

Wolfgang Pollan

## Pattern Bargaining and Wage Leadership in Austria

**Several contributions to the economic literature on industrial relations claim that wage bargaining in Austria is characterised by pattern bargaining or wage leadership. This claim has, however, never been investigated empirically. This paper fills this gap by examining the development of contractual wage rates set in collective bargaining and of wage rates actually paid. Wage disparity has been high and rising over the last 20 years. This finding is incompatible with the claims of the proponents of pattern bargaining or wage leadership and suggests that wage differentials are not closely linked to productivity.**

This article is based on Wolfgang Pollan, *Austrian Exceptionalism. Labour Market Institutions and Wage Disparity*. Study of the Austrian Institute of Economic Research, supported by the Austrian National Bank (Jubiläumfondsprojekt 10290), 2003. • Wolfgang Pollan is an economist at WIFO. The author thanks Alois Guger, Hedwig Lutz and Thomas Url for helpful comments. The data were processed and analysed with the assistance of Annamaria Rammel. • E-mail addresses: [Wolfgang.Pollan@wifo.ac.at](mailto:Wolfgang.Pollan@wifo.ac.at), [Annamaria.Rammel@wifo.ac.at](mailto:Annamaria.Rammel@wifo.ac.at). • JEL code: J3, J5

The persistence of unemployment in many OECD countries has focussed attention on the functioning of the labour market, in particular on wage bargaining institutions. The literature has identified certain labour market institutions as beneficial to achieving low unemployment and price stability.

According to the institutional school, countries with centralised wage bargaining exhibit a superior labour market performance. Under centralised wage bargaining, bargaining is delegated to peak level organisations, both at the employers' and employees' side. In this setting, wage setters are aware of the negative externalities associated with high wages and as a consequence pursue a moderate wage policy, which in turn fosters full employment and price stability (*Calmfors*, 1993, *OECD*, 1997A, *Calmfors et al.*, 2001).

The indicators of centralised wage bargaining used to examine this hypothesis refer mainly to the formal structures of unions and employers' organisations (such as union density, control over strike action, union confederation resources, the prevailing bargaining level, the number of union and of central employer confederations) and the question to what extent the actual practice of wage setting corresponded to formal rules was hardly investigated<sup>1</sup>.

The emphasis on formal structures, particularly those of labour unions, has been criticised by *Soskice* (1990), who argues that centralisation may be just one form of the wider concept of bargaining co-ordination. For example, co-ordination in wage bargaining may be achieved when employers are centralised, even if unions are not highly centralised. This is the case, *Soskice* argues, in Japan and Switzerland. The *OECD* (1997A, p. 70) argues in a similar vein: "Analysis of co-ordination . . . focuses on the degree of consensus between the collective bargaining partners. Bargaining may well be co-ordinated even when it is decentralised, as in the case of pattern bargaining or covert co-ordination. Co-ordination and centralisation may then be thought of as two different routes to achieving the same aims."

For Japan, a high degree of co-ordination may be inferred from the observation that the so-called Spring Offensive produced wage increases that were identical across bargaining groups. But not all cases of co-ordination are as clear-cut as that for the bargaining system in Japan. Each country's collective bargaining system has

<sup>1</sup> In view of the high degree of subjectivity in ranking the wage bargaining systems, *Casey – Gold* (2000) reject such rankings as useless.

to be judged on its own merits, a task that seems to be even more arduous and subjective than finding indicators for centralised wage bargaining.

This paper is organised as follows: The first section briefly reviews the arguments against classifying Austria's bargaining system as highly centralised and then explores the question of whether Austria's wage determination system may be highly co-ordinated in the form of pattern bargaining or wage leadership. After discussing the difficulties of distinguishing pattern bargaining from other models of wage determination in the second section, the paper turns to the empirical evidence by analysing the level and development of wage disparities in Austria, both in wage rates set in collective agreements and in wages actually paid. The final section contains a summary and conclusions.

Several studies of corporatism and of wage bargaining systems (*Bruno – Sachs, 1985, Calmfors – Driffill, 1988, OECD, 1994, 1997A*) assign Austria the highest rank in a grouping of wage setting systems along the centralisation/co-ordination dimension, the extent of centralisation and co-ordination of wage bargaining in Austria has, however, been seriously overstated<sup>2</sup>:

Wage bargaining does not take place at the national level, as claimed, but at the industry and plant level. More than 400 collective agreements are negotiated each year. Each bargaining unit, whether on the workers' or employers' side, must rely on its own resources in securing or moderating wage increases. This is the source of the high degree of wage disparity at the level of collectively bargained rates.

Wage rates negotiated in collective agreements are, however, only minimum rates which constitute a floor for the wages actually paid<sup>3</sup>. Many employees are remunerated substantially above the minimum rates. This practice contributes to a widening of wage differentials.

In much of the literature, the Austrian Trade Union Confederation (*Österreichischer Gewerkschaftsbund, ÖGB*) is portrayed as a monolithic organisation which tightly controls its member unions. Wage restraint and wage equality (solidarity) are forced on the rank and file by the peak organisation. This view, which *Golden (1993)* calls the union bureaucracy model, is based on a misinterpretation of the organisational form of the trade unions, and most arguments can be dismissed simply by reference to the statutes of the *ÖGB (Pollan, 2003)*. Other arguments in favour of this view are incorrect inferences from the fact that only the *ÖGB* is a legal entity<sup>4</sup>.

Furthermore, the claim that the Parity Commission and its Sub-Committee on Wages, seen as the embodiment of the formal institutions of centralised wage setting, has tightly controlled wage bargaining is clearly contradicted by the minutes of the Parity Commission (*Pollan, 2002*).

While Austria's wage bargaining system is clearly not highly centralised it may rank high on the co-ordination dimension. A variant of the claim that it is highly co-ordinated is the assertion that it is characterised by pattern bargaining (*Traxler – Blaschke – Kittel, 2001, p. 145, Eironline, 2003*). Pattern bargaining can be described as the co-ordination of collective bargaining performed by bargaining units below the peak level, with a certain bargaining unit setting the going rate for the rest of the economy.

Pattern bargaining, it is claimed, may achieve much the same outcome, namely wage moderation, as a centralised procedure (*Wallerstein, 1999, p. 657*)<sup>5</sup>:

A particular union, the German metal workers for example, may act as the wage leader. If the wage agreement signed in the leading industry is quickly adopted in other industries, and the wage negotiators in the leading industry understand that

<sup>2</sup> For a critical review of the literature see *Pollan (2003)*.

<sup>3</sup> In some sectors, the collective agreements also contain provisions regarding increases in actually paid wage rates (*Ist-Lohnklausel*). For details see *Pollan (2000)*, pp. 45-47.

<sup>4</sup> For example, such an inference is at the basis of *Visser's (1990)* claim that the *ÖGB* commands great authority over the individual unions.

<sup>5</sup> A similar claim is made by *Traxler – Blaschke – Kittel (2001, pp. 145-148)*.

## The classification of Austria's wage bargaining system

the terms of their agreement will rapidly spread throughout the economy, the outcome may be a wage schedule that is not very different from what would result from the direct negotiation of a centralised agreement covering the private sector as a whole.

There are two issues here: One refers to the question of wage moderation, with the macroeconomic goal of full employment and price stability, the second issue refers to the question of whether or not other bargaining units are able to achieve the same wage gains as the so-called wage leaders, or, if the wage leader practises wage restraint, whether they are willing to follow this lead. This question will be addressed later in this study, but an in-depth empirical evaluation of whether or not wage moderation has been practiced in Austria over the last 50 years is beyond the scope of this study.

History is full of examples of the collapse of agreements that aim to slow down the growth of wage increases (Katz, 1993, Freeman – Gibbons, 1995, Eichengreen – Iversen, 1999, Calmfors et al., 2001). Given this tendency of centralised wage restraint agreements to break down, the question arises as to why a "wage leader" would pursue a moderate wage policy. It is weak unions and bargaining units that push for a centralised wage setting system (Swenson, 1989). Stronger unions want to set their own agenda, with a view to distancing themselves from the settlements of other bargaining units.

Establishing the claim that pattern bargaining or wage leadership characterises a country's wage setting system faces severe theoretical and empirical difficulties. In every system where employers and labour representatives from unions or works councils bargain over wage increases, settlements of some visible bargaining units, either at the enterprise or the sector level, will serve as a reference for wage claims for other groups. This kind of imitative behaviour follows from the proposition that many market situations are characterised by limited information and transaction costs (Meyer, 1995, Teague, 2000).

But imitative behaviour will also prevail in a decentralised system, when there are social norms of fairness (Akerlof – Yellen, 1988). Employers will take account of wage development in other firms, not doing so would offend the workforce's concern for fairness and would have a negative impact on morale and would reduce productivity. Thus, imitation effects do not depend on the existence of any particular set-up and cannot differentiate one particular system of wage setting from another.

In an economic system which follows the neo-classical model the similarity in wage movements does not even require explicit imitative behaviour: competition of firms for labour assures that, in response to macroeconomic shocks, wage changes are similar in all sectors. Only firm-specific shocks yield marked differences in wage changes: during a transition period, expanding firms offer higher wage rates, shrinking firms offer lower wage rates.

While the finding of a strong co-movement in wages across industries can not by itself be interpreted one way or the other without gathering more evidence, the finding of strong (and persistent) divergence in the movement of wages across sectors would rule out the claim of pattern bargaining<sup>6</sup>.

Despite these difficulties, rankings on co-ordination have been produced, Austria's position in these groupings has not been based on empirical studies of the wage setting system, but simply asserted: the OECD (1997A) classifies Austria among the countries with the highest degree of co-ordination among the OECD countries, and the classification of pattern bargaining proposed by Traxler – Blaschke – Kittel (2001, Table III.7) puts Austria from 1983 onwards in the same group as Japan and Germany and the USA of the early 1970s.

---

### **Distinguishing between pattern bargaining and other models of wage determination**

<sup>6</sup> This finding, of course, would still be open to the interpretation that the wage pattern is the result of shifts in demand and supply, though such shifts would have to be strong and persistent.

The theoretical literature on the economic effects of bargaining institutions has yielded two main conclusions: a high degree of centralisation or co-ordination fosters, first, full employment and price stability and, second, produces wage compression. While the empirical literature on the macroeconomic effects of a high degree of centralisation or co-ordination in wage bargaining remains inconclusive, the second implication is strongly supported by empirical findings: there is a clear negative correlation across OECD countries between centralisation or co-ordination in wage bargaining and the extent of wage disparity (Rowthorn, 1992, OECD, 1997A, Freeman, 1998, Blau – Kahn, 1999). Austria seems to be the exception to this empirical regularity.

The Austrian labour movement claims to be committed to a solidaristic wage policy. Besides being expressed in statements of union goals (Kienzl, 1973, p. 234), this principle is also implicit in the ÖGB's official wage policy which stresses the orientation of wage increases toward economy-wide growth: all groups of workers should participate in the economy-wide productivity advances by receiving the same wage increases. The development of the extent of wage dispersion measures the degree to which this goal has been achieved and thus may be a good indicator of the power of the peak union organisation over the affiliated unions and the various wage bargaining units<sup>7</sup>. This is the question of centralisation.

Alternatively, if the issue is the effect of pattern bargaining and wage leadership on wages (the co-ordination dimension), such an indicator sheds light on the question to what extent the "wage followers" were willing or able to follow the "wage leader".

For Austria, wage leadership is ascribed to the metal workers (Gewerkschaft Metall – Textil), which for some years now jointly with the Union of Salaried Employees (Gewerkschaft der Privatangestellten, Sektion Industrie und Gewerbe) has opened the fall wage round. In a similar way, the wage settlements achieved by the employees in the trade sector and by the public sector unions may have a certain signalling effect on related bargaining groups. In the spring wage round, this role could be ascribed to the chemical workers (Gewerkschaft der Chemiewerker) and construction workers (Gewerkschaft Bau – Holz).

The following section takes a close look at the outcome of the Austrian wage bargaining system, by examining the extent and development of wage inequality in Austria, both at the level of collectively bargained wages and at the level of earnings.

Table 1 presents data for the *lowest* and the *highest* contractual wage rates for workers by industry in manufacturing, for wage rates for workers in the manufacturing metal and engineering industries<sup>8</sup> as well as for workers in the distribution sector and in electric utilities.

## The evidence from wage statistics

## The status quo: Large differentials in contractual wage rates

### A Note on Terminology

Contractual wage and salary rates arrived at in collective bargaining will be referred to as "contractual wage rates", only when the distinction between blue-collar and white-collar workers is important, will the text distinguish between contractual wage rates and contractual salary rates.

The terms in German are "Tariflöhne und Tarifgehälter" or "Kollektivvertragslöhne und Kollektivvertragsgehälter".

Wage and salary rates actually paid are referred to as effective wages (salaries). The term in German is "Effektivlöhne und Effektivgehälter".

For a comparison of contractual wage rates across industries, the wage rates of *unskilled workers at the entry level* were selected. At this level, wage rates refer to

<sup>7</sup> See Freeman (1988), who uses the extent of wage disparity along with the rate of unionisation as indicators of labour market structure.

<sup>8</sup> Blue-collar workers in the metal and engineering industries of manufacturing constitute about half of blue-collar workers in manufacturing. They are covered by one collective agreement and have the same contractual wage rates. The same applies to white-collar workers.

workers of the same qualification, while at a higher skill level the comparability of wage rates in various occupations may be limited. These rates also provide information on the minimum wage prevailing in a specific sector covered by a collective agreement.

Table 1: Contractual wage rates of unskilled blue-collar and white-collar workers in selected industries at the end of 2000

	Blue-collar workers Hourly wage rates	White-collar workers Monthly salary rates
	In €	
<i>Manufacturing</i>		
Industry with the lowest rates	4.87 <sup>1</sup>	851 <sup>1</sup>
Industry with the highest rates	9.38 <sup>2</sup>	1,381 <sup>3</sup>
Metal and engineering industries	6.89	1,212
<i>Trade</i>		
General wholesale and retail trade	5.85	974
Supermarkets	6.57	1,097
Electric utilities	7.46	1,298

Source: Statistics Austria. – <sup>1</sup> Clothing industry. – <sup>2</sup> Large breweries. – <sup>3</sup> Tobacco industry. – For manufacturing, the first and the second row show those branches with the lowest and highest rates for unskilled workers, e.g., the lowest hourly rates for unskilled workers were paid in the clothing industry, while the highest rates were paid in large breweries.

At the level of contractual wages for unskilled workers the principle of a solidaristic wage policy should be most clearly evident; nonetheless, wage differentials are rather high. In manufacturing, the rate for unskilled blue-collar workers in large breweries is almost twice as high as the corresponding rate in the clothing industry.

Collective agreements for blue-collar workers are negotiated by several unions, so some variation can be expected, but as far as white-collar workers are concerned, there is just one union, the Union of Salaried Employees, that negotiates collective agreements for almost all white-collar workers in the private sector. Nonetheless, contractual salary rates vary greatly, from € 1,381 in the tobacco industry to € 851 in the clothing industry.

Table 2: Average contractual wage rates and total labour costs for selected manufacturing industries in 1999

	Blue-collar workers	
	Contractual wage rate <sup>1</sup>	Total labour costs <sup>2</sup>
	In ATS	
Leather industry	70.5	144.5
Clothing industry <sup>3</sup>	69.4	176.1
Non-electric machinery industry	111.4	290.3
Pulp and paper industry	120.9	356.4
Iron and steel industry	112.0	381.2

Source: Statistics Austria, Austrian Economic Chamber. – <sup>1</sup> Austrian Economic Chamber, Lohnstatistik der Industrie. Average of April and September 1999. – <sup>2</sup> Austrian Economic Chamber, Die Arbeitskosten in der Industrie Österreichs 1999. – <sup>3</sup> Contractual wage rates for Austria excluding Vorarlberg.

For most workers, contractual wage rates are only minimum rates. In general, wage premiums paid above contractual wages as well as fringe benefits increase wage inequality. This can be documented for *manufacturing*. Table 2 compares average hourly contractual wage rates and total hourly labour costs<sup>9</sup> for two low-wage, two high-wage industries and one branch from the metal and engineering industries (non-electric machinery industry) for the year 1999 for blue-collar workers. For example, the ratio between the average contractual wage rate in the leather industry and in the iron and steel industry is 1.6, if, however, labour costs are compared the ratio rises to 2.6.

<sup>9</sup> Total labour costs include pay for time worked, pay for time not worked (vacation, public holidays, etc.), other cash payments (such as seasonal bonuses and pay in kind), employer social security expenditure (statutory, collectively agreed and non obligatory) and similar items. For a detailed analysis of total labour costs in the manufacturing sector by branches see Pollan (1997).

A similar picture emerges from statistics on pay for white-collar workers in manufacturing. Again the pulp and paper industry and the iron and steel industry are among the industries paying the highest salaries, and the clothing and leather industries among those paying the lowest salaries, though the inequalities are not as pronounced as for wage earners (Pollan, 2000).

This section examines the development of wage disparity both at the level established by collective bargaining and at the level of actually paid wages and salaries (effective wages and salaries).

Table 3 presents data for contractual wage and salary rates for the whole economy by major sectors for the period 1986 to 2002. The differences in wage increases may seem small for each period, but a difference of 0.2 or 0.3 percentage point per year, accumulated over 10 or 15 years, yields substantial wage differentials. This is illustrated for the major economic sectors, both for blue-collar and white-collar workers, in Figure 1, which depicts the development of relative wages and salaries (defined as contractual wage and salary rates of each individual sector divided by the aggregate of the private sector).

## The emergence of wage differentials

### Rising wage disparity in contractual wages and salaries in the whole economy . . .

Table 3: The development of contractual wage rates

	1986-1995	1995-2002
	Average percentage change per year	
Manufacturing		
Blue-collar workers	+ 4.9	+ 2.8
White-collar workers	+ 4.8	+ 3.0
Construction sector		
Blue-collar workers	+ 4.9	+ 2.6
White-collar workers	+ 4.7	+ 2.4
Small-scale industry excluding construction		
Blue-collar workers	+ 5.1	+ 2.0
White-collar workers	+ 4.4	+ 2.3
Trade		
Blue-collar workers	+ 4.4	+ 2.3
White-collar workers	+ 4.3	+ 2.2
Tourism industry		
Blue-collar workers	+ 4.6	+ 2.4
White-collar workers	+ 3.8	+ 2.0
Banking and insurance	+ 4.2	+ 2.1
Public sector	+ 3.7	+ 1.5
Transport sector	+ 4.0	+ 2.3

Source: Statistics Austria.

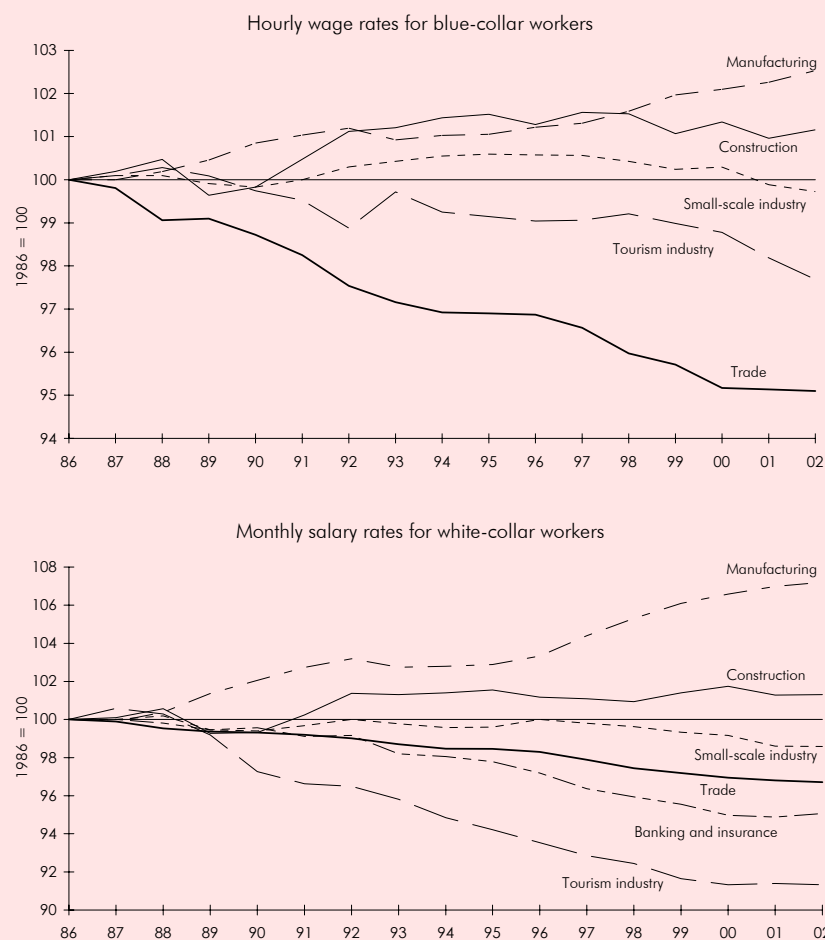
Wage and salary differentials have risen for the whole period under consideration, but it appears that the dispersion has grown more strongly since the mid 1990s. To examine this hypothesis the coefficient of variation regarding the yearly rate of increase of wages (salaries) was computed for 4 subperiods.

Two groups of employees, workers in agriculture and forestry among the blue-collar workers and salaried employees in the sector "professional and technical services" (freie Berufe) among the white-collar workers show a particularly uneven development of wages: periods of low wage (salary) increases are followed by exceptionally high increases<sup>10</sup>. To abstract from these irregularities, the coefficients of variation are computed excluding these two employee groups.

<sup>10</sup> This effect may partly be due to the fact that some employee groups are not able to secure wage (salary) increases every year; the high rates occur when wage increases are bunched together in one particular year.

Figure 1: The development of relative contractual wage and salary rates

Average of the private sector = 100



Source: Statistics Austria.

Two features are noteworthy: First, the coefficient of variation for white-collar workers is considerably larger than that for blue-collar workers. Second, the disparity in yearly wage or salary increases during the period from 1996 to 2000 is markedly larger than in the periods ending in 1990 and in 1995. This may be related to Austria's accession to the EU, which intensified competition in many areas.

Table 4: Variation of yearly increases in contractual wage rates in the private sector

	Ø 1987-1990	Ø 1991-1995	Ø 1996-2000	Ø 2001-02
	Coefficient of variation of percentage change per year			
Blue-collar workers <sup>1</sup>	0.10	0.07	0.16	0.12
White-collar workers <sup>2</sup>	0.14	0.11	0.26	0.09

Source: Statistics Austria, WIFO calculations. – <sup>1</sup> Manufacturing, small-scale industry, construction, trade, transport, tourism industry. – <sup>2</sup> Sectors listed in note 1 plus the banking and insurance industry.

One could argue that the rising disparity between the economic sectors reflects the fact that these sectors are covered by different unions. This is true for blue-collar workers but does not apply to white-collar workers: most of them are covered by the Union of Salaried Employees (Gewerkschaft der Privatangestellten).



An analysis of the manufacturing and related sectors yields much the same picture: Over the period 1986-2002 there is great variation in yearly growth rates. While the contractual rates of blue-collar workers in the metal and engineering industries (and the mining, iron and steel industries) rose by 4.2 percent per year, the contractual rates for the clothing industry fell behind with a yearly increase of only 3.4 percent (Table 5).

... and in the  
manufacturing sector

Table 5: The development of contractual wage rates in the manufacturing and related sectors by industry

	Blue-collar workers		
	1986-1994	1994-2002	1986-2002
	Average percentage change per year		
Construction	+ 5.1	+ 2.7	+ 3.9
Mining, iron and steel	+ 5.2	+ 3.2	+ 4.2
Petroleum	+ 5.1	+ 3.0	+ 4.0
Stone, brick, quarrying	+ 5.0	+ 2.6	+ 3.8
Glass	+ 4.9	+ 2.5	+ 3.7
Chemicals	+ 5.0	+ 3.1	+ 4.0
Pulp and paper	+ 4.5	+ 3.0	+ 3.7
Paper products	+ 4.9	+ 2.9	+ 3.9
Sawn wood	+ 4.8	+ 2.6	+ 3.7
Wood products	+ 4.9	+ 2.6	+ 3.7
Food and beverage	+ 4.5	+ 2.5	+ 3.5
Leather	+ 5.3	+ 2.4	+ 3.8
Leather products	+ 5.4	+ 2.3	+ 3.8
Clothing	+ 4.9	+ 2.0	+ 3.4
Textiles	+ 4.5	+ 2.5	+ 3.5
Metal products	+ 5.2	+ 3.2	+ 4.2
Gas and district heating	+ 4.0	+ 2.2	+ 3.1
Electricity	+ 5.1	+ 3.2	+ 4.2
Minimum	+ 4.0	+ 2.0	+ 3.1
Maximum	+ 5.4	+ 3.2	+ 4.2

Source: Statistics Austria.

Table 6: The development of contractual salary rates in the manufacturing and related sectors by industry

	White-collar workers		
	1986-1994	1994-2002	1986-2002
	Average percentage change per year		
Construction	+ 4.8	+ 2.6	+ 3.7
Mining, iron and steel	+ 5.2	+ 3.5	+ 4.3
Petroleum	+ 5.0	+ 3.0	+ 4.0
Stone, brick, quarrying	+ 5.0	+ 3.0	+ 4.0
Glass	+ 5.2	+ 2.8	+ 4.0
Chemicals	+ 5.3	+ 3.3	+ 4.3
Pulp and paper	+ 5.0	+ 3.0	+ 4.0
Paper products	+ 4.9	+ 2.9	+ 3.9
Sawn wood	+ 4.6	+ 2.4	+ 3.5
Wood products	+ 4.6	+ 2.8	+ 3.7
Food and beverage	+ 4.4	+ 2.7	+ 3.5
Footwear	+ 4.0	+ 2.4	+ 3.2
Clothing	+ 3.8	+ 2.0	+ 2.9
Textiles	+ 4.0	+ 2.7	+ 3.3
Textiles and clothing Vorarlberg	+ 4.0	+ 2.7	+ 3.3
Metal products	+ 5.2	+ 3.4	+ 4.3
Electricity	+ 5.1	+ 2.8	+ 4.0
Gas and district heating	+ 3.8	+ 1.9	+ 2.8
Audivisual and film industry	+ 5.9	+ 2.7	+ 4.3
Minimum	+ 3.8	+ 1.9	+ 2.8
Maximum	+ 5.9	+ 3.5	+ 4.3

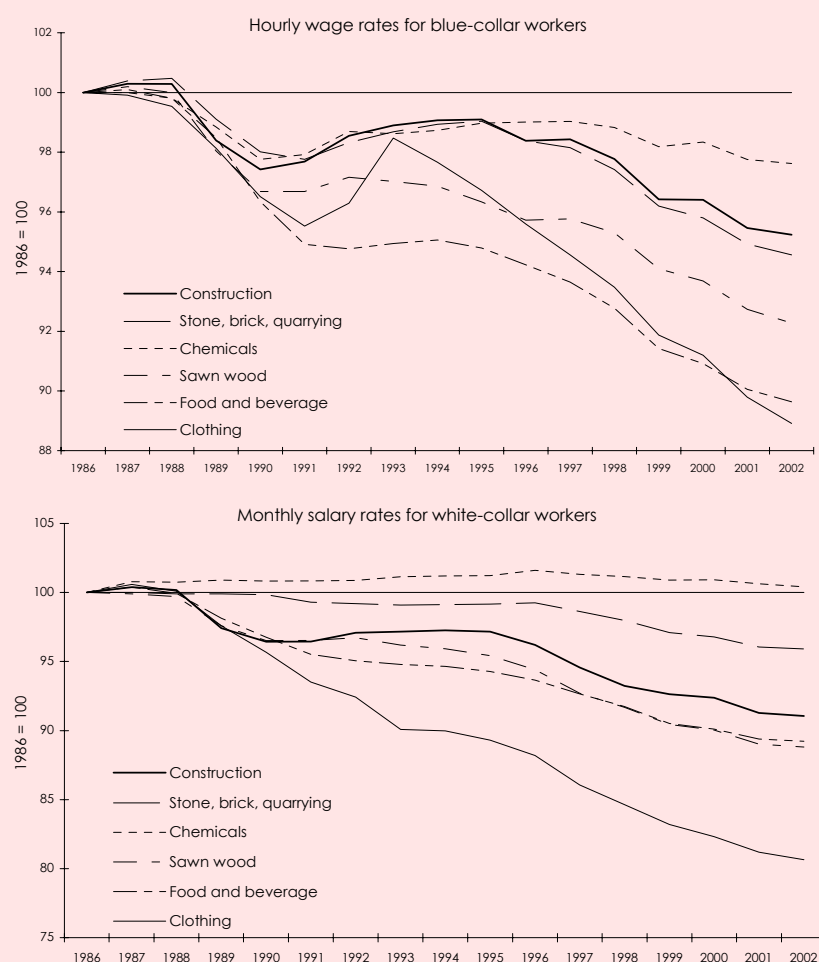
Source: Statistics Austria.

For some selected industries, these developments are depicted in Figure 2 with the metal and engineering industries serving as standard.



Figure 2: The development of contractual wage rates in selected industries in manufacturing

Metal and engineering industries = 100



Source: Statistics Austria.

As is the case for the major economic sectors, an analysis of the variation in the yearly wage increases in manufacturing and related branches yields an uneven development. For the periods 1987-1990 and 1991-1995 the coefficient of variation regarding wage increases for blue-collar workers is around 0.15, but rises to 0.24 in the five-year period after Austria's accession to the European Union (1996-2000), and then falls back to 0.15 in the two-year period from 2001-2002.

The picture is similar for white-collar workers in manufacturing: the variation in yearly wage increases (as measured by the coefficient of variation) is stable at 0.19 and 0.18 in the first two periods, but then jumps to 0.25 in the period 1996-2000; the last two years see a drop below pre-accession values (0.13).

Table 7: Variation of yearly increases in contractual wage rates in the manufacturing and related sectors by industry

	Ø 1987-1990	Ø 1991-1995	Ø 1996-2000	Ø 2001-02
Blue-collar workers	0.16	0.15	0.24	0.15
White-collar workers	0.19	0.18	0.25	0.13

Coefficient of variation of percentage change per year

Source: Statistics Austria, WIFO calculations.

From Tables 5 and 6 and Figure 2 it is clear that the divergence in wage increases was not a temporary phenomenon, but gave rise to higher and higher wage disparities. In other words, over the period considered, any shortfall in wage increases in some years was not offset by higher wage increases in later years. Moreover, the high variation in yearly wage increases, both for blue-collar and white-collar workers, in the years after 1995 indicates that during these years the deviations from a common standard were most pronounced.

Wages and salaries arrived at in collective bargaining are minimum rates, and many employees are remunerated at considerably higher rates (effective wages and salaries), as a result of bargaining between works councils (and individuals) and employers<sup>11</sup>.

This section traces the development of the dispersion in labour costs and in effective wages in the manufacturing sector. Two statistics are employed: the coefficient of variation and the relation between the average of wages (salaries) in the three industries with the highest wages (salaries) and that of the industries with the lowest wages (salaries); the second statistic is referred to as "relative span". While the coefficient of variation takes into account all elements of the distribution, the relative span focuses on the margins of the distribution.

The coefficient of variation and the relative span of *total labour costs* were computed for the manufacturing sector in two versions – because of its high wage and salary level, the petroleum industry tends to strongly influence the statistical measures for manufacturing. Version A includes the petroleum industry, while version B excludes it.

### The development of wage disparity in manufacturing

Table 8: Variation of labour costs in the manufacturing sector

		1960	1963	1972	1981	1990	1999
<i>Blue-collar workers: total labour costs per hour worked</i>							
Coefficient of variation	A	0.15	0.19	0.21	0.25	0.30	0.33
	B	0.15	0.27	0.26	0.26	0.27	0.25
Relative span	A	1.61	1.78	1.89	2.26	2.60	2.76
	B	1.60	1.64	1.70	1.97	2.21	2.23
<i>White-collar workers: total labour costs per month</i>							
Coefficient of variation	A	0.14	0.15	0.14	0.17	0.22	0.27
	B	0.15	0.14	0.13	0.14	0.17	0.20
Relative span	A	1.55	1.59	1.57	1.75	1.98	2.33
	B	1.55	1.56	1.50	1.57	1.71	1.94

Source: WIFO calculations, Austrian Economic Chamber, Arbeitskosten in der Industrie Österreichs, various issues. Coefficient of variation . . . measure of distribution of wages, relative span . . . ratio between labour costs in the three branches with the highest and the three branches with the lowest labour costs. A . . . including petroleum industry, B . . . without the petroleum industry.

The coefficient of variation for *blue-collar* workers in version A shows a more or less steady increase, while the coefficient of variation in version B exhibits a strong increase from 1960 to 1963, but remains more or less unchanged from then on. As the relative span shows, the increase in dispersion takes place at the margins, while the middle-wage groups are drawn together over time. This holds true regardless of whether the petroleum industry is included or excluded.

The impact of the petroleum industry on the dispersion of total labour costs of *white-collar* workers is less significant. On three out of four measures, dispersion remains more or less unchanged until the year 1981, which signifies the end of full employment, substantially higher dispersion rates are recorded for the years 1990 and 1999.

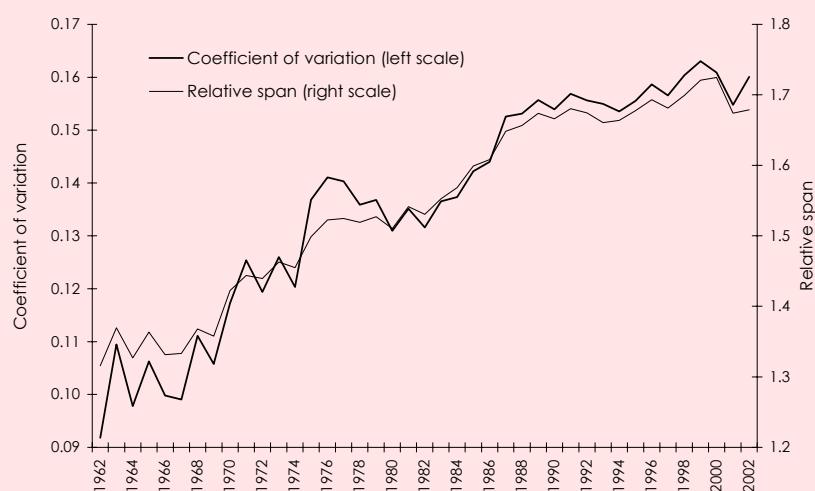
Total labour costs are an inclusive concept: they include social security contributions and non-mandatory social benefits (such as pension benefits and separation payments), which may not directly reflect the costs of currently employed personnel.

<sup>11</sup> For details on the development of the wage gap (the difference between contractual and effective wages) see Pollan (2000).

The following subsection looks at the development of the variation in pay for time worked (Effektivlöhne) in 18 branches of the manufacturing sector<sup>12</sup>.

Figure 3 shows a rise in both measures of variation during the 1960s until the middle 1970s, then a decline in the variation coefficient and an unchanged relative span. In the early 1980s, however, both measures rise steeply; then follows a stable phase and another rise in the late 1990s. This development conforms to the pattern typical for industrialised countries: a rise in unemployment and an increase in the supply of labour tend to raise wage disparity<sup>13</sup>.

Figure 3: Variation of hourly earnings in the manufacturing sector



Source: WIFO calculations. Coefficient of variation . . . . ., relative span . . . ratio between labour costs in the three branches with the highest and the three branches with the lowest labour costs.

Many of the contributions to the literature on corporatism and wage centralisation have dealt with what has been called the preconditions of wage restraint (Maier, 1984, Crouch, 1985). Studies along these lines seek to establish the features of a wage bargaining system that will produce wage moderation, which in turn will lead to low inflation and low unemployment.

As indicators of preconditions of wage restraint, mainly indicators of wage bargaining centralisation, have proved to be elusive, some studies have focussed on outcomes of wage bargaining and claimed that even if wage bargaining is not centralised, covert co-ordination as in wage leadership or pattern bargaining will lead to much the same results as a bargaining system, where a quasi-omnipotent peak organisation determines wage settlements.

Within the institutional framework, which sees non-economic forces as the main determinants of wage settlements, the centralisation/co-ordination hypothesis says that labour market institutions function in such a way that wage changes are more or less equal across all bargaining units, with the implication that wage disparity is small. A variant of the centralisation/co-ordination hypothesis, the hypothesis of pattern bargaining/wage leadership even explicitly focuses on the similarity in wage settlements. Another claim of this hypothesis is that the wage leader will pursue a moderate wage policy, a claim that is much more difficult to evaluate than the claim of small wage dispersion.

<sup>12</sup> Source: Austrian Economic Chamber, Lohnstatistik der Industrie, various issues. The following industries are included in this calculation: mining, iron and steel, stone, brick and quarrying, glass, chemical, pulp and paper, paper products, wood products, food and beverages, leather, leather products, clothing, textiles, and the six industries of the metal and engineering sector: foundries, non-ferrous basic metals, non-electric machinery, transport equipment, metal products, electric equipment. Note that the petroleum industry is not included in the calculation of the dispersion measures.

<sup>13</sup> For Austria see Pollan (1980, 2000).

## Concluding remarks

For Austria, there are no empirical studies investigating the claim that the wage setting process is characterised by wage leadership or pattern bargaining. This study tries to fill this gap and takes a close look at the outcome of the Austrian wage bargaining system, by investigating the extent and development of wage inequality in Austria, both at the level of collectively bargained wages and at the level of earnings.

The examination of the outcome of the wage setting process reveals a high and rising wage disparity. There are large wage differentials both at the level of collectively bargained rates as well as at the level of effective wages and salaries.

Wage inequality is high in Austria at the level of the contractual wage rates, i.e., at the level where the impact of collective bargaining must be expected to be strong. But wage disparity is even higher at the level of wages and salaries effectively paid. This can be established for the manufacturing sector, where reliable statistics on earnings are available.

For the whole economy, the statistical basis is much more tenuous. One of the statistical sources for calculating wage dispersion, the Mikrozensus, has been shown to be seriously inadequate: At the two-digit NACE classification the variance in gross earnings is underestimated by a factor of at least 2 (*Pollan – Leoni, 2003*).

While the development of wage differentials (at the level of earnings) for the whole economy is fraught with serious data problems, wage differentials can be traced for the manufacturing sector from the 1960s to the beginning of the new century. Depending on the data concepts and the definition of dispersion used, inequality has risen over most time periods since the early 1960s.

In sum, the observation that wage disparity has been high and has kept rising, not just in the short term but also in the long term, is incompatible with the claim of the proponents of pattern bargaining or wage leadership.

Of course, it may have been the case, and indeed likely, that bargaining units representing labour have tried to emulate the wage settlements of more successful wage bargainers<sup>14</sup>. But proponents of pattern bargaining or wage leadership claim more, namely that bargaining units succeeded in achieving their goal. This is simply not the case<sup>15</sup>. In the literature, there seems to be confusion between the intentions and perhaps the rhetoric of union leaders on the one hand and the outcomes of the wage setting system, on the other.

Another implication of the pattern bargaining/wage leadership hypothesis is that the wage leader will pursue a moderate wage policy. An evaluation of this claim is beyond the scope of this paper, but the existence of great wage inequality also throws some light on the question of whether or not wage restraint was practised by the high-wage industries.

In several reports, the *OECD* (1997B, 1999, 2001) suggested that Austria move towards decentralisation in wage setting; the finding of large and rising wage differentials would seem to indicate that the *OECD*'s recommendation has already been carried out. But the path to more labour market flexibility and lower unemployment need not be the same as the path to wider wage disparity: implicit and sometimes explicit in labour market reform proposals calling for increased wage differentials is the assumption that under a regime of high wage disparity wages are better linked to skill level, experience and ultimately to productivity. This assumption does not seem to be fulfilled in Austria; the main evidence comes from the wide wage inequality for workers of the same skill category.

Large wage differentials of this kind do not indicate market-based wages and throw some light on the question of whether or not wage restraint was practised by high-

<sup>14</sup> Negotiator on the employers' side may also be guided by wage settlements achieved by important branches, but only if the wage leaders practice wage restraint.

<sup>15</sup> To be sure, the signal sent by wage settlements of important bargaining units may influence the size of wage claims and subsequently of wage increases obtained by other groups. A separation of similarities in wage movements into an imitation effect (wage leadership) and effects due to common macroeconomic influences is difficult. But this identification problem is less severe when the wage increases of some groups are smaller than those of other groups, year after year, and not just over the course of a business cycle.

wage industries. The existence of large wage disparities suggests that high-wage industries have ample room for attracting labour. Wage rates that may be sufficient for attracting or holding, say, unskilled workers in the textile industry should also be sufficient for attracting labour to high-wage industries (where, moreover, the prospects of an upward-bound career path are considerably better than in low-wage industries).

In a widely cited paper, *Calmfors – Driffill* (1988) claim that both highly centralised and highly decentralised wage bargaining results in superior labour market performance. Centralised wage-setters are well aware of the macroeconomic costs associated with high wage increases, while in a decentralised setting the high degree of competition provides for market discipline. If one accepts these arguments then Austria finds itself in the intermediate position, a position that is synonymous with poor economic performance. Thus, in the Austrian setting, a reduction in wage disparity, either by way of more centralised bargaining with emphasis on wage moderation and solidarity or by way of decentralisation by moving to productivity-based wages, is likely to achieve two goals: higher efficiency and more wage equality.

- Akerlof, G., Yellen, J., "Fairness and Unemployment", *American Economic Review*, 1988, 78(2), pp. 44-49.
- Blau, F.D., Kahn, L.M., "Institutions and Laws in the Labour Market", in Ashenfelter, O., Card, D. (Eds.), *Handbook of Labour Economics*, Vol. 3, Elsevier, Amsterdam, 1999, pp. 1399-1461.
- Bruno, M., Sachs, J., *The Economics of Worldwide Stagflation*, Harvard University Press, Cambridge, MA, 1985.
- Calmfors, L., "Centralisation of Wage Bargaining and Macroeconomic Performance – A Survey", *OECD Economic Studies*, 1993, (21), pp. 161-191.
- Calmfors, L., Booth, A., Burda, M., Checchi, D., Naylor, R., Visser, J., "The Future of Collective Bargaining in Europe", in Boeri, T., Brugiavini, A., Calmfors, L. (Eds.), *The Role of Unions in the Twenty-First Century. A Report for the Fondazione Rodolpho De Benedetti*, Oxford University Press, Oxford, 2001.
- Calmfors, L., Driffill, J., "Bargaining Structure, Corporatism and Macroeconomic Performance", *Economic Policy*, 1988, (6), pp. 13-61.
- Casey, B., Gold, M., *Social Partnership and Economic Performance. The Case of Europe*, Edward Elgar, Cheltenham, 2000.
- Crouch, C., "Conditions for Trade Union Wage Restraint", in Lindberg, L., Maier, C. (Eds.), *The Politics of Inflation and Economic Stagnation: Theoretical Approaches and International Case Studies*, The Brookings Institution, Washington, D.C., 1985, pp. 105-139.
- Eichengreen, B., Iversen, T., "Institutions and Economic Performance: Evidence from the Labour Market", *Oxford Review of Economic Policy*, 1999, 15(4), pp. 121-138.
- Eironline, "2002 Annual Review for Austria", *European Industrial Relations Observatory On-line*, European Foundation for the Improvement of Living and Working Conditions, 2003, [www.eiro.euro-found.eu.int/2003/01/feature/af0301204f.html](http://www.eiro.euro-found.eu.int/2003/01/feature/af0301204f.html).
- Freeman, R., "Labour Market Institutions and Economic Performance", *Economic Policy*, 1988, (6), pp. 63-80.
- Freeman, R., "War of the Models: Which Labour Market Institutions for the 21st Century?", *Labour Economics*, 1998, (5), pp. 1-24.
- Freeman, R., Gibbons, R., "Getting Together and Breaking Apart: The Decline of Centralized Collective Bargaining", in Freeman, R., Katz, L. (Eds.), *Differences and Changes in Wage Structures*, NBER Comparative Labor Markets Series, University of Chicago Press, Chicago-London, 1995, pp. 345-370.
- Golden, M., "The Dynamics of Trade Unionism and National Economic Performance", *American Political Science Review*, 1993, 87(2), pp. 439-454.
- Katz, H., "The Decentralization of Collective Bargaining: A Literature Review and Comparative Analysis", *Industrial and Labor Relations Review*, 1993, 47(1), pp. 3-22.
- Kienzl, H., "Gewerkschaftliche Lohnpolitik und Stabilität", in: *Sozialismus, Geschichte und Wirtschaft. Festschrift für Eduard März*, Europaverlag, Vienna, 1973.
- Maier, C., "Preconditions for Corporatism", in Goldthorpe, J.H. (Ed.), *Order and Conflict in Contemporary Capitalism*, Oxford University Press, Oxford, 1984, pp. 39-59.
- Meyer, W., "Is Pattern Bargaining Dead? An Empirical Investigation with Micro Data for West Germany", *Konjunkturpolitik*, 1995, 41(3), pp. 229-243.
- OECD, "Collective Bargaining: Levels and Coverage", in OECD, *Employment Outlook*, Chapter 5, Paris, 1994.
- OECD (1997A), "Economic Performance and the Structure of Collective Bargaining", in OECD, *Employment Outlook*, Chapter 3, Paris, 1997.
- OECD (1997B), *OECD Country Reports: Austria*, Paris, 1997.
- OECD, *Implementing the OECD Jobs Strategy: Assessing Performance and Policy*, Paris, 1999.
- OECD, *Country Reports: Austria*, Paris, 2001.

---

## References

- Pollan, W., "Wage Rigidity and the Structure of the Austrian Manufacturing Sector – An Econometric Analysis of Relative Wages", *Weltwirtschaftliches Archiv*, 1980, 116(4), pp. 697-728.
- Pollan, W., "Große Lohnunterschiede nach Branchen in der Industrie", *WIFO-Monatsberichte*, 1997, 70(3), pp. 171-178.
- Pollan, W., *Einige Aspekte der Lohnbildung in Österreich. Lohnunterschiede und die Zentralisierung der Lohnverhandlungen*, WIFO, Wien, 2000.
- Pollan, W., "The Procedures of the Parity Commission and of its Sub-Committee on Wages", *WIFO Working Papers*, 2002, (184), [http://publikationen.wifo.ac.at/pls/wifosite/wifosite.wifo\\_search.get\\_abstract\\_type?p\\_language=1&pubid=22728](http://publikationen.wifo.ac.at/pls/wifosite/wifosite.wifo_search.get_abstract_type?p_language=1&pubid=22728).
- Pollan, W., *Austrian Exceptionalism. Labour Market Institutions and Wage Disparity*, Study by the Austrian Institute of Economic Research, supported by the Anniversary Fund of the Oesterreichische Nationalbank (Jubiläumssfondsprojekt No. 10290), Vienna, 2003.
- Pollan, W., Leoni, T., "Die Einkommensunterschiede nach Wirtschaftsbranchen in Österreich. Ein Vergleich zwischen Mikrozensus und Leistungs- und Strukturhebung", *WIFO-Monatsberichte*, 2003, 76(12), [http://publikationen.wifo.ac.at/pls/wifosite/wifosite.wifo\\_search.get\\_abstract\\_type?p\\_language=1&pubid=24760](http://publikationen.wifo.ac.at/pls/wifosite/wifosite.wifo_search.get_abstract_type?p_language=1&pubid=24760).
- Rowthorn, B., "Corporatism and Labour Market Performance", in Pekkarinen, J., Pohjola, M., Rowthorn, B. (Eds.), *Social Corporatism: A Superior Economic System?*, Oxford University Press, Oxford, 1992.
- Soskice, D., "Wage Determination: The Changing Role of Institutions in Advanced Industrialized Countries", *Oxford Review of Economic Policy*, 1990, 6(4), pp. 36-61.
- Swenson, P., *Fair Shares, Unions, Pay, and Politics in Sweden and West Germany*, Cornell University Press, Ithaca, N.Y., 1989.
- Teague, P., "Macroeconomic Constraints, Social Learning and Pay Bargaining in Europe", *British Journal of Industrial Relations*, 2000, 38(3), pp. 429-452.
- Traxler, F., Blaschke, S., Kittel, B., *National Relations in Internationalized Markets. A Comparative Study of Institutions, Change, and Performance*, Oxford University Press, Oxford, 2001.
- Visser, J., "In Search of Inclusive Unionism", *Bulletin of Comparative Labour Relations*, 1990, (18).
- Wallerstein, M., "Wage-Setting Institutions and Pay Inequality in Advanced Industrial Societies", *American Journal of Political Science*, 1999, 43(3), pp. 649-680.

### *Pattern Bargaining and Wage Leadership in Austria – Summary*

Several contributions to the economic literature on industrial relations claim that wage bargaining in Austria is characterised by pattern bargaining or wage leadership: a certain bargaining unit, such as the metal workers, sets the going rate for the rest of the economy. If the wage leader takes the macroeconomic effects of high wage settlements into account, the outcome, namely wage moderation and small wage disparity, may be much the same as in a centralised procedure, where the peak union and employer organisations control wage bargaining.

The hypothesis of pattern bargaining or wage leadership has, however, never been investigated empirically. This article tries to fill this gap by examining the development of contractual wage and salary rates arrived at in collective bargaining as well as wage and salary rates actually paid. Wage disparity has been high and rising over the last 20 years, both at the level of contractual and effective wages and salaries. This finding is incompatible with the claims of the proponents of pattern bargaining or wage leadership and suggests that wage differentials are not closely linked to productivity. Thus, a reduction in wage disparity, either by way of more centralised bargaining with emphasis on wage moderation and solidarity or by way of decentralisation by moving to productivity-based wages, is likely to achieve two goals: higher efficiency and more wage equality.