CPB Discussion Paper

European wage coordination: Nightmare or dream to come true?

An economic analysis of wage bargaining institutions in the EU

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Abstract

This paper analyses recent trends in wage bargaining institutions in Europe to explain the gradual deterioration in the bargaining position of trade unions. It appears that the integration of European economies is an important factor. This raises the question whether trade unions will respond by coordinating their wages internationally. Our conjecture is that the opportunities for wage coordination are not very strong. This is because of the numerous obstacles associated with heterogenous structures in wage setting in the EU. Softer coordination, e.g. in the form of information exchange or agreements on common rules in wage setting, is more likely to occur and has already been introduced in some cases.

If stronger forms of international wage coordination would take off, perhaps in the longer term, this would strengthen the bargaining power of trade unions relative to firms. The implications for equilibrium unemployment are ambiguous. On the one hand, higher bargaining power raises wages and thereby unemployment. On the other hand, it reduces unemployment by better incorporating the response of the ECB to wage demands. Another consequence of stronger forms of international wage coordination may be that the absorption of asymmetric shocks in the EMU gets more problematic. In that case, wage coordination may turn into a nightmare as it hampers a crucial stabilisation mechanism in the EMU.

1   Introduction

'Well over 15 000 port workers answer strike call' headed the Rotterdam Daily newspaper at 17 January 2003. In a coordinated action, the dockworkers closed all ports in Finland, Belgium and Spain, and also affected ports in Germany, France and the Netherlands. On the Internet, the success of this action was attributed to the cooperation between unions affiliated to the International Dock Workers Council and the International Transport Workers' Federation.[2]

This example of international coordination among trade unions is still rare, however. Trade unions have largely continued to operate on a national level. In the meantime, businesses have become more international and capital mobility has increased. The Single Market Programme, the completion of EMU and consecutive waves of cross-border mergers and acquisitions have all contributed to the economic integration of European economies. Moreover, economic policy coordination has intensified since the EMU. This has led to a divergence between the national orientation of trade unions and the internationalisation of businesses and product markets. It has invoked debates whether trade unions should intensify their international cooperation as well. In fact, the first initiatives in this direction have already taken off, as the dockworker case illustrates.

The prospect of international wage coordination has provoked a variety of responses among policy makers and economists. On the one hand, trade unions assembled in the European Trade Union Confederation (ETUC) are in favour of coordinating organised labour at the international level. Their views are supported by economists who claim that "… there is a general need for transnational co-ordination regardless of what scenario …" (Traxler, 1999). On the other hand, employer organisations generally resist the idea of Europeanising of industrial relations and particularly wage bargaining. They find support in economists claiming that "… attempts to centralise wage bargaining on a European level run counter to what is needed in order to reduce unemployment in a currency union." (Siebert, 1998).

This paper contributes to this debate on international wage coordination in two ways. First, it appears that debates among proponents and opponents suffer from the lack of clear definitions on what international wage coordination actually means. Our aim is to clarify this debate by distinguishing between different forms. Thereby, we also elaborate on the prospects of these various forms in the future. Secondly, we explore the economic consequences of different wage bargaining institutions in a simple analytical framework. Combined with insights from recent literature, we then explore the various pros and cons of international coordination of wage bargaining. Thus, we aim to provide a balanced view on the social-economic implications of international wage coordination.

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[2] www.labournet.net/docks2/0301/eur3.htm

2   Wage bargaining in a simple framework

To explore the impact of national institutions in wage bargaining on labour-market performance, we develop a small general equilibrium model. The model is a modified version of MINI-MIMIC, which is described in a nutshell in the box below. The main building block of MINI-MIMIC is wage formation, which is based on a right-to-manage framework.[3] We briefly sketch the main features of this framework and then elaborate on the impact of institutional changes on labour-market performance.

In the right-to-manage framework, wages are determined by negotiations between trade unions and employers' associations. The outcome of the negotiations can be described by the following Nash bargaining optimisation:

$$\underset{W}{Max}\ \Omega\ =\ \Pi^{\alpha}\ U^{1-\alpha} \tag{2.1}$$

where Π and U represent the interests of the employers organisation and the trade unions, respectively. The parameter α represents the relative bargaining power of the employers' organisation. In particular, if $\alpha = 1$, bargaining is completely dominated by the employers, whereas $\alpha = 0$ indicates complete domination by the union. Expression (2.1) reveals that negotiating partners maximise the bargaining outcome with respect to the contractual wage rate W. Employment is determined unilaterally by labour demand of employers.

The employer aims to maximise profits Π, i.e.

$$\Pi\ =\ PY\ -\ WL \tag{2.2}$$

where P and Y denote the price and the volume of value added and L stands for employment. According to (2.2), lower wages are in the interest of firms since they increase profits. In section 5 we will extend this framework by introducing a non-zero value for the outside option of the firm in order to explore international wage coordination.

The utility-function of the trade union reads as follows:

$$U\ =\ L^{\eta}\left[W\ -\ W^{*}\right]^{1-\eta} \tag{2.3}$$

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[3] For an overview of different models of trade union behaviour and their applications, see Heijdra and Van der Ploeg (2002).

Hence, trade unions care about both wage incomes and employment among their members. The parameter η in equation (2.3) represents the value that unions attach to employment, relative to wages. If $\eta = 1$, unions don not care about the wage level, whereas $\eta = 0$ indicates that they are only interested in the wage rate. In all other cases, trade unions face a dilemma between wages and employment. Thereby, they take into account the negative impact of higher wages on the demand for labour by employers.

MINI-MIMIC in a nutshell

MINI-MIMIC is a small static general equilibrium model that is developed at the CPB. The model is a core representation of a larger model called MIMIC. The small version captures the main mechanisms through which tax policies affect labour market performance in the Netherlands. The model contains five main building blocks:

- Firm behaviour: a large number of firms produce commodities according to a linear production technology with only labour as an input. Firms set prices as a mark-up over marginal costs on markets that are characterized by monopolistic competition. Since there is no free entry in these markets, there exist positive profits in equilibrium. From the firm model, we derive an expression for labour demand.
- Household behaviour: households trade off the utility derived from consumption and leisure, subject to a budget constraint which equates expenditures to labour and capital income. This yields an expression for labour supply. A number of households, however, is rationed in their labour supply due to involuntary unemployment. These households receive unemployment benefits that are used for consumption. Consumption comprises both nationally produced commodities and foreign produced commodities.
- Wage formation: a right-to-manage model describes wage formation as is discussed in the main text.
- Government institutions: the government levies taxes on labour income and uses the revenues to finance expenditures on unemployment benefits and public consumption. The government budget is always in equilibrium. Government behaviour is exogenous.
- Foreign sector: part of the domestically produced goods is exported while domestic consumption consists partly of imported goods. The balance of payments is always in equilibrium.

MINI-MIMIC is calibrated so as to reflect the main features of the Dutch economy. The elasticities in the wage equation are estimated, while some other important elasticities, such as the labour-supply elasticity and the export elasticity are derived from the literature.

For our simulations, we have modified MINI-MIMIC in two ways:
- There is no distinction between unskilled labour and skilled labour as in MINI-MIMIC
- We have eliminated job-matching from MINI-MIMIC

For more details of MINI-MIMIC and MIMIC, see respectively Bovenberg et al. (2001) and Graafland et al. (2001).

The utility that trade unions derive from higher wages is defined relative to the so-called outside option for workers, or reservation wage W^*. This reservation wage is the expected income for a worker in case the wage negotiations break down and the worker loses his job. The reservation wage is given by:

$$W^* = (1 - u)\bar{W} + uB \qquad\qquad (2.4)$$

The first term on the right hand side of (2.4) stands for the expected income in case the worker finds an alternative job (e.g. in another sector). This expected income is given by the average wage in the economy, $\bar{W}$, multiplied by the probability of finding such a job. The latter depends on the unemployment rate, denoted by u. The second term on the right-hand side of (2.4) denotes the expected income in case the worker does not find an alternative job. This income is determined by the unemployment benefit, B, and the unemployment rate. Hence, the higher is the unemployment benefit, the more attractive is the outside option. As unemployment benefits are lower than wages, a higher unemployment rate has a negative impact one the reservation wage.

Optimising (2.1) with respect to the wage rate subject to (2.3) and the relationship between labour demand and wages, we arrive at the following expression for wages:

$$W = \frac{\chi_1 W^* + \chi_2 PY/L}{\chi_1 + \chi_2} \qquad\qquad (2.5)$$

where $\chi_1 = \alpha/(1-\alpha) + \eta/(1+\epsilon^{-1})$, ϵ is the price elasticity of demand and $\chi_2 = 1-\eta$.

Expression (2.5) shows that wages are determined as a weighted average of the reservation wage and labour productivity with the weights depending on the parameters of the bargaining process. It reveals how three institutional variables affect real wages. In particular, real wages increase if the relative bargaining power of the trade unions increases (i.e. lower α) or if trade unions care more about wages relative to employment (i.e. lower η). Moreover, a higher replacement rate, i.e. an increase in unemployment benefits B relative to wages, raises wage demands due to (2.4). Apart from these institutional parameters, real wages are negatively related to the unemployment rate according to the wage curve.

We have simulated changes in the institutional variables with the full general equilibrium model described in the box. Table 2.1 summarizes the qualitative findings. Apart from the impact on wages, it shows also the consequences for unemployment and profits.[4] We see that the general equilibrium effects on wages correspond to the effects we derived from expression (2.5). Higher real wages come at the expense of lower profits and cause higher equilibrium unemployment.

Table 2.1   The impact of institutional changes on labour market performance

	Higher bargaining power of trade unions (lower α)	Higher value of trade unions for wages (lower η)	Higher unemployment benefits (higher B/W)
Real wage rate	+	+	+
Unemployment rate	+	+	+
Profits	–	–	–
Source: own calculations			

[4] The simulations are available from the authors upon request.

3   Trends in European wage bargaining institutions

The model of the previous section links labour market performance to the underlying structural parameters in wage formation. This section sketches the evolution of a number of labour market institutions over the last two decades, which are closely related to these underlying parameters. Thus, we explore how various trends may have affected the bargaining position of trade unions and, thereby, the level of real wages.

3.1   Union density and coverage

The bargaining position of trade unions depends first of all on the number of people that unions represent. Indeed, if the pool of non-unionised workers that firms recruit from is only small, unions are the dominant suppliers of labour to the firms. Hence, the higher is union density, the better is the relative bargaining position of the trade unions. In the framework of section 2, an increase in union density is thus reflected in a lower value of α. Table 2.1 reveals that this will raise wages and unemployment.

Union density is usually measured by the percentage of wage-and salary-earners that is union member in terms of the total workforce. The first three columns of table 3.1 sketch the evolution of this measure between 1980 and 1994 in a number of EU countries, and compares this with Japan and the US. We see that almost half of all employees in the countries of the EU is member of a trade union. This is substantially higher than in the US and Japan, where the union density is less than a quarter. However, also the differences within the EU are substantial. In 1994, unionisation in France is only 9%, whereas the Scandinavian countries show rates above 75%. In particular, 91% of all employees in Sweden is union member.

European trade unions lost more than six million members between 1980 and 1994 and the average density rate dropped from 51 to 44. The unions in the US and Japan also witnessed a clear drop in membership; they lost more than 20% of their members during this period. The Nordic countries are an exception in that union density has not declined.

The cross-national differences in union density remained large between 1980 and 1994. The spread in union density rates in Europe has even increased over time: the standard deviation of the density rates broadened from 17.8 to 25.8 between 1980-1994. This increase is largely attributable to the divergent development in Scandinavia as compared to the rest of Europe.

Table 3.1   Union density and union coverage in the EU, 1980-1994

	Trade union density rate			Collective bargaining coverage		
	1980	1990	1994	1980	1990	1994
Austria	56[a]	46	42	>70	98	98
Belgium	56	51	54	90	90	90
Denmark	76	71	76	72	69	69
Finland	70	72	81	95	95	95[g]
France	18	10	9	85[c]	92	95
Germany	36	33	29	91	90	92
Greece	37[b]	34	n.a.	n.a.	n.a.	n.a.
Ireland	57	50	n.a.	>70	>70	>70
Italy	49	39	39	85	83	82[h]
Luxembourg	52[c]	50[d]	n.a.	n.a.	n.a.	n.a.
The Netherlands	35	26	26	76	71	81
Portugal	61	32	32	70[c]	79	71[h]
Spain	25	11	19	68	76	78
Sweden	80	83	91	>70	86	89
United Kingdom	50	39	34	70[f]	47	47
Average EU[i]	51	43	44	80	79	80
Stand. dev. EU[i]	17.8	20.9	25.9	10.1	14.5	14.9
Japan	31	25	24	28	23	21[g]
United States	22	16	16	26	18	18

[a] 1982; [b] 1986; [c] 1981; [d] 1987; [e] 1984; [f] 1978; [g] 1995; [h] 1993;
[i] Unweighted average. For coverage, we include only those countries for which we have data for all three years.
Sources: OECD Employment Outlook 1994 and 1997; Booth et al. (2001) and Ochel (2001).

In many countries, mandatory and voluntary extension mechanisms extend the results of collective agreements between unions and employers to non-unionised workers and firms. This creates a discrepancy between the number of workers that are union member (union density) and the number of workers that are covered by collective agreements (union coverage). Union coverage tells potentially more about the actual influence of the trade unions in wage bargaining than union density. The right hand side of table 3.1 reveals information on union coverage in the EU and again compares this with Japan and the US. The figures refer to the number of employees that are covered by a collective agreement, divided by the corresponding total number of wage and salary earners. The data for 1994 show that union coverage exceeds 70% in almost all countries in the EU. This is substantially higher than the rates for union density. Moreover, the average coverage has remained stable at a rate of 80%. Hence, the decline in union density, that we observed from table 3.1, does not mean that union bargaining power has declined.[5] The

[5] More generally, table 3.1 reveals that union coverage is hardly correlated with union density rates. The correlation coefficient is only 0.05 for 1980 and 0.11 for 1990 and 1994.

'excess coverage' nevertheless presents a long-term risk, as the legitimacy of union-negotiated agreements may be undermined.

Compared to union density, union coverage rates are more similar among the countries of the European continent: the standard deviation of the coverage rates in the EU is substantially smaller than that of density rates. In the United Kingdom, coverage has declined from 70% in 1980 to 47% in 1994 and is the lowest among the countries of the EU. However, it is still larger than in the US and in Japan, where about 1 out of every 5 workers is covered by a collective agreement.

A final observation from table 3.1 is that countries in the EU have not become more similar in density or coverage rates. On the contrary, the standard deviation of density rates and coverage rates have increased over time. This is primarily because of the developments in the UK.

Empirical evidence by Nickell and Layard (1999) suggests that both union density and union coverage are positively correlated with unemployment. This suggests that the decline in union density has to some extent undermined the relative bargaining position of trade unions during the past two decades.

3.2   Centralisation and coordination

The institutional level at which negotiations take place is another factor that influences labour market outcomes. We can distinguish between three levels of wage bargaining: firm- or plant-level (decentralised bargaining), industry-level (bargaining at the intermediate level) and countrywide level (centralised bargaining). There exist different views on how these different levels of wage bargaining affect the labour market. The box below discusses these views in more detail.

Referring to the model of section 2, the degree of centralisation exerts two effects on real wages and unemployment. On the one hand, the more centralised the bargaining level, the more trade unions internalise the external effects of wage demands. In our model, this impact can be associated with a relatively high value that trade unions attach to employment relative to wages, i.e. a higher value of η. On the other hand, higher levels of centralisation are generally associated with a better bargaining position of trade unions, relative to firms, i.e. a lower value of α. Combining the two effects, i.e. a high value of η and a low value of α, we cannot a priori assess whether a higher level of centralisation reduces or increases wages. The empirical literature does not help us any further as well. On the basis of a review of empirical studies, Flanagan (1999) concludes that there is no robust conclusion regarding the impact of centralisation (and coordination) on labour-market performance.

Perspectives on centralisation of bargaining and wages

The wage outcome from the bargaining process depends on the institutional level at which negotiations take place. In the literature, different views exist on the impact of the degree of centralisation of wage bargaining on real wage demands (Traxler and Kittel, 2000; Teulings and Hartog, 1998).

First, the neoliberal school argues that the more decentralised the bargaining process, the less bargaining power trade unions can exert. Hence, decentralisation results in lower wage demands.

Second, the corporatist school argues that centralised bargaining results in the lowest real wage demands. The reason is that centralised wage-setters are more aware of the negative externalities associated with high wages and therefore moderate wage demands more than decentralised wage-setters do. In this respect, several externalities can be thought off. For instance, higher wages result in higher production costs and higher consumer prices which ultimately reduce real wages. Alternatively, higher wage claims may raise the number of unemployment benefits which has to be financed by a declining number of employed workers. Centralised trade unions take this increase in the premium for unemployment insurance into account when determining their wage claims (Calmfors, 1993).

The third view combines the neoliberal and the corporatist schools (Calmfors and Driffill, 1988). In particular, it suggests that the highest real wages are obtained at the intermediate industry-level, while wage levels are lower at both the decentralised and the centralised level. Indeed, with decentralised bargaining employers resist wage increases because they are unable to respond by charging higher prices. With centralised bargaining, trade unions understand that excessive wage increases will be passed on to higher prices. Thus, we arrive at a hump-shaped relationship between the degree of wage bargaining centralisation and real wages.

The arguments underlying the hump-shaped hypothesis are based on a closed economy. In an open economy, consumption prices are also affected by imports while producer prices are determined on international markets. Consequently, the theory predicts that real wage levels become more or less independent of the bargaining structure in open economies (Danthine and Hunt, 1994). This latter result is generally confirmed by empirical evidence, which typically rejects the hump-shaped relationship (OECD, 1997).

The left part of table 3.2 (next page) reveals the level at which wage bargaining is organised in the EU, Japan and the United States. The index in this table ranges from 1 (decentralised bargaining) to 3 (centralised bargaining) and refers to the period 1980-1994. We see that wage negotiations in the EU predominantly take place at the industry level (an indicator of 2): only in the United Kingdom wage bargaining is more decentralised. This is a marked difference with both Japan and the US, where the decentralised level has always been dominant. Since the 1980s wage bargaining has become slightly more decentralised in the EU, as we see for example in Sweden and the UK. On average, the indicator for EU countries dropped from an average of 2.16 to 2.02 between 1980 and 1994. According to Visser (2001), this decentralisation trend has continued during recent years. This is primarily driven by employers. Decentralised wage formation is in their interest because of the increasingly complex organisational structures of

companies, their multiple tasks, and their international orientation. This typically calls for more diversity in wage structures and more flexibility in wage negotiation practices.

The institutional level at which wage bargaining takes place clearly exhibits little variation across European countries. EU-countries have become more similar with respect to the degree of centralisation across time: the standard deviation of the index dropped from 0.34 in 1980 to 0.2 in 1994. This is mainly because of the decline in the indices for Sweden en Finland.

Table 3.2   Centralisation and coordination of wage bargaining in the EU, 1980-1994

	Centralisation of collective bargaining[a]			Coordination of wage bargaining[a]		
	1980	1990	1994	1980	1990	1994
Austria	2+	2+	2+	3	3	3
Belgium	2+	2+	2+	2	2	2
Denmark	2+	2	2	2.5	2+	2+
Finland	2.5	2+	2+	2+	2+	2+
France	2	2	2	2-	2	2
Germany	2	2	2	3	3	3
Greece	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	2-	2-	2	1.5	1.5	3
Luxembourg	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
The Netherlands	2	2	2	2	2	2
Portugal	2-	2+	2	2-	2	2
Spain	2+	2	2	2	2	2
Sweden	3	2+	2	2.5	2+	2
United Kingdom	2	2-	2	1.5	1+	1
Average EU[b]	2.16	2.06	2.02	2.15	2.13	2.17
Stand. dev. EU[b]	0.34	0.19	0.20	0.52	0.51	0.53
Japan	1	1	1	3	3	3
United States	1	1	1	1	1	1

[a] 1 = firm/plant level; 2 = industry level; 3 = country level; [b] Where we have assumed that 2- equals 1¾ and 2+ equals 2¼.
Source: OECD Employment Outlook 1997

In many countries, also informal networks and intensive contacts between social partners coordinate the behaviour of trade unions and employers' associations. Examples are the leading role of a limited number of key wage settlements in Germany, and the active role of powerful employer networks in Japan (Soskice, 1990). Therefore, not only the formal degree of centralisation matters, but also the degree of informal consensus seeking between bargaining partners. This is generally called the level of *coordination*. For highly centralised bargaining systems, the degree of coordination and centralisation are likely to coincide. More decentralised systems may, however, exhibit higher degrees of coordination than the formal level of centralisation suggests.

The right-hand side of table 3.2 reports the degree of wage bargaining coordination, using an index ranging from 1 (low degree of coordination) to 3 (high degree of coordination). We see that the coordination index exhibits more variation across European countries than the centralisation index. Indeed, the standard deviation of the coordination index is around 0.5, compared to a standard deviation in the centralisation index of 0.2 (figures for 1994). The degree of coordination is high in Austria and Germany, and low in the United Kingdom. In general, European countries are more coordinated than the US, but less coordinated than Japan, despite the higher level of centralisation in Europe.

Across time, the degree of coordination remains rather stable in most EU countries. In Italy, wage bargaining has become more coordinated while in Sweden and the UK it has become less coordinated. Typically, the degree of coordination changes primarily in countries that also undergo a change in the degree of centralisation. But despite the gradual decline in the centralisation index, there is no decline in the average coordination index. This is consistent with the observation by Visser (2001) who argues that the gradual shift towards decentralisation is accompanied by a gradual increase in informal coordination via social pacts.

In contrast to the centralisation index, the standard deviation of the coordination index is constant over time. Hence, although countries may have become more similar in terms of centralisation, they have remained equally different in terms of coordination.

To summarise, wage bargaining in Europe has become more decentralised during the past decades and this process tends to continue. At the same time, informal coordination tends to offset this trend. We cannot unambiguously conclude how these trends affect labour market outcomes.

3.3   The role of governments

The government can have an impact on wages and on the functioning of the labour market. For instance, all European governments impose labour-market regulations such as minimum wages and extension mechanisms of collective agreements. Also tax systems and in particular the degree of tax progressivity tend to affect wage formation. Furthermore, some EU governments negotiate wage guidelines with trade unions and employers' associations, while others are even involved in tripartite agreements for national wage schedules. During the past decades, there is a tendency in a number of EU countries to reduce the latter role of government in wage determination (Flanagan, 1999).

The government also affects wage bargaining through social insurance. In particular, unemployment benefits affect the attractiveness of the outside option of trade unions, thereby exerting an influence on the relative bargaining position of workers in wage negotiations. Indeed, from section 2 we learn that higher unemployment benefits raise the fall-back position

of employees, thereby strengthening their bargaining position and increasing wages (see table 2.1).

Table 3.3 presents the level of unemployment benefits in various countries by means of gross replacement rates, i.e. the ratio of the gross unemployment benefit and the gross wage level.

Table 3.3   Gross replacement rates in the EU, 1981-1995

	Replacement rate [a]		
	1981	1991	1995
Austria	29	31	26
Belgium	45	42	39
Denmark	54	52	67
Finland	23	39	43
France	32	38	37
Germany	29	29	27
Greece	7	17	22
Ireland	28	29	26
Italy	1	2	19
Luxembourg	n.a.	n.a.	n.a.
The Netherlands	48	51	46
Portugal	9	34	35
Spain	30	34	32
Sweden	25	29	27
United Kingdom	24	18	18
Average EU	27.4	31.8	33.1
Stand. dev. EU	15.1	13.1	13.0
US	15	11	12
Japan	9	10	10

[a] The presented numbers are summary indicators, based on benefits in the first five years for two cases.
Source: OECD statistical compendium and OECD data base on benefit entitlements and gross replacement rates.

The table reveals that the replacement rates in all countries in the EU are well above that in Japan and the US. Still, there is considerable variation within the EU: in 1995, the replacement rate ranges from 18% in the UK to 67% in Denmark. Across time, we observe some convergence in replacement rates in the EU: the standard deviation declined from 15.1 in 1981 to 13 in 1995. This is mainly because of increasing benefit levels in the Southern EU countries. Overall, replacement rates have risen in Europe: on average they rose from 27.4 in 1981 to 33.1 in 1995. This increase differs among countries, however. In particular, the Southern European and Scandinavian countries have increased social benefit levels while Belgium and the UK have reduced them.

To wind up

Trends in national wage bargaining institutions reveal a mixed picture on the position of trade unions. Lower union density and decentralisation of wage formation suggest that their bargaining position has deteriorated, while the rise of informal coordination and the increase in unemployment benefits are consistent with opposite effects. The next section elaborates on how economic integration of European economies has affected wage bargaining during the last decades.

4 Towards European wage coordination?

Not only trends in national institutions determine the position of trade unions in wage bargaining, but also the environment in which unions operate is important. Especially the internationalisation of businesses and economic policy coordination in Europe have changed this environment in recent decades. How has this changed the position of trade unions? And will trade unions respond by coordinating their wage demands internationally?

4.1 Internationalisation and trade unions

Economic integration is an ongoing process that is likely to continue in the near future. For instance, the Single Market Program and the introduction of the Euro have intensified European integration by reducing trade costs and eliminating currency risks. The completion of the single market for financial services and network sectors, and the enlargement of the EU with a number of countries from Central and Eastern Europe will further contribute to economic integration.

Also economic policy coordination in Europe is taking off rapidly. The new areas primarily involve non-binding forms of open coordination. Trade unions and employers' associations are involved in this process through the macro-economic dialogue, a discussion platform with the ECB, national governments, the EC and social partners.

Economic integration has important implications for labour markets in Europe. In particular, the literature on product market integration has emphasised that internationalisation reduces the relative bargaining power of trade unions (see e.g. Huizinga, 1993; Sørensen, 1993; Driffill & Van der Ploeg, 1993, 1995; and Naylor, 1998, 1999). The reason is that high wage claims cause more substantial job losses if industries are exposed to international competition. In a sense, European integration increases the responsiveness of labour demand to wages, which induces trade unions to moderate their wage claims.[6]

An alternative explanation is that European integration makes it easier for firms to locate their activities elsewhere in Europe. Thus, firms can escape excessive wage demands by moving abroad. This threat of relocation improves the relative bargaining position of firms, relative to trade unions, and leads to lower wages.

Both arguments suggest that internationalisation moderates wages. This theoretical prediction is consistent with the trends in real wage growth in Europe.[7] In particular, figure 4.1 depicts the evolution of the real wage growth in the EU during the last four decades and compares it with the growth in labour productivity. Until the 1980s, we see that real wages

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[6] In expression (2.5), this can be illustrated by a larger (thus more negative) price elasticity ϵ which causes a decline in W.

[7] Alternative explanations for a falling wage share are offered by Caballero and Hammour (1998) and by De Serres et al. (2001).

follow labour productivity. Since the 1980s, real wages have almost consistently lagged behind. This has caused a shrinking wage share in national income in the EU (Schulten, 2001). We take this as evidence for the erosion of the bargaining position of the trade unions. While trade unions have continued to operate on a national scale, the European economy is becoming increasingly integrated, thereby moderating real wages.

With internationalisation continuing, it seems likely that the wage share in Europe will stay under pressure. The position of the unions will be even further weakened with the upcoming enlargement of the European Union, because of low wage competition from the Central and Eastern European countries.

Figure 4.1   Real wage growth and labour productivity growth in the EU15 (1961 - 1999)
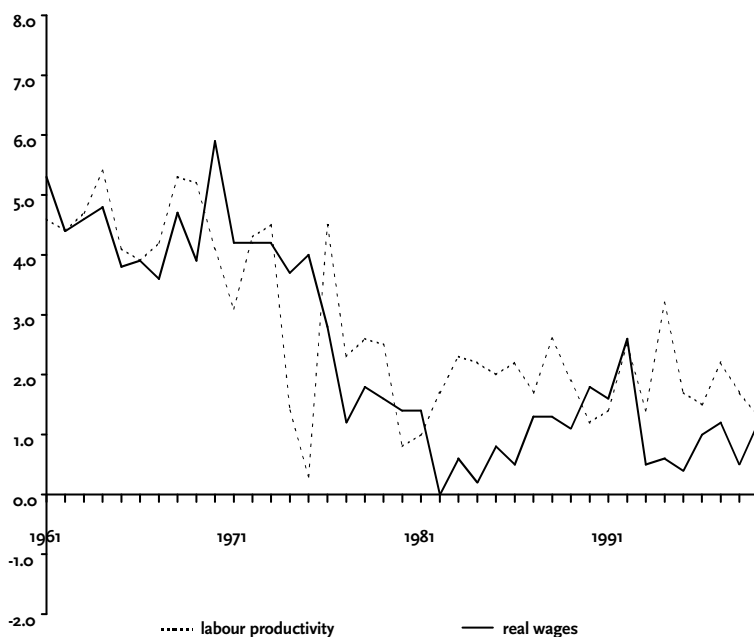
Source: European Commission (1999)

4.2   Why engage in international wage coordination?

To maintain (or recover) their bargaining position in the future, trade unions may aim to coordinate their wage policies internationally. However, a number of countervailing powers prevent a rapid transition towards European wage coordination. This section discusses both the incentives and the obstacles for international coordination.

Incentives for European wage coordination

By coordinating wage demands internationally, trade unions can improve their bargaining position in negotiations with employers (Borghijs and Du Caju, 1999). In a sense, it provides a countervailing power to the impact of economic integration in product and capital markets. Intuitively, in open economies high wage demands by an individual trade union lead to a decline in competitiveness compared to neighbouring countries. The individual trade union only takes this decline in competitiveness into account when determining its wage demand, but takes no account of the positive spillover on the competitive position of other countries. Thus, it is inclined to moderate wages. With coordinated action of trade unions, in contrast, each individual trade union will take into account this positive spillover effect of high wage demands on other countries. Accordingly, joint action by trade unions increase wage demands compared to decentralized action.

A second driving force for European wage coordination is policy coordination. Since the Treaty of Amsterdam, social partners have a vote in EU social policy. More recently, they participate in economic policy coordination through the macro-economic dialogue. These initiatives might be seen as an attempt to find a balance of powers between the ECB and social partners to obtain a stable macroeconomic environment in Europe with low inflation. As a side effect, it may form a platform for trade unions to seek more intensive coordination in wage formation.

A third possible stimulus for international wage coordination occurs when labour markets in Europe would integrate. Thus far, labour mobility in Europe is low (see e.g. Ederveen and Bardsley, 2003), so that labour markets are highly segmented. Indeed, the pool of foreign workers that compete for national jobs in EU countries is limited. This mitigates the incentives for international cooperation. Once workers would become more mobile, they may prefer a coordinated treatment of their interests via an international organisation. The integration of labour markets features high on the political agenda in Europe since the Lisbon Council in 2000.

Obstacles for European wage coordination

Despite its seeming attractiveness for trade unions, there is a number of obstacles that prevents wage coordination so far. First, there are substantial differences among EU countries with respect to trade union practices. For instance, section 3 has already shown the differences with respect to union density and coverage and the degrees of centralisation and coordination. In addition, differences exist with respect to the timing of wage bargaining and the role of trade unions in national policy debates. For example, in the Netherlands and Belgium trade unions constitute major players in discussions on economic policy, while this is not the case in the United Kingdom. Such international differences render international coordination costly due to

less diversity and less flexibility. Moreover, coordination involves operational costs associated with meetings, information gathering, translation, and so on.

A second obstacle to wage coordination is that there is a variety of labour market regulations among EU countries, such as minimum wages, unemployment benefits, employment protection legislation, labour taxation and labour market policy. These differences will only increase with the upcoming enlargement. They make it difficult to agree upon a common agenda between trade unions in Europe. It also implies that a common policy by trade unions may not be optimal for its distinct members. Indeed, the literature reveals that wage coordination can make some trade unions even worse off in case of strong asymmetries in labour markets, despite the gain in the welfare of all trade unions together (see the box below).

Incentives and obstacles for wage coordination in the presence of asymmetries

Borghijs and Du Caju (1999) show that, with symmetric countries, coordination in wage setting always makes trade unions better off as compared to a non-cooperative setting because they incorporate international spillover effects of their behaviour. Intuitively, by coordination, trade unions raises their monopoly power so that they are able to set higher wages.

With asymmetric countries, however, it is not necessarily the case that each trade union benefits from coordination: some trade unions may be worse off cooperating. Borghijs (2001) formally shows the conditions under which at least one union is worse off cooperating. In his model, countries differ in two aspects: the productivity level and the outside option for the worker. By simulating a move from non-cooperative wage-setting towards cooperative international wage-setting with separate wages in the two countries, Borghijs finds combinations of productivity and replacement rates for which wage coordination benefits the trade unions in both countries. Only if productivity and the replacement rate are sufficiently similar in the two countries, wage coordination is attractive for both trade unions. Otherwise, wage coordination makes either of the trade unions worse off. In particular, it is the union in the less competitive country – i.e. the country with lower productivity and higher replacement rates – that tends to lose from the cooperation agreement.

A final reason for the lack of international coordination is that employers' associations are not in favour of negotiations at the EU level. In contrast, they fear for building a European platform for wage negotiations since it would reduce their relative bargaining position in wage formation.

4.3   What forms of wage coordination?

Despite the obstacles, the first initiatives towards international coordination have been taken by trade unions. These are typically softer forms of coordination, e.g. in the form of information exchange or agreements on common rules in wage setting. This section demonstrates these current forms of international wage coordination in Europe and elaborates on the prospects of stronger forms in the future.

Current forms of wage coordination

Today, European coordination between trade unions is usually of the softer form. For instance, trade unions discuss with each other, exchange information and sometimes agree upon the criteria that they adopt in their negotiation strategy. They do not, however, impose binding restrictions on the strategy of each others behaviour or engage in joint wage strategies. This essentially distinguishes soft coordination from stronger forms.

What is the current practice in international cooperation between trade unions? First of all, at the central level the European Trade Union Confederation (ETUC) has long been stimulating international coordination of qualitative labour conditions, such as working standards and social protection. More recently, they advanced discussions on coordination of wages and employment. The most recent proposal of the ETUC bargaining rule is that the rise in wages should equal the rate of inflation plus the gains in productivity, possibly corrected for developments in other determinants (Mermet, 2001).

In another initiative, national trade unions of Belgium, Germany, Luxembourg and the Netherlands signed the Doorn agreement in 1998. Besides focussing on wage demands, this group aims at the promotion of employment growth. This was inspired by the feeling that prolonged wage moderation had resulted insufficiently in job growth. In organising worker representation at the centralised level on a transnational scale, the trade unions also hope to secure the social dialogue that has characterised wage bargaining in the individual member states of the Doorn group. In practice, trade union representatives of the participating countries meet annually and discuss the coordination of national wage-setting practices.

At the industry level, we already mentioned the International Dock Workers Council in the introduction. Another frontrunner is the European metal industry. The European Metalworkers' Federation (EMF) attempts to implement a common bargaining rule for its member partners. The EMF members adopted a resolution in 1998, stating that "the commitment to safeguard purchasing power and to reach a balanced participation in productivity gains is the new European coordination rule for coordinated collective bargaining in the metal sector all over Europe." This clearly reflects the belief that European wage coordination will improve the bargaining position of the workers and prevent downward competition in wages.

Finally, at the decentralised level European works councils bring together workers of multinational companies operating in Europe. Their primary goal is to improve the workers' information and consultation rights on issues that surpass national interests.

Prospects for the future

Labour market institutions – and in particular wage bargaining structures – are characterized by a high degree of inertia (Wallerstein et al., 1997). This implies that stronger forms of international wage coordination are unlikely to occur in the short term, especially in light of the substantial variation in wage bargaining structures within the EU. In the somewhat longer term,

however, international wage coordination may take off in response to trends in EU economies. This coordination can take various forms. For instance, unions may set their wage demands jointly, thereby either leaving room for national flexibility or setting uniform wages. Alternatively, coordination may occur through pattern bargaining, where a group of following trade unions copy the wage demand set by a leading trade union in one country. Another form of strong coordination would involve a common lower bound to wage growth. All these stronger forms of coordination have in common that a European body restricts the freedom of national trade unions in their negotiation strategies. Below, we discuss the opportunities for strong coordination at the centralized level, the industry level and the firm level.

Strong coordination at the centralised level is difficult. For instance, extending the Doorn initiative to other Member States of the EU is cumbersome since natural partners at the centralised level do not exist in a number of European countries. More intense coordination may occur, however, between trade unions in a subset of Member States. It seems likely, however, that centralised unions focus more on their role in the European policy debate rather than directly interfering with wage negotiations. In Europe, this is typically done at the industry level.

At the industry level, we already mentioned a number of obstacles to coordination such as the large heterogeneity across countries, the opposition from employers, and the substantial coordination costs. EU enlargement further raises the heterogeneity in Europe and renders coordination even more difficult. Still, the industry level is most common in European wage bargaining and therefore provides a natural platform. The most likely form of coordination at the industry level is the leader-follower model. This may be attractive for individual trade unions to maintain their institutional differences, but nevertheless benefit from the coordination agreement which strengthens their bargaining power.

European coordination may also develop at the firm level. This is stimulated by the general tendency towards more decentralisation in wage bargaining and the introduction of European Work Councils in multinational companies. This facilitates the comparison of wages within the same company and may put pressure on companies to harmonise nominal wage developments (or even wage levels) across different Member States.

5   The pros and cons of wage coordination

What would be the implications of European wage coordination for the functioning of European labour markets? This section analyses the impact on the labour market equilibrium and the role of nominal wages in absorbing asymmetric shocks.

5.1   Labour market equilibrium

Inflation and unemployment in the EMU

With the introduction of EMU, a new strand of literature has emerged in which the impact of EMU on wages and unemployment is evaluated.[8] In particular, these papers compare the labour-market performance under a monetary union with that under national monetary policies. In both situations, inflation averse national trade unions set their nominal wages, thereby taking into account the nominal wages set in other countries and the response of the central bank to their wage demands. The central bank, in turn, chooses inflation so as to minimise the joint costs of inflation and unemployment. The difference between the two regimes is that the central bank in the monetary unions chooses EU-wide inflation while the national central banks choose national inflation. In this setting, the papers conclude that a monetary union results in more aggressive wage demands by national trade unions. Intuitively, national trade unions perceive that their individual nominal wage demands have little repercussions for inflation in the monetary union because they are only small players. Accordingly, they engage in more aggressive wage demands, thereby raising inflation and unemployment. This suggests that the completion of EMU may cause an increase in the equilibrium rate of unemployment in Europe.

If wage bargaining is centralised in the EU, however, trade unions would internalise the impact of their (joint) actions on EU-wide inflation. Accordingly, wages and unemployment are lower under European wage coordination than under national wage setting. This also holds for wage leadership by trade unions in one country. Hall and Franzese (1998) therefore state that European wage coordination may reduce the sacrifice ratio, i.e. the unemployment cost of reducing inflation.

International wage coordination in this literature refers to stronger forms where wages are set jointly. This does allow for flexibility across countries, however. The important aspect is that trade unions correctly incorporate the responses by the ECB. This calls for joint action, but not necessarily uniform wage demands.

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[8] See e.g. Cukierman and Lippi (1999), Grüner and Hefeker (1999), Lippi (1999), Guzzo and Velasco (1999) and Coricelli et al.(2000).

Improved bargaining position of trade unions

International wage coordination exerts an impact on the relative bargaining power of trade unions relative to firms. Indeed, with international coordination trade unions reduce international competition and increase their market power or, in terms of wage negotiations, their bargaining power.

This effect can be captured in our model of section 2 by introducing a fallback position of firms in wage negotiations. Under national wage negotiations, the profits in alternative foreign locations form a credible threat point for the firm and strengthens its bargaining position against the trade union. Under joint wage setting, however, the level of profits in the alternative foreign location will change in exactly the same way as do national profits since wage costs are linked. This makes the threat of relocation by the firm less powerful and reduces the relative bargaining power of the firm.

To formalize this latter mechanism, we can extend our analytical framework of section 2 by including a non-zero outside option for the firm. The alternative excess profit equation reads as

$$\Pi \;=\; PY \;-\; WL \;-\; \Pi^* \tag{5.1}$$

where Π^* stands for the outside option of the firm. It represents the level of profits in case the negotiations in the country of residence break down. In that case, the firm may either stop production so that the alternative profits are zero. This was implicitly assumed in section 2. Alternatively, the firm can move its capital abroad so as to produce in a foreign country. In that case, the profits that can be earned in the foreign country constitute the relevant outside option. In that location, it faces the wage rate of foreign workers.

The solution for the wage rate in this extended model modifies (2.5) as follows:

$$W \;=\; \frac{\hat{\chi}_1 W^* \;+\; \chi_2 (PY \;-\; \Pi^*)/L}{\hat{\chi}_1 \;+\; \chi_2} \tag{5.2}$$

where $\hat{\chi}_1 \;=\; \alpha/(1-\alpha) \;+\; \eta/(1+\epsilon^{-1})(1+\Pi^*/(\epsilon^{-1}PY))$ and the rest as before.

Expression (5.2) reveals that, with a non-zero outside option for the firm, union members can at best hope to get a share of the excess profit. If the outside option of the firm increases relative to domestic profits (as is the case if foreign wage demands are independent of national wage demands), this keeps wages low since relocation of the firm constitutes a credible threat. However, if foreign profits are indexed to domestic profits because national and foreign wage demands are coordinated, wages will be set at a higher level. Wage coordination therefore

increases wages unambiguously, provided that it strengthens the link between wages across locations. Intuitively, by jointly setting wages, trade unions improve their bargaining position relative to firms as firm relocation becomes less credible. The increase in real wages is accompanied by a higher unemployment rate.

Indexation or joint wage setting reflect stronger forms of coordination as it restricts the freedom of national trade unions. It could take the form of demands for uniform increases in wages, commonly agreed lower bounds in wage demands, or implicit contracts in the form of leader follower behaviour in wage setting.[9]

5.2   Labour market flexibility

Since the introduction of the euro, individual Member States in EMU are deprived from monetary and, to a lesser extent, fiscal policy to absorb asymmetric shocks. European monetary policy by the ECB is geared to shocks in the entire Euro area and does not take account of asymmetric developments. Also stabilisation through the EU budget via fiscal redistribution is virtually absent in the EU. This implies that the labour market plays an important role in the adjustment to asymmetric shocks, either through labour mobility or through wage adjustment. Given the low mobility of labour among European countries, wage adjustment is probably the most important instrument for absorbing asymmetric shocks in the Euro area. In this respect, economists usually argue that wage bargaining should take place at the level at which shocks occur (Pissarides 1997; Calmfors 2001).

There is some controversy on whether asymmetric shocks in Europe will gain importance or not. On the one hand, European regions may become more specialised in EMU (Krugman, 1993). In particular, if the US economy would serve as an example for the future of Europe, then increasing regional specialisation is likely to occur. In that case, region-specific shocks will become more important. On the other hand, past experience in Europe does not confirm increasing patterns of regional specialisation (Gorter, 2002). Hence, there is no reason to believe that asymmetric shocks will gain importance. Frankel and Rose (1997) have even argued that EMU may lead to more synchronised business cycles among countries.

International wage coordination may reduce the flexibility of wages to absorb country-specific shocks. In particular, if trade unions either agree on uniform wage demands, use a band between which national nominal wages should move, or follow the nominal wage demands of a leading trade union in Europe, regional wage flexibility would be hampered.[10] In this respect, we refer to a robust finding in the empirical literature, namely, that centralisation of wage

[9] If trade unions seek to equalize the level of wages across countries, the effects on unemployment may be far more serious, as can be seen from the East German experience (see Akerlof et al., 1991).

[10] Note that softer forms of wage coordination, e.g. in the form of common rules, do not necessarily impair wage flexibility in response to asymmetric shocks.

bargaining is negatively correlated with wage dispersion (Flanagan, 1999). Applied to the EU level, this would imply that more centralised wage bargaining in the EU reduces wage differentials between regions, thereby potentially raising unemployment in regions with a relatively low labour productivity.[11]

[11] For aggregate shocks the situation is different. In response to aggregate shocks, European wage coordination does not necessarily reduce flexibility. In fact, by coordinating internationally, trade unions may even respond more quickly to aggregate developments.

6   Conclusion

Since the 1980s, real wages in Europe have consistently lagged behind the improvements in labour productivity. This points to a gradual deterioration of the relative bargaining position of trade unions in wage negotiations. It cannot satisfactorily be explained by institutional developments at the national level. In particular, although union density has steadily decreased and wage formation has become more decentralised, these changes are offset by increasing excess union coverage (due to mandatory and voluntary extension mechanisms) and informal forms of coordination, respectively. A more plausible explanation is, therefore, that firms increasingly operate at an international scale while trade unions have continued to operate nationally. This raises the question whether trade unions will respond by cooperating internationally as well. Softer forms of international coordination have already been introduced in the form of agreements about common rules in determining wage demands. Discussions now focus on steps towards stronger forms of coordination. Would this be a nightmare, or a dream to come true?

For trade union members, international wage coordination can be a dream. In particular, it increases their bargaining position relative to firms, which allows for higher real wages at the expense of lower profits. For society at large, however, this may not be welfare improving as it raises involuntary unemployment. Yet, unemployment does not necessarily increase due to wage coordination. This is because trade unions can, by acting jointly, solve a coordination problem with the ECB. In particular, the central trade union takes account of the response to its wage claims by the ECB, something which is not incorporated with decentralised wage setting. This reduces the unemployment rate as compared to the case with decentralised wage setting.

International wage coordination can nevertheless be harmful to the extent that it reduces the flexibility of wages in responding to asymmetric shocks. Indeed, flexibility in nominal wages is vital for stabilising the economies in EMU in the absence of other stabilisers. Wage coordination may even turn into a nightmare for Europe if trade unions would seek to equalize wages across countries.

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