Key lessons for labour market reforms: evidence from OECD countries' experiences

Jørgen Elmeskov, John P. Martin, and Stefano Scarpetta[*]

Summary

■ Since 1992, the OECD has been intensively researching into the causes and consequences of high, persistent unemployment and effective remedies to tackle it. In particular, since the *Jobs Study* was published in 1994, the OECD has elaborated detailed policy recommendations for each of its member countries and closely monitored their progress (or lack of it) in implementing these recommendations. This process identified six countries that have succeeded in reducing unemployment significantly in the 1990s, together with a few other countries that have maintained unemployment at relatively low levels.

The purpose of this paper is to distil the lessons for labour market reforms from the *successes* and *failures*. It begins by discussing the structural unemployment indicator that the OECD has used to identify the successful countries. This is followed by a review of the cross-country determinants of structural unemployment that focuses on the role of labour market policies and certain institutional factors. One novelty is the specific attention paid to potential interactions between labour market policies and institutional features of the collective bargaining system. The paper also highlights several key lessons for labour market reforms drawing on recent OECD research. In particular, it discusses the role played by labour market insiders in the process of reform. It considers the way in which concerns about the equity effects of labour market reforms have played a role in shaping policies. Finally, it discusses the role of crises as a potential catalyst for needed reforms. ■

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High and persistent unemployment has been a major blot on the economic and social record of most OECD countries during the past two decades or more. In 1992, OECD ministers gave the organisation a mandate to analyse the causes and consequences of high and persistent unemployment and propose effective remedies to tackle the problem. The first fruits of this work, published in 1994 under the title *The OECD Jobs Study*, included a list of more than 60 detailed policy recommendations backed by two volumes of research; see OECD (1994a, 1994b). Ministers then mandated the organisation to continue its analytical work in certain areas. They also asked the organisation to flesh out detailed policy recommendations for each OECD country (considering each country's historical, institutional and political contexts) and to monitor progress in the implementation of these recommendations and their impacts on labour market performance.[1]

The OECD work since 1994 has produced a series of additional publications; see OECD (1996a, 1996b, 1997a). This work culminated in a major report in 1997, *Implementing the OECD Jobs Strategy: Member Countries' Experience*.[2] And it enabled the organisation to identify several country success stories and failures in terms of implementing OECD recommendations and the resulting labour market

[1] The results of this monitoring exercise were published in OECD Economic Surveys of individual countries.
[2] OECD (1998a) presents a short update of the 1997 report.

outcomes. In assessing needs for reform, the work relied heavily on the econometric analysis in Scarpetta (1996) that quantified the role of a range of labour market policies and institutional factors in explaining differences in unemployment rates across OECD countries.

The aim of this paper is to distil the main lessons for labour market reforms from the successes and failures revealed by recent OECD research. In short, the paper tries to answer this question: Why did a few OECD countries succeed in the task of significantly reducing structural unemployment during the past decade while most have failed so far?

The paper has three main sections. Section 1 presents estimates of the structural unemployment rate indicator that the OECD used to identify successes and failures and briefly discusses its pros and cons. This is followed by a review of the main determinants of unemployment rates across countries, which is essentially an update and extension of the cross-country results in Scarpetta (1996). In particular, it focuses on possible interactions between labour market policies and institutional features of the collective bargaining system. Section 3 highlights some key lessons for labour market reforms revealed by OECD research. The final section contains concluding remarks.

1. Identification of country successes and failures

1.1. Structural unemployment rates

Because the ultimate goal of policy is to reduce high and persistent unemployment, it is natural to use an unemployment-rate measure as the criterion to distinguish success from failure. To abstract from business-cycle effects, the OECD opted for a measure of the structural or equilibrium unemployment rate as its criterion. Table 1 presents estimates of the *non-accelerating wage rate of unemployment* (NAWRU) that indicate the possible level and evolution of non-cyclical unemployment in OECD countries over the past decade; see Appendix A.

Estimates of the NAWRU are used to split the OECD countries into three groups consisting of countries where structural unemployment has: (1) increased during the 1990s; (2) shown little change; and (3) decreased. (A change in the structural unemployment rate between 1990 and 1997 is considered significant, and hence determines which of the three groups a country is assigned to, if it exceeds one standard deviation.)

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Table 1. Structural unemployment in the OECD countries as a per cent of the total labour force[a]

In the 1990s, the structural unemployment rate has...

...increased in	1986	1990	1997
Finland	5.5	7.0	12.8
Sweden	2.1	3.2	6.7
Germany	7.3	6.9	9.6
Iceland	0.8	1.5	4.0
Switzerland	0.7	1.3	3.0
Greece	7.8	8.2	9.8
Italy	8.4	9.7	10.6
France	8.9	9.3	10.2
Belgium	11.7	11.0	11.6
Austria	4.1	4.9	5.4
...remained fairly stable in			
Japan	2.5	2.5	2.8
Norway	3.1	4.2	4.5
Spain	19.1	19.8	19.9
Portugal	7.8	5.9	5.8
US	6.2	5.8	5.6
Canada	8.3	9.0	8.5
...decreased in			
Denmark	8.6	9.2	8.6
Australia	7.9	8.3	7.5
New Zealand	4.7	7.3	6.0
UK	9.5	8.5	7.2
Netherlands	8.0	7.0	5.5
Ireland	14.6	14.6	11.0
OECD structural unemployment rate[b]	6.9	6.8	7.1
OECD actual unemployment rate[b]	7.7	6.0	7.5

Notes:

[a] Structural unemployment data are based on estimates of the NAWRU made for the *OECD Economic Outlook*, 63, 1998. A change is considered significant (in absolute terms) if it exceeds one standard deviation. The latter was calculated for each series and country during the 1986-97 period.

[b] Weighted averages of the countries reported in the table.

Source: OECD Secretariat.

These estimates suggest that structural unemployment rates significantly increased in the 1990s in 10 countries, including Sweden, remained stable in another six, and significantly declined in the remaining six countries. This latter group, designated the success stories for the purposes of this paper, consists of Australia, Denmark, Ire-

land, the Netherlands, New Zealand, and the UK. Note that the success stories are not confined to English-speaking countries but also include two continental European countries: Denmark and the Netherlands. Several countries in the second group in Table 1 also managed to maintain structural unemployment rates at relatively low levels. This group includes Japan, Norway, Portugal, and the US. OECD (1997b) argues that some of these countries managed to maintain low structural unemployment because their policies in important respects followed the main thrust in the *Jobs Strategy*, though with clear differences of emphasis among countries. Also note that some of the countries in the first group, e.g., Austria, Iceland, and Switzerland, while experiencing rising structural unemployment in the 1990s, managed to maintain relatively low levels of unemployment.

1.2. The pros and cons of using estimates of structural unemployment rates as an indicator of success or failure

Because by definition the structural unemployment rate is an unobservable variable, serious questions can be raised about its use in this way to classify cross-country performance. And many economists question the analytical usefulness of the concept itself—witness the different views expressed on the concept in a symposium in the *Journal of Economic Perspectives*, Winter 1997.

Because differing views on the use of the concept for analytical and empirical purposes are well known, we do not rehearse the case again. All we are saying is that the OECD Secretariat has found the concept to be a useful one in its analyses of the unemployment problem, and the relevant OECD bodies that oversee work on implementing the OECD *Jobs Strategy* largely share this view.[3] Even if one accepts that the concept is a useful analytical device, there still remains the issue of deriving satisfactory empirical proxies for it. The previously cited OECD work has opted to proxy the structural unemployment rate by estimates of the NAWRU. Of course these time-varying estimates of NAWRUs are somewhat fragile, but similar concepts based on the unemployment rate that is associated with some average vacancy rate or some average capacity-utilisation rate, tend to give broadly similar numerical estimates (Elmeskov, 1993). The OECD NAWRU estimates are broadly aligned with those of other

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[3] Here, it is interesting to note the trenchant defence of the concept by Stiglitz (1997). He was formerly chairman of the OECD's Economic Policy Committee.

studies.[4] We also examined the correlations between changes in estimated structural unemployment rates during the 1990-97 period with corresponding movements in a range of *observable* labour market indicators, such as long-term unemployment, unemployment rates for low-skilled workers, and employment rates (OECD, 1997b). In all cases, relatively high correlation exists between movements in the different series. Figure 1 illustrates the correlation between changes in structural unemployment and changes in the cyclically adjusted employment rate.

Figure 1. Change in the structural unemployment rate plotted against the change in the employment rate, 1990-97

Change in structural unemployment rate

Change in cyclically adjusted employment rate
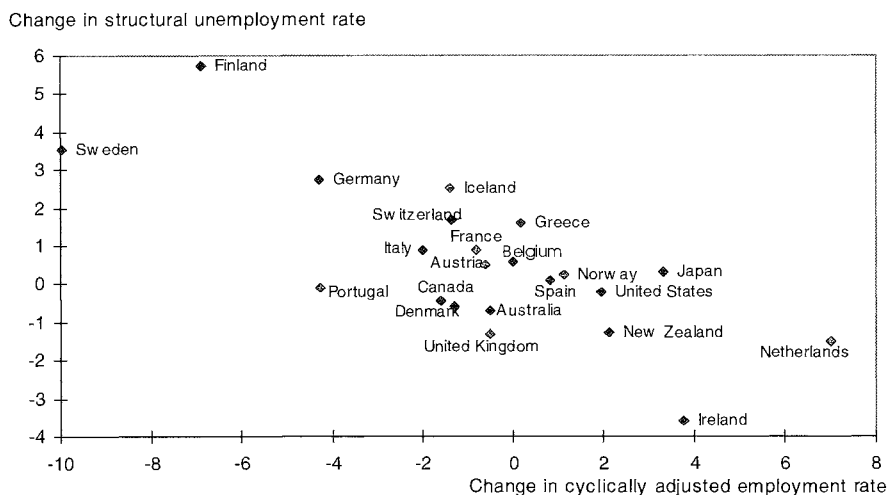
Note: Correlation coefficient = -0.7. t-statistic = -5.0. The cyclically adjusted employment rate was estimated by regressing the actual employment/population ratio against an estimate of the output gap based on the proportional difference between actual and trend output. The latter has been estimated using a Hodrick-Prescott filter.

[4] See the set of country studies on "The NAIRU: Concept, Measurement and Policy Implications" in the *OECD Economics Department Working Papers* series. However, Holden and Nymoen (1998) argue that estimates of rising NAWRUs for the Nordic countries may be misleading. While some of their conclusions may reflect conceptual differences in the definition of structural unemployment, and the strength of their evidence may be assessed differently, it must be acknowledged that estimates of structural unemployment are particularly uncertain where economies were subject to large shocks, as was the case in Finland and Sweden in the early 1990s.

In sum, while OECD estimates of structural unemployment rates are subject to conceptual and numerical uncertainties, the evidence suggests that changes in estimated structural unemployment rates in the 1990s matched real changes in labour market conditions in OECD countries. This, in turn, suggests that the three-way classification of countries in Table 1 permits a meaningful identification of successes and failures.

2. Determinants of structural unemployment in OECD countries

The preceding section identifies several countries that have either maintained low structural unemployment rates during the past decade or have managed to significantly reduce them. This section explores the possible determinants of the significant cross-country disparities in structural unemployment rates, drawing on the Scarpetta (1996) approach. Our empirical analysis extends Scarpetta's work in three main directions by:

- Considering a larger number of countries (from 17 to 19) and extending the time period;
- Exploiting recent information on the evolution of collective bargaining structures and employment protection legislation (EPL);
- Focusing on potential interactions between labour market policies and institutional factors.

2.1. A reduced-form unemployment equation

The theoretical framework for the analysis follows the familiar Layard-Nickell-Jackman (1991) model characterised by an upward sloping *wage-setting* schedule, based on the assumption that real wages are the results of a bargaining process between employers and employees, and a downward-sloping *labour-demand* schedule. Product market conditions, including the price mark-up over marginal costs, influence the latter, while a range of wage-push factors influence the wage-setting schedule.

It can be easily shown that the intersection of the labour demand curve and the wage-setting schedule identifies the structural (or equilibrium) unemployment rate and the equilibrium level of real wages. In this framework, structural unemployment is a function of wage-push factors, price-push factors, and the elasticities of real wages and price mark-ups to unemployment.

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In our empirical analysis of the determinants of structural unemployment, we tested several potential wage- and price-push factors, including income-support schemes for the unemployed; active labour market policies; the tax wedge; EPL; the structure of collective bargaining; and minimum wages.[5] To quantify the relative importance of these policy and institutional variables in determining the wide disparities in structural unemployment across OECD countries, we estimated a static model over the 1983-1995 period. The period corresponds, more or less, to a full business cycle, over which structural unemployment has changed only moderately in most OECD countries, at least compared with the sharp increases of the 1970s and early 1980s. This is also the period for which most of the information is available on labour market institutions and labour market policies.

Pooling data for 19 countries[6] over the 1983-95 period and adding an explanatory variable to account for the effects of aggregate demand fluctuations over the cycle,[7] the determinants of the actual unemployment rate were modelled by a reduced-form equation with this structure:

$$u_{it} = \mu_0 + \mu_i + \Sigma_k \beta_k x_{kit} + \gamma z_i + \varphi g_{it} + v_{it} \tag{1}$$

where i indexes countries, t the years, u is the unemployment rate, x denotes a set of time-varying explanatory variables, z is our measure of public spending on active labour market policies per unemployed person,[8] g is the output gap included to account for changes in the

[5] The OECD has produced quantitative indicators for each of these factors (see Scarpetta, 1996, for definitions and sources for all the variables except statutory minimum wages, which are described in OECD, 1998b). We used these data as regressors in our reduced-form unemployment equation.

[6] The set of 19 countries includes: Japan, western Germany, France, Italy, Canada, Australia, Austria, Belgium, Denmark, Finland, Ireland, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, the US and UK.

[7] Different variables are used in the literature to proxy aggregate demand effects. Layard and Nickell (1997) and Phelps (1994) used changes in inflation, while Coe (1990) used changes in capacity utilisation, as did Sargent and Sheikh (1996) who also included the output gap in their equation. We used the latter variable but also tested for the effects of replacing it by the change in inflation. The results were less satisfactory, most likely because in some countries factors other than aggregate demand (e.g., changes in macroeconomic policy regimes or income policy agreements) affected inflation.

[8] By construction, active spending per unemployed relative to GDP per worker (ALMPU) is highly endogenous and must be instrumented. We used the average of ALMPU over the entire sample period as the instrument. We also experimented

business cycle,[9] μ_0 is a constant, μ_i is the country-specific effect not accounted for by the available explanatory variables, and v is the usual error term.[10] Table B1 shows the key characteristics of the data set (see Scarpetta, 1996 for more details).

Table 2 presents the results of estimating different specifications of the reduced-form, unemployment-rate equation. The first three columns of the table focus, in turn, on key features of collective bargaining arrangements—namely, the degree of co-ordination in bargaining (column 1), the predominant bargaining level at which wages are negotiated (centralisation/decentralisation) (column 2), and a summary measure that combines the degree of centralisation/co-ordination (column 3).[11] Column 4 introduces the tax wedge in the

with using government spending (less net interest paid and labour market spending) as the instrument: first active spending as a share of GDP was instrumented with government spending, and then the instrumented variable was normalised with a smoothed employment/unemployment (E/U) ratio. The approach was not pursued because of the limited power of government spending in explaining the variations in active spending in some countries, and because the explanatory power of the overall instrument variable in the reduced-form unemployment equation was extremely sensitive to the choice of the smoothing factor for the E/U ratio.

[9] The gap variable is defined as the proportional difference between actual and trend output, where the latter is estimated by applying the Hodrick-Prescott filter to GDP. To minimise possible problems in estimating trend output at the two extremes of the series (1983 and 1995), we used a longer time series from 1970 to 1998 (the latter based on the latest OECD projections). Note that the assumption of an identical parameter for the gap variable across all cross-sectional units does not significantly affect estimated coefficients for the other explanatory variables.

[10] The conventional F-test was used to check for unobservable, country-specific effects and when the null hypothesis was rejected at conventional significance levels, random-effects models were considered. The assumption that country-specific effects are random was tested using the Breusch-Pagan test, and Hausman's (1978) orthogonal test was used to test for the correlation between the random country-specific effects and the other regressors. Finally, the following observations were removed from the sample because the diagnostic analysis revealed that they severely affected the standard error of the regression and/or the estimated coefficients: 1983 and 1984 for Portugal; 1993, 1994, and 1995 for Finland; 1983 and 1994 for New Zealand; 1995 for Sweden and for Spain. See Scarpetta (1996) for details on the tests used to identify outliers in the data set.

[11] In Tables 2 and 3, the reference group includes countries with either decentralised wage bargaining, low co-ordination or a low index of centralisation/co-ordination. Thus the estimated coefficients on the other two groups refer to the performance of these systems *relative to* decentralised/uncoordinated bargaining systems. A positive coefficient implies, other things being equal, a positive effect on the unemployment rate of the bargaining system relative to the decentralised

analysis, while column 5 replicates the same specification on a sample that excludes Sweden to test for changes in the estimated parameter for active labour market policy (ALMPU).[12] Finally, equation 6 tests for the possible influence of statutory minimum wages on aggregate unemployment rates. Statutory minimum wages exist in only nine of the 19 countries considered in our analysis. So the coefficients for the other explanatory variables in column 6 are not necessarily comparable with those in the other columns.

There is clear evidence in Table 2 that different collective bargaining arrangements affect labour market outcomes. A high degree of co-ordination on employer and employee sides (HGCOOR) can significantly reduce structural unemployment insofar as such co-ordination provides a mechanism by which economy-wide labour market conditions can be internalised in the wage-setting process, increasing the sensitivity of real wages to shocks. There is also some evidence (see column 2) that highly centralised (HGCENTR) and fully decentralised bargaining systems lead to somewhat lower structural unemployment compared with intermediate (sectoral) systems (INTCENTR).

The summary measure of collective bargaining structures (INTCORP and HGCORP) brings together the different features of co-ordination and the bargaining levels into a single indicator. For example, the summary measure allows us to consider cases where cross-industry co-ordination between employers and unions in an industry bargaining setting (e.g., Germany and Austria and more recently, Ireland and the Netherlands, with centralised income policy agreements) may be an alternative or functionally equivalent to centralised systems.

system, and *vice versa*. In the table, the INT acronym represents *intermediate*; HG represents *high*. Appendix B discusses changes in these country groupings over time.

[12] Sweden has been characterised by extremely high expenditures on active labour market programmes (four times the OECD average) in the 1983-1995 period and by levels of unemployment which, albeit low (until the early 1990s), are comparable with those of countries that spent much less on ALMPs.

Table 2. Reduced-form unemployment rate equations, 1983-95[a] (random effects, FGLS)

	1	2	3	4	5[b]	6
ALMPU	-0.11*	-0.11*	-0.09	-0.11*	-0.53**	..
	0.06	0.06	0.06	0.06	0.21	
UB	0.11***	0.08***	0.10***	0.09***	0.10***	-0.01
	0.02	0.02	0.02	0.02	0.02	0.05
EPL	0.32*	0.34*	0.38**	0.33*	0.37**	0.68***
	0.17	0.19	0.18	0.19	0.19	0.24
UDENS	0.01	-0.01	-0.02	-0.02	-0.01	-0.06**
	0.02	0.02	0.02	0.02	0.02	0.03
INTCOOR	-0.40					
	0.48					
HGCOOR	-1.91***					
	0.48					
INTCENTR		0.66*				
		0.39				
HGCENTR		-0.79*				
		0.43				
INTCORP			0.61*	0.58*	0.35	..
			0.35	0.35	0.36	
HGCORP[c]			-1.39***	-1.48***	-1.25***	-1.69***
			0.34	0.34	0.35	0.45
TWEDGE				0.10**	0.14***	0.12*
				0.04	0.04	0.06
GAP	-0.46***	-0.50***	-0.50***	-0.51***	-0.49***	-0.62***
	0.03	0.03	0.03	0.03	0.03	0.05
MINWAGE						-0.02
						0.03
Observations	238	238	238	238	226	112
Countries	19	19	19	19	18	9
F-test[d]	111.3***	125.4***	146.3***	136.6***	123.5***	86.3***
B&P LM[e]	1001.4***	1050.6***	1119.1***	1086.4***	1043.8***	172.4***
Hausman[f]	8.5	7.1	8.0	11.6	9.0	6.0

Notes: Each coefficient represents the expected change in the unemployment rate in response to a unitary change in the independent variable.
* = Statistically significant at 10% level
** = Statistically significant at 5% level
*** = Statistically significant at 1% level
[a] All regressions include a constant term, standard errors in *italic*.
[b] Sweden is excluded from the panel data set for this regression.
[c] Due to the limited number of countries in the HGCORP group in the equation 6 specification, HGCORP includes low & high centralisation/co-ordination countries.
[d] F-test of the hypothesis of absence of country-specific fixed effects.
[e] Breusch and Pagan LM test of the hypothesis of randomness of country-specific effects. The statistic is distributed as an χ^2 (1).
[f] Hausman (1978) structural test, distributed as an χ^2.

The estimated coefficients for the measures of centralisation/co-ordination (decentralised countries are the reference group) give some support to the hump-shaped hypothesis (Calmfors and Driffill, 1988), whereby highly centralised/co-ordinated systems and fully de-centralised systems help to restrain the insiders' wage claims and thereby serve to lower structural unemployment.

It is also interesting to note that union density (UDENS), per se, does not help to explain cross-country differences in structural un-employment, once other features of the collective bargaining system are considered. Moreover, the empirical analysis did not detect a sta-tistically significant impact of statutory minimum wages (relative to the average wage) on aggregate unemployment.[13]

Turning to the role of labour market policies, there is strong evi-dence that more generous unemployment benefits (UB) lead to higher structural unemployment. The implicit average elasticity of unemployment with respect to the OECD summary measure of benefit entitlements is around 0.4, a value that is close to those often found in the microeconometric literature (Holmlund, 1998).

The econometric evidence is mixed concerning the role of active labour market policies. The results in the first four columns of Table 2 show that our measure of spending on active labour market policies always has a negative coefficient; however, it is only marginally sig-nificant. But as Scarpetta (1996) has demonstrated, the presence of Sweden in the panel is crucial for this inconclusive result: if Sweden is excluded on the grounds that it is an outlier in the panel data set, the magnitude and statistical significance of the estimated coefficient for ALMPU increases sharply (the estimated coefficient becomes -0.53 in equation 5 in Table 2).

For employment-protection legislation (EPL), our results point to a positive impact of strict regulations on firing on structural unem-ployment. These results are somewhat more robust than those previ-ously found by Scarpetta (1996). A possible explanation for this is that the measure of EPL used in Table 2 accounts for recent changes in regulations.

Finally, the tax wedge (TWEDGE) is statistically significant in all equations. The estimated elasticity of unemployment with respect to the tax wedge is moderate (around 0.5), which implies that the ob-

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[13] But econometric analysis for the same panel of nine OECD countries, reported in OECD (1998b), shows that high levels of the minimum relative to average earnings reduce youth employment.

served reduction in the OECD average tax wedge of 7 percentage points during the 1983-1995 period could have contributed to reduce structural unemployment by about 0.7 percentage points.

It is of interest to compare our results with those of Layard and Nickell (1997) for 20 OECD countries based on two cross-sections for 1983-88 and 1989-94. The first point to note is that there is quite a high concordance between the two sets of results regarding the determinants of unemployment rates across OECD countries. Both studies assign significant roles to unemployment benefits, collective bargaining structures, active labour market policies (allowing for the caveat about the exclusion of Sweden), and the tax wedge–even if the variables in question are defined somewhat differently between the two studies. There are also some notable differences. For example, Layard and Nickell (1997) do not find a significant effect from EPL on the total unemployment rate. Their equation also includes the owner-occupier rate that is not included in our regressions, and they use changes in inflation to account for cyclical fluctuations of the unemployment rate, while we use the output gap.

2.2. Structural unemployment and reforms in the successful countries

How do these results help to explain the role of labour market and institutional reforms on the estimated changes in structural unemployment? To answer this question we do not use the NAWRU estimates in Table 1. Instead, we proxy structural unemployment by adjusting the actual unemployment rate by the estimated cyclical component based on the coefficients of the output gap in Table 2. Then, Table 3 breaks down the estimated changes in structural unemployment into the contributions of the main determinants, namely changes in unemployment benefits, the tax wedge, and institutional settings (i.e., the joint impact of collective bargaining systems and EPL) plus a residual that accounts for changes in unobserved country-specific factors.[14] For each country, the estimated parameters of equation 4 in Table 2 were used to compute the expected changes in unemployment that result from the observed changes in each of the explanatory variables. The calculations were made for two time peri-

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[14] A positive value of the country-specific effect means that other (omitted) factors have contributed to raise structural unemployment, while a negative value suggests that omitted factors have contributed to reduce structural unemployment.

ods, the full 1983-1995 sample period and the 1990-95 sub-period. In Ireland, the Netherlands, and the UK—which began introducing reforms in the early to mid-1980s—structural unemployment fell over the entire period covered in the empirical analysis (Table 3a.). In New Zealand, Australia, and Denmark, where most reforms were introduced somewhat later, falls in structural unemployment were recorded in the 1990s. For the latter countries, the decomposition over the 1990-95 period (Table 3b) is more meaningful.

An important fraction of the estimated change in structural unemployment cannot be accounted for by changes in the explanatory variables included in our analysis. Other omitted factors probably played important roles. And possible interactions between labour market policies and institutional factors, albeit difficult to identify (see below), have not been considered in the decomposition of Table 3. Bearing these caveats in mind, we can see that reforms in the key policy areas in the six *success* countries have generally gone in the direction of reducing structural unemployment, although there are noticeable differences between them in the contribution that can be assigned to each of the policies and institutional reforms.

To draw some lessons from the success stories, it is of interest to specify in somewhat greater detail what policy reforms were undertaken in these countries. Evidently, policy settings in many areas, including importantly product markets, have the scope to affect labour market outcomes, but the focus here is restricted to policies that impinge directly on labour markets.

During the past 15 years, while several OECD countries have increased the generosity of *unemployment benefits* by altering one or other of the central parameters of the system (i.e., replacement rates and duration of benefits), five of the six success countries either kept them unchanged or curtailed them.[15] As an illustration, in countries

[15] Australia is the exception. For Denmark, the OECD summary measure does not pick up the fact that the abolition in 1993 of the possibility of renewing benefit eligibility through participation in ALMPs effectively implied a cut in maximum duration, which has been followed by further cuts and recently, by a combined cut in duration and the replacement rate for young workers. For Ireland, the abolition of the earnings-related benefit in 1995 implied a significant cut in replacement rates. In the UK, the recent introduction of the Job-Seekers Allowance implied a halving in the duration of unemployment insurance benefits to six months. The Netherlands reduced the maximum duration of benefits (from 2.5 years to 1.5 years), and benefits were not raised in line with increases in earnings. In New

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such as Ireland, New Zealand, and the Netherlands, the estimated impact of changes in benefits during the 1990s on structural unemployment is in the order of 0.2 to 0.6 percentage points. Moreover, the six countries (like several others) tightened up on various aspects of eligibility and job-availability conditions for receipt of unemployment benefits that are not accounted for in the OECD summary measure of benefit generosity.[16]

Table 3a. Accounting for the changes in structural unemployment, 1983/85-1993/95

	Estimated change in structural unemployment[a]	UB	TWEDGE	Institutional factors[b]	Country-specific effect
Australia	0.9	0.4	0.1	-0.2	0.7
Austria	1.3	-0.1	0.1	0.2	1.2
Belgium	-0.4	-0.3	-0.1	0.0	0.0
Canada	-0.4	-0.2	0.4	0.0	-0.7
Denmark	-0.5	1.3	-0.1	0.0	-1.7
Finland	10.2	1.1	0.2	1.9	7.0
France	2.6	0.4	0.1	0.6	1.5
West Germany	1.2	-0.1	0.3	0.1	0.9
Ireland	-3.1	0.5	-0.2	-2.0	-1.4
Italy	5.5	1.6	-0.1	-1.5	5.5
Japan	0.7	0.1	0.1	0.1	0.4
Netherlands	-3.5	-0.4	-0.5	-2.1	-0.5
New Zealand	1.7	-0.3	-0.3	-0.1	2.3
Norway	1.6	0.5	-0.5	0.0	1.6
Portugal	-0.4	1.9	0.2	0.2	-2.7
Spain	4.7	-0.3	0.1	-0.2	5.1
Sweden	4.3	0.0	-0.4	1.9	2.8
UK	-1.6	-0.3	-0.4	-0.4	-0.5
US	-1.6	-0.2	-0.3	0.1	-1.2

Notes:

[a] Structural unemployment is proxied by actual unemployment minus the cyclical component estimated from the coefficient of the output gap in col. 4 of Table 2.
[b] The degree of centralisation/co-ordination and the index of employment protection legislation (EPL).

Zealand, several changes were made since the late 1980s, which cut the average replacement rate from a peak of 33% in 1987 to the current 27%.
[16] See Martin (1996) for a review of the OECD summary measure. An international overview of various dimensions of availability and eligibility does not suggest that the levels of these requirements deviate in any systematic manner between the six countries and other OECD countries (Danish Ministry of Finance, 1998).

Table 3b. Accounting for the changes in structural unemployment, 1990-1995

	Estimated change in structural unemployment[a]	UB	TWEDGE	Institutional factors[b]	Country-specific effect
Australia	-0.3	0.1	0.0	-0.3	-0.2
Austria	0.2	-0.4	0.1	0.1	0.4
Belgium	1.7	-0.3	0.5	0.0	1.6
Canada	0.2	-0.1	0.3	0.0	0.0
Denmark	-0.7	1.4	-0.1	0.0	-2.0
Finland	9.6	0.6	0.3	-0.2	8.8
France	0.9	0.0	0.3	0.2	0.5
West Germany	1.1	-0.1	0.3	0.1	0.9
Ireland	-2.1	-0.2	-0.1	0.0	-1.8
Italy	1.8	1.5	0.1	-1.5	1.7
Japan	-0.3	0.0	-0.2	0.0	-0.2
Netherlands	-0.7	-0.6	-0.1	0.0	0.1
New Zealand	-1.4	-0.4	0.1	-0.1	-1.0
Norway	0.7	0.0	-1.6	0.0	2.3
Portugal	-0.3	0.2	0.0	0.0	-0.5
Spain	2.2	-0.2	0.2	-0.2	2.4
Sweden	4.2	-0.2	-0.4	1.9	2.8
UK	-0.5	0.0	0.0	0.0	-0.5
US	-0.8	0.1	0.0	0.0	-0.8

Notes:

[a] Structural unemployment is proxied by actual unemployment minus the cyclical component estimated from the coefficient of the output gap in col. 4 of Table 2.

[b] The degree of centralisation/co-ordination and the index of employment protection legislation (EPL).

Measured relative to GDP, spending on *active labour market programmes* shows large variations across the six countries. But three of them, Denmark, Ireland (in the 1990s), and the Netherlands, are well above average regarding spending on active policies. These countries also managed to shift more of their spending on labour market policies toward active policies and away from unemployment benefits during the 1985-97 period. In Australia, New Zealand, and the UK, there has also been a shift in the orientation of spending on active policies toward job-search assistance and counselling for groups with particular disadvantages in the labour market. In Denmark, this shift in emphasis was a key element of the 1994 labour market policy re-

form, which laid down that individual action plans must be prepared for all people with more than three months of unemployment.

The overall *tax wedge on labour use* has been reduced in several OECD countries over the past decade, including the six success stories. The tax burden was reduced by more than 5 percentage points in the UK, Ireland and New Zealand, and by almost 8 percentage points in the Netherlands (albeit from an extremely high level in the early 1980s). According to our econometric estimates, these reductions could have lowered structural unemployment by about 0.2 to 0.5 percentage points. Australia recorded a decline in the tax wedge in the late 1980s that was subsequently reversed.

Because of their direct effect on labour costs, employer social security contributions were cut in recent years in several countries, sometimes targeted to encourage the hiring of low-wage workers. Thus, the Netherlands, Ireland, and to a minor extent the UK, reduced these contributions together with France and Sweden. But in the latter two countries, the tight fiscal position meant that other taxes had to be raised to offset the revenue loss.

Though there are marked differences in the strictness of EPL across OECD countries, there has been a tendency toward less constraining hiring and firing practices in several of them, including some of the six success cases. In particular, there has been some relaxation of EPL in the case of individual and/or collective dismissals in the UK (1993), and in Italy (1991), Portugal (1989, 1991), Spain and, more recently, in Germany and the Netherlands. In Australia, in response to employers' concerns about the 1993 tightening of regulations, new legislation was introduced in 1994 and 1995 to reduce legal costs to employers and to simplify procedures for dismissal in justified circumstances. But France moved in the opposite direction, with some easing of dismissal procedures (abolition of the administrative authorisations) in 1986 being followed by tightening in 1989 and 1993 for collective redundancies (the introduction of social plans).

As previously stressed, there are several relevant dimensions to *wage formation* that make it difficult to characterise a country as having done better or worse over time in this field. In addition, many aspects of wage formation are only indirectly amenable to policy influence, resting principally on private-sector decisions. Notwithstanding these difficulties, the six countries seem to have moved away from uncoordinated, sectoral, wage bargaining to either higher coordination or full decentralisation, both leading to greater wage mod-

eration and lower structural unemployment, at least according to our empirical results (see Table 3). Widespread decentralisation of wage bargaining has been the result of a deliberate policy aimed at reducing union power in the UK and New Zealand. Wage bargaining has also been substantially decentralised in Denmark, though employers maintain a significant element of co-ordination, and Australia has also moved toward decentralisation since the late 1980s, if from a very particular starting point. By contrast, Ireland (since 1988) and the Netherlands (since 1983) have conducted wage bargaining with close co-ordination among the government, employers' associations, and trade unions.

At the end of the day, what appears to set apart the six success stories from those countries that have failed to prevent a rise in structural unemployment in the 1990s is that they have implemented policy reforms across most of the key policy areas identified in the empirical analysis. Indeed, the six countries stand out as a group more in terms of the *comprehensive* coverage of reforms than in terms of their having taken particularly bold steps in specific areas—with industrial relations reform in New Zealand and to some extent in the UK, standing out as exceptions. To this comprehensive approach must be added the effects of relatively successful macroeconomic policies (see below).

Comprehensiveness seems indeed to be a crucial feature of any successful strategy to reduce unemployment because reforms in different areas can reinforce each other's effects. Conversely, policies that tend to drive up unemployment may also be mutually reinforcing. An example is that an increase in payroll taxes may have a larger effect on unemployment if introduced in a context of a high minimum wage, which prevents backward shifting of the tax hike into wages.[17]

2.3. Are there significant interactions between labour market policies and institutions?

Labour market policies may have a different impact on the functioning of the labour market depending upon the institutional framework within which they operate. Interaction mechanisms are generally

[17] Such interaction effects have recently received theoretical backing in Coe and Snower (1997). At the practical level, the OECD's reviews of individual countries' progress in implementing the *Jobs Strategy* have thrown up many examples of such interactions between policies in different fields—for details, see OECD (1997b).

complex and may not be fully accounted for by the analytical approach used in this study. But to shed some preliminary light on this issue, Table 4 presents the results of reduced-form unemployment rate regressions in which some policy parameters are allowed to vary across different policy and institutional settings. The results reported refer to those interactions that were statistically significant.

Column 1 in Table 4 suggests that unemployment benefits probably have different effects on structural unemployment depending on the intensity of public spending on active labour market policies. In countries that spend a lot on active programmes, per person unemployed, unemployment benefits have a slightly stronger impact than they do in the intermediate group of countries.[18] This result has intuitive appeal: the joint effect of generous benefits and high spending on active programmes serves to raise the reservation wage of the unemployed over and above what each policy in isolation would have done and thus leads to an even stronger aggregate impact on unemployment. But given this reasoning, one would expect to find the largest interaction effect for the countries with the highest spending on ALMPs, followed by the group of intermediate and low-spending countries in that order. The fact that our estimates do not match this pattern is a finding for which we have no satisfactory explanation.

Buti et al. (1998) argued that strict EPL may act as a substitute for unemployment insurance benefits. Under this hypothesis, countries might opt for either generous unemployment benefits and lax EPL or *vice versa*, and a combination of generous benefits with strict EPL could lead to higher structural unemployment. But the evidence in column 2 of Table 4 does not support this hypothesis: the estimated effect of unemployment benefits is not statistically different in countries with either strict or lax EPL.

Table 4 suggests that different collective bargaining arrangements influence the way in which EPL and the tax wedge affect unemployment. In both cases, the positive impact on aggregate unemployment is stronger and statistically significant in countries with an intermediate degree of centralisation/co-ordination, i.e., where sectoral wage bargaining predominates with limited co-ordination, while neither EPL nor the tax wedge are statistically significant in either highly

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[18] The Wald test rejects the restriction that the coefficients of UB are equal for the three groups of countries according to their spending on ALMPs.

centralised/co-ordinated or decentralised countries.[19] These results are consistent with the hypothesis that when insiders have strong bargaining power, they may more easily resist employers' attempts to reflect higher payroll taxes and/or high turnover costs (due to strict EPL) in lower wages, even if this works to the detriment of outsiders.

Bearing in mind the tentative nature of these results, they may have some implications for the understanding of the determinants of changes in structural unemployment discussed above. In particular, the impact of significant changes in the tax wedge may have been less marked in countries with either a high degree of centralisation/co-ordination (i.e., Austria and Germany) or decentralised wage bargaining systems (i.e., Canada and Japan). Conversely, the impact could have been stronger in countries with intermediate wage bargaining settings (e.g., Belgium, Finland, France, and Spain). Similarly, the tightening of EPL in France in 1989 and 1993 might have produced a more important increase in structural unemployment than that calculated in Table 3, while the loosening of EPL in Portugal in the 1990s might have contributed more strongly to the estimated reduction in structural unemployment.

2.4. The role of macroeconomic policies

Sound macroeconomic policies are an important element in any comprehensive strategy to combat high and persistent unemployment. This is in part because large macroeconomic fluctuations are likely to contribute to rising structural unemployment as increases in unemployment, which are initially cyclical, tend, over time, to become structural.[20]

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[19] Daveri and Tabellini (1997) obtained a similar result for the differentiated impact of the tax wedge on unemployment, although they included a smaller number of countries in their analysis and used a slightly different classification of countries according to the collective bargaining system.

[20] This would also occur if the impact of unemployment on wage inflation is non-linear (the Phillips curve). For example, if the difference between the log of unemployment and the log of the natural rate drives changes in inflation, the average level of unemployment will be larger, the greater the variance of unemployment, even if the log of unemployment is on average equal to the log of the natural rate. Indeed, if $(\log U - \log U^*)$ is normally distributed with mean zero and variance σ^2, then the expected value of U is: $E(U) = \exp(\log U^* + \frac{1}{2}\sigma^2)$. Turner (1995) presents estimation results that suggest that, for three of the G7 countries, the inflationary effects of a positive output gap (output being above trend) are much bigger than the disinflationary effects of a corresponding negative output gap.

Table 4. Reduced-form unemployment rate equations, 1983-

	1	2	3	4
ALMPU	-0.30	-0.11*	-0.04	-0.06
	0.23	0.07	0.07	0.06
UB			0.10***	0.09***
			0.02	0.02
UB*LWalmpu	0.21***			
	0.04			
UB*INTalmpu	0.05**			
	0.02			
UB*HGalmpu	0.11**			
	0.05			
UB*LWepl		0.09***		
		0.03		
UB*HGepl		0.10***		
		0.03		
EPL	0.28*	0.31		0.26
	0.17	0.20		0.17
UDENS	-0.01	-0.02	-0.02	-0.01
	0.02	0.02	0.02	0.02
INTCORP	0.25	0.55	0.53	0.46
	0.35	0.36	0.34	0.35
HGCORP	-1.65***	-1.49***	-1.46***	-1.42***
	0.38	0.34	0.33	0.34
EPL*HGCORP			-0.12	
			0.29	
EPL*INTCORP			0.50**	
			0.21	
EPL*LWCORP			0.35	
			0.33	
TWEDGE*HGCORP				0.06
				0.05
TWEDGE*INTCORP				0.15***
				0.05
TWEDGE*LWCORP				0.12*
				0.06
TWEDGE	0.15***	0.10**	0.10**	
	0.04	0.04	0.04	
GAP	-0.49***	-0.51***	-0.50***	-0.50***
	0.03	0.03	0.03	0.03

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-1995: interactions between explanatory variables.

... *continued* ...	1	2	3	4
Observations	226	238	238	238
Countries	18[a]	19	19	19
F-test	89.7***	124.6***	114.1***	101.0***
B&P LM test	890.0***	1034.0***	956.5***	853.7***
Hausman test	12.1	36.1***	12.4	11.1

Notes: See the notes for Table 2.

Acronym   **Dummy for countries with ...**

LWalmpu   = Low levels of ALMPU: Australia, Canada, Italy, Japan, Spain, UK, US

INTalmpu   = Intermediate levels of ALMPU; Austria, Belgium, Denmark, France, Ireland, the Netherlands, New Zealand, Portugal

HGalmpu   = High levels of ALMPU; Finland, Germany and Norway

LWepl   = Low levels of EPL: Austria, Canada, Denmark, Ireland, Japan, New Zealand, UK, and US

HGepl   = High levels of EPL: Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, Norway, Portugal, Spain, and Sweden

HGCORP   = High, intermediate, low degree of centralisation/co-ordination. For
INTCORP   the list of countries in each group and changes over time, see Table
LWCORP   B2.

[a] Sweden is not included in the sample.

Across countries, a positive correlation exists between the degree of annual volatility of unemployment and the extent of the rise over time in structural unemployment (Figure 2). Thus, stable conditions may help to maintain low structural unemployment. As a corollary, countries with macroeconomic room for manoeuvre to counteract prolonged slumps in macroeconomic conditions (e.g., Norway) have often avoided strong increases in actual unemployment.

Figure 2. Cyclical variability and structural unemployment,[a] 1985-97 (percentage points)
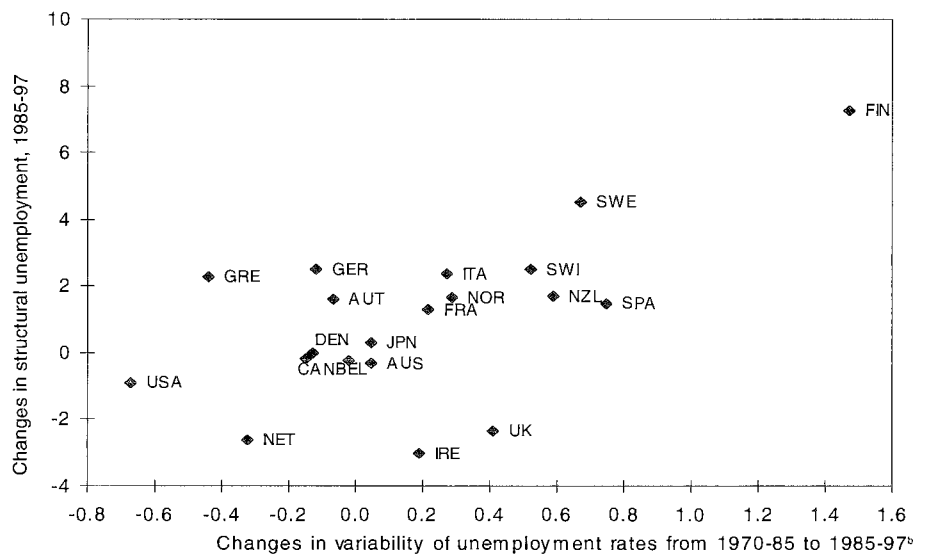
Notes:

[a] Structural unemployment data are based on estimates of the NAWRU made for the OECD *Economic Outlook*, 63, 1998.

[b] Measured by the standard deviation of yearly changes in unemployment rates.

Source: OECD.

There are also potentially important interactions between macro-economic and structural policy settings. Thus labour market policies can help determine to what extent cyclical unemployment increases

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are translated into higher structural unemployment.[21] The policy implications of this include:

- For countries with very rigid labour markets, macroeconomic instability carries a particularly high price in terms of structural unemployment, whereas countries with flexible labour markets, most notably the US, have experienced large cyclical fluctuations in unemployment around a rather stable level of structural unemployment.[22]

- Moves toward medium-term macroeconomic targets will often be less costly in terms of unemployment if the appropriate structural policies have been implemented first (Ball, 1996). Conversely, a sequencing that involves moving toward macroeconomic targets before implementing structural reform may be expensive in terms of unemployment.

The medium-term orientation of macroeconomic policies will probably also be important. This is mainly due to the effects over the longer term of sound public finances and price stability on unemployment *via* the channel of real interest rates:

- A fall of real interest rates may lower production costs in much the same way that lower payroll taxes or energy prices would do, and it may raise capital accumulation and thereby labour productivity. Where wage earners do not receive a corresponding increase in real wages, unemployment might fall.

- In some cases, lower real interest rates may affect the bargaining attitudes of workers and the labour-demand behaviour of enterprises, leading to the end result of lower unemployment.[23]

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[21] Scarpetta (1996) links slow adjustment of unemployment to strict employment protection, generous unemployment benefits, and aspects of wage bargaining systems. Layard (1989) finds that long benefit durations slow adjustment whereas centralised bargaining and expenditure on active labour market policies speed it up.

[22] Bean (1997) provides some empirical evidence of the long-lasting effect of a demand shock in EU countries compared with the US.

[23] Phelps (1992) argues that real interest rates affect the value that firms put on their customer base and their stock of employees familiarised with the firm, and thereby labour demand. Similarly, in a context where current employment raises the chances of future employment, a lower real interest rate may soften the bargaining stance of wage earners because the discounted value of future earnings associated with having a current job will increase.

● Lower real interest rates could also favourably affect productivity growth, either temporarily—while the capital-intensity of production responds, or more long lastingly—if the rate of innovation and its diffusion are affected. Increased productivity growth again might cause unemployment to fall. This would be the case to the extent it reduced the incidence of downward wage stickiness or facilitated wage bargaining by increasing the scope for real-wage gains.[24]

Empirical estimates of the effects of real interest rates on cross-country differences in unemployment yielded results that are variable but suggestive of significant impacts in some countries.[25]

3. Overcoming resistance to labour market reform

The analysis in the previous section treats a range of institutional and labour market policies as exogenous factors. On this view, unemployment is basically the result of misguided policies. But an alternative view sees the policy settings that influence unemployment as determined by political-economy considerations. This may also explain why it is so difficult to introduce policy reforms that will reduce unemployment. This section discusses the role that resistance by labour market insiders may have played as a hindrance to effective labour market reform; the role of equity considerations in shaping policies; and some evidence on the role of crises in overcoming resistance to reforms.

3.1 Insider resistance as a hindrance to reform

There can be little doubt that the insider-outsider distinction is an important one. Figure 3 shows a cross-country breakdown of em-

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[24] Manning (1992) argues that higher productivity and real-wage growth increase the incentives to set wages so that a job is retained.

[25] Scarpetta (1996) finds that the rise in real interest rates accounted for between 1 and 3 percentage points of the rise in the unemployment rate across 17 OECD countries during the 1971-93 period. Manning (1992), in a study of 19 OECD countries, finds effects suggesting that a 1 percentage point increase in real interest rates may increase unemployment by between 0 and 1 percentage point. In a study of 17 OECD countries, Phelps (1994) finds an impact of 0.1 to 0.4 percentage points on unemployment. Cotis et al. (1996) report estimates suggesting that rising real interest rates accounted for about half of the rise in the French equilibrium unemployment rate between 1974 and the mid-1990s.

ployment rates by age and gender. What sets countries apart in terms of overall employment/population rates is largely the extent to which *outsider* groups are employed. The young, older workers, and adult women represent outsiders in Figure 3. By contrast, the employment/population rates of prime-age males, a group dominated by *insiders* are much more similar across countries.

Arguments why insiders may oppose reforms that would produce higher employment for outsiders come in different forms. One such argument is that insiders are virtually unaffected by the unemployment consequences of labour market rigidities, but that the same rigidities may enhance their bargaining power in wage negotiations.
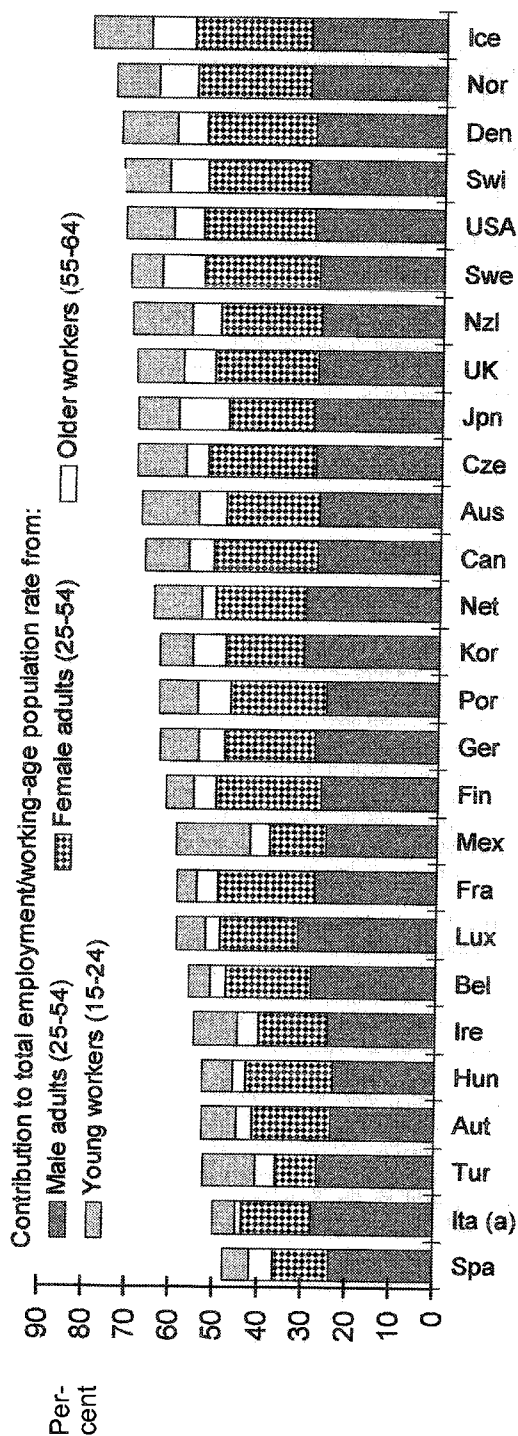
In these circumstances, insiders will have an interest in raising rigidities to the point where the extra gain in terms of higher real wages is offset by the loss in terms of added risk of unemployment and related income loss.[26]

Some empirical observations are consistent with such an insider-outsider view of policy determination:

- Across countries, there is a positive correlation between strictness of EPL for permanent workers and *excess coverage of wage contracts*, which is a measure of the extent to which union wage agreements are extended to non-union members (Figure 4). This suggests that the insiders, who benefit from strict EPL, may press for administrative extension of wage agreements as a protection against underbidding of their wages by outsiders.

- Spending on active labour market policies should empower labour market outsiders to compete more effectively with insiders. It may be no coincidence that Figure 5 shows a positive correlation between the extent of such spending (per unemployed and relative to per capita GDP) and the extent of union density. Where large parts of the labour market (including those with an outsider or near-outsider status) are organised, there may be greater internalisation of the gains from integrating outsiders and greater pressure to do so.

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[26] Seeing policy settings as endogenously determined has potential implications for the Section 2 analysis. In principle, it could raise questions about the direction of causality of the links between unemployment and policy settings and about the extent to which coefficients in Table 2 may be biased as estimates of the impact of policy settings on unemployment. To spotlight this issue, we ran some Granger causality tests to explore the possibility of reverse causality (see Appendix B). The results mostly tend to support interpretations of the empirical results in Section 2.

# Figure 3. Decomposition of the employment rate, 1996

Contribution to total employment/working-age population rate from:

■ Male adults (25-54)   ▦ Female adults (25-54)   □ Older workers (55-64)
▨ Young workers (15-24)

Ice
Nor
Den
Swi
USA
Swe
Nzl
UK
Jpn
Cze
Aus
Can
Net
Kor
Por
Ger
Fin
Mex
Fra
Lux
Bel
Ire
Hun
Aut
Tur
Ita (a)
Spa

Per-
cent

90 80 70 60 50 40 30 20 10 0

Notes:

[a] Italy 1997. Adults = 25-59 years of age.

The contributions of individual demographic groups to the overall employment/working-age population rate were calculated as the group-specific employment rates multiplied by the share of individual groups in the population of working age. The countries are ordered from left to right in ascending order of the total employment population rate.

Source: OECD Labour Force Statistics, Analytical Data Base.

Figure 4. Employment protection legislation and coverage of wage agreements

Index of the strictness of employment protection legislation
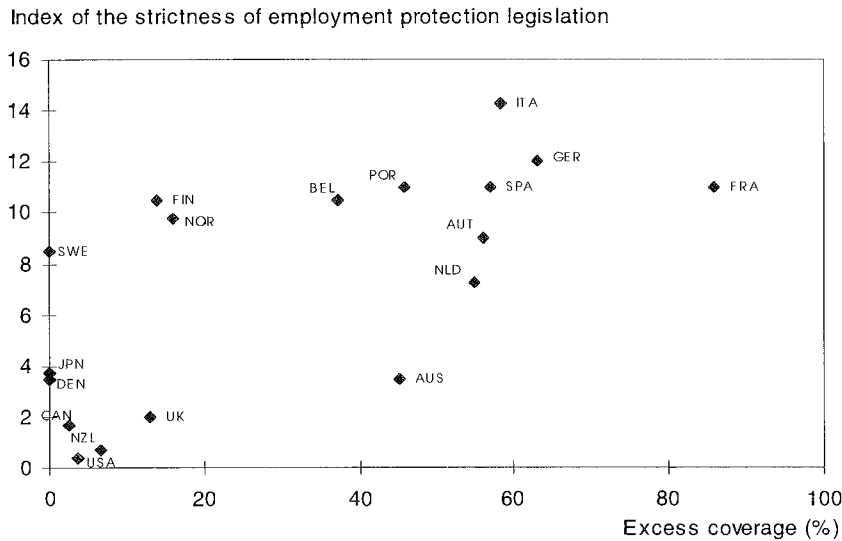
Excess coverage (%)

Note. The excess coverage index is the difference between the coverage rate (proportion of workers covered by the terms of wage agreements) and union density rate.

Evidence in OECD (1997b, 1998a) suggests that successful countries may have succeeded where others failed, in part, because their reform efforts to a greater extent were directed at reducing the bargaining power of insiders:

- Many countries have tightened up the eligibility conditions of their unemployment benefit schemes—a move that is unlikely to affect the insiders who, by definition, enjoy high job tenure. By contrast, central parameters of unemployment and related welfare benefit systems such as replacement rates and duration of benefits, which may affect the bargaining positions of insiders, were left relatively untouched in most countries outside the group of success stories.

- In a similar vein, many countries have eased up on the regulation of fixed-term contracts that expanded the supply of temporary jobs for outsiders, but it has typically been much more difficult to lower employment protection for permanent workers. In this context, Bentolila and Dolado (1994) argue that the existence of a group of temporary workers, who are easy to lay off, effectively

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reduces the unemployment risk of the secure insiders, and thus strengthens their position in wage bargaining.

This raises the question why successful countries could introduce policy reforms that affected insiders whereas other countries could not. Initial weakening of insider power may be part of the answer.

Figure 5. Union density and active labour market programmes

Union density (%)
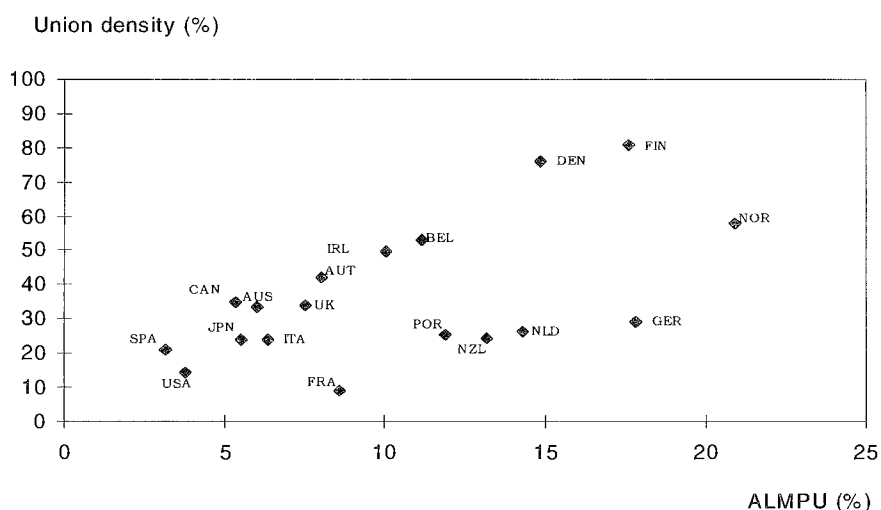
ALMPU (%)

Note. ALMPU is spending on active labour market programmes per unemployed relative to GDP per capita.

Thus in some of the successful countries, in particular the UK and New Zealand, governments took determined action at the outset of the reform process to weaken the bargaining power of insiders, notably through curbs on union rights and privileges. In other success countries, including Ireland, the Netherlands and Australia (at least in the initial phase of reform in the 1980s), there were moves toward increased centralisation of wage bargaining and a more corporatist attitude toward the setting of labour market policies, which may have led to a greater internalisation of outsider interests. But these are only proximate answers, because they do not explain why the weakening of insider power occurred in the first place.

In some cases, insider resistance may also have been reduced because individual reforms were seen as part of a comprehensive strategy of structural reforms. The argument would be that any individual

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reform might hurt the insiders who will therefore resist it. But when individual reforms are part of a much wider strategy, affecting all groups, they may be seen as more fair, the losses suffered by any particular group may not appear excessive, and there may be a stronger likelihood of economy-wide gains that may compensate some of the losses.

3.2. Equity concerns as a hindrance to reform

A reason often cited by countries to account for slow and sporadic implementation of the *OECD Jobs Strategy* recommendations is the perception that undertaking reform of, in particular, wage formation, EPL and social transfer systems involves conflict with policy objectives concerning income distribution.

Reflecting the many complicated mechanisms operating in this area, OECD research as to the nature and magnitudes of any potential trade-offs has provided no conclusive evidence. Nevertheless, it has been suggested that equity and efficiency objectives do not necessarily conflict, or at least that the terms of the trade-off may change, when they are seen in a dynamic perspective. Three reasons have been quoted for this:

1. Increased employment, because of policy reform, will tend to offset, at least partly, the impact of increased wage dispersion and restricted social transfers on income distribution. Thus, a wider distribution of wage rates is likely to enhance the employment prospects of workers at the bottom of the qualifications scale. But little agreement exists about the magnitude of such employment effects, with econometric estimates of elasticities between relative wage rates and demands for different categories of labour being highly uncertain and variable across studies.[27]
2. There is evidence of considerable mobility of individuals over time within the earnings distribution, showing that in some cases low-paid jobs are a stepping-stone to good careers. Across countries, with large differences in the static distribution of earnings,

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[27] For example, estimates of elasticities of substitution between different categories of labour substantially above one were found by Bound and Johnson (1992) and Katz and Murphy (1992) for the US, and by Risager (1992) for Denmark. In contrast, Machin et al. (1996) find an elasticity of around one for the US and less than one-half for the UK, Denmark and Sweden.

the degree of mobility seems remarkably similar.[28]   OECD
(1997c, Chapter 2) shows that, as a rule of thumb, after a period
of five years only about one-third of those full-time workers ini-
tially receiving low earnings (belonging to the lowest earnings
quintile) do so at the end of the period. A large part of the work-
ers who left low-paid employment had moved up in the earnings
distribution, though in some countries a significant fraction had
also moved out of employment (in particular, this was the case in
the US).
3. Lower relative incomes at the bottom of the scale may raise in-
    centives for investment in human capital by groups who would
    otherwise have made little such investment; the existence of this
    kind of linkage is supported by evidence that, across countries,
    university graduation rates tend to be higher where the financial
    reward to such education is higher (Figure 6).[29] Such an effect, in
    turn, could reduce income dispersion over the longer run and as-
    sist the adaptation of the workforce to changing skills require-
    ments.

Nevertheless, there are also arguments that might suggest that the
equity-efficiency trade-off is even starker. For example, there is con-
cern about the effectiveness of relative wage signals in influencing
human-capital investment, not least because increased inequality of
income, in a context of imperfect capital markets, may prevent those
at the bottom of the income distribution from investing in their own
or their children's education.[30]

In the context of the conflicting evidence on the strength, and
perhaps even the sign, of the equity-efficiency trade-off, the Nordic
countries have tended to take a strong position against wider disper-
sion of wage rates as a means of reducing unemployment. Instead,
policies are directed toward validating the existing, relatively com-
pressed earnings distributions in these countries by creating a simi-
larly narrow distribution of individual productivities. The emphasis is

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[28] This is based on the comparative data on earnings mobility in several countries
presented in OECD (1996c, 1997c). Aaberge et al. (1996) also supported the
finding of broadly similar mobility patterns across countries.
[29] The rates of return in Figure 6 do not account for the effects of tax-transfer
systems, including support for students or different unemployment risks across
education categories.
[30] Benabou (1996) presents a model that illustrates this point.

put, in particular, on education and active labour market policies to achieve this latter goal. But beyond a certain level of spending, active labour market policies may suffer from declining returns to scale. Even abstracting from this consideration, the results in Section 2 suggest that quite sizeable public spending in this area, with accompanying effects on taxes, could be required to validate relatively compressed earnings distributions. Moreover, there is a question as to how effective government subsidies to education, through near-free provision and generous grants, can be as an instrument to offset the disincentives arising from compressed wages and progressive taxes.

Figure 6. Internal rate of return and university graduation rates
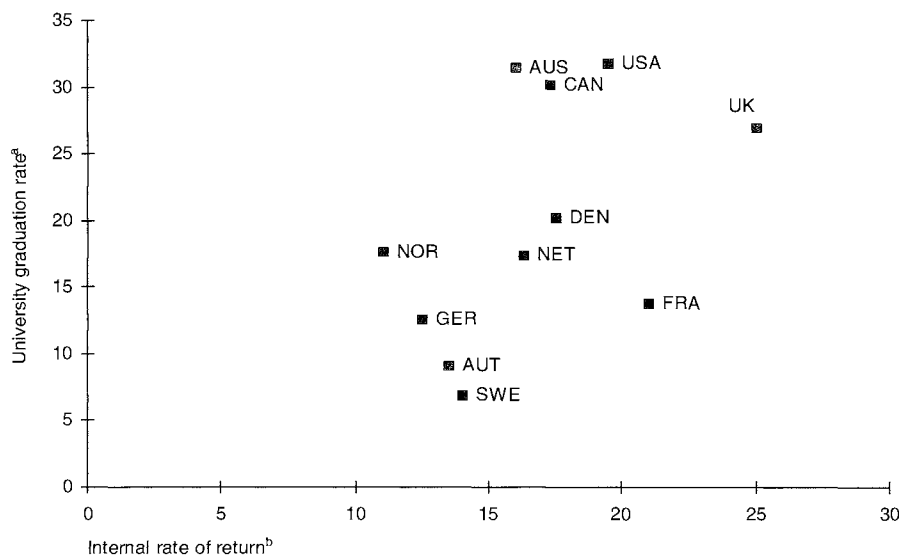
Notes:
[a] Ratio of graduates from short first university degree programmes to population at the typical age of graduation in 1994 [long first university degree programmes where short first degree programmes are not available (Austria, France, and Germany)].
[b] Based on university wage *premia* in the early 1990s, theoretical length of study and assumed retirement at age 65.
Sources: OECD, *Education at a Glance*, Paris, 1996; OECD, *The OECD Jobs Study*, Vol II, Paris, 1994.

3.3. The role of crises in facilitating reform

OECD (1988) argued that crisis conditions are often necessary to change the general orientation of macroeconomic policies. In a similar vein, crises may help to overcome resistance to labour market reforms, be it based on insider intransigence or equity considerations. Indeed, it has been argued that many of the successful countries embarked on reform programmes because "existing policies could no longer be sustained" (OECD, 1997b).

Taking a more systematic view on the role of crises should begin with an attempt to date the beginning of the reform process. For the six successful countries, this produces the following picture:

- In Australia, the re-orientation of policies has been a gradual process, beginning with trade liberalisation and tri-partite wage Accords after the new Labour government took office in 1983. This process gathered speed in the late 1980s and early 1990s with moves toward decentralisation of wage bargaining and an increasingly medium-term orientation of macroeconomic policies.

- In Denmark, the 1982 change of government marks a relatively clear break, with an immediate shift toward a medium-term orientation for macroeconomic policies, based on a fixed exchange rate vis-à-vis the DM and fiscal consolidation, and the abolition of indexation of private and public-sector wages and income transfers.

- For Ireland, the shift in policy stance also dates back to the early 1980s when the incoming coalition government embarked on a major shift in the orientation of fiscal policies, emphasising the imperative need to halt the debt spiral. The 1987 change in government led to a strong focus on wage moderation achieved through tri-partite national agreements, and with a tax-based element as government finances improved. The 1990s have seen sustained attempts to raise work incentives via reforms to the tax/benefit system, cuts in the tax wedge, and increased spending on ALMPs.

- In the Netherlands, 1982 is also a watershed year, with a change of government, a shift toward fiscal consolidation (eventually to be followed by tax cuts) and deregulation, and the conclusion of the tri-partite so-called Wassenaar agreement on wage moderation.

- In New Zealand, the change of government in 1984 marks a clear shift in economic philosophy toward one of stability-oriented macroeconomic policies and market deregulation—a series of re-

forms to the collective bargaining system culminated in the Employment Contracts Act in 1991.

● In the UK, the change in government that occurred in 1979 also led to increased emphasis on market deregulation and macro-economic stability—even if the latter proved to be rather elusive, at least until recently.

One notable lesson from this dating exercise is the role that changes in government seem to have played in the context of radical shifts in policy orientation. Not surprisingly, it is easier for a new government to break with past policies and strike out on a new path. A second lesson is that it can take a long time for a radical shift in policy orientation to bear fruits in terms of making significant inroads into structural unemployment. In most cases, the reform process in the successful countries got underway in the early or mid-1980s, but it took up to a decade before this was translated into success.

Even if a change of government was involved at the start of the reform process in the success countries, this does not explain why shifts in government in other countries did not lead to sustained reforms capable of reducing structural unemployment. We tried to examine whether particular features of economic developments might explain why reform programmes were enacted. The main results are:

● Major hikes in unemployment occurred in the years before the beginning of the reform process in Australia, Denmark, Ireland, and the Netherlands (Table 5). But for the other two success countries, it is difficult to argue that a sharp rise in unemployment was a major trigger of reform. And, some other countries experienced periods of significant rises in unemployment without embarking on sustained reforms. In other cases, though, sharp hikes in unemployment may have prompted a change in policy orientation that has not yet had sufficient time to work.

● A misery index, constructed by summing unemployment rates, government budget deficits, and external deficits relative to GDP, is not suggestive of crisis as a major common factor among the six countries. Denmark and Ireland are the only countries with a sharp rise in the misery index just before reform; Australia and the Netherlands had recorded a steady, but fairly slow, rise in the index; and, if anything, the index had tended to decline in the UK. Several other countries also recorded increases in the misery index that match those of the successful countries.

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- Exchange-rate pressures are capable of precipitating or exacerbating crises, and they were strong at the time of policy change in Denmark, Ireland, and New Zealand. Moreover, while pressures may not have been as strong, the Netherlands actually devalued in 1982, and the UK exchange rate declined significantly through 1978 and into 1979 (the winter of discontent). But Australia did not really experience exchange-rate pressures before 1986, that is, after the reform programme had been launched.

Table 5. Unemployment developments and policy reform 1961-96[a]

Country[b]	Change in unemployment preceding policy reform		Maximum rise in unemployment over[c]	
	2 years	3 years	2 years	3 years
Australia (1983)	4.2	3.9	4.2 (83)	4.6 (92)
Denmark (1982)	2.8	3.6	4.5 (75)	4.5 (76)
Ireland (1982)	4.0	4.1	4.0 (84)	6.5 (83)
Netherlands (1982)	4.5	4.9	5.2 (83)	7.0 (83)
New Zealand (1984)	0.9	1.1	3.2 (91)	4.7 (91)
UK (1979)	-0.6	-0.3	4.5 (81)	5.9 (82)
US			3.6 (75)	3.9 (82)
Japan			0.7 (94)	1.0 (95)
Germany			3.4 (83)	4.7 (83)
France			2.3 (93)	2.8 (94)
Italy			2.5 (94)	3.1 (95)
Canada			4.3 (83)	4.4 (83)
Austria			1.8 (83)	2.2 (83)
Belgium			4.0 (82)	5.3 (83)
Finland			10.2 (93)	14.4 (93)
Greece			3.8 (83)	5.1 (83)
Iceland			2.9 (93)	3.3 (94)
Norway			2.8 (89)	3.1 (90)
Portugal			3.8 (76)	5.2 (77)
Spain			6.4 (93)	7.9 (94)
Sweden			5.3 (93)	6.6 (93)
Switzerland			3.4 (93)	4.0 (93)

Notes:

[a] Data availability restricts the period for some countries.

[b] Year when policy reform began in parentheses.

[c] End-year of rise in parentheses.

Overall, it is difficult to argue that the existence of a crisis, in the narrow sense of a sharp rise in unemployment, or in the misery index or in exchange-market pressures, was a common factor triggering policy reform in the success countries and setting them apart from other countries. Clearly, other countries went through crises without introducing policies sufficient to reduce structural unemployment. But the success countries generally began their policy reforms against a background of either full-blown crisis or, at least, critical developments. In sum, while the evidence is not very conclusive, it might tentatively be argued that crises tend to create a groundswell of support for reforms, though the ability to harness such support and translate it into actions depends on political factors, such as shifts in government.

4. Concluding remarks

Recent OECD work on remedies for the unemployment problem has highlighted an important message: countries can reduce high and persistent unemployment significantly if they implement the right policies in a determined fashion.

This message is important because it runs counter to the sense of pessimism about tackling the unemployment problem that pervades much of the debate in the media and general public in many OECD countries today, especially in Europe. Hence, there is nothing inevitable about high unemployment, even if the evidence suggests that it can take quite some time for a successful strategy to bear its fruits.

It is also important to add that the six country successes highlighted by recent OECD research span a wide range of social, economic, and political models that include four EU countries.

When one reviews the experiences of the country successes and failures, one is struck by the great diversity in their experiences. There is no unique golden road to implement the policies required for success.

This paper identifies several policy settings and institutional features of the labour market that are associated with high structural unemployment. At the same time, it tries to highlight some important common features across those countries that were successful in reducing structural unemployment. In particular, we emphasise the importance of opting for a *comprehensive* set of reforms to all the policies and institutional factors that are the main determinants of structural unemployment, and to exploiting the synergies between these re-

forms and macroeconomic policies. We also draw attention to the important role played by changes of government, often against the backdrop of crises, in implementing effective reforms.

We also discuss some of the obstacles to implementation of the OECD *Jobs Strategy*. Some of the medicine prescribed under the OECD recommendations is bitter and hard for many countries to swallow, especially insofar as it appears to raise concerns about equity and appears to threaten some of the rents and privileges of insiders. As a result, there is natural tendency in many countries to delay needed reforms in certain areas and/or to search for alternative, sweeter remedies.

It requires strong political will and leadership to convince electorates that it is necessary to swallow all the medicine, and that it will take time before this treatment leads to improved labour market performance and falling unemployment. But the success stories show that it can be done.

Appendix A. OECD indicator of structural unemployment

The OECD indicator of structural unemployment is based on the notion of a non-accelerating wage rate of unemployment, NAWRU. Estimates are derived under the assumption that changes in wage inflation are proportional to the gap between actual unemployment and the *NAWRU*:

$$D^2 \log W = - a \cdot (U - NAWRU), \, a > 0, \tag{A1}$$

where D is the first-difference operator, and W and U are levels of wages and the unemployment rate, respectively. Using consecutive observations, and assuming the *NAWRU* to be constant between two consecutive years, an estimate of a can be calculated as:

$$a = - D^3 \log W / DU \tag{A2}$$

which yields an estimate of the *NAWRU* as

$$NAWRU = U - \left((DU/D^3 \log W) \cdot D^2 \log W \right). \tag{A3}$$

Conceptually, the *NAWRU* estimated in this way is a short-run concept, i.e., it indicates the unemployment rate which, in a given year and based on the *actual* history of unemployment, would be associated with a constant rate of nominal wage increases.[31] In practice, the OECD indicator of structural unemployment takes into account not only the (suitably smoothed) mechanical estimates based on the above method but also the views of country experts (Giorno et al., 1995).

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[31] In the presence of speed-limit effects or slow adjustment, a lower (or higher) unemployment rate may be associated with stable wage inflation in the long run, but this unemployment rate cannot be reached in the short term without setting off changes in inflation.

Appendix B. The empirical analysis

Table B.1 shows basic characteristics of variables used in the regression analysis in Tables 2 and 4. More details are in Scarpetta (1996).

Table B.1. Basic characteristics of the variables used

	Averages of values over the 1983-95 period				
Variables	Mean	Standard deviation	Minimum	Maximum	No. of countries
UR	7.96	4.23	1.46	22.60	19
ALMPU	14.03	16.29	3.11	78.94	19
UB	29.77	12.92	0.35	70.97	19
EPL	6.88	4.34	0.36	14.25	19
UDENS	41.44	20.09	8.83	91.00	19
GAP	-0.29	2.50	-7.88	8.72	19
TWEDGE	38.39	9.40	17.70	54.51	19
MINWAGE	47.57	10.12	29.33	65.34	9

Acronym	Explanation
UR	For all countries but Denmark (administrative data), the OECD standardised unemployment rate.
ALMPU	Public expenditures for active labour market programmes per person unemployed relative to GDP per capita (in per cent).
UB	The OECD summary measure of benefit entitlements that is computed as the average of unemployment benefit replacement rates for two earnings levels, three family situations, and three duration categories.
EPL	Index of the strictness of employment protection legislation (see below).
UDENS	The proportion of workers who are members of a trade union (in per cent).
GAP	Output gap $= [(A_o/T_o)-1] \cdot 100$; where A_o is actual output and T_o is trend output computed by applying the Hodrick-Prescott filter to actual output.
TWEDGE	The total value of employers' and employees' social security contributions and personal income tax paid divided by gross earnings plus employers' social security contributions.
MINWAGE	Gross statutory minimum wage relative to the average wage.

Negotiating levels and co-ordination in collective bargaining arrangements

The collective bargaining structure of each OECD country was assessed on the basis of the union density index (the proportion of workers who are member of a trade union) and indicators of the predominant level of wage bargaining and the level of co-ordination among employers, on the one hand, and among trade unions, on the other hand. Moreover, we also used a summary measure that considers both the degree of centralisation and the degree of co-ordination in bargaining.

Three dummies were created to capture the level of centralisation, co-ordination or the summary measure (1 = low; 2 = intermediate; 3 = high).[32] The reference group in the tables of the main text includes countries with low levels of centralisation and co-ordination. The summary measure of centralisation/co-ordination was computed on the basis of the values assigned to the two individual indexes, considering the degree of centralisation first, and then the degree of co-ordination. In countries with decentralised wage bargaining, it was assumed that different degrees of co-ordination did not significantly modify the potential labour market outcomes: wages were still considered to be predominantly determined by firms' conditions. But co-ordination was considered crucial in the case of intermediate (sectoral) wage bargaining: each bargaining unit could generate disemployment effects if the decisions of employers' associations and sectoral trade unions are not well co-ordinated. Finally, high centralisation is generally accompanied by a high degree of co-ordination and countries in this group were considered as highly centralised/co-ordinated.

The distribution of countries according to the three measures and the changes over the period covered by our data are in Table B.2. It should be stressed that the indicators in Table B.2 are intended to summarise the broad trend in the degree of centralisation and/or co-ordination in each country and cannot fully account for repeated changes in a short time period, such as the zigzag path toward decentralisation observed in some Nordic countries.

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[32] The classification proposed is based on recent OECD publications, including the 1995 and the 1997 issues of the OECD *Employment Outlook* (chapter 5 and chapter 3, respectively) and the special chapters on implementing the *Jobs Strategy* in the OECD Economic Surveys.

Table B.2. Country groupings—according to degree of ...

Country	Centralisation	Co-ordination
US	1	1
Japan	1	3
Germany	2	3
France	2	2
Italy	1; 3 since 1992	2; 3 since 1992
UK[a]	2; gradually to 1	1
Canada	1	1
Australia	2; 1 since 1988	2; 1 since 1988
Austria	2	3
Belgium	2	2
Denmark	3; gradually 2	3
Finland[b]	3; gradually to 2	2
Ireland	2	2; 3 since 1988
Netherlands	2	2; 3 since 1982
New Zealand	2; 1 since 1991	1
Norway	3	3
Portugal	2	2
Spain	2	3; 2 since 1987
Sweden	3; gradually 2	3; gradually 1 in the 1980s and back to 2 in 1991-95

Notes:

[a] In the UK, there has been a gradual move toward company-level pay setting. In the empirical analysis, it was assumed that by the end of the 1980s the UK was among the decentralised group of countries.

[b] In Finland, economy-wide bargaining agreements set guidelines rather than binding provisions, and sectoral unions have often, and increasingly over time, deviated from these guidelines. In the empirical analysis, it was assumed that in the second half of the 1980s, Finland was among the intermediate group of countries.

...centralisation/co-ordination (1=low; 2=intermediate; 3=high)

Summary measure of centralisation/ co-ordination	Comments
1	
1	
3	
2	
1; 3 since 1992	Income policy accords of July 1992 and July 1993
2; gradually to 1	
1	
2; 1 since 1988	Industrial Relations Act of 1988 followed by the Industrial Reform Act of 1993, that created a formal system of enterprise bargaining
3	
2	
3	Move toward decentralised bargaining but with a strong degree of co-ordination
3; gradually to 2	
2; 3 since 1988	Tripartite three-year national pay agreements since 1988
2; 3 since 1982	Wassenaar Agreement, 1982, which set tripartite negotiations at national level on pay increases
2; 1 since 1991	Employment Contracts Act of 1991
3	
2	
3; 2 since 1986	Up to 1986 national tripartite accords
3; gradually 2	In 1983, the engineering industry employer association and metal workers broke away from economy-wide negotiations; 1989 last central agreement for non-manual workers (SAF-PTK); 1991 and 1993 tripartite agreements.

Changes in employment protection legislation (EPL)

The summary measure of EPL is the average of two indices measuring the strictness of EPL rules for regular and fixed-term contracts, as presented in Tables 6.5 and 6.6 in OECD (1994b). In particular, the two indices are country rankings based on the average of scores assigned to several key elements characterising regular and fixed-term contracts, respectively. Since this classification was made, there were significant changes in the EPL of several OECD countries, including Germany, France, the UK, Australia, Denmark, Portugal and Spain (see OECD, 1997b). These changes were considered, using the following procedure: (1) the country scores for each of the key elements of regular and fixed-term contracts were re-evaluated on the basis of the observed changes; (2) the overall country scores for regular and fixed-term contracts were re-calculated; and, (3) the summary EPL indexes were recalculated taking into account (for the countries with changes in EPL) how their new summary scores compared with those of countries that had no changes.

In other words, the original ranking presented in OECD (1994b) was used as a benchmark; each country whose EPL had changed was assigned a position in the new ranking similar to the country with the closest summary score. Along these lines, Germany had only a marginal change that did not modify its position in the overall country ranking. France moved gradually to a more restrictive EPL from 1989 (the index rose from 9.5 to 11.5 in 1995). The UK moved to a slightly less-restrictive EPL (the index fell from 2.25 to 2 in 1993). Australia moved firstly to a more restrictive EPL in 1993 (from 3.26 to 4) and then in the opposite direction in 1994 (from 4 to 3.5). Denmark moved to a somewhat more restrictive EPL in 1994 (from 3.25 to 3.5). Portugal moved to ease its very strict EPL slightly in 1989 and 1991 (from 12.5 to 11.5 and 11).

Testing for reverse causality

To explore the possibility of reverse causality, Granger causality tests were run between, on the one hand, unemployment and, on the other hand, the generosity of unemployment benefits and the size of the tax wedge. The tests obviously had to be restricted to the variables that vary over time. Keeping this caveat in mind, the results in Table B3 do not give strong backing to the hypothesis of reverse causation. But there are a few exceptions. Thus, unemployment may have led changes in benefit generosity in Belgium, France and Italy.

Table B.3 Testing for reverse causality
(F-statistics of the Granger causality tests, 1970-1995)[a]

Country	Test of the hypothesis that unemployment does not Granger-cause	
	Benefit generosity	Tax wedge
Australia	0.47	0.58
Austria	0.59	4.90**
Belgium	8.29***	1.32
Canada	0.95	0.53
Denmark	0.91	0.49
Finland	0.54	2.42
France	5.98***	0.68
West Germany	1.13	1.45
Ireland	0.74	5.23**
Italy	9.47***	1.51
Japan	2.43	0.75
Netherlands	3.11*	0.16
New Zealand	0.18	1.63
Norway	0.07	3.89**
Portugal	0.93	1.98
Spain	0.48	0.74
Sweden	0.14	0.74
UK	3.62**	0.17
US	3.56**	0.02

Notes:
* = Statistically significant at 10% level
** = Statistically significant at 5% level
*** = Statistically significant at 1% level

[a] F-statistics of the relevant hypotheses. Different lag structures of the dependent and independent variables were used to maximise the efficiency of the estimates and obtain white-noise residuals.

The hypothesis that unemployment does not lead benefit generosity is also rejected for the UK and the US; in the latter, this result may reflect the regular practice of extending benefit duration from 26 to 39 weeks during periods of recession. Similarly, the hypothesis that unemployment does not lead changes in the tax wedge is rejected for Austria, Ireland, and Norway. Here, rejection does not necessarily imply a political-economy link, but could just reflect the normal economic mechanism that as unemployment changes, government budgets are affected and tax changes may be enacted in response.

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