Pay-setting Systems in Europe: On-going Developments and Possible Reforms

During the last twenty years, Western Europe has been characterised by both high unemployment and low growth as compared to the United States. However, in the last decade, experiences have been diverse among European countries. Several smaller countries have managed to reduce unemployment substantially, whereas the large EU countries (France, Germany, Italy and Spain) have been less successful (see Chapters 1 and 2). As discussed at length in last year's EEAG report (EEAG 2003), Germany is the EU country that has suffered the worst stagnation.

Macroeconomic performance is intimately associated with the functioning of pay setting. It influences output and employment in a number of ways:

- Aggregate real wage moderation, as was achieved in, for example, the Netherlands in the 1980s and the first half of the 1990s, is a precondition for high equilibrium levels of output and employment, that is for high average output and employment over the business cycle.
- Aggregate wage flexibility contributes to output and employment stabilisation in the case of macroeconomic shocks. Such flexibility has become even more important than before with the common currency, as changes in relative wage costs represent the only way of changing real exchange rates among countries in the euro area.
- Relative-wage flexibility is required to reduce labour market imbalances at sectoral, occupational, and regional levels that otherwise raise equilibrium unemployment. Vivid illustrations of the importance of this factor are provided by eastern Germany and southern Italy, where a compression of the wage differentials to the other parts of the countries is a major cause of high unemployment.
- Pay differentials according to skills determine the returns to investment in education and training and thus the pace of human capital accumulation, which is a fundamental determinant of the rate of long-run growth.
- The extent to which pay is linked to individual or group performance at the level of the enterprise and the workplace has an important influence on labour productivity.

As discussed in Chapter 2, pay setting and macroeconomic performance are affected by a number of basic "institutional" factors: the generosity of unemployment insurance, the scope and design of active labour market policy, the degree of employment protection, the extent of competition in product markets, and tax levels (see also Nickell and Layard 1999 and Calmfors and Holmlund 2000). The way pay bargaining is conducted is also a fundamental determinant of macroeconomic performance. This chapter assesses the on-going developments of pay-setting systems in the European countries, including the new EU member states, and gives recommendations on appropriate reforms.

The chapter is structured in the following way. Section 1 reviews the present pay-setting practices in the European countries. Section 2 analyses the advantages and disadvantages of various systems. Section 3 discusses possible future developments. Section 4 offers some normative conclusions as to what pay-setting systems to strive for.

1. A review of pay-setting systems in Europe

The most striking observation on pay-setting systems in Europe is probably their diversity and the number of country-specific features. There is no such thing as a uniform European model of wage setting. Still most countries show many similarities. To characterise pay setting, we focus below on two key aspects. The first is the importance of collective bargaining and trade unions. The second aspect concerns the level at which collective bargaining occurs (the degree of centralisation) and the extent of co-ordination among various bargaining units.

1.1 Unionisation and the coverage of collective agreements

A key common feature in most western European countries is the importance of collective agreements. As shown in Table 3.1, collective agreements cover over 60 percent of all employees in most of the current EU countries, and in some of them (Austria, Belgium, Denmark, Finland, France, the Netherlands, Spain, and Sweden) coverage is even above 75 percent. In most cases, coverage is higher in the total economy than in the market sector. This reflects the fact that collective agreements usually cover a larger fraction of the labour force in the public than in the private sector.

The coverage rates of collective agreements are much more similar among the current EU countries than unionisation rates. The latter vary from only 10 to 15 percent in France and Spain to 70 to 90 percent in Belgium and the Scandinavian countries. The similarity of coverage rates, despite the large differences in union density, can be explained by various extension mechanisms: in some countries employers choose voluntarily to extend collective agreements to all employees. In others they are legally required to do so. Most present EU countries – though not the Scandinavian ones – also have legal provisions for extending sectoral collective agreements to non-unionised firms in the sector (Ebbinghaus and Visser 2000; Calmfors et al. 2001).

Table 3.1

Coverage of collective agreements and unionisation[a]

	Total economy (2001)		Market sector (mid 1990s)	
Country	Coverage	Unionisation	Coverage	Unionisation
Old EU member states				
Austria	98	40	97	34
Belgium	100	69	82	44
Denmark	85	88	52	68
Finland	90	79	67	65
France	90	9	75	< 4
Germany	67	30	80	25
Greece		32		
Ireland				43
Italy		35		36
Luxemburg	60	50		
Netherlands	78	27	79	19
Portugal	62	30	80	< 20
Spain	81	15	67	< 15
Sweden	94	79	72	77
UK[b]	36	29	35	19
New EU member states				
Cyprus	65-70	70		
Czech Republic	25-30	30		
Estonia	29	15		
Hungary	34	20		
Latvia	< 20	30		
Lithuania	10-15	15		
Malta	60-70	65		
Poland	40	15		
Slovakia	48	40		
Slovenia	100	41		
Other countries				
Australia	22 (23)[c]	23		
Canada	32	30[g]		
Japan	21	22[h]	21	24
New Zealand	45[d]	22		
Norway	70-77[e]	55[h]	62	44
Switzerland	53[f]	23[h]	50	22
US	15	14[h]	13	10

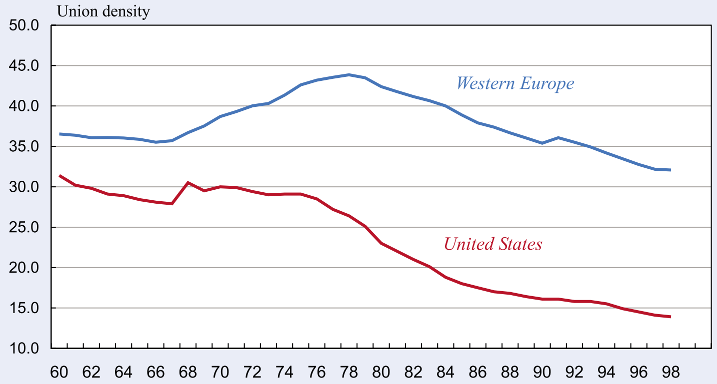
Notes: [a] Coverage refers to the percentage of employees covered by collective agreements and unionisation to the percentage of employees with union membership; [b] Figures do not include Northern Ireland; [c] The parenthesis refers to the coverage of wage awards (see Section 1.1) and to 2000; [d] 1997; [e] 2000–01; [f] 1994; [g] 2000; [h] 1996–98.

Sources: *Industrial Relations in the EU Member States and Candidate Countries* (2002) for the total economy and Ebbinghaus and Visser (2000) for the market sector in most cases. The sources for the total-economy coverage data are *Aus-tralian Workplace* (2003) for Australia, http://www.gov.nf.ca/labour/unionization_rates (2002) for Canada, *Industrial Rela-tions in the EU, Japan and the US* (2002) for Japan and the US, Bray and Walsh (1998) for New Zealand, http://www.eiro.eurofound.ie/2002/12/study/tn0212102s for Norway, and Ochel (2001) for Switzerland. The sources for total-economy unionisation data are Ebbinghaus and Visser (2000) for Japan, Norway, and the US, OECD for Canada and Switzerland, and ERA (2003) for New Zealand. Differences among countries should be taken only as broadly indicative, as data are not always exactly comparable.

The main outlier in Western Europe in terms of coverage of collective agreements is the United Kingdom, where the overall coverage rate in 2001 was estimated at 36 percent. This reflects a process where coverage has fallen pari passu with unionisation over the last twenty years. According to Brown et al. (2000), around half of all employees and around 2/3 of employees in the private sector now have their wages set unilaterally by employers in the United Kingdom. The development in New Zealand, and also in Australia, has been similar to that in the United Kingdom: both coverage of collective agreements and unionisation have fallen dramatically, although the development in these countries occurred mainly in the 1990s. For New Zealand, Bray and Walsh (1998) reported that in the mid-1990s around 50 percent of all employment contracts were between an individual employee and an employer. The developments in the United King-

Figure 3.1

UNIONISATION TRENDS IN WESTERN EUROPE AND THE UNITED STATES



Note: Union density (union membership relative to employment) for Western Europe is a weighted average of Austria, Belgium, Denmark, Finland, France, western Germany, Ireland, Italy, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom.

Source: Ebbinghaus and Visser (2000).

dom, New Zealand and Australia imply that the industrial relations systems there have approached the US system. In most Western European countries, except the United Kingdom, coverage rates have remained quite stable, even though there have been significant reductions in unionisation rates in most of them over the last two decades (the exceptions are the Scandinavian countries and Belgium; see Ebbinghaus and Visser 2000, Calmfors et al. 2001, and Ochel 2001). A summary picture of these reductions is given in Figure 3.1, which shows how average union density in Western Europe declined from 44 percent in 1979 to 32 percent in 1998.

It is evident from Table 3.1 that the new EU member states are very different from the present ones in terms of both coverage of collective agreements and unionisation. With the exception of Slovenia (with almost 100 percent coverage), Cyprus and Malta, coverage is much lower than in Western Europe. Unionisation rates are also very low in some of the new member states. In Estonia, Lithuania, Poland and Hungary union density is around 20 percent or lower. This reflects to a large extent the difficulties of the old trade unions in these countries, which did not play a wage-bargaining role under communism, to adapt and obtain legitimacy with employees as well as the difficulties of building up new unions (Flanagan 1998).

1.2 Bargaining levels

Table 3.2 gives a summary picture of how collective bargaining is conducted in different countries. Again there are large differences among countries, to a large extent along the same lines as the differences in the coverage of collective agreements. In the present EU countries, the most important bargaining level is usually the sectoral one. This applies to Austria, Denmark, Germany, Greece, Italy, the Netherlands, Portugal, Spain and Sweden. In several of these countries (primarily Austria, Denmark, Germany and Sweden), there is a strong element of pattern bargaining, with the engineering sector usually acting as a wage leader, setting the pace for the whole economy.

The standard situation in the present EU member states is one of multi-level (or at least two-tier) collective bargaining, where multi-employer bargaining at the sectoral level is complemented to a smaller or larger extent by bargaining at the enterprise level on the implementation of the sectoral agreements. The general trend over the last twenty years has been that the scope for local bargaining has increased (Traxler et al. 2001; Calmfors et al. 2001; Traxler 2003). This picture is confirmed by the development of various measures of bargaining co-ordination that seek to measure the importance of the different bargaining levels (see also Section 2.1). According to Visser (2000), co-ordination decreased from the mid-1970s to the mid-1990s in ten out of thirteen EU countries examined.[1] A similar picture is given by Ochel (2000), who found that co-ordination decreased in eight out of thirteen EU countries between 1975–79 and 1995–99.[2]

However, the only current EU country where single-employer bargaining at the local level has become completely dominating is the United Kingdom, where multi-employer bargaining at the sectoral level has almost ceased to exist (Brown et al. 2000; Nickell and

[1] The ten countries are Austria, Belgium, Denmark, Finland, France, Germany, Italy, Spain, Sweden and the United Kingdom. According to Visser, co-ordination increased in Ireland, the Netherlands and Portugal. Outside the EU, co-ordination was found to have decreased in Switzerland but to have remained stable in Norway.

[2] Concerning the EU countries, the difference between Visser and Ochel is that the latter found bargaining co-ordination to have decreased in Portugal, increased in Finland and Italy and remained unchanged in Germany. As to countries outside the EU, Ochel reports a decrease in co-ordination in Australia, Canada, New Zealand, Norway and Switzerland and unchanged co-ordination in Japan and the United States.

Table 3.2

Bargaining levels

Country	National guidelines	Inter-sectoral level	Sectoral level	Enterprise level
Old EU member states				
Austria	Pattern bargaining		XXX	X
Belgium	Centrally agreed guidelines for wage increases with the government 2003–04	XXX	X	X
Denmark	Pattern bargaining	XX	XX	X
Finland	Tripartite national pay agreement 2003–04	XXX	XX	X
France			X	XX
Germany	Pattern bargaining		XXX	X
Greece	National general collective agreement 2002–03	XX	XXX	X
Ireland	Tripartite national pay agreement 2003–04	XXX	X	X
Italy	Social pacts with government 1993 and 1998 setting guidelines for the wage-bargaining process		XX	X
Luxemburg			XX	XX
Netherlands	Centrally agreed ceiling for wage increases with government 2003; tripartite national wage freeze 2004–05	XX	XXX	X
Portugal			XXX	X
Spain	Centrally agreed guidelines for wage increases 2003	XX	XXX	X
Sweden	Intersectoral agreements setting guidelines for the wage-bargaining process; pattern bargaining		XXX	XX
UK			X	XXX
New EU member states				
Cyprus			XXX	X
Czech Republic	Tripartite national agreements on minimum wages		X	XXX
Estonia	Tripartite national agreements on minimum wages		X	XXX
Hungary	National guidelines for wage increases agreed with government and tripartite national agreements on minimum wages	X	XX	XXX
Latvia	Tripartite national agreements on minimum wages	X	X	XXX
Lithuania			X	XXX
Malta				XXX
Poland	National guidelines for wage increases agreed with government and tripartite national agreements on minimum wages		X	XXX
Slovakia	Tripartite national agreements on minimum wages		XX	X
Slovenia	Tripartite national pay bargains	XXX	XX	X
Other countries				
Australia	National wage awards for minimum wages	X	XX	XXX
Japan	Pattern bargaining			XXX
New Zealand			X	XXX
Norway	Pattern bargaining; tripartite agreement on guidelines for wage increases 2003	XX	XXX	X
Switzerland			X	XX
US				XXX

Notes: XXX = dominating level
XX = important, but not dominating, level
X = existing level

Sources: *Industrial Relations in the EU Member States and Candidate Countries (2002)*, *Collective Bargaining Coverage and Extension Procedures* (2002), individual Eiroline country reports. For New Zealand: Bray and Walsh (1998).

Quintini 2002). Again, similar developments have occurred in New Zealand and Australia, where the earlier systems of letting government tribunals determine sector, and occupation-based national wage awards were replaced in the 1990s by a system of basically single-employer bargaining (Honeybone 1997; Bray and Walsh 1998). France is also a country where the enterprise is the most important bargaining level (in recent years stimulated by government financial incentives for firms to conclude local collective agreements on working time reductions), although bargaining at the enterprise level coexists with bargaining at the sectoral level (Jefferys 2000; Dufour 2003; Eironline France 2003).

The enterprise is the dominating bargaining level in most of the new EU member states (the Czech Republic, Estonia, Hungary, Malta, Poland, Latvia and Lithuania). The sectoral level is dominating in Cyprus and of substantial importance in the Slovak Republic and Slovenia. One important explanation of the limited role of sectoral bargaining in the former communist countries is that it has proved difficult to organise employers' associations in a situation of rapid structural change, where many old (state) firms have been closed down or privatised and many new firms have been started (Flanagan 1998).

Perhaps somewhat surprisingly, the trend towards greater importance of the local bargaining level has in many of the current EU countries occurred at the same time as there have been *social pacts* between the peak-level labour market organisations, sometimes also involving the government as a third actor, setting national norms for pay increases to be negotiated at the sectoral level. Indeed, such agreements became more frequent in the pre-EMU period in the 1990s as a means to promote real wage restraint without resorting to inflation and exchange rate depreciations. Such income policies have also been used frequently in some EMU countries after 1999 as a means to restrain wage increases.[3] Table 3.2 also gives an overview of the extent to which such attempts at co-ordination of wage increases have been made recently.

The most comprehensive central agreements in force are probably those in Finland and Ireland, where the peak-level labour market organisations agreed low wage increases with the government for 2003–04 in exchange for tax cuts (Finland) or other changes in government policies (Ireland). Tripartite bargaining has also taken place in the Netherlands. For 2003, the peak-level labour market organisations agreed on a ceiling for wage increases in exchange for cuts in taxes and social insurance contributions (Eironline Netherlands 2002) and for 2004–05 they accepted a pay freeze in exchange for a government commitment to refrain from reductions of certain expenditures. Another recent example of tripartite bargaining is Belgium, where a central "indicative norm" on wage increases was negotiated for 2003–04, at the same time as the government undertook to implement certain employment measures.[4] National central agreements on wage increases have also been negotiated between peak-level employer organisations and union confederations in Greece and Spain. Italy and Sweden provide examples of weaker co-ordination efforts, where earlier social accords (Italy) or inter-sectoral agreements (Sweden) established guiding principles for wage setting and bargaining procedures.[5] Germany provides an exception to the pattern described, as the attempts there of achieving co-ordinated wage restraint through social pacts (Bündnis für Arbeit) have been largely unsuccessful.

Social pacts have also played a much smaller role in the new EU countries than in the old ones. Slovenia is the only new member country where tripartite national pay bargains have a dominating influence, whereas national guidelines agreed centrally with the government play some role in Hungary and Poland. In the other ex-socialist countries joining the EU, tripartite bargaining at the national level applies only to minimum wages.

2. Advantages and disadvantages of various pay-setting systems

There is a large literature on the advantages and disadvantages of various pay-setting systems. This literature has emphasised the effects on:

- the aggregate (equilibrium) wage and employment levels
- the flexibility of the aggregate wage level
- relative wages and wage dispersion
- incentives for effort and productivity

2.1 The aggregate wage and employment levels

Much of the literature on pay-setting systems has focused on the determination of the aggregate wage level. This literature has usually tried to distinguish between, on the one hand, the effects of collective bargaining and unionisation *per se,* and, on the other hand, the effects of different degrees of co-ordination/centralisation of the collective bargaining that takes place.

Theoretical modelling of trade union behaviour usually assumes that unions strive for real wages that trade off the benefits of a wage increase for employed members against the income (and utility) loss of those members who may become unemployed because of the wage rise. The bargaining process between unions and employers is modelled as providing a negotiated wage that balances unions' wage objectives against employers' interests in high profits (see, for example, Nickell and Layard 1999 or Calmfors and Holmlund 2000). A well-known argument based on such an analytical framework is that a high degree of co-ordination of collective wage bargaining (which may come about either because

[3] See, for example, Crouch (2000a, b), Calmfors et al. (2001), and Calmfors (2001) for more detailed discussions.
[4] The Competition Act of 1996 stipulates formally that wage bargaining must be based on a pay norm set by the Central Economic Council (an advisory body to the government) according to which wages should not rise any faster than in Belgium's three main neighbouring countries (France, German and the Netherlands) (Calmfors et al. 2001; Eironline Belgium 2003).
[5] In Italy, social accords of 1993 and 1998 established a two-tier wage-bargaining process, according to which wage increases at the sectoral level should be linked to forecast inflation, whereas bargaining at the enterprise level should be based on productivity increases (Baccaro et al. 2002; Bertola and Garibaldi 2003). In Sweden, an agreement between a number of industry unions and employers' associations in 1997 (the Industrial Agreement) has sought to establish a bargaining framework conducive to industrial peace and wage moderation with the aim of strengthening the role of the manufacturing sector as wage leader (Elvander 1999). Similar agreements on the bargaining framework have later been concluded in the public sector.

bargaining is formally conducted at a high level, such as the national one, or because separate bargaining units co-ordinate their actions at that level) promotes real wage restraint because it allows negative externalities of high wage levels for individual bargaining areas to be internalised. Wage setters will take into account that high wages for one group may have a negative impact on other groups. This could occur for several reasons (Calmfors, 1993):

- because the aggregate consumer price level is pushed up;
- because the prices of inputs to other production sectors are increased;
- because high wages in one sector cause job losses there that reduce employment opportunities for everyone in the economy;
- because such job losses raise costs of unemployment benefits and reduce the tax base; or
- because high wages for one group can give rise to pure envy effects.

For these reasons, one should expect collective bargaining at the sectoral level to result in higher real wage levels, and thus also higher unemployment, than co-ordinated multi-sector bargaining, as negative externalities will be internalised to a lesser extent. This hypothesis receives strong empirical support from attempts to relate unemployment differences among countries to differences in labour-market institutions, as is illustrated in Table 3.3 (see also Calmfors et al. 2001 and Calmfors 2001).[6]

It has been more difficult to show in time series wage equations for individual countries that periods with highly co-ordinated collective bargaining have been associated with wage moderation (see, for example, Hartog 1999 on the Netherlands or Walsh 2002 on Ireland), although Koskela and Uusitalo (2003) – after controlling for other factors – report significantly lower wage increases in Finland in years with centralised wage agreements than in years when the main locus of bargaining has been the sectoral level.

It is less clear, both theoretically and empirically, how decentralised single-employer collective bargaining at the enterprise level compares with multi-employer bargaining at the sectoral level. If various degrees of internalisation of negative externalities were the whole story, then enterprise-level bargaining would imply an even higher aggregate wage level than sector-level bargaining, since the degree of

[6] Some of the earlier studies in the table exploit only cross-section variation among countries, but later studies use panel data, thus exploiting also time-series variation.

Table 3.3
Unemployment rates under various bargaining regimes (ceteris–paribus differences to decentralised systems) in various studies[a)]

A: Studies finding a hump-shaped relationship between bargaining co-ordination and unemployment

	Study	Intermediate co-ordination	High co-ordination	Measure of bargaining structure[b)]
1	Zetterberg (1995)[c)]	2.6	- 1.5	Centralisation
2	Bleaney (1996)[d)]	3.5	- 2.1	Centralisation/ co-ordination
3	Scarpetta (1996)[e)]	0.9	- 12.0	Centralisation
4	Elmeskov et al. (1998)[f)]	1.3	- 2.4	Centralisation
5	Elmeskov et al. (1998)[g)]	1.2	- 4.4	Centralisation/ co-ordination
6	Elmeskov et al. (1998)[h)]	6.9	- 4.6	Co-ordination
7	Cukierman & Lippi (1999)[i)]	5.8	3.2	Centralisation
8	Daveri & Tabellini (2000)[j)]	5.8	- 7.2	Geographical[k)]
9	Nicoletti *et al.* (2001)[l)]	3.6	- 2.2	Centralisation/ co-ordination
	Average	**3.5**	**- 3.9**	

B: Studies finding a monotonic relationship between bargaining co-ordination and unemployment

	Study	Intermediate co-ordination	High co-ordination	Measure of bargaining structure[b)]
1	Layard et al. (1991)	- 4.7	- 10.4	Co-ordination
2	Zetterberg (1995)[m)]	- 0.4	- 2.4	Centralisation
3	Scarpetta (1996)[n)]	- 6.2	- 12.3	Co-ordination
4	Bleaney (1996)[o)]	- 2.0	- 3.9	Co-ordination
5	Elmeskov et al. (1998)[p)]	- 0.8	- 5.7	Co-ordination
6	Hall & Franzese (1998)[q)]	- 2.6	- 5.1	Co-ordination
7	Iversen (1998)[r)]	- 3.3	- 4.1	Centralisation
8	Nickell & Layard (1999)[s)]	- 4.6	- 6.0	Co-ordination
9	Blanchard & Wolfers (2000)[t)]	- 4.4	- 8.9	Centralisation
10	Belot & van Ours (2001)[u)]	- 2.6 (0)	- 5.2 (0)	Co-ordination
11	Belot & van Ours (2001)[v)]	- 1.9	- 1.9	Co-ordination
12	Nickell et al. (2003)[x)]	- 7.2	- 14.4	Co-ordination
	Average	**- 3.4**	**- 6.7**	

Notes:
[a] The table shows how the unemployment rates under intermediate and high co-ordination/centralisation differ from that under decentralisation/low co-ordination when other factors are controlled for. High co-ordination can be interpreted as bargaining/co-ordination at the national level, intermediate co-ordination as bargaining/co-ordination at the sectoral level and low co-ordination/decentralisation as uncoordinated bargaining at the enterprise level.
[b] Measures of centralisation capture the level at which actual bargaining takes place. Measures of co-ordination try to capture informal co-ordination among formally independent bargaining units as well.
[c] Equation (5) in Table 4.14. We have classified the countries ranked 1–3 and 7–9 as centralised, the countries ranked 13–17 as intermediately centralised and the countries ranked 4–6 and 10–12 as decentralised.
[d] Equation (4) in Table 5. Bleaney distinguishes between highly centralised systems, highly decentralised systems, moderately centralised systems with a high degree of corporatism and moderately centralised systems with a low degree of corporatism. In the table, the last two categories have been amalgamated to one.
[e] Equation (8) in Table 1. The entry for intermediate centralisation refers to the country ranked 14 and the entry for co-ordination to the country ranked 1. The comparison is with the country ranked 17.
[f] Equation (2) in Table 2.
[g] Equation (4) in Table 2.
[h] Equation (4) in Table 4. In the equation, taxes and bargaining co-ordination are interacted. The effects are evaluated at the average tax ratio for the sample period 1983–95.
[i] Equation 4.5 in Table 4.2. In the regression, centralisation is interacted with central bank independence. The effect in the table is evaluated at the sample average for the central bank independence variable. At high levels of central bank independence the hump-shaped relationship between centralisation and unemployment turns into a positive (!) monotonic one (that is with higher centralisation being associated with higher unemployment).
[j] Equation (5) in Table 9. In the equation, taxes and bargaining co-ordination are interacted. The effects are evaluated at the average tax ratio for 1983–95.
[k] This study associates the Scandinavian countries with high co-ordination, the European continental countries with intermediate co-ordination, and the Anglo-Saxon countries with low co-ordination/decentralisation.
[l] The dependent variable is non-employment and not unemployment. The study has not been included when computing the averages.
[m] Equation (3) in Table 4.14. The countries ranked 1–5 are classified as highly co-ordinated, the countries ranked 6–10 as intermediately co-ordinated, and the countries ranked 11–17 as uncoordinated/decentralised.
[n] Equation (2) in Table 1.
[o] Equation (1) in Table 5.
[p] Equation (1) in Table 2.
[q] Decade equation in Table 2. Countries have been assigned co-ordination values from 0 (lowest co-ordination) to 1 (highest co-ordination). In our calculation, high co-ordination is 0.875, intermediate co-ordination is 0.5, and low co-ordination 0.125. In the regression the co-ordination variable is interacted with a central bank independence variable ranging from 0 to 1. In the calculation in the table the central bank independence variable has been assigned the value 0.5.
[r] Full model in Table 2. High co-ordination refers to the average score for the three countries with the highest co-ordination, low co-ordination to the three countries with the lowest co-ordination, and intermediate co-ordination to the halfway distance between the two groups. In the regression the co-ordination variable is interacted with a central bank independence variable ranging from 0 to 1. In the calculation in the table the central bank independence variable has been assigned the value 0.5. Note that the monotonic relationship does not hold at high degrees of central bank independence. Then the relationship is instead u-shaped.
[s] The equation explains the log of the unemployment rate. In the calculation of the effect on the unemployment rate, it has been assumed that unemployment under decentralisation is equal to the average rate of unemployment among the countries studied during the estimation period.
[t] Equation (1) in Table 1. In the equation, macroeconomic shocks and bargaining co-ordination are interacted. The entries show the differences in the increase of unemployment between the 1960–65 period and the post-1995 period.
[u] Equation (1) in Table 3a. The equation has been estimated without fixed country and time effects. With such effects, there are no significant unemployment differences among various bargaining regimes as indicated by the zeros in the parentheses.
[v] Equation (2) in Table 3b. This equation interacts various labour market institutions with each other (for example employment protection and co-ordination as well as union density and co-ordination). The effects in the table are evaluated at the average values of employment protection and union density in 1960–94. The equation has been estimated with fixed country and time effects.
[x] Equation (1) in Table 5. This equation interacts various institutional variables with each other (for example union density and co-ordination as well as the employment tax rate and co-ordination); the effects in the table are evaluated at the average sample values of union density and tax rates. The effects in the table are steady-state effects.

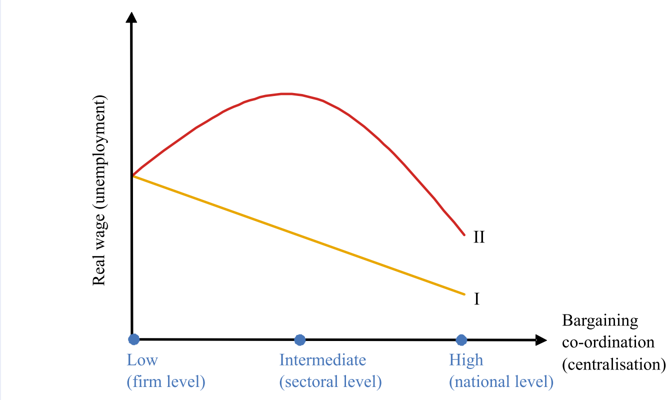
Source: Calculations by the EEAG.

internalisation is lower. In this case there is thus a monotonic negative relationship between, on the one hand, the degree of co-ordination and, on the other hand, the real wage and unemployment (curve I in Figure 3.2). But enterprise-level bargaining may also have a wage-restraining effect because it increases competitive pressures to restrain wages. These pressures may be weak in sectoral bargaining, since all domestic competitors in a sector are then exposed to similar wage increases, which makes it easy to shift them on to prices. If the competition effect due to loss of market power outweighs the reduction in the internalisation of negative externalities, enterprise bargaining leads to lower wage levels than sectoral bargaining. In that case, there is a hump-shaped relationship between, on the one hand, the degree of co-ordination of collective bargaining and, on the other hand, the levels of real wages and unemployment (curve II in Figure 3.2).[7] The height of the hump depends on the extent of competition from abroad. Because sectoral bargaining only reduces competitive pressures from other domestic producers, the hump will be less pronounced the larger is the degree of competition from abroad (Danthine and Hunt 1994; Calmfors et al. 2001).

[7] This hypothesis was originally formulated by Calmfors and Driffill (1988). Note that the hump-shaped relationship presupposes that the degree of bargaining co-ordination is changed along the dimension firm-sector-nation. Changes in the degree of co-ordination along the dimension of various types of labour would have other effects. For example, decentralising collective bargaining so that different types of labour in each firm negotiate separately would raise the aggregate wage level if a wage increase for one group reduces labour demand for other groups (that is, if the various types of labour are complements in labour demand), since this negative externality cannot then be taken into account.

Figure 3.2

THE RELATIONSHIP BETWEEN BARGAINING CO-ORDINATION (CENTRALISATION) OF COLLETIVE BARGAINING AND THE REAL WAGE (UNEMPLOYMENT)



The empirical research on the determination of aggregate unemployment in Table 3.3 does not give a clear verdict on how collective bargaining at the enterprise level compares with sectoral bargaining. Almost half the studies indicate that decentralisation to the enterprise level results in lower unemployment than sectoral bargaining, whereas the other half gives the reverse result. As can be seen, there is a tendency in the studies to find more support for the hump-shape hypothesis with "centralisation measures", focusing on the actual level of bargaining, than with "co-ordination measures", attempting to capture also informal co-ordination among separate bargaining units. But the studies finding a hump-shaped relationship also agree that bargaining under high centralisation/co-ordination (at the multi-sector or national level) is associated with lower unemployment than bargaining under decentralisation/low co-ordination (at the enterprise level).

There is, however, a consensus in the empirical literature that less importance of collective bargaining and unions *per se* – given the degree of co-ordination of the collective bargaining that takes place – is associated with lower wages or factors likely to be correlated with lower wages. Table 3.4 reports estimates of the effects on unemployment from cross-section and panel data sets of countries. There is also a large body of microeconomic evidence indicating that higher unionisation and coverage of collective agreements lead to higher wages and lower profitability of firms (see, for example, Addison and Hirsch 1989, Belman et al. 1997, Kleiner 2001 or Askildsen and Nilsen 2002). This is, of course, to be expected, since the main raison d'être of trade unions is to push up wages and various employee benefits above the levels that would otherwise prevail.

An important conclusion is that the chances that decentralisation of collective bargaining is associated with wage restraint increase if such a development is associated with a reduction in unionisation and the coverage of collective agreements. This is all the more so, as there is some evidence that low unionisation has a larger unemployment-reducing effect under decentralised bargaining than under intermediate or high centralisation/co-ordination: for example, Belot and van Ours (2001) find that

Table 3.4
Unemployment rates under various rates of union density and coverage of collective agreements (*ceteris– paribus* differences to 15% union density or coverage) in different studies[a)]

	Study	45%	75%	Explanatory variable
1	Layard et al. (1991)	2.5	4.9	Coverage
2	Scarpetta (1996)[b)]	1.8	3.6	Union density
3	Elmeskov *et al.* (1998)	0	0	Union density
4	Hall & Franzese (1998)	0	0	Union density
5	Iversen (1998)	0	0	Union density
6	Nickell & Layard (1999)[c)]	2.8	6.5	Coverage
		3.7	9.0	Union density
		6.5[d)]	15.5[d)]	Total
7	Nickell & Layard (1999)[e)]	2.4	4.8	Union density
8	Nicoletti et al. (2001)[c)]	2.1	4.2	Union density
9	Belot & van Ours (2001)[f)]	1.8 (0)	3.6 (0)	Union density
10	Belot & van Ours (2001)[g)]	4.7	9.4	Union density
11	Nickell et al. (2003)[h)]	0 (2.1)	0 (4.2)	Union density

Notes:
[a)] The table shows how much higher the unemployment rate is at 45% and 75% density or coverage rates compared to 15% density or coverage rates when other factors are controlled for.
[b)] Equation (2) in Table 2.
[c)] The equation explains the log of the unemployment rate. In the calculation of the effect on the unemployment rate, we have assumed that unemployment at 15% density and coverage rates is equal to the average rate of unemployment among the countries studied during the estimation period.
[d)] The sum of coverage/density effects.
[e)] The dependent variable is non-employment and not unemployment.
[f)] See footnote (u) to Table 3.
[g)] Equation (2) in Table 3B. The equation interacts various labour market institutions with each other (for example union density and co-ordination). The entries in the table refer to the effects of changes in union density under decentralisation. At higher levels of co-ordination there are no significant effects.
[h)] Equation (1) in Table 5. The figures not in parenthesis are long-run effects. The figures in parenthesis are impact effects. The regression equation interacts union density and co-ordination. The effects in the table are evaluated at the sample average of co-ordination.
Source: Calculations by the EEAG.

variations in unionisation only affect unemployment under decentralised bargaining.

EMU and different bargaining structures

An issue that has received much interest in the recent research literature on bargaining co-ordination is how monetary unification in Europe affects wage outcomes.

One strand of literature has focused on the interaction between the central bank and wage setters in an economy with monetary policy autonomy, that is a flexible-exchange rate economy outside the EMU (Coricelli et al. 2000, Soskice and Iversen 2000). The starting point is that, provided there is some co-ordination of collective bargaining, wage setters could be expected to act strategically and take into account the anticipated responses of the central bank to wage settlements. More precisely, central bank behaviour can act as a *deterrent* to high wages, because wage setters realise that wage increases that threaten the price stability goal of the central bank will trigger an interest rate rise that raises the cost of high wage increases in terms of employment losses (the effective elasticity of labour demand). For a country outside EMU, with a flexible exchange rate and an inflation-targeting central bank, like Sweden, an extra incentive for wage restraint is thus added under these conditions. But this incentive does not work for the EMU countries, as national wage setters will always be too small relative to the ECB to be able to trigger any monetary policy reaction.

So, one could argue that monetary unification weakens the incentives for wage restraint when there is some co-ordination of collective bargaining. The argument has been made that the effect is larger with only intermediate co-ordination (bargaining at the sectoral level) than with high co-ordination. The reason is that in the latter case the incentives for wage moderation may be very strong anyway because of various internalisation effects, so the potential deterrence role of monetary policy may then not matter much anyway (Soskice and Iversen 2000; Holden 2001).[8] But with weaker internalisation effects in the case of intermediate co-ordination, the loss of a deterring national monetary policy in EMU is more serious. This might be one explanation of why it may be difficult for Germany – with its heavy reliance on sectoral bargaining – to achieve sufficient real wage moderation (see also Soskice and Iversen 1998 and Hall and Franzese 1998).

2.2 Aggregate wage flexibility

Another aspect of pay setting concerns the degree of aggregate nominal wage flexibility as an adjustment mechanism in the case of macroeconomic shocks. This aspect has become more important than before in the euro zone, as there is no longer any nominal exchange rate channel for changing real exchange rates among the member countries.

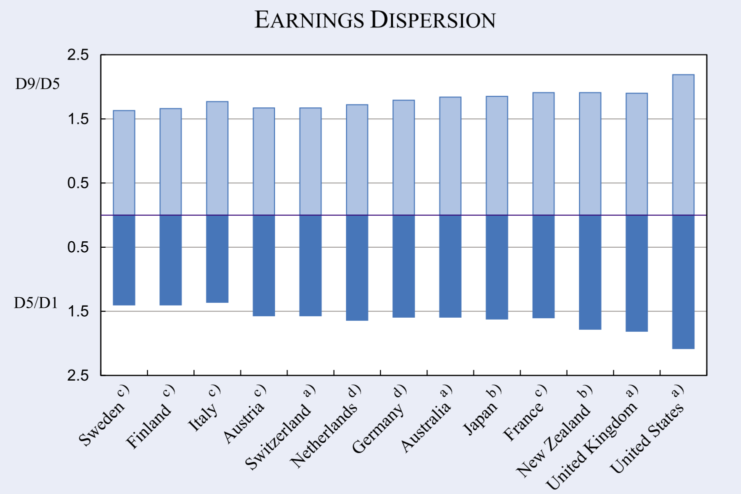
An old argument already dates back to Keynes (1936), who argued that the concern of employees over relative wages would make them oppose money wage reductions, unless all wages were cut simultaneously so as to preserve existing wage relativities. A more modern version of this co-ordination failure argument is that because of product demand interrelationships, the benefit of changing wages (and thus also prices) in individual firms depends on whether or not other firms do the same (Ball and Romer 1991). With small demand shocks, adjustment costs may make it unprofitable for each firm to change the wage independently of what happens in other firms. With very large shocks, it will always pay to adjust the wage, even if others do not. But for shocks of intermediate size, the individual wage setter may gain from adjusting only if others do the same. This could give rise to *multiple equilibria:* which one materialises will then depend on the expectations of what other wage setters will do. Co-ordination of pay setting is a way of removing such indeterminacy and ensuring that the economy ends up in a good equilibrium in which wages adjust.

A similar argument can be made with respect to the length of wage contracts, which is an important determinant of nominal wage flexibility. In systems with decentralised and unsynchronised wage setting, contract length may be chosen in a socially inefficient way (Ball 1987). Most notably, there is an aggregate-demand externality: wage setters in an individual bargaining area do not take into account that a long-term wage contract on their part may contribute to aggregate demand fluctuations in the economy. The reason is that money wage stickiness in a part of the economy means lower flexibility of the aggregate price level in the case of nominal

[8] Iversen (1998) did indeed find empirical support for the hypothesis that a more non-accommodating central bank has a larger unemployment-reducing effect at intermediate levels of co-ordination than at high or low levels. But Hall and Franzese (1998) and Cukierman and Lippi (1999) found only partial empirical support for the theoretical predictions.

shocks. With co-ordination of wage setting, wage setters have an incentive to internalise this externality. This effect works towards shorter wage contracts and thus more nominal wage flexibility, when there is more co-ordination.[9]

Figure 3.3



Notes: D9, D5 and D1 refer to earnings deciles. a) 1998; b) 1997; c) 1996; d) 1995.
Source: OECD database on earnings deciles; calculations by the EEAG.

At the same time, it should be recognised that decentralised wage setting is easier to combine with various systems of performance-related pay (see Section 2.4), including profit-sharing arrangements, which increase aggregate pay flexibility. Also, lower unionisation and less importance of collective agreements are likely to make labour markets conform more closely to the textbook competitive model, with demand and supply factors exerting a more direct influence. Overall, however, there has been little empirical research on the importance of various bargaining systems for nominal wage flexibility.

2.3 Relative wages and wage dispersion

The determination of relative wages is an equally important aspect of wage setting as the determination of the aggregate wage level. Aggregate real wage restraint is not enough for achieving low unemployment if there are large demand and supply imbalances between regions, sectors, occupations and skills.

Trade unions typically regard a "fair distribution of wages" as a central goal. Sometimes the objective is formulated as "equal pay for equal work", but many times the objective is the even more far-reaching one of general pay compression. This latter objective has been particularly important in the Scandinavian countries and Italy.[10] Reducing pay compression is a rational objective for a trade union if the utility gain for an employer member is seen as larger the lower is the initial wage. Then a union will be more inclined to trade off wage increases against employment losses for low-wage than for high-wage members. Another factor working in the same direction is that the income loss in case the wage rise makes a member unemployed (the wage when employed minus unemployment compensation) is smaller the lower the initial wage is (provided that unemployment compensation is fixed and thus independent of the wage).

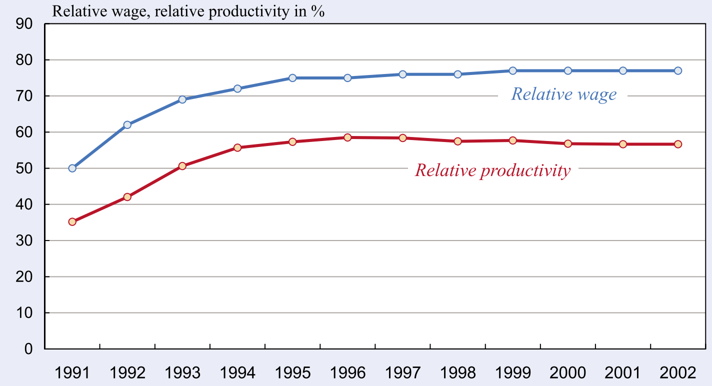
There exists overwhelming evidence that high degrees of unionisation and coverage of collective agreements compress the wage structure in all dimensions. It is also well-known that higher degrees of centralisation of collective bargaining reduce wage dispersion (see, for example, Rowthorn 1992 or Wallerstein 1999). This is illustrated in Figure 3.3, which shows that earnings dispersion is higher in New Zealand, the United Kingdom and the United States, where multi-employer bargaining is rare and rates of unionisation and coverage of collective agreements are lower than in other countries.

Reductions in wage dispersion in centralised collective agreements seem to come about mainly through higher wages at the lower end of the wage distribution. For example, Blau and Kahn (1996) found that centralisation of bargaining reduces wage dispersion by narrowing the wage differential between the 50th and 10th percentile, but has no significant effect on the differential between the 90th and 50th percentile. It is also striking how the large increases in wage dispersion in the United Kingdom over the last twenty years and in New Zealand over the last ten

[9] But, as analysed by Ball (1987), there is also an externality working in the opposite direction. It arises because wage setters in an individual bargaining area will not, under decentralisation, take into account that an increase in contract length there, and the consequent reduction in nominal wage variability, will reduce real wage variability in other bargaining areas.
[10] For example, the Trade Union Congress in Sweden sees "the possibility of achieving the basic elements of solidaristic wage policy with special wage increases for low-wage groups in order to attain equitable wage differentials" as a main advantage of co-ordinated bargaining (*Riktlinjer för samordnade förhandlingar* 2003, 19).

Figure 3.4

RELATIVE WAGE PER EMPLOYEE AND RELATIVE PRODUCTIVITY PER EMPLOYEE IN EASTERN VERSUS WESTERN GERMANY



Source: Federal Statistical Office, Germany.

years have coincided in time with de-unionisation, reduced coverage of collective agreements in general and virtual disappearance of multi-employer bargaining.

A clear-cut example in Europe of how wage policies aimed at compressing wage differentials across regions can contribute to high unemployment is Germany. As has been reported by the German Council of Economic Experts (2002), the lowest union wages in west German industry rose much more than average wages over the period from 1970 through 1999. This was a direct implication of the unions' policy of negotiating for lump sum rather than proportional wage increases. While the unemployment rates among people with high and average skills have not risen much in Germany, the unemployment rate of those who have neither vocational training nor a university degree rose from about 6 to 22 percent in the period from 1975 to 2001.[11]

The most adverse consequences of wage compression in Germany have occurred in eastern Germany. Wages per hour increased from 7 percent of wages in western Germany in 1989, before unification, to about 72 percent in 2002 (Sinn 2003). The relative wage per employee in 2002 amounted to 77 percent, while aggregate productivity (GDP per employee) had only reached a level of 57 percent of the level in western Germany (see Figure 3.4). This is a major cause of the high unemployment in eastern Germany (currently around 18 percent, see Figure 3.5).

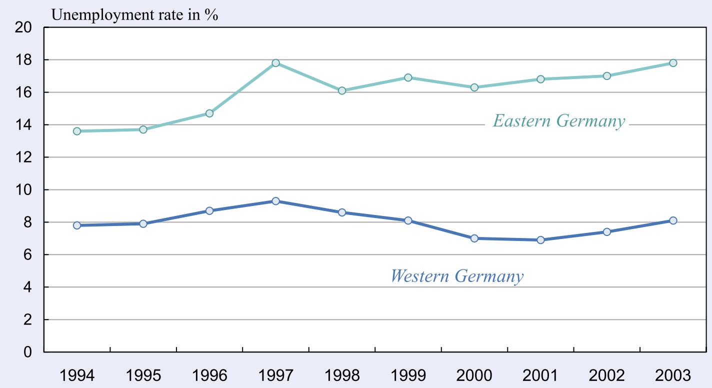
2.4 Performance-related pay

During the last two decades, it has been a general trend in most countries for firms to increasingly use pay systems to stimulate both individual and group effort of employees. This trend towards more incentive pay conflicts with traditional union policies of pay compression, as described in Section 2.3. In most Western European countries, union policies have had a large influence on the possibilities of differentiating pay both among and within firms. Sectoral wage bargaining has limited the possibilities of differentiating pay depending on individual company performance. This has been quite a binding constraint, especially in countries like Germany and Austria, where local bargaining about the implementation of sectoral agreements has played only a limited role. Within firms, collective agreements traditionally set standard pay rates for broadly defined groups or tasks based more on formal criteria than on individual performance.

An important objective for each firm is to align the incentives of the employees with those of the firm to stimulate high performance. Profit maximisation

Figure 3.5

UNEMPLOYMENT RATES IN EASTERN AND WESTERN GERMANY



Source: Federal Employment Services, Germany.

[11] IAB (2002a).

requires that this is done in as cost-efficient a way as possible. One method is close monitoring of employees combined with threats of dismissal or missed career opportunities. But monitoring is efficient as an incentive device only if the probability of discovering "shirking" is high (Nalbantian and Schotter 1997) and may therefore be costly. It will be the more so the more complex the relationship is between employee work and firm performance. Performance-related pay is therefore likely to be part of any optimal incentive package.

The optimal mix of individual pay incentives and group incentives, such as profit-related pay or employee stock ownership plans, depends on the character of production. The advantages for the employer of incentive pay linked to group rather than individual performance are greater when (i) capital intensity is high and the risks of misuse of capital equipment is large; (ii) when labour inputs are strongly complementary, so that the pay-off from encouraging co-operation among employees is high and the potential disruptive costs from conflicts over the use of differentiated pay are large; and (iii) when it is difficult to measure individual output (which explains why profit sharing and employee stock ownership plans are common in sectors with complex employee tasks and rapidly changing technology; Kruse 1996). Another advantage of profit-related pay is that it introduces more flexibility of the average pay level in the firm, as discussed in Section 2.2. One should therefore expect profit sharing to be common in firms with a high variability of performance and in new firms with uncertain prospects, which is an empirical prediction that seems to be borne out by the data (Kruse 1996).

The benefits of incentive pay seem increasingly to have been realised by employers over the last twenty years. So called *Human Resource Management* practices have been adopted by a large number of firms (Lazear 1999). These practices have been described as aiming to substitute co-operative employer-employee relationships, focused on "managing the contribution and commitment of individual employees", for more collectivist and adversarial industrial relations (see, for example, Godard and Delaney 2000 or Roche 2001). Flexible work assignment, cross training, teamwork and formal employee participation are typical elements of human resource management policies. Performance-based pay is also seen as a key ingredient (see, for example Lazear 1999, Ichniowski et al. 1996, Godard and Delaney 2000 or Rayton 2003).

Not very surprisingly, performance-based pay has been found to be associated with superior economic performance in empirical studies. For example, the profit-sharing literature has found significant links between firm performance and profit-related pay (Kruse 1993). A widely quoted study by Ichniowski et al. (1997) of productivity in steel finishing lines concluded that "innovative work practices" (incentive pay, team structures and flexible job assignments) lead to higher performance than "traditional work practices" (narrow job specifications, close supervision, hourly pay and strict work rules). A very recent study by Rayton (2003) of US firms finds that average employee compensation is significantly positively related to firm performance (in terms of stock returns and bond ratings) in high-performance firms, whereas there is no significant relationship between average employment compensation and performance in low-performance firms.

Decentralisation of pay setting to the level of the individual firm makes it easier in general to design incentive pay systems that are appropriate for the specific activities performed. Also average employee compensation can more easily be linked to firm performance in this way, because benefits in the form of profit sharing or employee stock ownership plans can best be traded off against standard wages at the local level. Indeed, profit sharing arrangements and employee stock ownership plans have often been adopted by firms in distress as an explicit part of concession bargaining at the firm level (see, for example, Bell and Neumark 1993).[12]

The standard view has been that unions are opposed to incentive pay systems because they are likely to increase wage dispersion. But it has also been claimed that higher unionisation may not necessarily make such pay systems less likely and that the key determinant of the probability that such systems are adopted is the general industrial-relations climate (Heywood et al. 1998). Interestingly, a recent study using panel data for US firms found that, although unionised firms were less likely than non-unionised firms to have profit sharing and employee stock ownership plans in 1975, they were equally likely to have adopted them subsequently (often as part of concessionary bargaining; Kruse 1996).

[12] There are, however, also many examples of such systems being adopted because firms want to raise employee compensation in periods of good performance without taking on an obligation to pay higher wages also in the future (Kruse 1996).

3. Alternative ways of decentralising pay setting

The development towards more decentralised pay setting in the current EU countries over the last two decades, which was described in Section 1.2, has taken place on the initiative of employers. Several driving factors have been pointed out:

- Standardised tasks and hierarchical Tayloristic organisation within firms seem increasingly to have been replaced by more flexible tasks and flatter hierarchies, allowing greater decentralisation of decision-making. This makes an increased use of performance-related pay systems, which have to be decided on at the enterprise/workplace level, profitable for employers (Lindbeck and Snower 2000; 2001). This development can be seen as part of a more intensive search for efficiency-enhancing measures at the level of the firm driven by increased competition (due to product market deregulations and "globalisation").
- If most of the competition for a firm comes from other domestic producers, it may regard uniform wages across a sector as an advantage because they provide a "level playing field". But increasing international competition renders this consideration less relevant. Instead, it becomes more important for each firm to be able to adjust its wage level to that of foreign competitors, which requires greater scope for wage bargaining at the level of the firm (Crouch 2000a,b; Calmfors et al. 2001).
- A desire to reduce the political power of unions by limiting their role as a national actor in general may be a third factor (Elvander 1999; Calmfors et al. 2001).

The development towards more decentralisation of pay bargaining can also be seen as an outcome of "meta bargaining" between unions and employers about the level at which wage negotiations should take place. To the extent that the relative bargaining strength of employers has increased, they may have been able to shift the locus of bargaining in their preferred direction. One possible explanation of such a shift in bargaining power is the increasing degree of international capital mobility, which gives the employer side a better "fall-back" position in the case of disagreement with unions.

Another explanation of the shift in bargaining power in favour of employers is the fall in unionisation rates that has taken place in many western European countries (see Figure 3.1 in Section 1.1). This development has been attributed to a number of structural changes in the economy (Ebbinghaus and Visser 2000; Calmfors et al. 2001). One such change is the shift in employment from the traditionally heavily unionised manufacturing sector to the private service sector with many small establishments that are costly for unions to organise. At the same time, employment in the public sector, where unionisation is in most countries higher than in the private sector (presumably because politicians for election reasons are more favourable to unions than private-sector management) has stagnated. Increased relative importance of part-time and temporary employment is usually also held as an important explanation of the trend towards lower unionisation, since employees on such contracts are likely to see smaller benefits of being unionised than permanently employed full-time employees.

The forces behind a decentralisation of pay bargaining are likely to operate also in the future. Thus, one should expect further decentralisation to occur in continental, Western European countries. But this process can take place in different ways, which may have quite different implications. We shall distinguish between three possible scenarios:

1. Massive decentralisation and de-unionisation of the Anglo-Saxon type
2. Disorganised and gradual decentralisation/de-unionisation
3. Organised decentralisation where higher-level collective agreements allow more scope for local wage setting.

3.1 Massive decentralisation and de-unionisation

The first scenario is *massive decentralisation/de-unionisation* of the type that has taken place primarily in the United Kingdom and New Zealand, but also in Australia. As discussed in Section 1, developments in these countries have not only meant a large reduction in unionisation, but also a dramatic reduction in the coverage of collective agreements and a radical shift from multi-employer to single-employer bargaining.

From a theoretical point of view, the Anglo-Saxon model has its benefits. It allows an increased use of incentive pay and more relative wage flexibility. As we discussed in Section 2.1, it is an open question to which extent collective bargaining at the enterprise level in a system with high unionisation and high coverage of collective agreements creates incentives for aggregate wage moderation as compared with higher-level bargaining. But de-unionisation and low coverage of collective agreements represent strong wage-moderating forces.

In both the United Kingdom and New Zealand, there has been much talk of trying to achieve larger 'individual variation' in employment contracts. It is, however, not clear to what extent this has happened in practice. A weaker role for collective agreements appears to have led to more legal regulation of 'minimum employment conditions' (Bray and Walsh 1998; Brown et al. 2000). Employers also often seem to have stuck to standardised employment contracts independently of the degree of trade union presence because of the cost savings implied (Bacon and Storey 2000).

A development of the Anglo-Saxon type appears very unlikely in most western European countries in the near future. Existing bargaining institutions in these countries seem to be changing only at a slow pace. One should not expect radical changes in the bargaining institutions unless there are massive reforms in the legal regulations. Indeed, it was such reforms that triggered off the dramatic changes in pay-setting systems in the United Kingdom, New Zealand and Australia.

In the United Kingdom, there was a sustained series of legal changes during the 1980s, which gradually restricted union powers. These legal reforms involved: legislation on election of union officials and secret ballots before strikes; outlawing of secondary action; making unions liable for fines and civil damages if legal rules on industrial action were not observed; *de facto* abolition of closed shops; legal recognition of the right not to belong to a union; and rules making it more difficult for unions to be recognised by employers (Gregory 1998). Even despite these radical changes, the reduction in the importance of collective bargaining has been only a gradual process. The main explanation of the decreased scope of collective bargaining has been the difficulties of unions to get recognition at new workplaces rather than de-recognition at already existing ones (Machin 2000). The legal reforms seem to have led to a situation where traditional union wage premiums have largely disappeared, and where unionisation no longer appears to cause negative productivity effects (Addison and Belfield 2001; Forth et al. 2002).

In New Zealand, the changes in wage-setting institutions were triggered by the Employment Contracts Act of 1991, which introduced completely new labour legislation. Here, unlike in the United Kingdom, no attempts were made to regulate the internal structure of unions. Instead, the guiding principle behind the new legislation was to view the employee and the employer as the primary parties to the bargaining process. Each employee must choose between bargaining on his/her own or being represented by a "bargaining agent", who could be another person or an organisation. A trade union can be such an organisation, but it cannot bargain on behalf of an employee (not even a union member) unless he/she has given it explicit bargaining authority. Legislation allows explicitly for two types of employment contracts: individual and collective ones. Single-employer bargaining is encouraged, for example, by explicit provisions prohibiting industrial action to force an employer to become a party to a multi-employer collective agreement (Honeybone 1997; Bray and Walsh 1998).

Changes in the legal regulations in Australia have been later and less radical. But the Workplace Relations Act of 1997 clearly favours collective agreements at the enterprise level and restricts the earlier use of compulsory arbitration (with "wage awards" now being confined mainly to minimum wages). The legislation also allows for individual employment contracts, although, unlike in New Zealand, these have not become the norm, but instead require an active "opt-out" (Bray and Walsh 1998).

The upshot is that dramatic changes in wage-setting systems of the type that have occurred in Anglo-Saxon countries would seem to require massive legal interventions, abolishing, for example, legal restrictions on individual employment contracts that stipulate lower wages or other less favourable employment conditions than in collective agreements. Such *favourability clauses* exist, for example, in Germany, the Netherlands and France. In the United Kingdom and New Zealand, the fundamental changes in pay-setting institutions were made politically possible because of deep economic crises and widespread dissatisfaction with the workings of the traditional systems. But it is difficult to see that the political preconditions for such radical reforms exist in Western European countries today. This point is underlined by the failure to include even very modest changes of the pay-setting system in the recently adopted labour market reforms in Germany. It appears that political resistance to reforms of pay-setting practices is often much harder than to other types of labour market reform. The main reason is that changes in the pay-setting regime have a large, direct impact on employed insiders, as discussed in Chapter 2. Also, union officials, who see their role challenged, have strong incentives to try to organise political opposition to such reforms.

3.2 Disorganised decentralisation

An alternative scenario is that decentralisation and de-unionisation proceed in a spontaneous way without legal changes and with opposition from the union side. Such a *disorganised decentralisation* process seems to have been going on in Germany. It has, to a large extent, been concentrated in eastern Germany, where many firms have left the employers' associations in order to conclude enterprise agreements outside the sectoral collective agreements, and others have, in violation of existing legislation, paid wages below the minimum levels stipulated in the sectoral agreements.

In eastern Germany, western German unions and employers' organisations stepped in immediately after unification in 1990 to carry out wage negotiations. Before the privatisation programmes could begin, long-term wage contracts were concluded that foresaw full wage equalisation with western Germany in only five years. After privatisation, many east German entrepreneurs tried to negotiate new contracts, but they only managed to postpone the time of wage equalisation by one year. As a consequence, many employers broke the union contracts with the silent consent of the unions, whereas others left the employers' organisations. In 2002, no more than 20 percent of all firms with 43 percent of the work force were covered by sectoral agreements in eastern Germany, whereas the corresponding shares were 44 percent and 63 percent, respectively, in western Germany (see Table 3.5).

Unions in eastern Germany have been much weakened by this development. When the metalworkers' union (IG Metall) called for a strike in the spring of 2003 to reduce the working week in eastern Germany to 35 hours, the weakness of unions there was clearly exposed. The strike was unpopular among employees who feared that the union demands would further undermine the competitiveness of their companies. After only a few weeks, the union had to give in without having achieved any of its goals.

Spontaneous and disorganised decentralisation has also occurred in the public sector in Germany. The earlier joint bargaining association *("Tarifgemeinschaft")* for public sector employers, encompassing the federal government, the states and the municipal employers, collapsed in 2003 because bargaining goals turned out to be too diverse. To a large extent, this was related to tensions between western and eastern states (Eironline Germany 2003a).[13]

However, one would expect spontaneous decentralisation and de-unionisation processes to be slow, unless they occur in such extreme economic situations as in eastern Germany. As pointed out in Section 3.1, it does appear that, in the absence of fundamental changes in the legal framework, bargaining institutions are very persistent. A possible explanation is that the design of labour market institutions to a large extent reflects deep-rooted social attitudes. For example, Black (2001) finds that differences in the degree of centralisation of wage bargaining among countries depends on differences in societal values relating to such basic factors as "power distance" (the

Table 3.5
The coverage of collective agreements in eastern and western Germany, 2002

	Percentage of firms		Percentage of employment	
	Western Germany	Eastern Germany	Western Germany	Eastern Germany
Sectoral collective wage agreement	44	20	63	43
"Orientation" towards sectoral collective wage agreement	22	34	16	23
Enterprise collective wage agreement	2	4	7	12
No collective wage agreement	32	42	14	22

Note: "Orientation" towards sectoral collective agreement means that firms/workers are not formally encompassed by such agreements, but that wage conditions have been "influenced" by them.
Source: WSI Tarifarchiv 2003: Tarifbindung (IAB Betriebspanel).

[13] Similarly, in Austria, the earlier centralisation of the (informal) bargaining in the public sector was abandoned in 2002 because of diversity in bargaining objectives (Eironline Austria 2002). Similar developments occurred much earlier in Sweden.

degree of inequality of power in organisations and institutions that the population considers normal), general attitudes towards "individualisation", the cultural values attached to "masculinity" and attitudes towards risk.

Another factor that counteracts tendencies toward spontaneous moves to single-employer bargaining is the demand for insurance on the part of employers against the costs of labour market conflicts. An important function of employers' associations in some countries, such as the Scandinavian ones and Germany, is to provide this type of insurance through joint conflict funds. Indeed, in Sweden, for example, multi-employer bargaining initially emerged on the initiative of employers who sought to protect themselves against union action against individual firms through such co-operation (Skogh 1984). The operation of such a system of insurance creates incentives for hierarchical control in the employers' associations to address moral hazard problems, so that individual employers do not choose too aggressive a stand against unions leading to an excessive number of labour market conflicts.

Spontaneous moves to single-employer bargaining are not likely to proceed at a fast pace in most western European countries. Nor are unionisation and the coverage of collective agreements likely to fall rapidly. The structural changes working in this direction, which we discussed in the introduction to Section 3, occur only slowly over time, and trade unions may, to some extent, develop strategies to cope with them (Calmfors et al. 2001). Experiences from the United States and Canada seem also to imply that negative management attitudes to unionisation may matter much less for union recognition and the existence of collective agreements than the legal framework (Kleiner 2001).

The available empirical research surveyed in Section 2.1 does not permit clear-cut conclusions on the macroeconomic effects of moving from a system of sectoral collective bargaining, such as in Germany, to a system of collective bargaining at the enterprise level. If the hump-shape hypothesis (see Section 2.1) is correct, such decentralisation will promote aggregate real wage restraint, although the effects may not be very large. But there is also the possibility that the incentives for wage restraint are weakened. This risk is most apparent if a move to single-employer bargaining would occur at the same time as coverage of collective agreements and unionisation remain fairly high.

3.3 Organised decentralisation

A third possibility is *organised decentralisation* (a term coined by Traxler 1995), according to which higher-level union confederations and employers' associations choose voluntarily to leave more scope for local bargaining. At least theoretically, this scenario would seem to offer the greatest possibilities of combining the benefits of co-ordination in terms of internalisation of various effects of wage increases with the benefits of larger relative-wage flexibility. Several models exist for such organised decentralisation.

Local determination of the distribution of wage increases

One possibility is to retain the determination of the total margin for wage increases (the average wage increase in each firm/workplace) at the higher (usually sectoral) level, but increase the freedom of local bargainers to determine how this margin should be distributed among the individual employees in the firm/workplace. In many countries there has been a general trend towards such *separation* of the decisions at the sectoral level on the total margin applicable to each firm and the decisions at the enterprise level on how the agreed wage increase should be distributed among individuals. But the development does not seem to have gone very far in countries like Austria, Belgium, Germany and Italy. The development has gone much further in the Netherlands and the Scandinavian countries. In the Netherlands, sector-wide agreements have been interpreted as "increasingly adopting the character of framework agreements, which then need to be developed in detail at company level" (Eironline Netherlands 2002a). This can occur through negotiations between the employer and the local works council.

Table 3.6 gives an overview of the differences in the designs of existing collective agreements in Sweden in 2002. According to the table, collective agreements with standard wage increases at the sectoral level that applied to *all* employees (category 7) existed only in the private sector and did not encompass more than ten percent of the employees there. All other collective agreements left some scope for local bargaining about the distribution of wage increases among individual employees. Usually local bargain-

Table 3.6

Types of collective agreement in Sweden, 2002

	Percentage of employees in each sector		
	Private sector	Central govern-ment	Local govern-ment
1. Local bargaining without nationally determined margin for wage increase	7	32	28
2. Local bargaining with nationally determined margin for wage increase if the local parties cannot agree	5		
3. Local bargaining with a nationally determined margin for wage increase if the local parties cannot agree and some type of binding individual guarantee	8	68	
4. Local bargaining on the distribution of nationally determined margin for wage increase without any type of individual guarantee	7		24
5. Local bargaining on the distribution of nationally determined margin for wage increase with a binding individual guarantee or an individual guarantee if the local parties cannot agree	45		48
6. Nationally agreed general wage increase plus local bargaining on the distribution of additional nationally determined margin	18		
7. Nationally agreed general wage increase	7		

Note: Local government refers to regional authorities and municipalities.
Source: *Avtalsrörelsen och lönebildningen* (2002).

ing about the distribution of wage increases was conducted under the constraint of a minimum guaranteed wage increase for everyone (sometimes only as a guarantee when the collective agreement was evaluated *ex post*) or a fall-back clause stipulating that such a guarantee would apply if the local parties could not agree (categories 3, 5 and 6).

Delegating the decisions on the distribution of wage increases among individuals to the local level makes it possible to use pay increases as an individual incentive mechanism. It is instructive to study how this has influenced wage setting in hospital care in Sweden, where employers (the regional authorities) have tried (in fact much more consistently than in large parts of the private sector) to introduce pay policies that aim explicitly at stimulating effort and on-the-job training (Calmfors and Richardson 2003). This has been achieved for registered nurses (*sjuksköterskor* in Swedish), where, since 1995, the union side has accepted that the distribution of nationally agreed pay increases are a subject for local negotiations only, without any influence from higher bargaining levels. Such a pay system has not been accepted by the trade union organising less educated assistant nurses (*undersköterskor* in Swedish), for whom collective agreements have contained guarantees of pay rises for the individual (more or less amounting to the standard pay increases negotiated centrally). As can be seen from Table 3.7, wage dispersion has increased substantially for registered nurses (in the upper half of the wage distribution), whereas it has stayed more or less constant for assistant nurses.

Local determination of the total margin for wage increases

Table 3.6 also shows that a substantial share of employees in Sweden is subject to higher-level, multi-year agreements that do not specify any figures for wage increases at all, but leave the determination of both, the total margin for wage increase (the average wage increase) and its distribution

Table 3.7

Wage dispersion in Swedish hospital care run by regional authorities

	1988			1994			2002		
	90/10	90/50	50/10	90/10	90/50	50/10	90/10	90/50	50/10
Registered nurses (*sjuksköterskor*)	1.18	1.05	1.12	1.19	1.07	1.11	1.29	1.15	1.12
Assistant nurses (*undersköterskor*)	1.12	1.02	1.10	1.08	1.03	1.04	1.13	1.06	1.07

Note: 90/10 is the wage ratio between the 90th and the 10th percentiles etc.
Source: Calmfors and Richardson (2003).

among individual employees in each firm/workplace, entirely to annual local bargaining (category 1). Such contracts apply to seven percent of the employees in the private sector and to as much as 32 and 28 percent in central government and local government (municipalities and regional authorities), respectively. These contracts apply mainly to white-collar employees with higher education. This represents another form of organised decentralisation, where higher-level collective agreements delegate also the determination of "total" wage increases to bargaining at the local level. The local bargaining is then conducted under a "peace obligation", ruling out the use of industrial action. With such delegation of bargaining rights, higher organisational levels retain some co-ordination capacities through their influence on local negotiators as well as the capacity to "recall" the delegation in future collective agreements. This "recall capacity" can be seen as a constraint on the behaviour of local parties, at the same time as the delegation increases the scope for adjusting wage developments to local conditions. So far, collective agreements leaving the determination of the total margin for wage increases to the local level have mainly been used as a means to raise relative wages for groups with a favourable labour market position. But such agreements could also allow downward wage flexibility in situations of unfavourable labour market developments.

Local incentive pay schemes

The possibilities of using incentive pay mechanisms at the level of the individual firm/workplace can be enhanced by sectoral agreements on the design of performance-related pay systems. For example, the Confederation of Danish Industries and the Central Organisation of Industrial Employees in Denmark concluded a framework agreement on a new pay system (Plus Pay) in 2002, outlining the general principles for how basic pay (80 percent of the total wage) and qualification-motivated supplements should be combined with task-related bonuses and performance-related pay elements, with the specific design in each firm to be negotiated in local bargaining (Eironline Denmark 2002). A similar framework agreement on more decentralised pay was also concluded in the public sector in Denmark in 2002 (Eironline Denmark 2003). Another example is the 2002 agreement in the German banking sector on variable pay, allowing variations of annual earnings of up to eight percent) based on performance appraisals and achievements of agreed targets (Eironline Germany 2003b).

We are not, however, aware of any sectoral or other higher-level collective agreements in EU countries on guiding principles for how local bargaining parties could trade off employee benefits in the form of profit sharing or employee stock ownership arrangements against standard pay rates in individual firms. In Finland, for example, unions have tried to negotiate such framework agreements, but employers have not been willing to do so (Eironline Finland 2003). On the other hand, unions have often been opposed to such compensation schemes, because they are likely to increase pay dispersion. However, in a system where the main locus of pay bargaining is the sectoral level, such framework agreements may be necessary for a more widespread introduction of profit-related pay.

Opening clauses

A final possibility of increasing the flexibility of company pay levels in a system with sectorally negotiated pay increases is to widen the scope also for downward deviations from them. In Germany, for example, these possibilities are very restricted. The so-called *favourability* principle in the federal Collective Agreements Act (§ 4) states that "sites which are subject to collective agreements can only approve regulations which depart from the collective agreement if the changes are in the employees' favour" (Bispinck 2003). Downward adjustments of the pay level to save jobs are not allowed under this stipulation, unless an explicit opening clause has been negotiated in the sectoral agreement. Such clauses are, however, usually quite restrictive and allow only limited and temporary deviations from the sectorally determined pay levels (Lange et al. 2001). A possible reform, proposed, for example, by the German Council of Economic Experts (2002) would be to amend the statutory regulations to establish a legal framework for decentralised pay bargaining. Each employer and local works council could be given complete freedom to deviate both upwards and downwards from the sectoral agreements if they agree on that. Alternatively, such a deviation could be allowed if a certain proportion of the employees agree to it. Introducing such "symmetric" flexibility at the local level would allow both, greater wage dispersion among firms in general and greater possibilities to adjust wages locally to adverse shocks. One would not, however, expect such a reform to radically affect wage outcomes, as the sectoral wage agreement would serve as a fall-back option in local bargaining in the case the parties cannot agree. Still, it did not prove possible to include such limited changes of the pay-setting system in the recent labour market reforms in Germany (see Chapter 2).

4. Conclusions

Each system of pay setting has its advantages and disadvantages. There is ample research evidence that highly co-ordinated collective bargaining at the multi-sector or national level, such as in many smaller European countries, promotes aggregate real wage restraint and low unemployment. Controlling for other factors, unemployment appears to be systematically lower with high co-ordination of collective bargaining than with intermediate co-ordination (where the locus of bargaining is the sectoral level). There are reasons to believe that EMU membership could increase the benefits of high co-ordination. The explanation is that monetary policy in EMU cannot react to wage hikes in individual countries, which weakens its disciplining force. Under such circumstances, there may be a greater pay-off from wage-setting arrangements that in themselves foster wage moderation than if national monetary policy could be used as a direct means to influence domestic wage setting. However, pay compression and inflexibility of relative wages seem always to be serious disadvantages of centralised wage bargaining.

Decentralisation of collective bargaining to the level of the firm facilitates the adjustment of wages to the labour market situation of different skill categories, occupations, regions and sectors. Such single-employer bargaining also facilitates the use of performance-related pay to boost labour effort and productivity. It appears, however, that decentralised collective bargaining is less conducive to aggregate real wage restraint and low unemployment than highly co-ordinated bargaining. But it is less clear how decentralised collective bargaining compares with intermediate centralisation (sectoral bargaining) in this respect. According to some empirical studies, decentralised collective bargaining leads, other things equal, to lower unemployment than sectoral bargaining. According to others it leads to higher unemployment. What is clear, however, is that low unionisation and low coverage of collective agreements promote real wage restraint and high employment. Therefore, the chances that single-employer bargaining results in wage moderation increase if a development in this direction goes hand in hand with a reduced importance of collective bargaining.

As to the flexibility of the aggregate pay level, there are conflicting tendencies. On the one hand, an increased use of profit-related pay under single-employer collective bargaining can help raise aggregate pay flexibility. But, on the other hand, it can become more difficult to change wages in response to macroeconomic disturbances if bargaining is decentralised and unsynchronised, because the incentives for wage adjustments for a particular bargaining area may be weak unless other bargaining areas also adjust their wages.

Against this background, which pay-setting systems should the EU countries opt for? One cannot give a generally valid answer to this question. A characteristic feature of pay-setting systems is their high degree of inertia: it usually takes a very long time or very special circumstances to achieve fundamental changes. So, the answer is likely to depend on the starting point, which for historical reasons differs a lot among countries.

Several of the current EU member states, especially many of the smaller states (for example Belgium, Finland, Ireland and the Netherlands) have been able to achieve wage moderation through formal or informal co-ordination of bargaining at the multi-sector level, involving peak-level labour market organisations and sometimes also governments. Through such social pacts it has often been possible to establish generally accepted *norms* for wage increases, serving as benchmarks for subsequent negotiations at lower bargaining levels. In countries where such arrangements have worked, there is little reason to abandon them now. But there are good reasons for treating central wage norms only as indicative, and not binding, in order to give more room for relative wage changes. The trick is to avoid such recommendations being regarded as “floors” for wage increases. It is important to get an understanding that a functioning market economy means that wage increases across firms, sectors, occupations and regions must deviate from the average, depending on the situation in the specific labour market. One way of signalling the need for this could be to publicise a corridor for wage increases rather than a single figure when guidelines are formulated. Alternatively, one might define a “normal” wage increase, which lies below the desired average, with the understanding that "above-normal" wage increases should only be granted in bargaining areas with labour shortages.

Both in countries with a social-pact tradition and in countries with more traditional bargaining at the sectoral level, such as Austria and Germany, one could also conceive of other reforms within the existing pay-setting system in order to increase relative pay flexibility among both firms and individuals. Such *organised decentralisation* could encompass reforms of the following type:

- The distribution among individual employees of agreed "aggregate" wage increases at higher bargaining levels should be determined at the local level to a much larger extent than is currently the case. Higher-level agreements should therefore by and large abstain from providing individual guarantees of wage increases.
- The scope for opening clauses that give local wage bargainers also the right to deviate downwards from higher-level collective agreements should be increased. Such flexibility would, for example, be very helpful for adjusting wages in eastern Germany and southern Italy to the prevailing unemployment situations.
- Where there is bargaining at the sectoral level, framework agreements would facilitate the introduction of variable performance-related pay systems at the level of the individual firm. Such framework agreements should allow the possibility of wage adjustments at the company level in connection with the introduction of profit-sharing systems or employee stock ownership plans.
- One could also conceive of higher-level collective agreements that delegate the determination of the total margin for wage increases (the average wage increase in each firm/workplace) to the local level, but where the local negotiations are conducted under a "peace obligation", ruling out industrial action, and the higher level retains the organisational capacity to "recall" the delegation in future collective agreements. Such "discretionary delegation" increases the flexibility of relative wages at the same time as the higher-level collective agreements serve as a "stand-by option" if co-ordinated wage adjustments are needed in a macroeconomic crisis.

How should one expect wage bargaining systems in continental Western European countries to develop? We have surveyed the tendencies to decentralisation that have taken place and concluded that this development is likely to continue. How should one evaluate this? Obviously, the conclusion depends on the starting point from which decentralisation occurs.

For the countries with social pact co-ordination, the key question is whether or not it is possible to have both general wage norms determined in a co-ordinated way and relative wage changes that are decided in a decentralised manner. In our view the jury is still out. An optimistic scenario is that the process of organised decentralisation proceeds in the manner we have described so as to make greater diversity of wages compatible with continued aggregate real wage moderation. A pessimistic scenario is that disorganised decentralisation, increasing the number of independent pay-setting actors, ultimately makes co-ordinated wage restraint unfeasible.

For a country such as Germany, where the main locus of collective bargaining is the sectoral level and the extent of co-ordination of collective bargaining is lower than in many of the smaller EU countries, the prospects are different. It is possible that a disorganised decentralisation process could lead to more aggregate wage restraint. But the difference to current outcomes may be small. And it is also possible that more single-employer collective bargaining could weaken the incentives for such wage restraint. A key requirement for overcoming the present stagnation in Germany seems to be that labour market reforms are extended to pay-setting practices in such a way that greater diversity of wages is allowed.

If it turns out to be impossible to combine aggregate real wage restraint with relative-wage flexibility in the continental western European economies, one could not in the long term rule out an Anglo-Saxon development, where decentralisation of collective bargaining is accompanied by massive de-unionisation and reduction in coverage of collective agreements. But such a development would probably only occur as the consequence of radical political reform of basic labour legislation after a deep economic crisis. An important reason why this scenario may not materialise is that trade unions may find it in their self-interest to acquiesce in both wage restraint and organised decentralisation precisely because they want to avoid such a development.

Most of the new EU member states in Eastern and Central Europe find themselves in an entirely different situation from the present EU states in Western Europe. Estonia, the Czech Republic, Hungary, Latvia, Lithuania and Poland are all characterised by decentralised pay bargaining at the level of the enterprise and low unionisation and coverage of collective agreements. These countries are likely to face strong pressures from Western European trade unions, and possibly also from EU institutions, to change their industrial relations systems so as to conform better to "EU standards". Such pressures should be resisted. The existing "Anglo-Saxon" combination of enterprise-level bargaining and limited importance of collective agreements in these countries is likely to produce better macroeconomic outcomes than a move to collective bargaining at the sectoral level of the Western European type.

References

Addison, J. and B. Hirsch (1989), "Union Effects on Productivity, Profits, and Growth: Has the Long Run Arrived?", *Journal of Labor Economics* 7, 72–105.

Addison, J. and C. Belfield (2001), "Updating the Determinants of Firm Performance: Estimation Using the 1998 UK Workplace Employee Relations Survey", *British Journal of Industrial Relations* 39, 341–66.

Askildsen, J. and Ø. Nilsen (2002), "Union Membership and Wage Formation", *European Journal of Political Economy* 18, 345–63.

Avtalsrörelsen och lönebildningen 2002 (2003), Medlingsinstitutets årsrapport, Medlingsinstitutet (National Mediation Office), Stockholm.

Baccaro, L., M. Carrieri, and C. Damiano (2002), "The Resurgence of the Italian Confederal Unions: Will It Last?", Discussion Paper 144, International Institute for Labour Studies, Geneva.

Bacon, N. and J. Storey (2000), "New Employee Relations Strategies in Britain: Towards Individualism or Partnership?", *British Journal of Industrial Relations* 38, 407–27.

Ball, L. (1987), "Externalities from Contract Length", *American Economic Review* 77, 615–29.

Ball, L. and D. Romer (1991), "Sticky Prices As Coordination Failure", *American Economic Review*, 81, 539–552.

Bell, L. and D. Neumark (1993), "Lump Sum Payments and Profit Sharing Plans in the Union Sector of the United States Economy", *Economic Journal* 103, 602–19.

Belman, D., J. Heywood, and J. Lund (1997), "Public Sector Earnings and the Extent of Unionization", *Industrial and Labor Relations Review* 50, 610–28.

Belot, M. and J. C. van Ours (2001), "Unemployment and Labor Market Institutions: An Empirical Analysis", OSA Working Paper 2001–10.

Bertola, G. and P. Garibaldi (2003), "The Structure and History of Italian Unemployment", Working Paper 907, CESifo, Munich.

Bispinck, R. (2003), "Country Report on Germany", ETUI, Brussels.

Black, B. (2001), "National Culture and Industrial Relations and Pay Structures", *Labour* 15, 257–77.

Blanchard, O. and J. Wolfers (2000), "The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence", *Economic Journal* 110, C1–C33.

Blau, F. and L. Kahn (1996), "International Differences in Male Wage Inequality: Institutions versus Market Forces", *Journal of Political Economy* 104, 791–837.

Bleaney, M. (1996), "Central Bank Independence, Wage-Bargaining Structure, and Macroeconomic Performance in OECD Countries", *Oxford Economic Papers* 48, 20–38.

Bray, M. and P. Walsh (1998), "Different Paths to Neo-Liberalism? Comparing Australia and New Zealand", *Industrial Relations* 37, 358–87.

Brown, W., S. Deakin, D. Nash, and S. Oxenbridge (2000), "The Employment Contract: From Collective Procedures to Individual Rights", *British Journal of Industrial Relations* 38, 611–29.

Calmfors, L. (1993), "Centralisation of Wage Bargaining and Macroeconomic Performance – A Survey", *OECD Economic Studies* 21.

Calmfors, L. (2001), "Wages and Wage-Bargaining Institutions in the EMU – A Survey of the Issues", *Empirica* 28, 325–51.

Calmfors, L., A. Booth, M. Burda, D. Checchi, R. Naylor, and J. Visser (2001), "The Future of Collective Bargaining in Europe", in T. Boeri, A. Brugiavini and L. Calmfors, eds., *The Role of Unions in the Twenty-First Century,* Oxford University Press, Oxford, 1–155.

Calmfors, L. and J. Driffill (1988), "Bargaining Structure, Corporatism and Macroeconomic Performance", *Economic Policy* 6, 14–61.

Calmfors, L. and B. Holmlund (2000), "Unemployment and Economic Growth: A Partial Survey", *Swedish Economic Policy Review* 7, 107–153.

Calmfors, L. and K. Richardson (2003), *Marknadskrafterna och lönebildningen i landsting och regioner,* Landstingsförbundet, Stockholm.

Carley, M. (2002), *Industrial Relations in the EMU Member States and Candidate Countries,* European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.fr.eurofound.eu.int/publications/files/EF0284EN.pdf.

Crouch, C. (2000a), "The Snakes and Ladders of Twenty-First-Century Trade Unionism", *Oxford Review of Economic Policy* 16, 70–83.

Crouch, C. (2000b), "National Wage Determination and European Monetary Union", in C. Crouch, ed., *After the Euro, Shaping Institutions for Governance in the Wake of European Monetary Union,* Oxford University Press, Oxford.

Cukierman, A. and F. Lippi (1999), "Central Bank Independence, Centralisation of Wage Bargaining, Inflation and Unemployment: Theory and Some Evidence", *European Economic Review* 43, 1395–1434.

Danthine, J. P. and J. Hunt (1994), "Wage Bargaining Structure, Employment and Economic Integration", *Economic Journal* 104, 528–41.

Daveri, F. and G. Tabellini (2000), "Unemployment, Growth and Taxation in Industrial Countries", *Economic Policy* 15, 48–104.

Department of Employment, Workplace Relations and Small Business, "Agreement Making in Australia under the Workplace Relations Act 2000 and 2001", *Australian Workplace,* www.workplace.gov.au/Workplace.

Dufour, C. (2003), *Collective Bargaining in France in 2002: A Sudden Change of Climate,* Institut de Recherches Economiques et Sociales (IRES), Noisy-Le-Grand.

Ebbinghaus, B. and J. Visser (2000), *Trade Unions in Western Europe since 1945,* Macmillan, London.

EEAG (2003), *Report on the European Economy 2003,* European Economic Advisory Group at CESifo, Munich.

Eironline Austria (2002), "Changing Industrial Relations in Local Public Sector", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.eiro.eurofound.eu.int/2002/04/feature/at0204202f.html.

Eironline Austria (2003), "2002 Annual Review for Austria", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.eiro.eurofound.eu.int/2003/01/feature/at0301204f.html.

Eironline Belgium (2003), "2002 Annual Review for Belgium", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.eiro.eurofound.eu.int/2003/01/feature/be0301306f.html.

Eironline Denmark (2002), "New Pay System Agreed for Industry Sector", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/2002/11/inbrief/dk0211102n.html.

Eironline Denmark (2003), "2002 Annual Review for Denmark", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.eiro.eurofound.eu.int/2003/01/feature/dk0301106f.html.

Eironline Finland (2003), "2002 Annual Review for Finland", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.eiro.eurofound.eu.int/2003/01/feature/fi0301106f.html.

Eironline France (2003), "2002 Annual Review for France", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.eiro.eurofound.eu.int/2003/01/feature/fr0301108f.html.

Eironline Germany (2003a), "Public Sector Employers' Bargaining Association Collapses", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/2003/06/inbrief/de0306202n.html.

Eironline Germany (2003b), "2002 Collective Bargaining Round Examined", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/2003/02/feature/de0302203f.html.

Eironline Greece (2003), "2002 Annual Review for Greece", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.eiro.eurofound.eu.int/2003/01/feature/GR0301103F.html.

Eironline Ireland (2003), "Social Partners Ratify New National Agreement", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/2003/04/inbrief/ie0304201n.html.

Eironline Netherlands (2002a), "Debate over Viability of Collective Bargaining System", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions.
www.eiro.eurofound.eu.int/2002/11/feature/nl0211104f.html.

Eironline Netherlands (2002b), "Social Partners and Government Reach 'Social Agreement' for 2003", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/2002/12/inbrief/nl0212101n.html.

Eironline Netherlands (2003), "Pay Freeze Agreed for 2004-5", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/2003/10/feature/nl0310103f.html.

Eironline Norway (2003a), "Cooperation on Incomes Policy Agreed Prior to 2003 Settlement", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/2003/02/feature/no0302105f.html.

Eironline Norway (2003b), "2002 Annual Review for Norway", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/print/2003/01/feature/NO0301105F.html
.

Eironline Spain (2003a), "2002 Annual Review for Spain", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.eiro.eurofound.eu.int/2003/01/feature/es0301110f.html.

Eironline Spain (2003b), "Agreement Sets Framework for Collective Bargaining in 2003", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions,
www.eiro.eurofound.eu.int/2003/02/feature/es0302204f.html.

Elmeskov, J., J. Martin, and S. Scarpetta (1998), "Key Lessons for Labour Market Reforms: Evidence from OECD Countries' Experiences", *Swedish Economic Policy Review* 5, 205–52.

Elvander, N. (1999), The Industrial Agreement: *An Analysis of Its Ideas and Performance*, ALMEGAs förlag, Sandviken.

ERA (2003), *The Report on Current Employment Relations in New Zealand*, no. 12, Department of Labour, Wellington.

Flanagan, R. (1998), "Institutional Reformation in Eastern Europe", *Industrial Relations* 37, 337–57.

Forth, J. and N. Millward (2002), "Union Effects on Pay Levels in Britain", *Labour Economics* 9, 547–61.

Godard, J. and J. Delaney (2000), "Reflections on the 'High Performance' Paradigm's Implications for Industrial Relations as a Field", *Industrial and Labor Relations Review* 55, 482–90.

Gregory, M. (1998), "Reforming the Labour Market: An Assessment of the UK Policies of the Thatcher Era", *Australian Economic Review* 31, 329–44.

Hall, P. A. and R. J. Franzese (1998), "Mixed Signals: Central Bank Independence, Coordinated Wage-Bargaining, and European Monetary Union", *International Organization* 52, 505–35.

Hartog, J. (1999), "Wither Dutch Corporatism? Two Decades of Employment Policies and Welfare Reforms", *Scottish Journal of Political Economy* 46, 458–87.

Heywood, J., O. Hübler, and U. Jirjahn (1998), "Variable Payment Schemes and Industrial Relations: Evidence from Germany", *Kyklos* 51, 237–57.

Holden, S. (2001), "Monetary Regimes and the Co-ordination of Wage Setting", *CESifo Working Paper* no. 429, Munich.

Honeybone, A. (1997), "Introducing Labour Flexibility: The Example of New Zealand", *International Labour Review* 136, 493–507.

IAB (2001), *Werkstattbericht* no. 2, 23 April.

IAB (2002), *Die Entwicklung der Flächentarifbindung 1995 – 2001,* Ergebnissse aus dem Betriebspanel. http://doku.iab.de/betriebspanel/ergebnisse/2002_11_01_05_tarifbindung.pdf.

Ichniowski, C., T. A. Kochan, D. Levine, C. Olson, and G. Strauss (1996), "What Works at Work: Overview and Assessment", *Industrial Relations* 35, 299–333.

Ichniowski, C., K. Shaw, and G. Prennushi (1997), "The Effects of Human Resource Management Practices on Productivity: A Study of Steel Finishing Lines", *American Economic Review* 87, 291–313.

Iversen, T. (1998), "Wage Bargaining, Central Bank Independence, and the Real Effects of Money", *International Organization* 52, 469–504.

Jefferys, S. (2000), "A 'Copernican Revolution' in French Industrial Relations: Are the Times A'Changing?", *British Journal of Industrial Relations* 38, 241–60.

Kauppinen, T. (2002), "Quality of Industrial Relations in the Candidate Countries Benchmarked in the EU Perspective", European Industrial Relations Observatory on-line, European Foundation for the Improvement of Living and Working Conditions, www.fr.eurofound.eu.int/industrial/elsinore/abstract_kaupinnen.htm.

Keynes, J. M. (1936), *The General Theory of Employment, Interest, and Money,* Macmillan, London.

Kleiner, M. (2001), "Intensity of Management Resistance: Understanding the Decline of Unionization in the Private Sector", *Journal of Labor Research* XXII, 519–40.

Koskela, E. and R. Uusitalo (2003), "The Un-Intended Convergence: How the Finnish Unemployment Reached the European Level", *CESifo Working Paper* no 878, Munich.

Kruse, D. (1993), *Profit Sharing: Does it Make a Difference?,* Upjohn Institute for Employment Research, Kalamzoo, Mich.

Kruse, D. (1996), "Why Do Firms Adopt Profit-Sharing and Employee Ownership Plans?", *British Journal of Industrial Relations* 34, 515–38.

Lange, T., G. Pugh, and L. Funk (2001), "Reforms in the New German Labour Market: A Case for Institutional Corporatism?", *International Journal of Manpower* 22, 494–507.

Layard R., S. Nickell, and R. Jackman (1991), *Unemployment, Macroeconomic Performance and the Labour Market,* Oxford University Press, Oxford.

Lazear, E. (1999), "Personnel Economies: Past Lessons and Future Directions", Presidential Address to the Society of Labor Economists, *Journal of Labor Economics* 17, 199–236.

Lindbeck, L. and D. Snower (2000), "Multitask Learning and the Reorganization of Work: From Tayloristic to Holistic Organization", *Journal of Labor Economics* 18, 353–376.

Lindbeck, L. and D. Snower (2001), "Centralized Bargaining and Reorganized Work: Are They Compatible?", *European Economic Review* 45, 1851–75.

Machin, S. (2000), "Union Decline in Britain", *British Journal of Industrial Relations* 38, 631–45.

Nalbantian, H. R. and A. Schotter (1997), "Productivity under Group Incentives: An Experimental Study", *American Economic Review* 87, 314–41.

Nickell, S. and R. Layard (1999), "Labor Market Institutions and Economic Performance", in O. Ashenfelter and D. Card, eds, *Handbook of Labor Economics,* vol 3, Amsterdam, North Holland, 3029–84.

Nickell, S. and G. Quintini (2002), "The Recent Performance of the UK Labour Market", *Oxford Review of Economic Policy* 18, 202–220.

Nickell, S., L. Nunziata, and W. Ochel (2003), *Unemployment in the OECD since the 1960s. What Do We Know?,* Bank of England.

Nicoletti, G., R. Haffner, S. Nickell, S. Scarpetta, and G. Zoega (2001), "European Integration, Liberalization and Labour Market Performance", in G. Bertola, T. Boeri, and G. Nicoletti, eds., *Welfare and Employment in a United Europe,* MIT Press,Cambridge, Mass., 147–235.

Ochel, W. (2000), *Collective Bargaining (Centralization and Co-ordination),* Ifo Institute, Munich.

Ochel, W. (2001), "Collective Bargaining Coverage in the OECD from the 1960s to the 1990s", *CESifo Forum* 4, 62–65.

Rayton, B. (2003), "Firm Performance and Compensation Structure: Performance Elasticities of Average Employee Compensation" *Journal of Corporate Finance* 9, 333–52.

Riktlinjer för samordnade förhandlingar (2003), LO, Stockholm.

Roche, W. (2001), "The Individualization of Irish Industrial Relations?", *British Journal of Industrial Relations* 39, 183–206.

Rowthorn, R. E. (1992), "Centralization, Employment and Wage Dispersion", *Economic Journal* 102, 506–23.

Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung – German Council of Economic Experts (2002), *Jahresgutachten 2002/2003: Zwanzig Punkte für Beschäftigung und Wachstum,* Wiesbaden.

Scarpetta, S. (1996), "Assessing the Role of Labour Market Policies and Institutional Settings on Unemployment: A Cross-Country Study", *OECD Economic Studies* 26.

Skogh, G. (1984), "Employers' Associations in Sweden", in J. Windmuller and A. Gladstone, eds., *Employers' Associations and Industrial Relations: A Comparative Study,* Clarendon Press, Oxford.

Traxler, F. (1995), "Farewell to Labour Market Associations? Organized versus Disorganized Decentralization as a Map for Industrial Relations", in C. Crouch and F. Traxler, eds., *Organized Industrial Relations in Europe: What Future?,* Avebury, Aldershot, 3–19.

Traxler, F., S. Blaschke, and B. Kittel (2001), *National Labour Relations in Internationalized Market: A Comparative Study of Institutions, Change, and Performance,* Oxford University Press, Oxford.

Traxler, F. (2003), "Bargaining (De)centralization, Macroeconomic Performance and Control over the Employment Relationship", *British Journal of Industrial Relations* 41, 1–27.

Wallerstein, M. (1999), "Wage-Setting Institutions and Pay Inequality in Advanced Industrial Societies," *American Journal of Political Science* 43, 649–80.

Visser, J. (2000), "A Combined Indicator of Union Centralisation and Coordination", Working Paper No 00/03, Amsterdam Institute for Advanced Labour Studies.

Walsh, B. (2002), "When Unemployment Disappears: Ireland in the 1990s", *CESifo Working Paper* no. 856, Munich.

Zetterberg, J, (1995), "Unemployment, Labour Market Policy and the Wage Bargaining System", in J. Johannesson and E. Wadensjö, eds., *Labour Market Policy at the Crossroads,* EFA, Ministry of Labour, Stockholm, 57–115.