study makes several improvements over the only other pooled time series analyses with total employment as the dependent variable, OECD (2002: 249-55) and Kenworthy (2003). Both of these studies enter public employment as a control variables. This makes the Nordic model which produces the highest employment rates of any welfare state or production regime incomprehensible. The Nordic employment model produces high levels of employment by providing a wide range of social services which simultaneously increase the demand for labor through public sector employment and the supply of labor by providing services and transfers, such as day care and maternity leave, which make it possible for people to combine work and family. The model requires high taxes but the potential employment dampening effects of this can be tested directly (as we do) with measures of tax burden.

Second, the OECD study suffers from omitted variable bias as the authors do not include unemployment replacement rates, active labor market policy effort, or wage dispersion as independent variables. Third, our methodology allows us to test the neoliberal hypothesis that institutions constructed in periods of low unemployment and high levels of economic growth

[1] See OECD (1994, 1999), Siebert (1997), DiTella and MacCulloch (1998), or much of the popular media reporting on the topic.

have become hindrances to strong employment performance in the face of rising globalization. The neoliberal hypothesis suggests, but does not explicitly test, that institutions have become a liability for OECD countries due to greater globalization. We split our sample into two periods — high globalization and low globalization — to test the interaction between labor market institutions and measures of globalization.

Deregulation and Employment Performance

The conventional wisdom, in the form of the neoliberal hypothesis regarding OECD employment problems, suggests that labor market rigidities are at the root of employment problems in OECD countries and deregulation is the solution.[2] The OECD *Jobs Study* series is the most comprehensively formulated set of neoliberal arguments on OECD employment. Briefly stated, the neoliberal thesis suggests that labor market "rigidities" – welfare state generosity, employment protection, high levels of union density, minimum wages, high levels of taxation, or any other non-market institutions – prevent the labor market from producing optimal outcomes – low unemployment rates and high employment rates – by raising the cost of labor above its market-clearing level.[3] Richard Freeman summarizes the consensus view of the deregulation thesis (as set out in the OECD *Jobs Study*) as, "remove labor-market regulations, eliminate job-protection laws, reduce unemployment benefits, weaken unions, decentralize wage-setting, and presto! European unemployment would vanish" (Freeman 1995). This "flexibility" or "deregulation" thesis is simple and powerful, and provided that governments care about improving employment performance, provides a model to follow. The policy prescriptions flowing from these analyses are deregulation of labor markets to the level of the United States, or more recently the United Kingdom. As Stephens (2005: xx) notes, even if the OECD itself cannot provide incentives for national states to follow its policy prescriptions (unlike the IMF or World Bank), "it has certainly moved the debate in a neoliberal direction" through its vigorous promotion of "neoliberal solutions in the areas of social policy and labor market relations."

Despite decidedly mixed empirical support, the deregulation argument still dominates the policy prescriptions for poor European employment performance since the 1980s. For example, of the 37 recommendations in the 1999 volume of the *Jobs Study* for reforming member country labor market policies, 22 contain some call for decentralization (for wage bargaining systems), deregulation (for employment regulations), lower taxes (overall and payroll), and a reduction in benefit generosity (lowering replacement rates).[4] In its most recent empirical work on labor market regulations and employment, the OECD finds significant negative effects of taxes, unemployment benefit replacement rates, and union density on employment.[5] As discussed

[2] The OECD offers the most complete formulation of neoliberal arguments through its *Jobs Study* series, starting in 1994 and continuing through the present. Despite its consistent support for neoliberal solutions to labor market problems, the OECD is currently in the process of reassessing its *Jobs Study* strategy, possibly including greater consideration for the positive role of labor market institutions in creating jobs. See, for example, the editorial in the *OECD Employment Outlook 2004*.

[3] The terms "deregulation thesis" and "neoliberal hypothesis" are used interchangeably as catch-all phrases for various arguments which place institutional rigidity at the core of poor employment performance in the OECD. See Crouch (1998) for a similar use of this phrase.

[4] See OECD (1999a: 178)

[5] OECD, *OECD Employment Outlook 2002*, Chapter 5.

below, however, these results are somewhat ambiguous and are biased against public sector employment strategies.

The OECD and analysts of this ilk tend to focus primarily on unemployment as an indicator of labor market "performance." Treating the unemployment rate as the single best indicator of "economic performance" biases this type of analysis toward success in one type of outcome. Unemployment rates are sensitive to labor force participation; in fact, they can be lowered or raised based on participation regardless of whether or not more jobs have been created or destroyed. Due both to social policy provisions (early exit schemes common in Continental welfare states; see Esping-Andersen 1999) and personal choice within existing provisions (use of disability schemes), people can be excluded from labor force, thus lowering the overall unemployment rate without representing improved employment performance (Scharpf 1997). The point is that the rigidity literature tends to equate "success" with a lower (or declining) unemployment rate. Part of the corrective of this study is to widen the measure of success to include employment-to-population ratios. In a recent path breaking study on globalization, welfare states, and employment, Scharpf and Schmidt (2000) argue that employment rates are better indicators of comparative performance than unemployment rates. Thus, the employment-to-population ratio is used as the dependent variable throughout the Scharpf and Schmidt study as an indicator of comparative performance.[6]

Globalization and Employment Performance

The conventional wisdom of the neoliberal "globalization thesis" asserts that the increasing capacity of investors and firms to move capital and production around means that government interference, other than "market friendly" measures, will harm economic performance. Applied to labor market outcomes, the neoliberal globalization thesis suggests that governments must deregulate (i.e. weaken or dissolve labor market institutions) or face higher unemployment. Underlying this logic is the assumption that firms are essentially similar across institutional contexts and associate competitiveness almost entirely with labor costs, thus forcing governments to adopt measures to lower the cost of labor (Hall 1999). Huber and Stephens (2001) summarize the conventional neoliberal wisdom that "globalization is particularly detrimental to the most generous welfare states because these welfare states interfere extensively with market mechanisms and globalization strengthens markets against states, and because intensifying competition forces a lowering of wage costs and most forms of taxation and thus makes generous social programs unaffordable" (p. 18). Thus in the era of internationalization, the "costs" of certain labor market institutions - high levels of union density, high replacement rates, high non-wage labor costs, high levels of employment protection, low levels of wage inequality, etc. - are no longer viable and governments face pressure to deregulate in order for firms to remain competitive and maintain or increase employment.

The dominant interpretation of the employment crisis and welfare state retrenchment in Europe is the neoliberal version of the globalization thesis, which suggests that rising unemployment, slow growth, and retrenchment are direct products of increased openness of

[6] The employment-to-population ratio is not without problems either; for example, it doesn't account for differences in working time and part-time employment. However, as Scharpf notes, "employment/population ratios still seem to be the most valid indicators of relative employment performance" (Scharpf 1997: 2).

European economies vis-à-vis one another and the world economy. As Stephens (2005: xx) notes, this version of globalization is linked to the neoliberal "Eurosclerosis" thesis, "which linked unemployment and slow growth to the overly generous welfare states, rigid labor markets, and counterproductive state intervention said to be characteristic of Western European economies".[7] Thus, there is a fit between the neoliberal globalization literature and the rigidity literature reviewed above. Even though the rigidity literature does not explicitly model processes of globalization, the argument that labor market institutions are the source of employment problems in OECD countries rests on the role of globalization. Specifically, since labor market institutions exhibit relative stability over time but employment performance has deteriorated in many OECD economies, the rigidity argument depends on some process, or group of processes, making the institutional configurations more costly over time or in different time periods. Thus, there is an implicit logic in the OECD-type arguments that points to, but does not explicitly test, processes of globalization as the culprit in making certain labor market institutions unsustainable under conditions of growing globalization. In sum, if the neoliberal interpretation of Europe's employment problems is correct, the negative relationship between labor market intervention and employment outcomes should be stronger in the era of greater globalization.

For very different reasons, Iversen (2005, also see Iversen and Wren 1998) has similar expections that certain labor market features, such as high levels of employment protection, generous unemployment benefits, and low levels of wage dispersion, will become a greater liability for employment creation in the current era that they were in the golden age of post war capitalism. In the era of industrial expansion, these features were not only not a liability for employment performance, they arguably enhanced it. Employment protection encouraged workers in industry to invest in industry specific skills. Generous unemployment benefits allowed workers with industry specific skills more time to search for jobs in which their skills would be put to their full productive use. Wage compression, following the Swedish Rehn-Meidner prescriptions, encouraged employers to make productivity enhancing investments. With the transition to post industrial societies in which industrial employment was declining and new employment was being produced in the low productivity service sector, it was no longer possible to offset the costs of these policies by upgrading productivity. Thus, employment protection, generous unemployment benefits, wage compression, etc. become liabilities for employment performance.

Institutions and Employment Performance

The general message of the OECD studies and others like it - a complete deregulation reform package is necessary and it works across the universe of OECD member states - runs counter to much of the institutionalist work in political science. At the same time, the deregulation view seems to confirm the neoliberal globalization thesis, which recent institutionalist political science literature also calls into question.[8] The "neo-institutional"

[7] The "Eurosclerosis" thesis is another name for the "deregulation thesis" or "neoliberal hypothesis" since it locates Europe's problems in inflexible and incentive-reducing institutional arrangements.

[8] The "globalization hypothesis" is used here as a catch-all for theories which suggest that due to changes in the global economy advanced industrial economies must converge around a single model of market liberalism in

divergence hypothesis, on the other hand, suggests that institutional configurations across countries matter a great deal and shape government responses to "global" pressures. In other words, due to differences in labor market institutions and varieties of capitalism, convergence on neoliberalism is unlikely and unnecessary to achieve "good" economic or employment performance. Thus, in the institutional literature, some of the "rigidities" blamed for poor performance might not only shape responses to changes in the global economy, but might also play a positive role in labor market outcomes (discussed in more detail in the "Globalization" section above).[9]

The "varieties of capitalism" and neo-institutional literature suggests at least two broad classifications of contemporary capitalist political economies – coordinated (CME) and liberal market economies (LME) (Hall 1998; Soskice 1990, 1999; Kitschelt et al. 1999). The "varieties of capitalism" approach provides the rationale for both the positive and negative contributions of labor market institutions. What the deregulationist approach considers "rigid" labor market institutions, the institutionalist approach treats as a potentially positive part of the overall production and employment regime. For example, high benefit replacement rates, extensive social services, and active labor market policies have traditionally played a key role in efficient job search and labor mobilization in CMEs, particularly in the social democratic variant of CMEs (Huber and Stephens 2001; Estevez-Abe et al. 1999). Furthermore, the institutions of wage bargaining in CMEs have been key components in delivering wage restraint, economic growth, and investment in the CMEs (Hicks and Kenworthy 1998, Iversen 1999). Particularly with the reduction in the ability of countries to use exchange rates and interest rates as adjustment tools in the era of EMU and financial deregulation, coordinated bargaining systems may well be the most efficient way to deliver real wage restraint and thus job creation in highly unionized countries (see Huber and Stephens 2001 for this line of argument).

So, while the neoliberal explanation for rising unemployment in some CMEs in the 1980s and 1990s is that labor market regulations, generous welfare states, taxation on the wage bill, and union power have produced rigid labor markets and thus poor employment performance, this view is hard to reconcile with the performance in the previous postwar decades. As Hall (1998) notes, the paradox of this neoliberal answer is that with largely the same set of policies and institutions, CMEs had much lower levels of unemployment from the 1960s-1980s. Given the relative "stickiness" of labor market institutions over time, the deregulation thesis runs into a serious time inconsistency problem, since employment performance was generally superior in the "rigid" CMEs prior to the late-1970s (and the 1990s for Sweden and Finland; see Garrett 1998 on the stickiness of labor market institutions).[10]

In sum, the institutional strand of the labor market institutions literature questions the fundamental tenet of the deregulation thesis – institutional intervention in the labor market leads to sub-optimal outcomes in the labor market. Instead, the institutional literature suggests that

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order to maintain good economic performance (see "Conclusion" in Kitschelt et al. 1999 for an elaboration of this argument).

[9] The European Union's *European Employment Strategy* is closer to the institutionalist literature in that it takes into account the positive role that welfare state policies and institutions play in employment creation.

[10] Garrett defines labor market institutions in terms of union density and concentration in confederations, but the general point of stickiness over time is the relevant point.

labor market institutions are situated within larger institutional configurations and form part of the overall political economy. Thus there is no prior assumption that all non-market institutions negatively affect employment. Finally, as indicated in the reference to Hall (1998), the institutional literature also points to a potential time inconsistency problem with the deregulation thesis. That is, for institutions to be at the root of OECD employment problems, institutional "rigidity" had to increase around the mid-1970s (or the early 1990s for Sweden and Finland), ceteris paribus. As a review of some of the literature on institutions shows, however, labor market institutions appear relatively "sticky" over time, meaning that they show no great movement up or down the "rigidity" scale. Since countries achieved low unemployment and job growth in the presence of "rigid" labor market institutions in the first three decades after 1945, then the deregulation thesis is incomplete. By contrast, the nuanced argument of Iversen (2005) give one clear theoretically grounded reasons to expect that at least some of these institutions might turn from an asset to a liability with the transition from industrial to post industrial economies.

Hypotheses

The key explanatory variables are taken from those highlighted in the "labor market rigidity" literature and the European unemployment literature in general (Bean 1994; Nickell 1997; OECD 1999a, 2002; Baker and Schmitt 1999). Our hypotheses are informed by both the neoliberal and institutionalist literature as well as previous empirical work on employment performance.

The Welfare State and the Benefit System

Welfare state spending, as it directly relates to the labor market, can be divided into active and passive labor market spending. The neoliberal interpretation of OECD employment problems posits that a higher level of passive benefits – income support for workers temporarily out of the active labor force – and a longer duration of receipt may increase one's reservation wage and reduce job search while raising "choosiness" of the unemployed (Siebert 1997; OECD 1994, 1999b, 2002). The "replacement rate" (or percentage of working income received while unemployed), benefit duration, and conditionality (training requirements for continuation of benefits) are the key measures of benefit generosity. The OECD found a negative cross-country correlation between benefit levels and unemployment rates in the 1960s and early 1970s; that is, countries with highest entitlements had the lowest unemployment rates and those with low entitlements had higher unemployment rates (OECD 1994). Given that high replacement rates existed in many countries prior to the unemployment crisis in the OECD (this is particularly true of the Scandinavian cases which did not face an employment crisis until the 1990s) but now are considered part of the employment problem, it is particularly important to use this variable in each period of globalization to test the hypothesis that high replacement rates are a "luxury" which countries can no longer afford. Thus, for the neoliberal interpretation of OECD labor markets to be correct, higher replacement rates should be negatively correlated with employment in the whole period, and particularly so in the period of "high" globalization.

The institutional literature is more nuanced and suggests that some types of welfare state spending, in particular active labor market policy, will increase employment and improve the functioning of the labor market. In fact, a high replacement rate in itself does not have to exert

the above disincentive effect; rather the combination of a high rate and long duration may prove to be a bigger job search disincentive. Conversely the ending of benefit entitlement may stimulate job search and lower one's reservation wage. Benefit administration is also hypothesized to be important, as frequency and effectiveness of contacts between labor offices and benefit claimants may shorten average unemployment lengths. Finally, enforcement of rules (e.g. forcing the unemployed to accept job offers, perhaps at low pay or a significant mismatch of skills) may shorten unemployment spells and increase the overall employment rate. Thus, we hypothesize that the combination of a high level of benefits over a long duration may have a negative effect on employment. However, contrary to the neoliberal hypothesis, we hypothesize that a generous replacement rate of shorter duration may have positive effects on employment. High replacement rates may serve more to reward a worker for his/her skill investment while out of work than to create a reservation wage that prevents the worker from seeking re-employment and they may allow workers with industry specific skills conduct longer and more costly job searches in order to find employment in which their skill is fully utilized. Further a high replacement rate may be linked to other job-enhancing measures, such as training or public employment, which may serve to create employment.

Active labor market policies, on the other hand, may mitigate the potentially negative impact of generous benefits by retraining and re-integrating unemployed workers into the labor force. In general a more active approach should have a positive impact on employment by increasing the employability of the working age population. Empirically, in an extensive assessment of active labor market policies, the OECD comes to two main conclusions: in countries with more spending on training and related programs, a given amount of growth creates more employment growth than in lower spending (on active measures) countries and in a majority of OECD countries active program expenditure helps to reduce structural unemployment by creating wage moderation (OECD 1993). As we noted above, the original OECD Jobs Study departs from its otherwise neoliberal formula in recommending increased spending on active labor market policies. We hypothesize that greater spending on active labor market policy will have a positive impact on employment by increasing the employability of the working age population.

The Structure of the Taxation System

In addition to the benefit system, we expect the structure of the tax system – the type of taxes and overall levels – to have an impact on employment outcomes. Given that nearly all taxes potentially can be seen as a tax on labor (or at least three main components of taxation – payroll, income, and consumption taxes), it is difficult to determine which taxes matter most for employment. It is common to start with non-wage labor costs (various forms of payroll taxes), which the neoliberal view holds to provide a disincentive to employers to hire workers. That is, the tax wedge is the difference between the cost of labor to a firm and the wage paid to the worker. When this difference is large or increases, equilibrium hiring will be lower than in the absence of the tax, as it increases the cost of employment to the firm. The exception, of course, occurs if wages adjust downward enough to compensate for the increase in the non-wage part of the total labor cost.

Empirically, some studies find the tax wedge has a significant positive (negative) effect on overall unemployment (employment) and others find an effect only on certain elements of unemployment (e.g. long-term) (Nickell and Layard 1997; Scarpetta 1996; OECD 1999b). In its most recent empirical work on taxes and employment, the OECD finds a negative effect of the tax wedge on employment, when controlling for public sector employment (OECD 2002). We expect to find that higher rates of social security taxes (as measured by a larger share of GDP or a higher tax wedge), which essentially act as a "jobs tax," will have a negative effect on employment.

The neoliberal hypothesis suggests not only that the structure of taxes affects employment but also that the overall level of taxation will affect employment. As the OECD points out "cutting one part of the wedge while increasing another does not shift the overall tax burden away from labor"; thus, according to the deregulationist argument, the overall tax burden must not just be shifted around but must actually be cut to avoid negative labor market consequences (OECD 1997b: 68).[11] However, when using total employment as the dependent variable, as we do in this analysis, there is no reason to expect total taxes to have a negative effect on employment. Rather, we expect to find a positive relationship between total taxes and employment. Higher taxes correlate with greater public sector investment and employment, which raises overall employment levels.

Thus, the most complete way to test the effect of taxes on employment is to include both "labor specific" (payroll and social security) taxes and the overall tax rate. As Huber and Stephens suggest, a potential way to raise growth, and thus employment, is to lower payroll taxes (and thus shift to more financing of social security from general revenue) in exchange for domestic investment commitments from firms (Huber and Stephens 1998b). Additionally, Scharpf (1997) suggests eliminating, or at least reducing, payroll taxes on lower wage jobs as a way of stimulating private sector employment growth. This reduction could be compensated by shifting more welfare state financing to general revenue. The important question here is whether shifting, rather than cutting, the financing structure of the state will generate positive employment effects. Finally, the effect of taxes in the face of increasing capital mobility and economic openness will be considered; if the globalization hypothesis is correct, we expect that higher taxes (both overall and payroll) are more of a liability in an era of high globalization.

Wages and the Wage Bargaining System

In a standard demand-supply labor market model, as implied in the neoliberal hypothesis, the price of labor determines the level of employment. While other variables - taxes, employment protection, and welfare benefits - are all "costs", it is wages that make up the majority of labor costs. The OECD policy guidelines urge member countries to decentralize wage determination, widen wage dispersion, abandon or relax administrative extension (of wage settlements), and modify (i.e. eliminate) minimum wages (OECD 1999a: 178). The neoliberal hypothesis thus holds that greater bargaining decentralization, wage restraint, lower union density, and greater wage dispersion will lead to higher levels of employment.

[11] In the recent *Jobs Study* a key recommendation is to cut both overall and payroll taxes.

Contrary to the neoliberal literature, the large corporatism literature suggests that in general, the more "encompassing" the labor market institutions (i.e. wage setting mechanisms) are the better labor market actors are able to overcome collective action problems in setting wages; otherwise, the labor market must be sufficiently "free" and uncoordinated so that particular groups cannot on their own create wage-price spirals. In addition to achieving wage moderation, encompassing and coordinating labor market institutions are also associated with greater investment and a positive trade balance (Hicks and Kenworthy, 1998). Although a recent summary of empirical work (OECD) found few statistically significant relationships between most measures of bargaining structure and economic performance, Nickell sums up much of the work in this area as "unions are bad for jobs [due to the tendency for union wages to be higher than non-union wages and lead to inflationary spirals], but these bad effects can be nullified if both the unions and the employers can coordinate their wage bargaining activities" (OECD 1997a; Nickell 1997). Thus we expect to find a negative correlation between union density and employment, once we control for wage coordination and/or bargaining centralization. Coordinated wage bargaining systems should deliver real wage restraint and thus be positively correlated with employment.

There is a potentially strong link between wage dispersion and employment. In a standard model of the labor market, the demand for labor is expected to increase as the cost of it falls. If the wage dispersion (controlling for productivity) in a country is excessively tight (i.e. the distance between the top and bottom deciles is small) then this may cause supply problems at the top end of the wage scale (if more highly skilled workers do not receive a sufficient premium they may opt out of the labor market) and demand problems (if low-skilled workers are costly to employ, the demand for them will decline). Most of the economics literature (see Siebert 1997 for a review) suggests that increasing wage dispersion (particularly in more egalitarian European countries) may lead to greater employment, especially at the bottom end of the labor market. Implicit in this view is that it is the *lower* end of the wage scale that must move down in order to create the greater dispersion. If the level of inequality does affect the employment level in society, the 50-10 ratio in particular should be important. It is lower wage labor markets that are at the heart of arguments about labor market rigidities (OECD 1999b; Siebert 1997; Scharpf 1997). Since most of our data points for wage dispersion are for 1980 and after (see below), clearly in the post-industrial period, following Iversen (2005) and Iversen and Wren (1998), we hypothesize that wage dispersion will be positively related to employment levels.

In its own empirical work, the OECD (1996) found no correlation between relative employment rates of low-skilled and high-skilled workers and the incidence of low pay. In fact, the OECD (1996), which continues to advocate policies of wage dispersion and the creation of low-wage labor markets as a solution to employment problems in OECD countries (see OECD 1999b), concluded its review of the data by noting "there is little solid evidence to suggest that countries where low-paid work is less prevalent have achieved this at the cost of higher unemployment rates and lower employment rates for the more vulnerable groups in the labor market, such as youth and women."

In addition to wage dispersion, wage growth itself is important for overall levels of employment. Excessive and prolonged real wage growth should have a dampening effect on the overall employment level, while long-term real wage moderation should have a positive effect

on the overall employment-to-population ratio. Regardless of how wage moderation is achieved – via corporatist, coordinated institutions or unregulated market mechanisms – we expect that countries with greater long-term real wage moderation will have higher levels of employment.

Employment Protection

While some form of employment protection exists in nearly every OECD country, significant cross-national differences exist in the strictness of these measures (see discussion above and OECD 1999b). Neoliberal claims that employment protection legislation (EPL) is at the root of post 1970s European unemployment holds that job protection rules make hiring an "irreversible decision", thus eventually weakening labor demand (Siebert 1997; Bertola & Ichino 1995). In its *Jobs Study*, the OECD argues that employment protection legislation, as part of overall rigidity, may have two negative effects on labor market outcomes. First, as firms are not certain of future demand levels for their products and future employee productivity, future dismissal costs are calculated as part of total labor costs, and thus may discourage new hires. Second, in countries with strict job protection laws but relatively low levels of restrictions on fixed-term and temporary agency work, a dual labor market may emerge in which "outsiders" may face difficulty "breaking in" to find stable employment. On the other hand, in the face of particularly stringent employment protection, the unemployment rate itself should be less volatile over business cycles since firms may hoard labor in downturns and adjust hours, rather than number of employees, in upturns. We expect a negative correlation between EPL and employment. However, to the extent that labor market actors view EPL as non-binding, it is not clear that EPL will have a significant effect on employment.

The publication of time-varying EPL indices in *OECD Employment Outlook* publications (see description below) has been an impetus behind more econometric work on the role of rigidities. Prior to the updated EPL indices, the existing empirical evidence showed that strict employment protection has not significantly raised average unemployment, mainly due to its countering effects of reducing outflow and reducing inflow into employment (OECD 1994, 1999; Bertola 1990; Lazear 1990; Nickell 1997; CEPR 1995). In fact, in a recent study of employment protection, the OECD (based on cross-sectional analysis of the old EPL index) found no statistically significant relationship between its measures of employment protection and unemployment and overall employment rates.[12] However, in its most recent empirical estimates of the effects of labor market institutions on employment, the OECD found a significant, negative effect of EPL on overall employment (OECD 2002). Since the OECD EPL data series begin in 1980, following Iversen (2005), we expect negative effects of EPL on employment levels.

Globalization

If labor market institutions are relatively "sticky" over time, how can these institutions - benefit systems and wage bargaining systems - have been neutral or beneficial prior to the employment problems in the OECD but now quite detrimental to labor market performance?[13]

[12] Despite no relationship with the overall employment rate, employment protection is strongly associated with the share of self-employment in total employment (OECD 1999b: 80).
[13] On the "stickiness" of labor market institutions over time, see Nickell (1997) and Garrett (1998).

The neoliberal version of globalization predicts that with increased trade openness, firms face tougher and more constraining competition and must in turn lower labor costs in order to maintain or increase employment. The implication is that unemployment will rise and employment will fall in countries where labor market institutions are not "flexible" (i.e. deregulated) enough to adjust wages downwardly. Thus this version of globalization is straightforward in regards to employment and labor market institutions – in an era of relatively mobile capital (as in the post-1980 world), according to the deregulationist logic, labor market institutions should become more costly in employment terms. As we pointed out above, for quite different reasons, Iversen's (2005) post-industrial hypthesis also predicts that at least some features of the golden age labor market institutions will become liabilities in the post-industrial period.

Measurement

Our data set covers the period 1961-1999 for 17 advanced industrial democracies.[14] Our main data sources are the OECD and the Huber et al. (2004) Comparative Welfare States Data Set which in turn relies heavily on OECD data (see Table 1).[15] The dependent variable in the analysis is total civilian employment as a percentage of the working age population (15-64 years of age). As we have argued above, the level of employment is a more appropriate dependent variable than unemployment because unemployment does not pick up inactivity rates, principally disability, early retirement, and non-working spouses, which vary greatly across these countries.

[Table 1 about here]

The best indicators of welfare state generosity as it relates directly to the labor market are replacement rates and duration of unemployment insurance. We have two sources of data, the OECD's time series on gross replacement rates and Scruggs' (2004) recently released data on net replacement rates and duration of benefits. The OECD summary indicator of "benefit generosity" has the following structure: the average of unemployment benefit replacement rates for two earnings levels (average earnings and 2/3 of average earnings), three family situations (single, married with dependent spouse, and married with spouse in work), and three durations of unemployment (first year, second/third years, and fourth/fifth years of unemployment). Our independent variables are the one year replacement rate and the five year replacement rate averaged across the income levels and family situations. We expect a positive effect of high benefits over the short duration but a negative effect of benefits over a long duration. From the

[14] Unless otherwise specified, the data for variables in the analysis are annual time series from 1961 to 1999 for all seventeen countries.

[15] The Huber et al. (2004) data set can be downloaded at the Luxembourg Income Survey website at http://www.lisproject.org/publications/welfaredata/welfareaccess.htm. The countries included in this model are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and the United States. The classification scheme in Table 2 follows Kitschelt et al. (1999). While the independent variables differ somewhat from their analysis, the differences in labor market institutions – particularly between coordinated market economies (CMEs) and liberal market economies (LMEs) – are substantial enough to warrant this regime classification. Some countries, such as Austria, do not consistently fit into a particular regime type, but we follow the Kitschelt et al. (1999) convention of grouping countries in this way.

Scruggs' data, we calculated a net replacement rate for a bout of unemployment one year long. The net replacement rate is clearly the preferable measure but the data are only available from 1971 on. The one year gross and net replacement rate series are highly correlated (.85) which increases our confidence in the analysis using the OECD measure. The Scruggs data set contains data on the duration of unemployment benefits. We expect a negative effect of duration but not as strong as with the five year replacement rates because we expect that long duration with low replacement rates as in Australia and New Zealand will not have a strong negative effect on employment.

Our measure of social security taxes and total taxes are those taxes as a percent of GDP. Since our dependent variable is total employment including public sector employment, we expect total taxes to be positively related to employment once social security taxes (which are expected to be negative) are controlled. Our measure of wage coordination is Kenworthy's indicator. This measure is preferable to measures of bargaining centralization because it taps institutionalized practices such as pattern setting, tacit coordination, and government intervention which are missed by measures of bargaining centralization. Contrary to the initial OECD Jobs Study recommendations but consistent with the large institutionalist literature on wage bargaining, we expect wage coordination to be positively related to employment because it facilitates wage restraint.

In addition to this measure of wage coordination, we include a broader measure of neocorporatism developed by Hicks and Kenworthy (1998) which includes wage coordination as well as six other items tapping tri-partite government-capital-labor cooperation, union federation centralization, employers' federation centralization, firm-investor relations, and firm provided job security. While the wage coordination measure is expected to operate primarily via wage restraint, this measure is expected to have additional effects via cooperative promotion of investment, increased productivity, trade performance, and macro-economic stability. This measure is available only to 1995. Our measure of union strength is net union membership as a percent of wage and salary workers.

We include two measures of economic openness or "globalization". Following Bradley et al. (2001), we use the Quinn/Inclan (1997) measure of capital and current account controls as our measure capital market openness. As a general measure of capital market openness, we favored the control measures over the flow measures (inward and outward FDI as a percent of GDP) because, as Simmons (1999) and others have argued, it is the possibility of easy exit that changes the behavior of actors not variations in actual flows. In the Quinn/Inclan measure, the maximum score indicates no capital controls. For these same reasons, our preferred measure of trade openness would be a measure of tariff and non-tariff barriers to trade. Unfortunately, no such time series exists, so we use the conventional measure of trade flows, imports plus exports as a percent of GDP.

For the remaining variables, data coverage is more limited and the time series are unbalanced with varying time points per country. The wage dispersion measure is the 50-10 ratio, the ratio of the wage/salary of the median full time employee to the wage/salary of the full time employee at the 10^{th} percentile. We reasoned that wages at the bottom of the distribution

would be most relevant for the development of a large private service sector.[16] For this variable, we have 332 observations from 1961 to 1999, with 79% of the observations being concentrated in the period after 1980.

Our data on employment protection laws (EPL) are the OECD's (2004) recently released annual time series. The summary index summarizes a number of sub indices measuring the difficulty of layoff (notice, severance pay, etc.) and regulations restricting the use of temporary work. The data are available for 16 of the 17 countries from 1985 to 1991 and all 17 from 1992 to 1999. Following Nickell (1997), we operationalize active labor market policy (ALMP) effort as active labor market spending as a percentage of GDP divided by the unemployed portion of the population. This OECD series is available for 10 countries from 1980 to 1984 and all of them from 1985 to 1999. Our measure of wage restraint is the change in relative unit labor costs (RULC) in manufacturing. We reasoned that the level of employment would be affected not just by the change in the previous year but rather by the recent history of changes in RULC, so we measured this variable as the ten year average of changes in RULC. This series is available for 1969 to 1999 but only for 12 of the 17 countries. Mean values for the independent variable and selected independent variables are displayed in Table 2.

[Table 2 about here]

Analytic Techniques

Hicks (1994) notes that "errors for regression equations estimated from pooled data using OLS [ordinary least squares regression] procedures tend to be (1) temporally autoregressive, (2) cross-sectionally heteroskedastic, and (3) cross-sectionally correlated as well as (4) conceal unit and period effects and (5) reflect some causal heterogeneity across space, time, or both" (p.172). We follow Beck and Katz's (1995) recommended procedure, using panel-corrected standard errors, corrections for first-order auto-regressiveness, and imposition of a common rho for all cross-sections. This procedure is implemented in version 8.0 of the STATA econometrics program. Since there is some trend in our data, we do not include a lagged dependent variable as recommended by Beck and Katz (1996) because in this situation the lagged dependent variable inappropriately suppresses the power of other independent variables, as Achen (2000) has shown.[17] Beck and Katz (2004:16-17) have shown that correcting for first order auto-regressiveness actually does include a lagged dependent variable on the right hand side of the equation. Thus, it does deal with the problem of serial correlation but without, as our results show, suppressing the power of other independent variables.

To check our results for robustness, we reestimated all of the models with OLS estimation of the regression coefficients, which provides consistent estimates of the regression coefficients, and *robust-cluster* estimators of the standard errors. The standard (i.e., non-cluster) Huber-White or "sandwich" robust estimator of the variance matrix of parameter estimates was discovered independently by P. Huber (1967), White (1980) and others (see Long and Ervin 2000 for a detailed description). It provides correct standard errors in the presence of any pattern of heteroskedasticity (i.e., unequal variances of the error terms) but not in the presence of

[16] We got similar results for the 90-10 ratio.
[17] In these data, the lagged dependent variable explains 98% of the variation in the dependent variable.

correlated errors (i.e., nonzero off-diagonal elements in the covariance matrix of the errors). The robust-cluster variance estimator is a variant of the Huber-White robust estimator that remains valid (i.e., provides correct coverage) in the presence of *any* pattern of correlations among errors *within* units, including serial correlation and correlation due to unit-specific components (Rogers 1993; see also Sribney 1998; StataCorp 1999: 256-260). Thus the robust-cluster standard errors are unaffected by the presence of unmeasured stable country-specific factors causing correlation among errors of observations for the same country, or for that matter any other form of within-unit error correlation.[18]

The robust-cluster estimator of the standard errors is only impervious to correlations of errors *within* clusters. It requires errors to be uncorrelated *between* clusters. The latter assumption might be violated if unmeasured factors affect the dependent variable in all units at the same point in time. Global economic fluctuations could produce such contemporaneous effects. To evaluate the potential impact of such unmeasured period specific factors we re-estimated the models with indicator variables for the oil crisis period (1974-79), the 1980s and for the 1990s; the baseline category corresponds to the "golden age" of post war capitalism (1961-73). None of the three indicators reached significance in any of the models suggesting that period-specific effects are not present.

As discussed above, implicit in the neoliberal argument is that labor market rigidities - generous welfare benefits, high taxes (to fund the welfare state), centralized wage bargaining, employment protection legislation, etc. - have become more costly as globalization has increased. As firms and investors increase their ability to move capital across national borders, interventions in the labor market "cost" more in terms of employment since job-creating actors (firms) have the ability to exit the national labor market and relocate either physical or investment capital in a lower cost market. Thus, while rigidities such as high tax rates or generous replacement rates might not have been much of a barrier to employment in an era of relatively low globalization, they now cause slower job growth and higher unemployment as firms relocate to avoid higher costs. The change in the effect of these institutions is explicitly theorized in Iversen's (2005) post-industrialism hypotheses. There are two ways to test these arguments. One way is to use interaction terms between the key independent variables and various measures of globalization and post-industrialism. However, this method of estimating the impact of increasing globalization or post-industrialism on employment introduces multi-collinearity into the equation because of the high degree of correlation between various interaction terms and the main terms.

A second option which avoids the use of interaction terms and thus circumvents the multicollinearity problems associated with them is to split the data set into two periods, one of low globalization and industrialism (1961-80) and high globalization and post-industrialism (1981-99). Our measure of trade flows increases from 52% to 65% from the first period to the second. The capital market openness measure increases from an average of 10 to 12.5 from the first to the second period, reaching an average value of 13.5 (out of a possible 14) in 1999.

[18] Long and Ervin (2000) find that the alternative robust estimator HC3 proposed by MacKinnon and White (1985) performs better than the standard Huber-White robust estimator in small samples in the presence of heteroskedasticity. However HC3 is not defined for clustered data and not impervious to correlated errors within clusters. Thus HC3 is not suitable for our data.

Measures of capital flows show even more dramatic increases. For example, direct foreign investment outflows as a percentage of GDP increases from and .4% to 1.9% of GDP, an almost five fold increase.[19] If the neoliberal hypothesis is correct, then labor market rigidities should have a much greater negative effect on employment in the period of high globalization. Industrial employment as a percentage of the working age population declines from 25% in the early period to 20% in the later period.

As previously noted, the data on net replacement rates, wage dispersion, ALMP, RULC, EPL, and neocorporatism are only available for a subset of our cases. Data for all of the independent variables are only available for 133 of the 663 observations, which we deemed to be too small and unrepresentative a set of observations for analysis. With the exception of neocorporatism, the data for these variables are generally available from 1970 on, with full coverage only from 1980. Thus, for the analysis by period, we include only the variables with complete coverage and neocorporatism. For wage dispersion, RULC, and ALMP, we enter the variables one at a time to the baseline equation which includes one year gross replacement rate (or one year net), five year gross replacement rate (or duration of benefits), social security taxes, total taxes, wage coordination, union density, capital market openness, and trade openness. In the case of EPL, the data are available for a subset of data points for which we have ALMP data, so EPL is added to the model containing ALMP. Since the missing values for neocorporatism are for the most recent period, it is not included in this analysis.

The OECD gross replacement rates for Italy do not include a number of special benefits for special categories of workers, most notably the Cassa Integrazione, whose coverage is sufficiently broad that many experts on Italian markets consider it essential to include it when making international comparisons (e.g. see Lodovici 2000). Fortunately, Scruggs' (2004) net replacement data allow one to add these special benefits to test whether their inclusion makes a difference in the analysis.

Results

Table 3 displays the results of the baseline model for all years and for the two time periods of low and high globalization. In models 1 and 2 for the whole time period, the neoliberal position receives some support as the five year replacement rates and social security taxes are strongly related to employment levels. However, the one year replacement rate is positively and strongly related to employment rates supporting our hypothesis rather than the neoliberal claim. Total taxes are not significant in either model, supporting neither the neoliberal claim nor our counter hypothesis. Trade openness is consistently negatively related to employment in all six models but its effect is only strong in the equations with neocorporatism. Capital market openness is not significant in any of the models and the coefficient is in the wrong direction in half of them. Thus, the direct effects of globalization are modest at best. The results for wage coordination and neocorporatism support the institutionalist view rather than the neoliberal view. The coefficients for the two variables are correctly signed and, in the case of neocorporatism, significantly and strongly related to employment levels. The coefficient for wage coordination falls short of significance, but in the robust cluster estimates, wage

[19] Swank (2002) shows that other measures of capital flows such as inward DFI, portfolio investment, and borrowing on international capital markets show similar dramatic increases.

coordination is positive and significant at the .01 level. Otherwise, the robust cluster estimates (not shown) are largely consistent with the Prais-Winsten estimates. The results for union density do not support the view, common to the neoliberal and institutionalist literature, that union density will be negatively related to employment levels once wage coordination/neocorporatism is controlled for.

A comparison of the periods of low (1961-80) and high (1980-99) globalization does not support the neoliberal view that globalization makes high replacement rates, social security taxes, and total taxes more costly for employment levels. The largest increase in employment cost from the low to high globalization era is exhibited in the case of the five year replacement rate but only in the estimates including neocorporatism (models 4 and 6) and this is the only case for which the coefficients for the two periods are significantly different at the .05 level. Moreover, many of the other changes in replacement rate coefficients move in the opposite direction from the one predicted by the neoliberals. The coefficients for both social security and total taxes are stable across the periods as are the labor market institution variables. The only coefficient other than the five year replacement rate which shows a statistically significant increase across the two periods is the trade openness coefficient, and the fact that trade openness is a bigger liability for employment regardless of government policy or labor market institutional arrangements does not support the neoliberal view but rather the view of anti-globalization critics of neoliberalism, though we hasten to say that the difference is small and only appears in the case of the models with neocorporatism.[20]

Table 4 shows the results for wage dispersion, RULC, ALMP, and EPL. The OECD *Jobs Study*, Iversen (2005), and our own hypotheses agree that wage dispersion and active labor market measures should increase employment while EPL and increases in RULC should decrease employment. ALMP and EPL are correctly signed and significant, ALMP strongly so. RULC, though correctly signed, falls slightly short of significance. Wage dispersion is not only incorrectly signed but also significant in the wrong direction. However, this is not a robust finding: In the robust cluster estimates, the estimates with neocorporatism substituted for wage coordination, and estimates adding wage dispersion to model 4 (not shown), wage dispersion remained negative but fell to insignificance. The only other consistent difference between the robust cluster and Prais-Winsten estimates is that wage coordination was significant in all four robust cluster models. In regressions with neocorporatism substituted for wage coordination (not shown), neocorporatism was positively related to employment levels and significant at the .001 in all models estimated with either Prais-Winsten or robust cluster regressions, strongly supporting the institutionalist view of the employment effects of labor market institutions.

Table 5 displays the results for the analysis of one year net replacement rates and duration of benefits. The results for one year replacement rates, social security taxes, and total taxes are completely consistent with results for gross replacement rates shown in Tables 3 and 4. As expected, the results for the duration of benefits are not quite as strong as for the five year replacement rates; they are all negatively signed as expected, but only significant in three of the

[20] Models 4 and 6 indicate that a standard deviation increase in trade (29% of GDP) results in a decrease in employment of 1% in the early period and 2.4% in the later period.

seven models.[21] As in the gross replacement rate models, capital market openness is insignificant and there is some indication that trade openness is weakly related to lower employment levels. The analysis of labor market institutions also yields similar results: Wage coordination is correctly signed but insignificant in the Prais-Winsten regressions but significant in four of the seven robust cluster models (not shown). Neocorporatism was positive and significant in all Prais-Winsten and robust cluster models (not shown). Union density is not related to employment outcomes. As in the gross replacement rate analysis, ALMP is positive and strongly related to employment levels and EPL is negatively signed and significant. Wage dispersion is again wrongly signed but insignificant. RULC is negative but not significant.[22] Model 2 show that the results are not affected by the Italian special benefits schemes.

Conclusion

To summarize, our analysis confirmed the neoliberal view for social security taxes, high unemployment insurance replacement rates of long duration, and employment protection legislation. All of the other neoliberal hypotheses – on wage bargaining arrangements, short term (one year) unemployment replacement rates, total taxes, wage dispersion – found no support in the data analysis. In fact, we found that short term replacement rates and neocorporatist labor market institutions were positively and strongly associated with high employment levels. We also found no support for the view that "labor market rigidities" have become a greater liability in the era of globalization. In areas where the original OECD *Jobs Study* and Nordic social democratic prescriptions found common ground, wage restraint and active labor market policy, we found strong support for the positive effects of active labor market policy and weaker support for the positive effects of wage restraint.

It is worthwhile investigating the magnitude of our main findings from a policy point of view as well as a scientific standpoint. In the case of one year gross replacement rates for the globalized period, model 6 in table 3, our best estimate, indicates that a move from an average LME level of replacement rate (32% - see Table 2) to a Nordic CME level (52%) is associated with a 5% increase in employment levels.[23] A *reduction* of five year gross replacement rates from a Belgian level (41%) to a Canadian level (26%) would result in a 3.5% increase in employment levels. With regard to active labor market policy, as indicated in model 4 of Table 4, moving from a continental level of effort (.14) to a Nordic level (.28) would result in a 2.3% increase in employment. Reducing social security taxes, moving from a German level (14%) to a Danish level (1%), would result in a 6.3% increase in employment. In the case of employment protection legislation the magnitudes are modest: Even using the larger estimate (model 6 in Table 5), moving from the German, Swedish, or Belgian level (3.0) to the Danish level (2.0) would only result in a 1.5% increase in employment. While labor market institutions are much more difficult to change, especially the web of policy and institutional linkages measured by the Hicks/Kenworthy measure, it is of social scientific interest to consider how large these effects are. Based on model 6 in table 3, a one standard deviation increase in the neocorporatism (.33),

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[21] The robust cluster estimates for duration were significant in five of the seven models.

[22] RULC was significant at the .01 level in the robust cluster estimates.

[23] With the exception of social security taxes, all of the estimated effects correspond to approximately a one standard deviation change in the independent variable. In the case of social security taxes, a standard deviation reduction would result in a 2.6% increase in employment.

which is equivalent to moving from a Dutch to an Austrian or Norwegian level, would result in a 3.2% increase in employment.

Other than the neocorporatism finding, our results would appear to be highly policy relevant with quite practical policy implications. In the case of replacement rates, our results suggest that one might finance an increase in the one year replacement rate with a reduction in duration and long term replacement rates. Increases in active labor market spending have clear employment payoffs.[24] Our results for social security taxes indicate that there appears to be solid cross national quantitative ground for the claims of scholars working on the German case who identify the high levels of social security taxes as a major source of German employment woes (Manow and Seils 2000, Scharpf 2000, Streeck and Trampusch 2005). The comparison between Denmark and Germany in the previous paragraph is relevant because total taxes as a percent of GDP were actually much higher in Denmark (55%) than in Germany (44%) in the late 1990s, indicating that German social security taxes could be lowered by a reallocation of the tax burden rather than reduction of welfare state generosity. Denmark also shows that very low levels of poverty and inequality are compatible with just average levels of employment protection.

We noted that employment protection legislation had significant effects but they were modest. It turns out that the results were dependent on the inclusion of Italy. Until 1996, Italy was a significant outlier among our cases in terms of EPL and it also had the lowest levels of employment of all of the countries in the analysis (see Table 2). Three Southern European members of the European Union, Portugal, Greece, and Spain, had similarly high levels of EPL during this period and two of them, Spain and Greece, ranked similarly low in terms of employment performance. This suggests that EPL would show much stronger effects were these three countries added to the analysis and further that this result might be the product of a threshold effect which kicked in at high levels of EPL. Our preliminary analysis of data including these three countries indicates that this is the case. EPL was highly significant (at the .001 level) and larger than in the 17 country data set, with a standard deviation decrease in EPL resulting in a 2.2% increase in employment levels. The relationship remained significant when any one of the four cases was dropped one at a time.[25]

Taken as a whole, our results are more consistent with the European Employment Strategy (EES) than with the initial OECD Study recommendations. As former OECD economist Bernard Casey (2004; xx) has noted his recent comparison of the two:

> The [OECD job strategy] is predicated upon neo-classical perceptions, whereby market solutions predominate; the [EES] owes more to 'social market' theories, whereby the state intervenes to moderate negative effects of market relationships and to enhance the efficency of market performance. The former makes little reference to the welfare state and tends to regard them as impediments; the latter sees them as potentially productive, albeit as also implying obligations."

[24] This is an aggregate generalization. ALMP is generally thought to be most effective when unemployment is moderate or low. When unemployment is very high, the mismatch between job vacancies and the skills of the unemployed is not a central problem.

[25] This analysis replicates model 4 in Table 4 but without wage coordination or union density for which the data are incomplete.

Casey notes that, given the point of departure, there is more overlap than one might expect. As we note, even the original Jobs Study recommended introducing or intensifying active labor market policy, a traditional Nordic social democratic policy measure, and over the years the OECD has modified its policy recommendation, particularly in the area of wage bargaining where it has recognized the virtues of coordinated wage bargaining. However, these adjustments come as afterthought to the still neo-classical view. By contrast, the EES owes much to traditional Nordic social democratic employment and labor market policies and converges even more on Third Way social democratic policies (Huo 2005). The core of the EES/Third Way policies is labor market activation and training. The goal is to move people from welfare (dependence on transfers) and non-work to work and to upgrade skill levels and match skills to existing job vacancies. Whereas the neoliberal policy prescriptions were best represented by the US, Denmark best represents the policy package suggested by our analysis: Very low social security taxes, modest EPL, strong ALMP effort, high levels of wage coordination and neocorporatism, and high short term unemployment replacement rates. The one policy on which Denmark is less than optimal is the duration of unemployment benefits which is four years, but even there it is moving in the right direction having reduced it from nine years and also having increased the compulsion to work or enter training by adding more qualifying conditions. Denmark and the United States might be thought of as alternative paths to high employment as they rank second (77%) and third (74%) repectively on our dependent variable in the final year included in this analysis. The difference is that the US model carries costs in terms of the levels of poverty and inequality which the Danish model does not.

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Table 1. Variable Descriptions, Data Sources and Hypothesized Effects on Employment level

Variable	Description	Hypothesized impact on employment
Dependent Variable		
Employment level	Percentage of the population aged 15-64 employed.[a,b]	
Independent Variables		
Gross replacement rate, 1 year	Replacement rate for an unemployment spell of one year[b]	+
Gross replacement rate, 5 year	Replacement rate for an unemployment spell of five years[b]	-
Net replacement rate, 1 year	Replacement rate for unemployment spell of one year, net of taxes on both previous employment and unemployment benefits[c]	+
Duration	Duration of unemployment benefits in weeks[c]	-
Social security taxes	Social security taxes as a percent of GDP.[a,b]	-
Total taxes	Total taxes as a percent of GDP.[a,b]	+
Wage coordination	Degree of coordination of wage bargaining.[d]	+
Neo-corporatism	Hicks and Kenworthy's (1998) seven item index (see text)	+
Union density	Union members as percent of wage and salary workers.[e]	-
Capital market openness	Index of controls and international agreements on capital and currency accounts, high values indicate fewer controls.[a,f]	-
Trade openness	Exports plus imports as a percent of GDP.[a]	-
Wage dispersion	Ratio of median wage and salary worker to wage and salary worker at the 10th percentile (full time work)[b]	+
Employment protection	Index of employment protection legislation[b]	-
RULC	Change in relative unit labor cost, 10 year average[g]	-
ALMP	Spending on active labor market policy measures divided by the unemployed population[a,b]	+

Sources: [a]Huber et al. (2004); [b] OCED [c] Scruggs (2005); [d]Kenworthy (2001); [e]Ebbinghaus and Visser (2000); [g]Quinn; [f]our calculation from BLS data

Table 2. Mean Values of Key Variables by Country

	Employment % working age population	Gross replacement rate, 1 year	Gross replacement rate, 5 year	Net replacement rate, 1 year*	Neo-Corporatism	Duration of benefits in weeks**	Employment protection legislation	Social security taxes	Active labor market policy	Change in RULC 10 yr ave.	Wage dispersion 50-10 ratio
Nordic CMEs											
Sweden	76	64	19	79	.95	58	3.0	11	.54	5.7	1.3
Norway	71	38	23	53	.96	63	2.8	11	.21	6.8	1.4
Denmark	74	67	45	73	.75	338	2.0	1	.19	5.7	1.4
Finland	70	41	25	45	.86	68	2.2	6	.17		1.5
Mean	73	53	28	63	.88	132	2.5	7	.28	6.1	1.4
Continental CMEs											
Austria	66	28	25	32	.96	30	2.2	12	.09		1.9
Belgium	57	47	41	65	.72	391	3.0	13	.15	3.4	1.4
Netherlands	58	64	46	54	.63	44	2.7	16	.18	3.0	1.6
Germany	66	39	29	64	.81	52	3.0	14	.18	3.9	1.6
France	62	56	30	63	.42	98	2.9	17	.07	4.7	1.7
Italy	55	9	5	7	.41	26	3.5	12	.04	8.6	1.6
Switzerland	78	40	13	48	.55	36	1.1	9	.24		1.6
Mean	63	40	27	48	.64	97	2.6	13	.14	4.7	1.6
LMEs											
Australia	66	21	22	28	.21	450	1.0	0	.04		1.6
Canada	65	51	26	49	.09	40	.8	4	.05	4.4	2.3
Ireland	57	34	24	39	.12	61	.9	4	.11		2.0
UK	69	29	22	23	.13	39	.6	6	.07	7.8	1.8
USA	66	26	12	32	.07	26	.2	7	.03	1.2	2.0
Mean	65	32	21	34	.12	123	.7	4	.06	4.5	1.9
Japan	72	32	11	36	.76	29	2.1	7	.09	3.4	1.7

*with special benefits, Italy = 36, ** Australia is unlimited, coded to 450

Table 3. Prais-Winsten models of Employment Levels with PCSEs by Period (Gross unemployment replacement rates)

	1961-99		1961-80		1981-99	
Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Replacement rate, 1 year	.098 ***	.154 ***	.130 ***	.107 ***	.147 ***	.259 ***
Replacement rate, 5 year	-.109 ***	-.180 ***	-.203 ***	-.146 ***	-.108 *	-.235 ***
Social security taxes	-.311 ***	-.462 ***	-.327 ***	-.498 ***	-.343 ***	-.555 ***
Total taxes	-.004	-.007	.016	.011	-.032	-.070
Capital market openness	-.033	.030	-.189	-.064	.173	.259
Trade openness	-.018	-.045 ***	-.027 *	-.029 *	-.046 *	-.078 ***
Union density	-.003	-.036	.049 ^	-.022	.013	-.040
Wage coordination	.102		.167		.190	
Neocorporatism		8.399 ***		8.879 ***		9.706 ***
Constant	69.552 ***	67.786 ***	68.736 ***	67.204 ***	67.341 ***	67.666 ***
Common rho	.90	.87	.85	.88	.89	.86
R^2	.88	.91	.94	.95	.92	0.95
N	663	578	340	340	323	238

Level of significance: ***=.001, **=.01, *=.05, ^=significant in opposite direction of hypothesis

Table 4. Prais-Winsten models of Employment Levels with PCSEs (Gross unemployment

Independent Variables	Model 1	Model 2	Model 3	Model 4
Replacement rate, 1 year	.234 ***	.098 ***	.100 **	.098 **
Replacement rate, 5 year	-.277 ***	-.096 *	-.082	-.042
Social security taxes	-.363 ***	-.245 **	-.310 ***	-.256 **
Total taxes	.038	.008	-.078	-.072
Wage coordination	.118	.021	.118	.322
Union Density	.013	.063	-.001	.000
Capital market openness	.006	.052	.152	.162
Trade openness	-.052 *	-.029	-.045 *	-.064 **
Wage dispersion	-2.705 ^			
RULC		-.148		
ALMP			12.174 ***	16.405 ***
EPL				-1.180 *
Constant	71.915 ***	65.873 ***	69.812 ***	69.889 ***
Common rho	.86	.92	.91	.89
R^2	.95	.91	.92	.93
N	311	353	305	255

Level of significance: ***=.001, **=.01, *=.05, ^=significant in opposite direction of hypothesis

Table 5. Prais-Winsten models of Employment Levels with PCSEs (net unemployment replacement rates)

Independent Variables	Model 1	Italy with Special Model 2	Model 3	Model 4	Model 5	Model 6
Replacement rate, 1 year	.034 ***	.027 *	.041 **	.043 ***	.054 **	.053 *
Duration of benefits	-.001	-.002	-.009 ***	-.001	-.006 *	-.006 *
Social security taxes	-.330 ***	-.339 ***	-.341 ***	-.273 ***	-.347 ***	-.268 **
Total taxes	-.012	.001	.012	.004	-.890	-.070
Wage coordination	.082	.090	.025	.010	.154	.394
Union density	-.022	-.010	.015	.078 ^	.022	.020
Capital market openness	.053	.057	-.018	.021	.163	.204
Trade openness	-.017	-.021	-.044 **	-.417 *	-.056 **	-.068 ***
Wage dispersion			-1.533			
RULC				-.149		
ALMP					12.507 ***	17.675 ***
EPL						-1.446 **
Constant	69.997 ***	71.038 ***	72.713 ***	66.716	70.553	70.487 ***
Common rho	.92	.92	.92	.92	.89	.87
R^2	.89	.89	.92	.91	.93	.93
N	493	493	317	332	305	255

Level of significance: ***=.001, **=.01, *=.05, ^=significant in opposite direction of hypothesis