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ABSTRACT

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This paper uses data from 20 OECD countries to investigate the impact of welfare state institutions (especially employment protection, wage bargaining and work incentives) on the functioning of the labour market both theoretically and empirically. It shows that the impact of welfare state institutions is not as clear-cut as the deregulationists' view suggests. This result may be surprising against the background of the common view that welfare state measures cause European employment problems but it is in line with the outcomes of many other economic studies. The reasons for the ambiguous effects of welfare state institutions are manifold but the most important reason is the complexity of the impacts. There are many side-effects or second-round effects of welfare state institutions which, although often neglected, prove to be very important in the real 'imperfect market' world. Many welfare state institutions only have a clear-cut negative effect against the background of the theoretical perfect market model.

JEL Classification: E2, J0, P1, P5

Keywords: welfare states, institutions, economic performance, growth, employment

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1. Institutions and Economic Fitness

Many European countries -usually described as developed welfare states- have suffered recently from persistently high unemployment, low employment-population rates and apparently underdeveloped service sectors. By contrast, the US achieved record low unemployment in the 1990s. The common notion (see e.g. the OECD's jobs study) is that high European unemployment is structural in the sense that institutional arrangements create high equilibrium unemployment. However, some European countries have experienced strong employment growth and achieved high employment-population rates despite the fact that they are among the most generous welfare states in the world. Moreover, where countries have eased employment protection, reduced unemployment benefits and strengthened eligibility criteria (as many have), cross-national and longitudinal analyses do not suggest that this 'deregulation' has had a substantial impact on employment or unemployment.

There are many potential reasons for unemployment but the observation of unemployment is surely not sufficient in itself to justify the conclusion that labour markets are malfunctioning. Also, the share of long-term unemployment may be regarded as endogenous to high unemployment simply caused by a selection process and demand deficiency. However, the most widely accepted explanation for high European unemployment is that European-type welfare state institutions are an impediment to economic development because they create frictions leading to sclerosis. If Europe wants to maintain its position in the world economy, it needs to change its institutions. The typical line of argument proceeds as follows:

Firstly, it is argued on a theoretical basis that European welfare state institutions shift the economy away from Pareto efficiency.
Secondly, it is claimed that US institutions come closest to the 'perfect market model' or 'best practice' respectively and that the economic success of the US shows the superiority of the Anglo-Saxon model.

Thirdly, it is argued that strong coalitions prevent the implementation of the 'necessary' reforms. It is claimed that, although theoretical analysis shows what the necessary reforms are, political interests (rent-seeking coalitions) prevent societies from adopting these recipes.

Fourthly, it is claimed that a delay in the 'necessary' reforms will reduce international competitiveness. Globalized capitalism forces countries to bring their institutions into line with 'best practice'. Just as it used to be thought that competition between firms would only allow companies conforming to 'best practice' to survive in the market, so globalization will only allow the most efficient institutional arrangements to survive.

This reasoning depends on many assumptions. Basically, it holds for a perfect market world but not at all necessarily for the real world, with all its deviations from the perfect model. A long list of papers contrast European-type welfare state institutions with the perfect market model and, of course, identify these institutions as impediments. A 'prototype' example for this approach is Horst Sieberts' (1997) contribution 'Labour Market Rigidities: At the Root of Unemployment in Europe'. Siebert basically identifies welfare state measures as deviations from the perfect market model and concludes that 'policies against the perfect market model' can only distort otherwise smoothly functioning markets. Many welfare state regulations may indeed look unnecessary and inefficient when compared with the perfect market model. A different view may be taken when the presence of market imperfections is remembered (see e.g. Schettkat 1992, Blank/ Freeman 1994, Atkinson 1995, Buttler/ Franz/ Soskice/ Schettkat 1996, Agell 1999, Krueger 2000, Stiglitz 2000). It has been shown that even small deviations from perfect market assumptions (Akerlof/ Yellen 1985) can create outcomes very different from the perfect market equilibrium. Furthermore, market processes can create sub-optimal outcomes and macro results which do not fit the preferences of any (!) individual (Schelling 1978). In this situation, institutions are necessary to achieve the social **and** individual optimum.

Regulations clearly limit *ceteris paribus* the scope for discretionary decisions by employers, but only in the perfect market model are they simply restrictions and

distortions; in a less perfect environment they may well create opportunities. For example, works councils may not only constrain managerial decisions but also give workers a ‘voice’ and thus improve decision-making (Hirschman 1970, Freeman/ Medoff 1984, Wolf/Zwick 2002). Furthermore, there is usually more than one way to do things and some instruments may actually facilitate adjustments (for example, a reduced working hours subsidy can provide a short-term alternative to dismissals, see e.g. Abraham/ Houseman 1993).

Many welfare state institutions have been introduced to protect workers or to give them security. Unemployment insurance is, of course, intended to prevent wages falling below a certain level. Many unemployment insurances grew out of workers’ self-help initiatives and in some countries unemployment insurances are still administered by unions. However, other branches of social security have been introduced to protect employers. It was high claims for compensation following accidents in the workplace and the related high risks for employers that led to the introduction of the ‘work-related accident insurance’, the first social insurance introduced by Bismarck. Insurance, of course, creates incentives for free-rider behaviour and moral hazard, with the consequential need to introduce, monitor and enforce standards of safety at work. Nevertheless, this very first social insurance was introduced to protect employers rather than workers and to shift compensation claims from the private-law to the public-law sphere.

However, the perfect market model is still the point of reference in economic policy and many ‘political economy’ papers (see e.g. Saint-Paul 1996) likewise base their proposals on this model, albeit appending explanations of the non-implementation of the ‘perfect market solution’. The interest of ‘rent-seeking’ coalitions (usually employed insiders or unions) lies in using their power to prevent the implementation of perfect market solutions and so to protect their rents. Empirical support for the deregulationists’ hypothesis is claimed to come from the more favourable employment trends in the 'deregulated' US economy. Although the US showed excellent economic performance in the late 1990s, it was not always regarded as the best performer and some European countries actually performed better than the US during that period. Not long ago, Japan

was expected to be the leading economy in the 21st century because of the superiority of its institutions compared with those of the US: team-oriented management techniques vs. overly specialized individualists; flat vs. hierarchical organizations; long-term employment relations providing the necessary stability for employees and employers to invest in human capital vs. high labour turnover and poaching; long-run development strategies ('long-termism') of Japanese banks and management and the MITI vs. the 'short-termism' and short-run profit-seeking of US banks and shareholders. Almost the same list is used today to 'explain' the present problems of the Japanese economy and the current success of the US. The US was seen by American economists as an economic system able to prosper in terms of McJobs but unable to create 'good jobs' and certainly totally unable to create sophisticated new products. Yet in the late 1990s the US became the world-leader in the most innovative industries (Krugman 2000) and is now regarded as particularly well-suited to achieve radical innovations. The Netherlands is a similar case. It used to be claimed that the corporatist culture and consensus-seeking of the Netherlands enabled an even distribution of the burdens in a shrinking economy but prevented dynamic economic development. Yet the country's success in the 1990s was said to be due precisely to this corporatist culture. Many other countries could be added to this list. Success seems to attract attention and it is almost always possible to identify some institutional characteristic which can serve as an 'explanation' for it. If the 'explanation' fits our prior assumptions, we are apparently prepared to accept it without critical examination.

This paper questions the conventional ‘deregulationist’ analysis on both theoretical and empirical grounds. It proceeds as follows: firstly, it discusses different theoretical models relating economic fitness to institutions (economic fitness landscapes), together with the consequences of the different models for economic analysis. Then, it analyzes theoretical arguments concerning the effects on economic performance of welfare state institutions such as wage bargaining, employment protection legislation, transfers (including unemployment benefits) and taxes. These are the institutional arrangements high on the deregulationists’ list (see Siebert 1997). The impact of these institutions on economic performance are analyzed and facts about the institutional arrangements are presented.

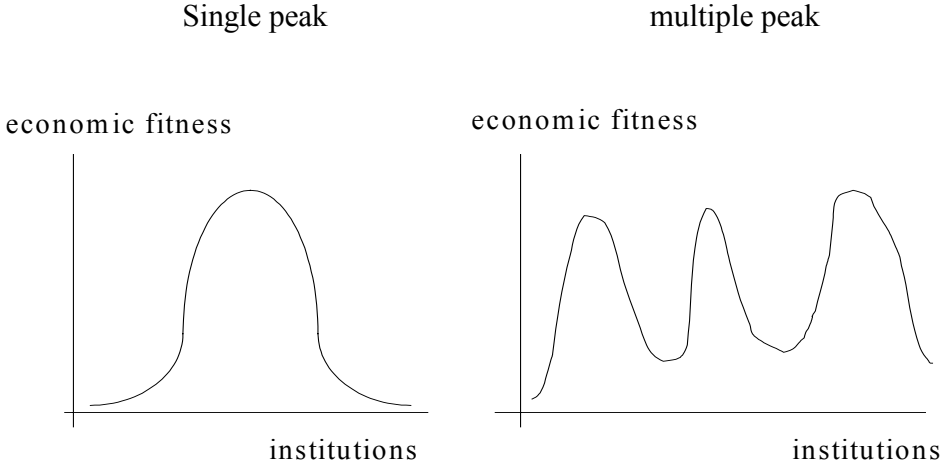
•Do institutional differences cause differences in economic fitness?
•Is there any one institutional arrangement that leads to peak performance at all times?
•Does competitiveness require that labour institutions conform to a single 'best practice' in a globalized world?

2. Theoretical Considerations: Market Imperfections and Institutional Solutions

In the perfect market model with globalized capitalism, only one 'best practice' can survive. There is such a thing as THE optimum national institutional arrangement and ultimately all countries must adopt it. Although there are no markets for institutions, the selection process in the stylized economy will only allow 'best practice' to survive. Just as firms with sub-optimal organizational structures will not survive in conditions of market competition, so international competition in conditions of globalized capitalism will require countries with sub-optimal national institutional arrangements to conform to 'best practice'. International competition in a globalized capitalist economy is thought to impose the optimum national institutional arrangement on countries, just as competition within markets imposes the optimum organizational structure on firms. In a diagram showing institutional arrangements on the horizontal and economic fitness on the vertical axis, there would be only one peak representing the 'best practice' institutional arrangement (left-hand diagram in Figure 2.1).[1]

[1] The metaphor of a 'fitness landscape' was first developed in biology to describe the ability to survive as a function of genetic code (Bak 1997: 118/119) and was to my knowledge first introduced into economics by Richard Freeman (2000).

Figure 2.1: Economic fitness landscapes



Source: inspired by Freeman 20000

The single-peak world is intellectually attractive and deeply ingrained in economics, perhaps because it allows for clear and precise policy prescriptions. Changing institutions in the direction of the 'best practice' institutional arrangement will always improve economic fitness. All that is necessary is to identify the leader in terms of economic fitness, investigate the institutional differences and eliminate them. Policy advice is a risk-free business in the single-peak world. This vision underlies (usually implicitly) many cross-country studies, which take the inter-country difference in economic performance and assume this to be caused by the inter-country difference in institutional arrangements, as illustrated in the left-hand panel of Figure 2.1. Once the institutional differences are identified, the policy prescription is simple: 'follow the leader and you improve economic fitness'.

However, there may be more than one peak in the economic fitness landscape (right-hand panel of Figure 2.1). After all, different institutional arrangements may best serve economies specializing in different kinds of production. Countries may specialize according to their natural and historical (path-depending) advantages. For example, one country may specialize in medium-tech industries using a roughly homogenous labour force with medium skills, while another country may specialize in high-tech industries, probably in combination with a large part of the economy in low-tech industries. This is

roughly the difference between the German and the US economy, with the former relying on a 'medium-skilled' labour force and the latter depending on a combination of low-skilled and high-skilled workers in almost every industry (Freeman/ Schettkat 1999). International trade may allow the two economies to achieve a similar level of economic fitness, so that the fitness landscape will have two peaks coinciding with different institutional arrangements. In this example, the difference in the institutional arrangements allows the economies to achieve similar fitness. Moving one country towards the institutional arrangement of the other country would reduce economic fitness, since each country already has the institutional arrangement best fitting its structure and resources.

Learning from other countries in a multi-peak economic fitness landscape is difficult and policy advice is hard to give. This world also requires a very different approach to international comparative research. It is no longer sufficient to identify the leader and then mimic the institutional arrangement of that country. Instead, the relationship between institutional arrangements and economic performance has to be carefully investigated to reach an understanding of why institutions differ and to decide whether they are ideally suited to the structure of the economy. To identify the impact of institutions on economic fitness, it is necessary at least to investigate whether changes in institutions lead to the assumed effect on economic fitness. Whereas it is sufficient in a single-peak world to conduct a cross-country study, the multi-peak world requires at least the investigation of initial differences (and international comparative study or a 'difference in the difference' analysis). The two approaches to international comparative studies are illustrated in Figure 2.2.

Another difficulty is the multi-dimensionality of institutional arrangements, which make them difficult to identify, and the fact that indicators intended to summarize institutional arrangements are always debatable (see below). Furthermore, economic fitness is likewise multi-dimensional and to some extent debatable. Even though the consensus may be greater in this respect than with regard to institutions, it will still be necessary to discuss which economic aspects are to be included in an economic fitness measure,

whether they are compatible or competitive (for example, unemployment and inflation), and how different variables should be weighted when summarized in a single indicator. The single-peak vision requires that a single institutional arrangement be deemed to be 'best practice' in relation to various dimensions of 'economic fitness' and different periods of time.

Many economists may agree to describe economic fitness in terms of:

- growth of per capita income (GDP per capita)
- productivity growth
- unemployment
- price stability
- external trade balance

  and (although much more controversial)
- inequality

Leaving inequality aside, Figure 2.3 shows 'radar diagrams' for ranking six big OECD countries (Germany, France, Italy, UK, US and Japan) in these economic dimensions for the averages of the 1960s, the 1970s, the 1980s and 1990s. The single-peak vision requires that the 'best practice' country ranks number one in all dimensions and in all four periods, provided that there was no very great change in institutions. In other words, the country lines should not cross each other in the radar diagrams. However, Figure 2.3 shows that the country-specific lines do cross, demonstrating that no country has been the top performer in all dimensions and over all periods. The single-peak vision certainly does not hold when all four periods are included in the analysis.

Japan came closest to being the 'single-peak country' in the 1980s. In that period Japan ranked number one in 4 of the five dimensions (ranking after Germany only in export surplus), whereas US performance was average or worse in 4 dimensions of economic fitness. This explains the popularity of the Japanese model at that time. Weighting all five dimensions of economic fitness equally and taking the mean, Germany ranked number one in the 1960s and remained well ahead of the US up to the 1980s. Only in the 1990s

did the US rank number one on average, and then only in one dimension: growth of per capita GDP. Apart from this, the US ranked number one only in terms of inflation and only in the 1960s. In all other dimensions, the US often ranked below the average.

Figure 2.2: The cross-country and international comparative approach

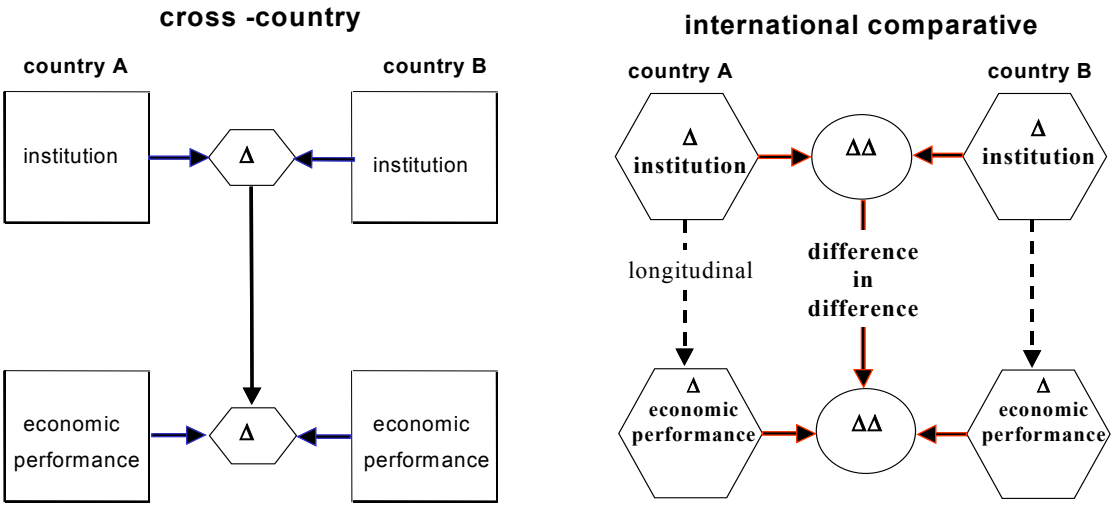


Table 2.1: Average rankings for economic fitness (average country ranking computed on the basis of growth of per capita income, productivity growth, unemployment rate, inflation rate and external trade balance)

	average rankings			
	1960s	**1970s**	**1980s**	**1990s**
Germany	**2.4**	*2.6*	*2.8*	3.4
France	3.6	3.4	3.8	3.8
Italy	*3.2*	3.6	4.8	4.2
UK	4.0	4.4	4.4	3.8
US	4.6	4.8	4.0	**2.6**
Japan	*3.2*	**2.2**	**1.2**	*3.2*

Source: Computations based on OECD, Economic Outlook Database

Figure 2.3: Radar diagram for economic performance

[see appendix]

3. The Impact of Institutions in Imperfect Markets

This section discusses likely impacts of institutions on economic fitness. It starts with wage bargaining systems and their impact on wage distribution and employment. The impact on wage distribution is discussed against the background of differences in skill levels as measured by the International Adult Literacy Survey (IALS, OECD 1997). Section 3.2 discusses the impact of employment protection on employment and section 3.3 analyzes work incentives, making use of detailed data provided by the Dutch Central Planning Bureau.

3.1 Wage Bargaining Institutions, Wage Distribution, Skills and Employment

Wage bargaining institutions can influence the aggregate wage trend, as Bruno and Sachs (1985) emphasize, but they can also affect wage dispersion (Freeman 1988, Rowthorn 1992, Appelbaum/ Schettkat 1995). “Equal pay for equal work” is part of almost any

union's programme and larger unions can be expected to enforce this more comprehensively than smaller ones. Wage bargaining can take place between individual firms and individual employees or company unions at the one extreme (decentralized bargaining), or between national unions and employers associations at the other (centralized bargaining, for a summary discussion see Appelbaum/ Schettkat 1995). Traditionally, economists have favoured decentralized bargaining because it is closest to the 'perfect market' model, in which neither the supply side nor the demand side have any market power and both are price-takers. Distortions in labour markets have usually been identified as the misuse of market power by unions, classified as monopolies, pushing up wages and compressing the wage structure (e.g., Sinn 2001, Monopolkommission 1994). Indeed, in a cross-country comparison, wage differentials decline in direct linear relation to increasing union density and indicators measuring the degree of centralization of wage bargaining institutions. The more centralized the bargaining system, the less the wage inequality (Freeman 1988, Appelbaum/ Schettkat 1996). It is a single-peak landscape with the peak (the highest inequality) occurring on the left with decentralized wage bargaining (see Table 3.1).

Table 3.1: Bargaining indices, union density, wage differentials and incidence of low pay

[see Appendix]

But what actually causes the dispersion of wages? A narrow wage distribution may indicate institutional wage compression but may also be caused by a narrow skill distribution. Countries with a wide dispersion of skills are expected to have a wide dispersion of wages and if countries with decentralized wage bargaining systems also have wide distributions of skills, conclusions on the impact of institutions on wage dispersion drawn from the 'raw' wage differentials will suffer from a spurious correlation. Joop Hartog and Coen Teulings collected the results of micro-data wage regressions, which -following the seminal work of Krueger and Summers (1988)- regressed wages on personal characteristics such as years of schooling, age, experience, firm size, etc. (see Teulings/ Hartog 1998). In efficient, competitive labour markets, the residuals should be small because wages should represent marginal productivity according to individual characteristics (for a comprehensive discussion see Krueger/ Summers 1988). However, the unexplained wage variations (the residuals) in column 6 of Table 3.2 correlate negatively with the centralization of bargaining institutions, suggesting that decentralized bargaining systems create wide wage dispersion not related to 'economic fundamentals'.[2] In other words, it seems to be decentralized rather than corporatist wage bargaining systems that create large unexplained wage residuals. How can this be? Several factors may explain this unexpected result: (1) rent-seeking, (2) information problems, (3) unobserved ability.

(1) In decentralized bargaining systems, the 'hold-up' problem may be more severe. In other words, workers or their company unions may use their insider positions to extract rents. The decentralized bargaining system is implicitly equated to the 'perfect market' but this is inadequate because labour markets are inherently imperfect and thus invariably inhibit some market power. Even less organized workers have market power at the individual firm level. Companies invested in hiring, training etc. (see the summary on efficiency wage models by Akerlof/ Yellen 1986) may use their position to extract rents, as may workers. Although the bargaining position of workers is weak in firms suffering from decline in demand, their position in expanding firms is very strong and they can use

[2] Of course, it can always be argued that the divergent result is due to unobserved variables, but this is not always very convincing (see Krueger's and Summers' (1988) discussion of this issue).

this situation to raise their wages. Thus, decentralized bargaining systems may impose more wage restraint in declining firms but also allow more rent-seeking in expanding firms and thus create more variation. Rent-seeking behaviour may be less severe in more centralized bargaining systems, where the specific company situation does not affect bargaining. More centralized bargaining systems are less responsive to local demand trends, but this coin has two sides: on the one hand, such systems do not allow firms hit by negative demand shocks to lower wages (see Akerlof/ Dickens/ Perry 1996 for a summary of the empirical evidence) but, on the other, wages do not rise as much in firms hit by positive demand shocks. However, the greatest expansion in employment will be achieved where wage restraint is practised in expanding firms or industries because the expansionary demand effect will not be reduced by rising prices (for a discussion, see Bell/ Freeman 1985). Which effect dominates will depend on the distribution of shocks.

It may be argued, however, that wage differentials between expanding and contracting firms or between expanding and declining occupations are necessary to guide workers into the jobs in which their labour can be most efficiently used.

(2) Markets without an auctioneer suffer from information problems. Without an auctioneer, wages are the outcome of bilateral bargaining in decentralized bargaining systems. Individual pairs of workers and employers conclude contracts based on wages different from the market-clearing equilibrium wage (Chamberlain 1948). Thus, individual wages will initially depart from the equilibrium wage and it is only after a sequence of adjustments -which require either renegotiable contracts or labour mobility- that the market-clearing wage can be achieved. Searching for the equilibrium wage is costly because the convergence to the market wage has to occur through a process of trial and error. If renegotiations are difficult, firm-worker pairs with wages below the market level will result in quits, whereas those with wages above the equilibrium level will result in dismissals. Again the term ‘market wage’ and ‘equilibrium wage’ are used, but with incomplete information even ‘equilibrium wage’ contracts may result in quits or dismissals if the local information indicates over or under-payment (see Schelling 1978 for an analysis of macro-outcomes of processes with local information). In more

centralized bargaining systems, unions and employers' associations may be seen as a substitute for the auctioneer because they may have knowledge about the relevant demand and supply functions and can thus determine the market-clearing wage. The consultancy company 'HAY' actually serves as an information pool for wage data: using a standardized job classification, it collects data on wages and makes this information available to their clients. If bargaining institutions substitute for the auctioneer, the unexplained residual in wage regressions should be a falling function of centralization. This is consistent with the data in Table 3.1.

(3) Variables used in wage regressions may not be a sufficiently accurate measure of workers' ability. In other words, the residual may be due to unobserved ability. 'Years of formal education' can be an especially misleading measure in international comparisons, because what is learnt in the course of a year can vary substantially between schools and certainly between countries (Freeman/ Schettkat 2000). The OECD's adult literacy survey provides data on skills based on standardized literacy scores for the adult population (see OECD 1997). Scores vary from 0 to a maximum of 500. The median skill scores in the IALS survey do not differ very much between the US, Germany, Sweden, the UK and the Netherlands (285, 285, 310, 276, 292 respectively). The upper end of the skill distribution also seems to be roughly similar (see Table 3.3), while skill distributions at the lower end of the labour market are clearly different, especially between the US and the continental European countries.

Wage structure and employment

Describing the skill range of the lower half of the labour market by the median skill score of the employed ($D5_{employed}$) at the upper bound and the first decile skill score of the unemployed ($D1_{unemployed}$) at the lower bound, it emerges (in line 5 of Table 3.2) that the median score for the employed is 2.5 times that of the first decile of the unemployed in the US, but only about 1.3 to 1.5 times in Germany, Sweden and the Netherlands (and 1.7 in the UK). This is a surprising result, given that the continental European wage bargaining systems are alleged to 'crowd out' the least skilled workers, who are thought to

be excluded from employment because their wages are set above their productivity level. Under the 'wage compression hypothesis', one would expect the skill score of the lowest decile of the unemployed to be roughly equal to the skill score of the employed in the US, where the flexible wage system is claimed to allow low-skilled workers to price themselves into employment via wage concessions. In continental European countries, on the other hand, the 'wage compression hypothesis' would predict a huge gap between the skill scores of the lowest decile of the employed and the unemployed, because unemployment should be concentrated among the least skilled workers, who are allegedly pushed out of employment by excessive minimum wages. The empirical facts are exactly the reverse of what the wage compression hypothesis predicts.[3]

Apparently the wage distribution is also wider because the US skill distribution is wider than those in the continental European countries. Furthermore, the integrative effect of flexible US wages cannot be found in the data. The skill differential between the employed and unemployed is high in the US but comparatively low in Europe. This is in total contrast with the ‘wage compression hypothesis’, which alleges that European-type welfare state institutions exclude low-skilled workers from employment (see Freeman/ Schettkat 2000). The unexplained residual in wage regression, which can be taken as an efficiency measure for labour market institutions, is also higher in countries with decentralized bargaining systems. This result is consistent with the view that labour markets are fundamentally imperfect markets and that the transaction costs to achieve the market-clearing equilibrium wage are high in decentralized bargaining systems. From a theoretical perspective, centralized bargaining systems may collect information and substitute for the auctioneer.

[3] For an analysis of why ‘pricing-in’ does not occur even in the US, see Bewley 1995.

Table 3.2: Skill and wage differentials

	US	Germany	Sweden	UK	Netherlands
1. wages					
D9/D5	2.10 (1995)	1.61 (1993)	1.59 (1993)	1.87 (1995)	1.66 (1994)
D5/D1	2.09 (1995)	1.44 (1993)	1.34 (1993)	1.81 (1995)	1.56 (1994)
Skills (literacy scores)					
2. total population aged 15-64 years					
D9/D5	1.22	1.19	1.17	1.23	1.15
D5/D1	1.57	1.24	1.28	1.47	1.28
3. employed					
D9/D5	1.21	1.18	1.16	1.19	1.13
D5/D1	1.41	1.22	1.22	1.36	1.24
4. unemployed					
D9/D5	1.28	1.21	1.16	1.27	1.21
D5/D1	2.17	1.32	1.30	1.52	1.44
5. D5 employed / D1 unemployed					
	2.48	1.39	1.34	1.72	1.49
wage deciles ratio / skill deciles ratio					
6. employed					
D9/D5	1.74	1.36	1.37	1.57	1.47
D5/D1	1.48	1.18	1.10	1.33	1.26
7. (D5/D1)wages / (D5employed / D1unemployed) skills					
	.85	**1.04**	**1.00**	**1.05**	**1.05**

Source: computations are based on OECD Employment Outlook 1999: 62 for wage deciles and IALS for skill deciles.

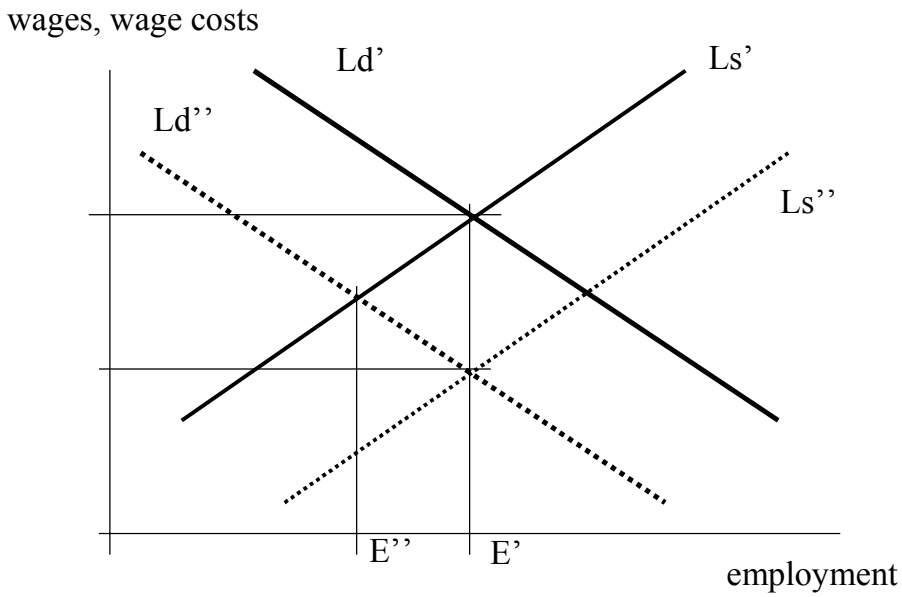
The values in row 7 are computed as:

$$\frac{Wage_{D5} / Wage_{D1}}{Skill_{D5} / Skill_{D1}}$$

3.2 Employment protection

Employment protection is high on the 'black list' of welfare state institutions. In a probably oversimplified description of the costs of employment protection, which nevertheless captures the major issues of the discussion, employment protection is interpreted as imposing additional costs and thus shifting the labour demand function downwards.[4] An economy which is in equilibrium at E' and is now facing the costs of employment protection will shift c.p. to the new equilibrium E''. Employment will be lower than it would have been without employment protection. Peering across the Atlantic, this relation is used to argue that employment protection costs a total of E'-E'' jobs (for a discussion along these lines, see e.g. Flanagan 1989, Schellhaas 1989).

Figure 3.1: The Effect of Employment Protection on Jobs



Ld' = labor demand function without employment protection, Ld'' with employment protection
Ls' = labor supply function without employment protection, Ls'' with employment protection

[4] This presentation is similar to the Summers (1989) analysis of mandatory benefits.

How far the labour demand function shifts downwards when employment protection is introduced depends on the interest of firms themselves in stable employment relations. Many theoretical arguments suggest that firms have an original interest in stable employment relations because of search and hiring costs, training costs, learning, subtle rules of firm-specific organization, familiarity with firm-specific customs etc.. The more the firm regards its employees as assets, the lower will be the cost of employment protection. As a minimum wage below the lowest wage will have no effect on labour demand, employment protection legislation representing the status quo of employment relations will not affect firms' costs and therefore leave labour demand unchanged. If employment protection legislation simply codifies common practice, the average firm may not suffer additional costs. Although this may be an extreme case, it is generally true that employment protection creates additional costs for firms only to the extent that it raises employment stability above the optimum level that they would choose anyway.

The costs of employment protection also depend on the skill structure in the particular firm, the outside options, and thus the general labour market situation (for a more comprehensive discussion, see Schettkat 1997).

Since markets have two sides, any additional costs for the firm created by employment protection may be compensated by a downward shift in the labour supply function. If workers pay an actuarially fair insurance premium for job security, deregulation of employment protection will have no employment effect at all. This is the essence of implicit-contract models. In Figure 3.1 the new equilibrium may occur at a lower wage than without employment protection and employment may even remain at the former level.[5] Thus the relationship between dismissal protection and employment is theoretically not as clear-cut as is often suggested (Bertola and Bentolila 1990, Bertola 1992).

[5] It can be argued that legal employment protection as opposed to voluntarily negotiated employment security shifts power to the employees and may be misused to push up wages. However, this effect may be more important in decentralized bargaining systems and actually eliminated in more centralized ones.

Table 3.3 lists variables describing potentially relevant aspects of employment protection. 'Employment protection' is a summary indicator of the strictness of employment protection legislation, distinguishing between regular and temporary employment. The higher the value of the indicator, the stricter the employment protection. There is obviously substantial variation in this indicator, both OECD-wide and within Europe. The strictest regulations for regular employment (column 1) are found in Portugal and the Netherlands, two countries regarded as successful in reducing unemployment. However, only Portugal has relaxed employment protection sufficiently to affect the indicator displayed (Table 3.3, column 2).[6] As column 2 indicates, deregulation has not been the rule in Europe for regular employment, but has been for temporary employment, which has been eased in 7 European countries (column 4). However, there is no significant correlation between deregulation (negative signs in columns 2 and 4) and the initial regulation levels (columns 1 and 3). By contrast, regulation levels for regular and temporary employment correlate positively (r = .64, significant at 1%). It does not generally seem to be the case that countries with tight regulation of regular permanent employment compensate for this by less stringent regulation of temporary contracts, although this does appear to occur in Spain. Of course, employers try to shift to temporary employment if labour market conditions make it feasible, but in 'normal' labour markets they fear quits from those working under unfavourable contracts (Schettkat 1997).

[6] Olivier Blanchard and Pedro Portugal (2001) argue that employment protection slows down adjustment to shocks because there is a negative correlation between dismissals and employment protection but a positive correlation between unemployment duration and employment protection. These two effects cancel out when the relationship between unemployment rates and employment protection is analyzed.
However, Abraham/ Houseman (1996) found that employment (measured in hours) adjusts as quickly in Germany as in the US and that, even in terms of staff numbers, adjustment is similar in both economies after one year.

Table 3.3: Employment Protection, and Product Market Regulation

Country	Strictness of employment protection				Product market regulation
	regular employment		temporary employment		
	late 1990s	difference 1990-1980	late 1990s	difference 1990-1980	
	1	2	3	4	5
Australia	1.0	0.0	0.9	0.0	1.2
Austria	2.6	0.0	1.8	0.0	1.9
Belgium	1.5	0.0	4.6	0.0	2.8
Canada	0.9	0.0	0.3	0.0	1.0
Denmark	1.6	0.0	0.9	-1.7	1.9
Finland	2.1	-0.6	1.9	0.0	2.2
France	2.3	0.0	3.6	0.5	2.8
Germany	2.8	0.1	2.3	-1.5	1.9
Ireland	1.6	0.0	0.3	0.0	1.1
Italy	2.8	0.0	3.8	-1.6	3.2
Japan	2.7	0.0	2.1	.	1.9
Netherlands	3.1	0.0	1.2	-1.2	1.9
New Zealand	1.7	.	0.4	.	1.4
Norway	2.4	0.0	2.8	-0.7	2.1
Portugal	4.3	-0.5	3.0	-0.4	2.0
Spain	2.6	-1.3	3.5	0.0	2.1
Sweden	2.8	0.0	1.6	-2.5	1.6
Switzerland	1.2	0.0	0.9	0.0	2.1
UK	0.8	0.0	0.3	0.0	0.5
USA	0.2	0.0	0.3	0.0	1.0
correlation with protection in regular employment	1.00	-0.23	.56*	-0.37	0.52*

source: OECD, Employment Outlook June 1999
* = significant at the 1% level

If employment protection has a negative effect on jobs, there should be a negative correlation between the protection measures in Table 3.3 and employment. However, no significant correlation could be found (at the 5% significance level) either for employment-population rates or for changes in them. There is therefore no support for the 'reluctance to hire' hypothesis in general. However, there is a significant negative correlation (at the 5% significance level) between the share of personnel in the 'trade, hotels, restaurants' sector in the general population (employment-population rates for this

specific service industry) and the regulation of temporary employment (r = -.56 in the 1980 and r = -.51 in the 1990s) and the regulation of regular employment in the 1980s (r = -.56, 5% significance level) but not in the 1990s (r = - .40, insignificant at the 10% level only). Thus there is some evidence that employment protection may affect employment in private-sector industries providing consumer services, which are most likely to be affected by Baumol's cost disease. More flexible employment arrangements may help to reduce costs here and the average skill level in the 'trade, hotels, restaurants' sector is below the average (based on the IALS data base, Schettkat 2001c). In other words, the correlation seems to be concentrated in unstable, low-paid jobs.

In an analysis of direct foreign investment into the UK and Germany, two countries with distinct labour market regulations and employment protection, Kerstin Pull (2002) finds that the 'deregulated' UK environment attracts more short-term oriented investment with a low share of R&D and skilled labour. Foreign direct investment into Germany, on the contrary, is more long-term oriented with a higher share of R&D and high-skilled workers.

This is exactly the area where easing fixed-term contracts was found to be relevant in a detailed analysis of a 'natural experiment' (the introduction of the Employment Promotion Act 1985 in Germany). The law was highly controversial (for details see Fuchs/ Schettkat 2000) and was later evaluated by a major study (Büchtemann/ Höland 1989). This study found that fixed-term contracts were used mainly in small and medium-sized companies, which typically account for a large share of low-skilled labour, and that a major motive for using them was selection (cited by 40% of the firms concerned). Employers used the fixed term as an extended probationary period in order to overcome information asymmetries. Once employers have confidence in the skills of workers, they are obviously interested in long-term relationships, because hiring is costly (even at the low-skill end of the jobs market).[7] Thus, even if employment protection measures do not have

[7] Using different data, Abraham and Houseman (1993) and Kraft (1994) found no evidence that the Employment Promotion Act had changed the speed of employment adjustments, as would have been expected from 'non-hiring' models. Evaluation of the prolonged Employment Promotion Acts (Bielenski, H./ Kohler, B./ Schreiber-Kittl, M. 1994) comes to conclusions similar to those of Büchtemann and Höland. No increased use of fixed-term contracts was observed between 1985 and 1994: the share remained at 5-6%

a strong effect on overall employment, they may affect employment in 'technologically stagnant' industries where the mean skill level is low.

Given the theoretical ambiguity of employment protection, it is not surprising that detailed empirical studies find that the relaxation of employment protection has little if any impact. The literature suggests that variations in employment protection over time do not affect the employment adjustments made by firms (Fuchs/ Schettkat 2000).

3.3 Incentives: Minimum Wages, Transfers and Wedges

Probably the most prominent allegation against welfare states is that they create disincentives to work. Pecuniary incentives to work depend on the difference between net transfers and the net wage. In other words, wages, taxes, contributions and benefits all influence the so-called wedge. However, the combined impact of taxes and benefits on incentives to work in different countries are difficult to compare because these variables are rarely uniform and often depend on family status, the presence of children, income, etc. Furthermore, unemployment benefits are exempt from taxation and contributions in some countries but not in others. In order to achieve a better comparison of the impact of regulation on incentives to work in different countries, the Dutch Central Planning Bureau (CPB, 1995) investigated transfers and contributions for different types of households and income classes.. Its study included a comprehensive set of related benefits, like family allowances and rent subsidies, in addition to obvious transfers like unemployment benefits. There is also an OECD study producing data on the redistribution of income (OECD 2001).

Replacement rates

The purpose of unemployment insurance is to reduce the economic pressure on workers who have lost their jobs. Since higher replacement rates and longer eligibility periods will

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of all new contracts. Most surprisingly of all, the share of fixed-term contracts did not vary over the

tend to reduce search intensities, countries with more generous unemployment insurance systems (or transfer systems in general) should show higher rates of equilibrium unemployment. Steve Nickell (1998) found that unemployment patterns across countries are consistent with this thesis, but mentions that the longitudinal evidence within countries does not support it. Detailed econometric studies based on micro-data find that replacement rates have either no effect or very mixed effects on unemployment.[8] Eligibility periods seem to have a major effect on unemployment duration in econometric studies (see for a summary and literature Fuchs/ Schettkat 2000), but the causation is unclear. Is it longer eligibility that causes longer duration, or have longer eligibility periods been introduced because of the increasing difficulty of finding jobs (for example, longer eligibility periods have been introduced in many countries for the elderly). Longer search may improve the quality of matches and may thus be beneficial to both individual workers and society (Acemoglu/ Shimer 2000). This idea is confirmed by a study by Kostas Mavramas (1992) for the IAB (Institute for Labour Market Research Nuremberg, Germany), which shows that longer duration of search leads to higher employment stability in subsequent jobs, although very long search duration reduces the probability of finding a fixed-term or permanent position. In addition, it short unemployment duration in the US is related to a high probability of leaving the labor force rather than by a high probability to leave for employment (Schettkat 1992, Gangl 2002). Markus Gangl (2002, 185) also shows in his US-German comparison that benefit recipients search somewhat longer before accepting employment in both countries but they also interrupt search less often and are more likely to exit unemployment into employment.

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business cycle (Bielenski 1997, also Kraft 1994).

[8] In a historical analysis of the 'benefit misuse' argument Gűnther Schmid (Schmid et al.) shows that this follows a 'political business cycle'.

However, long unemployment duration may signal negative selection and this actually creates an incentive for workers to search intensely. Employers may take unemployment duration as a productivity signal and believe that long durations may signal a 'lemon' (an unemployed individual who is not genuinely interested in working or who has been rejected by other employers). Long periods of unemployment will therefore affect the worker's expected future income and this may make it irrational to allow unemployment to continue for too long (Schettkat 1996, Russo/ Gorter/ Schettkat 2001). Indeed, most unemployment spells are very short. Table 3.4 shows the net replacement rates for different types of households and durations of unemployment. For minimum wage earners, Portugal and Spain actually create disincentives to work and in many countries the replacement rates do not change over time, although they drop substantially in some other countries. Again, there is only one household type for which the German system provides higher replacement rates than the Dutch for all periods of unemployment (the single-earner couple with two children on a minimum wage). We conclude therefore that the unemployment insurance system cannot provide a plausible explanation for the higher rate of unemployment in Germany compared to the Netherlands.[7]

Table 3.4: Net replacement rates (in %) for different household types by unemployment duration
[see appendix]

3.3 Wedges and Incentives to Work

A minimum wage level can exist even where there is no statutory minimum wage. The social security system sets a reservation wage below which hardly anybody will be willing to work in practice (see e.g. Sinn 1998, Scharpf 1993, McKinsey Global Institute 1997). 'Rather than guaranteeing a high standard of living, high minimum wages actually keep low-skilled workers out of work' (McKinsey Global Institute 1997). In this way, the social security system drives out low-skilled jobs, while not creating public-sector jobs (Zukunftskommision der Friedrich-Ebert Stiftung 1998). What then is the level of minimum wages in practice? Recent analysis shows that the reservation wage in Germany, as defined by the social security system, is not as high as is commonly believed. It stands at about 32% of the mean wage. This is less than the minimum wage as a proportion of the mean wage in the US (about 35%, see Freeman/ Schettkat 1998). Table 3.5 provides an overview of gross wages and net disposable income of minimum wage-earners as a percentage of the mean wages in various countries and three American states. Again the picture is diverse and seems not to be related to unemployment patterns.

Table 3.5: Minimum wages as % of the mean wage

country (state)	gross wage	disposable wage: single	disposable wage: one-earner couple with 2 children
Belgium	0,53	0,65	0,69
Denmark	0,59	0,72	0,78
France	0,63	0,74	0,72
Germany	0,38	0,48	0,57
Ireland	0,49	0,57	0,63
Italy	0,61	0,65	0,73
Netherlands	0,57	0,64	0,75
Portugal	0,49	0,53	0,53
Spain	0,44	0,50	0,50
United Kingdom	0,39	0,47	0,77
European average*	0,50	0,58	0,65
USA (3 staates)*	*0,35*	*0,41*	*0,59*
New York	0,35	0,42	0,62
Texas	0,35	0,39	0,57
California	0,35	0,41	0,57

* unweighted
lowest collectively bargained wage in countries (Denmark, Germany, Italy) without a statutory minimum wage
Source: computations based on CPB 1995

The left-hand columns of Table 3.6 display disposable earned income as a percentage of transfers. Again, it is important to distinguish between household types, since transfers and taxes often have family components. Clearly, poverty traps (ratios of less than 100%) can occur for single-earner couples with children, because transfers are often based on the income necessary to achieve an acceptable standard of living. However, the table suggests that the actual poverty-trap phenomenon is largely confined to families with low earning potential. For the average production worker, the income from work is higher than that from benefits. Surprisingly from the European perspective, New York state shows values similar to those in European countries (Table 3.6), although other American states are clearly less generous.

For a single person on the lowest collectively agreed wage, earned income as a percentage of transfers is similar in Germany and the Netherlands. For the average production worker, however, Germany provides a much higher 'incentive' to work than the Netherlands, although the earned net income is still 84% higher than the transfer level in the Netherlands. For a single-earner couple with two children, the CPB has identified a clear disincentive to work in Germany. In that case, the earned income would be about 15% lower than the transfers in Germany, whereas in the Netherlands there is a 5% gain in net income for a single-earner couple on the lowest collectively agreed wage. For the average production worker, the incentive to work would again be higher in Germany.

The right-hand columns of Table 3.6 display marginal tax rates for a minimum wage earner, an average production worker and an employee earning twice the average production worker's wage. Because earned income reduces benefits, marginal tax rates can be very high for those on low wages and may actually decline as income increases. Only Spain, Portugal and Ireland show marginal tax rates for minimum wages substantially below the rates for better paid workers. In all cases, however, the Dutch marginal tax rates (including contributions) are higher than those in Germany.

Table 3.6: Disposable income as a percentage of benefits, marginal tax weges

Country (state)	disposable income as a percentage of transfers				Marginal wedge		
	single		single-earner family, 2 children				
	Minimum wage	APW	Minimum wage	APW	min wage	APW	2*APW
Belgium	163	252	126	181	56.7	63.4	69.9
Denmark	122	170	126	163	62.3	60.3	69.7
Germany	127	266	89	158	49.9	52.6	35.6
Spain	214	430	123	245	28.6	44.2	48.6
France	177	241	115	159	50.9	54.5	55.6
Ireland	138	240	87	138	26.5	49	51.7
Italy	235	361	115	158	53.9	54.5	54.6
Netherlands	117	184	100	134	58.6	53.9	59.7
Portugal	127	240	99	188	29.1	41.5	50.5
United Kingdom	127	270	116	151	74.3	40.2	43.9
European average*	*155*	*265*	*110*	*168*	*49.1*	*51.4*	*53.9*
US 3 state average	*300*	*751*	*143*	*244*	*39.1*	*34.1*	*45.9*
New York	145	345	109	177	41.6	39.1	51
Texas	591	1503	210	366	37.4	29.7	39.9
California	164	405	109	188	38.3	33.4	46.8

* unweighted
lowest collectively bargained wage in countries (Denmark, Germany, Italy) without a statutory minimum wage
Source: computations based on CPB 1995

The difference between the inequality of market incomes and inequality in final incomes seems to be an adequate measure for the extent of redistribution. Table 3.7 shows the Gini coefficients for the 1980s and the 1990s for market income and final income, as published in an OECD occasional paper (No. 51, 2001, authors: Arjona/ Ladaique/ Pearson). This shows that the Anglo-Saxon countries are near the top of the list with respect both to the inequality of market incomes and to overall income (after taxation and transfers). The data also show that the Scandinavian and continental European countries have a strong emphasis on redistribution, as measured by the difference in the Gini coefficients (Gini overall – Gini market). The US showed the highest Gini coefficients in the 1980s but not in the 1990s. The standard Gini coefficients for market income rose by

25% over that period. Most remarkable is the dramatic change in the Gini for market income in Sweden, which was much lower for final income (the reverse of the usual trend). Here the cross-country standard deviation dropped by 20% between the 1980s and the 1990s. However, as market inequality increased, redistribution (as measured by the Ginis) rose. Again, Germany and the Netherlands have roughly similar Ginis for market income, with greater redistribution in the Netherlands. According to the conventional wisdom, the result should be a less favourable employment situation in the Netherlands.

Table 3.7: Distribution and redistribution of income; Gini coefficients for overall and market income, working age population

Country	1980s			1990s			change 1990s - 1980s	
	Gini overall	Gini market	Difference (1) - (2)	Gini overall	Gini market	Difference (4) - (5)	Gini overall	Gini market
	1	2	3	4	5	6	7	8
Australia	0.30	0.39	-0.09	0.29	0.41	-0.12	-0.01	0.02
Austria	0.23	.	.	0.23	.	.	0.00	.
Belgium	.	.	.	0.27	0.47	-0.20	.	.
Canada	0.29	0.37	-0.08	0.29	0.39	-0.10	0.00	0.02
Denmark	0.21	0.32	-0.11	0.21	0.36	-0.15	0.00	0.04
Finland	0.21	0.31	-0.10	0.24	0.38	-0.14	0.03	0.07
France	0.27	0.39	-0.12	0.28	0.41	-0.13	0.01	0.02
Germany	0.26	0.36	-0.10	0.28	0.37	-0.09	0.02	0.01
Ireland	0.34	0.47	-0.13	0.32	.	.	0.02	.
Italy	0.31	0.39	-0.08	0.34	0.46	-0.12	-0.03	0.07
Japan	.	.	.		.	.	.	.
Netherlands	0.24	0.38	-0.14	0.25	0.38	-0.13	0.01	0.00
New Zealand	.	.	.			0.00	.	.
Norway	0.22	0.29	-0.07	0.25	0.34	-0.09	0.03	0.05
Portugal	.	.	.	.	.	.	.	.
Spain	.	.	.	.	.	.	.	.
Sweden	0.21	0.32	-0.11	0.25	0.42	-0.17	0.04	0.10
Switzerland	.	.	.	0.26	0.29	-0.03	.	.
UK	0.28	0.39	-0.11	0.30	0.42	-0.12	0.02	0.03
USA	0.33	0.40	-0.07	0.33	0.41	-0.08	0.00	0.01

Source: computations are based on OECD 2001(Arjona/ Ladaique/ Pearson, Occasional Paper No. 51)

5. Conclusions

Many welfare state institutions are blamed to cause labour market inefficiencies and consequently high unemployment in Europe. Closer inspection reveals, however, that the impact of welfare state institutions on economic performance and employment is not as clear-cut as some analysts suggest. At both the theoretical and the empirical level, the picture is ambiguous and this study must conclude that the empirical evidence in support of the idea that European unemployment is caused by European welfare state mechanisms is extremely weak.[9] Ranking countries in terms of the 'usual suspects' (i.e. redistribution, the level of minimum wages, employment protection, disposable minimum-wage income relative to net transfers, and net unemployment replacement rates) and correlate them with the ranks of the unemployment rates produces a very diverse picture as summarized in Table 5.1.

Table 5.1: Correlations coefficients for country rankings, unemployment rates and for major institutional variables

Unem-ployment-rate	Inequality market incomes	Redistri-bution	Employment protection	Wage differentials (D9 / D1)	Minimum wage/ average wage*	Disposable minimum-wage income / net transfers**	Net replacement rate***
1980	0	0	0	+	0	0	0
1990	0	0	0	0	0	0	0
1999	+	0	0	0	0	0	0

Source: computations based on countries ranks from Tables ……..
for the countries in Table 3.5,
** for a single, countries as in Table 3.6
*** for a single, countries as in table 3.4

There are only two significant (at the 10% level) rank correlation in the table. One is between inequality of market incomes and the unemployment rate in 1999. Hear,

however, the coefficient has a positive sign, meaning that higher unemployment goes together with higher inequality. Similarly, wage differentials (D9 / D1). Again, if anything, higher wage differentials correlate positively with unemployment rates in 1980. In all other cases are the correlations coefficients insignificant at the 10% level. This also applies to net unemployment replacement rates. In short, the rank correlations between institutional variables, which may be taken to represent the 'usual suspects' do not show the expected impact on unemployment rates. For itself, of course, these correlations would be at best a hint that the deregulationists' claim of the negative labor market effects of welfare state institutions may not hold. However, given the theoretical ambiguity and the indetermined empirical evidence, the correlations Table 5.1 may be rather taken as a summary of the argument: The relation between welfare state institutions and labour market performance is highly complex and deductions of the impacts from the perfect market model may be very misleading.

However, there may be many reasons why the alleged negative effects of welfare state institutions are not confirmed in the analysis. First of all, the indicators used for institutional arrangements are at best approximations and it may well be that the concerted action of institutions creates effects undiscovered in the analysis of individual institutions (system effects). In general the information on institutions is weak and for inter-temporal analysis hardly available. Furthermore, little is known about the complex interaction of institutions and economic variables, which may in fact depend on the macroeconomic situation (see Blanchard/ Wolfers 1999, 2000). In many analyses this problem is circumvented by referring to the perfect market model. Compared to the perfect market situation, any deviation from 'perfect market' institutions is deemed to be a rigidity and the typical analysis following this approach creates a long list of these. The message then is to shape the world according to the perfect market model, usually ignoring 'natural imperfections'. The deregulationists' view gains its strength from the theoretical comparison of real world institutions with the perfect market model, supported by sketchy empirical examples. If the perfect model were correct, globalized capitalism

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[9] This result is in line with previous studies (e.g. Blank/ Freeman 1994, Atkinson 1995, Buttler/ Franz/ Schettkat/ Soskice 1996, Gregg/ Manning 1997, Esping-Andersen/ Regini 2000, Aggell 1999, Freeman/

would indeed select the most efficient institutions and there would indeed be nothing to choose for countries. The national institutions wold converge to the one optimal arrangement. However, real markets suffer from natural imperfections and many institutions may have been introduced to compensate for these imperfections, which also give freedom for different national institutional arrangements.

The conclusion should be that knowledge of the impacts of institutional arrangements on economic variables needs to be improved, even in detailed bi-country studies (e.g. Freeman/ Schettkat 2002). There is a need for a better understanding of 'how markets really work' (Gordon 1990) as it is the program of many microeconomic studies. However, institutions will always have many 'side-effects' –both positive and negative- which will be hard to identify and even harder to quantify. There are many side-effects or second-round effects of welfare state institutions which, although often neglected, prove to be very important in the real 'imperfect market' world. And many welfare state institutions only have a clear-cut negative effect against the background of the theoretical perfect market model.

Schettkat 2000).

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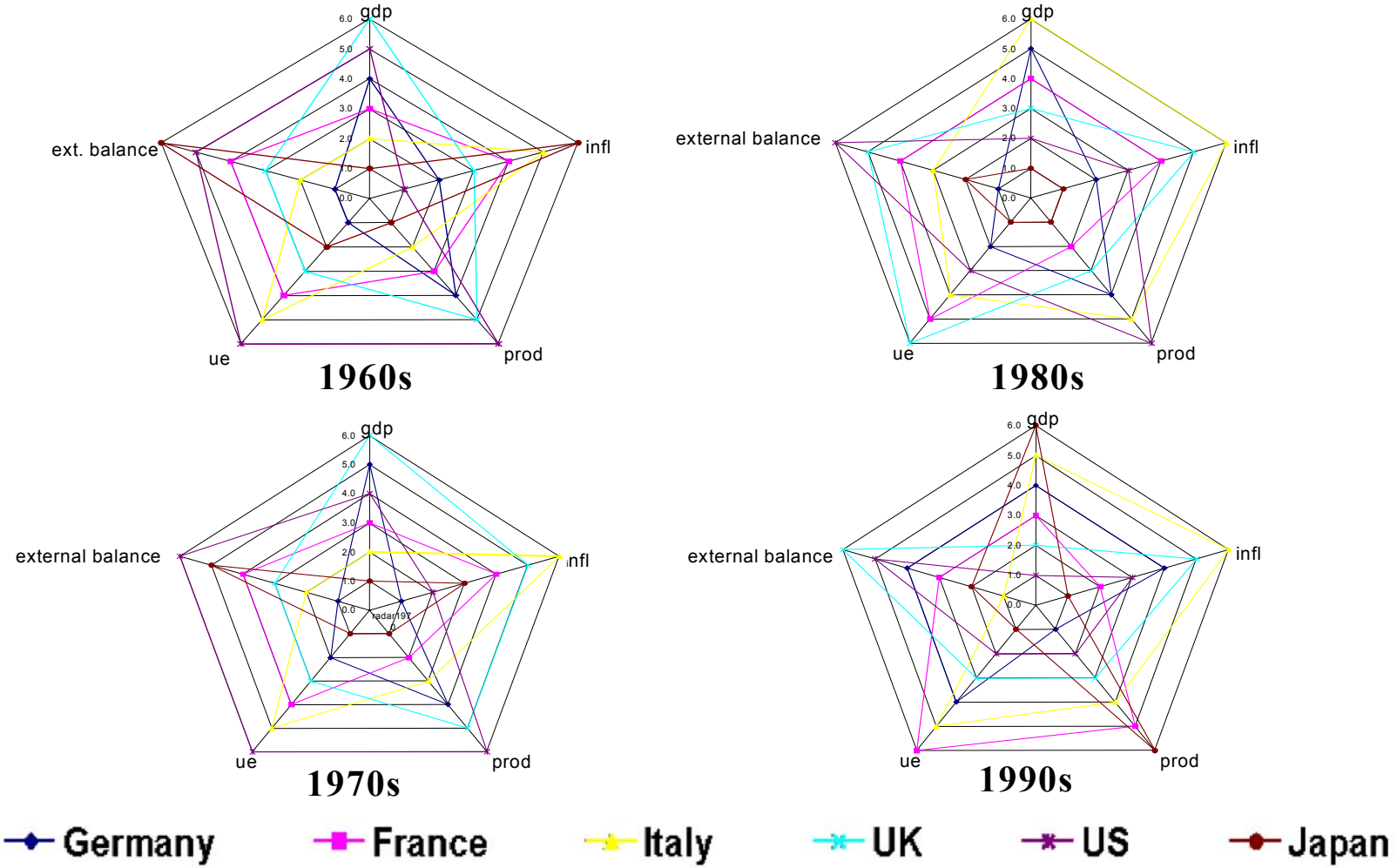
Figure 2.3: Radar diagrams for economic performance



Source: Computation based on OECD Economic Outlook database

Table 3.1: Bargaining indices, union density, wage differentials and incidence of low pay

	wage bargaining indicators									inequality				
	union density (% of labor force)		Coverage Rate		level of wage bargaining		Centralization/ coordination (OECD)		Calmfors/ Driffill ranking1	wages (D9/D1)		incidence low pay** %	children living in poverty	residuals Hartog/ Teulings
	1975	1995	1970s	1990s	1970s	1980s	1970s/80	1990s	1970s	1980	1990			
	1	3	4	6	7	8	14	15	13	1	2	4	5	6
Australia	56.0	.	88	.	2	1	2	1	7	2.8	2.8	14	12	.
Austria	56.1	41	98	97	2	2	3	3	15	3.5	3.5	13		0.26
Belgium	55.3	54	90	82	2	2	2	2	9	2.4	2.3	7	4	.
Canada	34.4	.	37	.	1	1	1	1	1	4.0	4.4	23	15	0.38
Denmark	.	78	.	52	.	.	3	3	.	.	.	.	5	.
Finland	67.4	80	95	67	3	1.5	3	2	12	2.5	2.5	5.5	4	0.29
France	22.8	10	85	75	2	2	2	2	6	3.3	3.3	13.5	8	0.35
Germany	36.6	29	91	80	2	2	3	3	11	2.7	2.5	13	11	0.33
Ireland	.	47	.	.	.	.	2	3	.	.	.	.	17	.
Italy	.	39	.	.	.	.	1	3	.	.	.	.	20	.
Japan	34.4	.	28	21	1	1	1	1	4	3.0	3.2	15	12	.
Netherlands	38.4	24	76	79	2	2	2	3	10	2.5	2.6	12	8	0.22
New Zealand	50.1	.	67		2	2	2	1	8	2.9	3.0	17		.
Norway	52.7	55	75	62	3	3	3	3	14	2.1	2.0	n.a.	3	0.23
Portugal	52.4	40	70	80	2	2.5	2	2	n.a.	3.6	3.5	n.a		.
Spain	30.4	17	67	67	2.5	2	3	2	n.a.	n.a.	n.a.	n.a.	12	.
Sweden	82.1	88	83	72	3	2	3	2	13	2.0	2.0	4.5	2	0.21
Switzerland	32.9	24	53	50	2	2			3	n.a.	2.7	12.5		.
UK	48.3	32	70	35	2	1	2	1	5	2.8	3.3	19	20	0.39
USA	22.8	.	26	13	1	1	1	1	2	4.8	5.6	25	23	0.39
correlation with Calmfors/ Driffill centralization ranking														
1980s	0.69*	0.59	0.79*	0.77*	0.78*	0.68*	0.93*	0.80*	1.00	-0.68	-0.65	-0.73*	-0.82*	-0.84*

1 low rankings = low degree of centralization * significant at 5%

sources: OECD, Employment Outlook 1996,

earning inequality specifics: US from Employment Outlook 1993, Canada 1981, New Zealand 1984, Portugal, Netherlands 1985, Belgium 1986, Germany 1984, Norway 1979, 1991.

Table 3.4: Net replacement rates (in %) for different household types by unemployment duration

country/ state	minimum wage				APW			
	initial	after ... months			initial	after ... months		
	in % of income	12	24	60	in % of income	12	24	60
		% of initial replacement				% of initial replacement		
				Single				
Belgium	77	83.9	83.9	83.9	67.1	69.9	69.9	69.9
Denmark	95.4	100.0	100.0	100.0	79.6	100.0	100.0	100.0
Germany	78.6	100.0	100.0	100.0	61.1	89.7	89.7	89.7
Spain	106.5	100.0	100.0	43.9	83.7	85.7	85.7	27.7
France	89.3	100.0	89.9	70.0	80.4	100.0	90.8	58.1
Ireland	72.5	100.0	100.0	100.0	43.8	100.0	100.0	100.0
Italy	79.4	87.3	53.5	53.5	55.5	100.0	49.9	49.9
Netherlands	84.8	100.0	100.0	100.0	74.2	100.0	76.5	76.5
Portugal	112.4	100.0	70.0	0.0	78.7	100.0	52.9	0.0
UK	79.7	100.0	99.1	99.1	41.4	100.0	99.3	99.3
European average*	87.6	97.1	89.6	75.0	66.6	94.5	81.5	67.1
New York	50.4	136.5	136.5	136.5	53.4	56.9	56.9	56.9
Texas	50.2	33.7	33.7	33.7	51.8	12.9	12.9	12.9
California	47.8	100.0	127.4	127.4	40.5	62.7	62.7	62.7
US 3 state average	49.5	90.1	99.2	99.2	48.6	44.2	44.2	44.2
				one earner couple, 2 children				
Belgium	80.8	105.6	105.6	105.6	62.5	105.0	105.0	105.0
Denmark	96.8	100.0	100.0	100.0	86.6	100.0	100.0	100.0
Germany	111.8	100.0	100.0	100.0	74.0	92.7	92.7	92.7
Spain	105.9	100.0	100.0	76.8	77.3	91.2	91.2	52.8
France	90.0	100.0	98.8	98.0	79.5	100.0	90.3	82.0
Ireland	115.4	100.0	100.0	100.0	74.2	100.0	100.0	100.0
Italy	86.8	100.0	100.0	100.0	65.6	100.0	96.3	96.3
Netherlands	99.5	100.0	100.0	100.0	81.5	100.0	94.0	94.0
Portugal	111.1	100.0	100.0	8.8	75.9	100.0	77.2	6.9
UK	86.1	100.0	100.0	100.0	69.8	100.0	100.0	100.0
European average*	98.4	100.6	100.4	88.9	74.7	98.9	94.7	83.0
New York	104.2	88.0	88.0	88.0	48.6	117.9	117.9	117.9
Texas	36.7	129.4	129.4	129.4	46.5	58.7	58.7	58.7
California	72.0	100.0	127.8	127.8	36.6	100.0	146.2	146.2
US 3 state average	71.0	105.8	115.1	115.1	43.9	92.2	107.6	107.6

source: computations are based on CPB 1995

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