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Pacts for employment and competitiveness in Germany

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ABSTRACT

Pacts for employment and competitiveness (PECs) in Germany reflect a process of organised decentralisation, delegating additional rights and responsibilities for industrial relations agreements to the plant level. PECs are now used by both struggling and prosperous firms. An analysis of the content of recent agreements shows that the economic situation of the firm has a significant impact on changes agreed at the firm level. Changes in working time are associated with the demand for the products and services of a firm while financial concessions by employees are more common in firms with weak profits.

INTRODUCTION

The German collective bargaining system has attracted criticism from many economists (Berthold and Stettes, 2001; German Council of Economic Experts, 2002; Sinn, 2002). Critics maintain that the predominant model of the industry-wide collective agreement, which usually sets uniform wage and working-time conditions for all companies in a particular sector of the economy, is too rigid. They accuse it of being inefficient in terms of allocations and hold it partly responsible for continuing mass unemployment. However, such stereotyped criticism often obscures the fact that the collective bargaining system has been undergoing profound changes in recent years. Indeed, in various respects this process can be described as the beginning of a fundamental paradigm shift in German collective bargaining and corporate policy (Hassel, 1999; Mückenberger, 2003; Tüselmann and Heise, 2000).

Numerous collective agreements have created space for flexible arrangements at the company level. By means of opening clauses the actors at the company level (management and works councils) have gained new options for deviating from the collective bargaining standard so that agreements on company-specific flexible solutions regarding income and working time have become possible. Decentralised bargaining levels are gaining in power. Management and works councils are now able to expand their room for manoeuvre and also enter into negotiations on pay and working time within the limits specified by collective agreements. Moreover, they are concluding agreements on production-site issues and investments, job guarantees, and even terms for

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hiring new staff (Seifert, 2000). One novelty, compared with previous corporate policy, is that management and works councils are now explicitly setting employment objectives and agreeing on corresponding measures as part of company-level pacts for employment and competitiveness (*Bündnisse für Arbeit und Wettbewerbsfähigkeit*, or PECs). By negotiating such pacts, the parties at the company level are also contributing to a paradigm shift in company-level strategies regarding flexibility. Internal flexibility is becoming more important and, to some degree, is replacing external forms of workforce adjustment. Finally, it is clear that PECs are no longer limited to companies in crisis. Prosperous businesses have also concluded such agreements, even though the focus of such alliances differs with respect to the instruments that are implemented. So it seems justified to speak of a new regulatory model in collective bargaining and corporate policy.

In this article, we describe and analyse these changes in German collective bargaining and corporate policy using the example of company-level PECs. First, we propose a working definition and review the relevant literature on PECs (*Pacts for employment and competitiveness*). Second, we set out the basic principles governing industrial relations in Germany as major changes in the collective bargaining system paved the way for firm-level agreements (*Regulatory framework*). Third, we present an empirical analysis of the key findings of a recent representative survey of works councils on the subject of PECs (*Spread and contents of PECs*). Fourth, we present conceptual considerations regarding the business rationale for specific flexibility instruments in PECs. By applying multivariate analysis we can show how the various contents of PECs are strongly related to the specific business problem that the particular company currently faces (*Economic situation and contents*). Finally, the article ends with a summary and some concluding remarks (*Conclusion*).

PACTS FOR EMPLOYMENT AND COMPETITIVENESS

Although various terms are used in practice, up until now there has been little explicit theorising about the concept of PECs with the partial exception of an international comparative study commissioned by the European Foundation for the Improvement of Living and Working Conditions in the late 1990s (cf. Sisson *et al.*, 1999). The two summary reports analysed 43 case studies conducted in 11 EU member states (Freyssinet and Seifert, 2001; Sisson and Artiles, 2000). They showed that although PECs could be found in all of those countries, significant differences existed with respect to scope, level of negotiation and content mainly depending on the institutional environment and the concomitant strategic choices that the relevant actors made.

Based on the pragmatic and empirically grounded approach that Sisson *et al.* (1999) employed, we define PECs as mutual accords between management and workforce representatives that resolve company-specific problems related to employment and competition. Works councils cooperate in order to cut costs and boost productivity. In return, the employers generally promise to forgo planned dismissals, protect threatened jobs or even create additional ones, and to preserve or even expand the production site affected.

When it comes to the literature on German PECs, most of the empirical evidence is rather descriptive and inductively derived from case studies (Büttner and Kirsch, 2002; DGFP, 1998; Müller and Martin, 2000), document analyses (Heidemann, 1999) or surveys with a small sample size and conducted in a single industry (Ackermann

and Vollmer, 1999; Richter *et al.*, 2001).[1] Taken together, these studies provide a fairly consistent picture of PECs in Germany: such agreements are complex packages that emphasise measures for organisational and working time (as opposed to monetary) flexibility. PECs generally contain some quid pro quos as employment stability might well be in the interest of both the workforce and management (e.g. retaining plant-specific human and social capital).

Besides describing the extent and contents of PECs, two recent studies by Rehder (2003) and Berthold *et al.* (2003) differ from previous research as they adopt conceptually stronger analytical approaches. Rehder (2003) in studying PECs at Germany's 100 largest companies develops a general typology with the four ideal types being 'pacts for investment and compensation reduction', 'pacts for employment and compensation reduction', 'pacts for investment and productivity enhancement' and 'pacts for employment and worksharing'. While the first two resemble US-type concessionary bargaining insofar as they entail direct monetary cutbacks, the latter two represent distinct models because measures for productivity increases or worksharing were introduced without immediate reductions in total compensation. Quantitatively, the latter two types dominate given that 69 per cent of PECs in Rehder's sample of 149 agreements belong to these categories. She further draws a general distinction between PECs at recently privatised 'infrastructure companies' (telecommunications, postal service, railroads) on the one hand and those at corporations in general industry on the other. At infrastructure companies, the recent processes of privatisation and product market deregulation caused a dramatic increase in the intensity of competition. Thus, infrastructure companies had to cope with the problem of significant overstaffing. Here PECs moderated the necessary restructuring process by means of introducing tools for worksharing and socially responsible employment cutbacks such as early retirement. At the vast majority of corporations in general industry on the other hand, PECs were concluded as instruments for increasing efficiency. Rather than simply codifying employment guarantees, a significant share of those agreements called for additional investments while at the same time they introduced measures for efficiency enhancement by reducing labour costs and/or increasing productivity. So by negotiating PECs, German manufacturing companies, which were traditionally following business strategies that emphasised diversified quality production, introduced measures for labour cost cutting as a reaction to intensified international cost competition.

Berthold *et al.* (2003) have developed a dichotomous typology based on the economic situation the company faces. Using a sample of 484 manufacturing companies, they identified two distinct ideal types, namely 'adaptation pacts' and 'prevention pacts'. Adaptation pacts were typically negotiated in cases where the company faces acute problems such as insufficient product demand or capital shortages. Companies reacted by proposing measures for immediate labour cost reductions such as reduced bonuses, or by reducing working time without equivalent monetary compensation. Prevention pacts on the other hand were found in companies that aimed at boosting efficiency by increasing the options for internal flexibility, although no immediate business problem was identified. Instruments that were predominantly found in this latter type of PECs included profit sharing as well as flexible working time accounts.

Although based on a thorough examination of the literature and by applying theoretically derived typologies to the empirical analysis, both the study by Rehder

[1] See also the contributions in Seifert (2002a).

and the one by Berthold *et al.* have several crucial shortcomings. First, they are based on rather limited empirical bases. Rehder limited her analysis to large corporations and was therefore not able to document the ongoing changes in small- and medium-sized companies while Berthold and colleagues only analysed a single sector and did not control for fixed industry effects. Second, the analytical methods that were applied cannot produce clear-cut conclusions as the statistics that were reported leave ample room for criticism regarding structural effects that were not controlled for. Finally, and related to the second criticism, the assignment of the empirically observed PECs to the theoretically developed ideal types was performed on a rather ad-hoc basis in both studies because the classification criteria were not explicitly defined.

The present article tries to improve on recent studies. Unlike previous research, we use a large-scale survey of works councils that is representative of the German private sector. This allows us to apply multivariate statistical methods by which single structural as well as economic effects can be isolated. While using the conceptual approach first developed in Mauer and Seifert (2001), the following analysis incorporates more recent data, allowing us to improve upon the previous research on PECs.

REGULATORY FRAMEWORK

Basic structure of the German system of industrial relations

Although codetermination and collective bargaining in Germany represent separate regulatory arenas that are basically independent of one another, they are mutually supportive in nature and are increasingly conditioning one another (Keller, 2004).

In the German collective bargaining system, labour agreements are typically concluded on an industry-wide basis, either at the regional or even the national level (Jacobi, 2003). In addition to such sectoral collective agreements that are concluded by the industry's employers' association and the respective trade union, a fair number of enterprises that do not belong to an employers' association also negotiate specific firm-level collective agreements directly with the appropriate industry's trade union. Although up to now, company-level agreements are still of only minor importance. In 2001 they were in place in less than three per cent of enterprises in western Germany, employing about eight per cent of the total, gainfully employed population. In eastern Germany the figures were, respectively, six and twelve per cent (Kohaut and Schnabel, 2003).

The key topics regulated by collective agreements include wage rates and working conditions (especially working hours). Both national and regional collective agreements specify binding standards which then apply throughout the whole industry. Thus, industry-wide contracts guarantee a certain wage standard irrespective of the economic performance of an individual company. As a safeguard against wage dumping, the principle of favourability as laid down in the Collective Agreement Act states that deviations from such standards are only allowed in those instances where the modification would unambiguously be to the benefit of the affected employees (Höland *et al.*, 2000). Hence, to a certain extent this model of collective bargaining takes wages and working conditions out of the sphere of market competition.

Codetermination (the plant-level version of worker representation in Germany) is based on the 1972 Works Constitution Act and on analogous regulations for the public sector (Müller-Jentsch, 1995). For representing employees' interests, these laws

permit works councils to be elected in private enterprises and staff councils that are elected in public-sector organisations with at least five regular employees. Still, only about 16 per cent of all enterprises with more than five members of staff have worker-interest representations at plant level (Addison *et al.*, 2003). The low ratio of works council density is the result of the high proportion of small establishments with up to 20 employees (about 80 per cent of plants in Germany). These smallest of German companies traditionally have a very low works council density (just about nine per cent of the companies in this size class have a works council). So when density is calculated in terms of the number of employees in codetermined establishments, the picture improves somewhat and the proportion rises to 54 per cent for western and 47 per cent for eastern Germany.

Trends towards decentralisation

As described in the previous paragraph, in companies covered by sectoral collective agreements the central parameters of pay and working time are fixed on an industry-wide basis. Deviations that undercut these agreed standards are only allowed in the context of collectively agreed opening clauses. Following the 1993 economic slump, the parties to collective agreements negotiated such opening or 'hardship' clauses in a wide array of regulatory areas (Bispinck, 1998; Schnabel, 1998). Today, various options for plant-level flexibility are included in nearly every major contract throughout German industry (Bispinck and WSI-Tarifarchiv, 2004). The leeway established for undercutting standards set by collective agreements for pay or working time is typically contingent on certain preconditions that have to be met. Typically, the company has to demonstrate that it currently faces an economic crisis situation and that a significant number of jobs are immediately at risk. In most cases, opening clauses also commit the employer to offer 'quid pro quos', particularly in the form of a temporary ban on business-related dismissals. The sharp increase in the application of such opening clauses represents a significant paradigm change in the German system of collective bargaining and has been described as a specific form of 'organised' or 'coordinated decentralisation' (Bosch, 2004; Traxler, 1994).

Of the firm-level pacts that have been concluded, income-related agreements deal both with collectively fixed benefits and with company-specific bonuses that go beyond the contractually agreed industry-wide standard. Furthermore, some concessions affect all workers (e.g. the suspension of scheduled wage increases or the reduction or modification of bonuses) while others affect only certain segments of the workforce (e.g. second-tier wage systems for new hires).

Firm-level changes in the area of working time provide companies with additional options for internal numerical (i.e. working time) flexibility. The social partners at the firm level currently negotiate both reduced and extended regular working hours, depending on the specific economic problems the company currently has to deal with. Firm-level collective agreements also offer possibilities for establishing working time accounts that can be used to flexibly distribute the collectively agreed standard working time in line with volatile product demand.

In most cases where working time measures have been negotiated, companies are able to at least indirectly economise on labour costs. With constant hourly wage rates, working hour reductions immediately translate into smaller wage bills and by introducing working time accounts companies can significantly reduce their obligations to pay overtime premiums. Firm-level agreements typically resemble complex

packages as they combine monetary changes with temporal as well as organisational measures giving the actors at the company level a wide variety of alternative courses of action.

SPREAD AND CONTENTS OF PECs

Data

Data used for the subsequent analysis were obtained from a 2003 works council survey (Massa-Wirth and Seifert, 2004). Neither unions and employers' associations nor the government or research institutes possess a complete address file that includes all German companies with a works council from which a random sample could be drawn. As works councils are present at only 11 per cent of German establishments and are extremely rare at small- and medium-sized plants (Ellguth and Kohaut, 2004), drawing a random sample from general company address files (without having information on the codetermination status) generates extremely low response rates and generally leads to unsatisfactory cell occupations in the lowest size classes. We therefore used two alternative sources to select our cases. First, we contacted about 1,100 works councils that had already participated in prior WSI works council surveys. Second, we drew a random sample of about 13,900 companies from the customer database of a German publishing company that primarily focuses on publications for works councils so that we could be confident that the total target population would contain, predominantly, companies in which a works council is actually present.

Out of the 15,000 companies with 20 or more employees in all private sectors that were contacted by mail survey, we received a total of 2,477 questionnaires that were completed by a member of the company's works council for a total response rate of 16.5 per cent. Given the sampling procedures, this has to be considered the lower boundary of the true response rate based on the net number of companies with a works council in our sample. Because our sample differed slightly in terms of structural characteristics from the total of codetermined companies as reported by the IAB (*Institut für Arbeitsmarkt- und Berufsforschung*), we calculated weighting factors based on the 2002 IAB establishment panel in order to adjust our sample for structural characteristics and to be able to draw valid conclusions for all codetermined German companies with 20 or more employees.

The spread of PECs

Company-level agreements on employment and competitiveness are now widely used as the employment situation has generally been poor since the sharp economic slump of 1993. As the results of our survey indicate, a PEC is currently in place at about 23 per cent of German companies that have both a works council and at least 20 employees (cf. Table 1). Furthermore, agreements are planned at three per cent of the companies, while an additional six per cent had applied a pact during the last five years but terminated it in the meantime.

There is a positive correlation between the probability of an agreement and company size (cf. Table 1). Whereas only 10 per cent of the companies in the lowest size class (20–50 workers) have concluded a PEC, in establishments employing more than 1,000 workers the proportion rises to 42 per cent. But even though formal agreements

Table 1: Prevalence of PECs by structural indicators (in percentage of all companies)

West	22% (464)
East	28% (104)
20–50 employees	10% (22)
51–100 employees	9% (28)
101–200 employees	14% (56)
201–500 employees	22% (115)
501–1,000 employees	28% (105)
>1,000 employees	42% (227)
No information on plant size available	16% (15)
Total	23% (568)

Source: 2003 Works Council Survey.
Absolute number of cases in each group in parentheses.

are rather rare in small firms, informal understandings between management and the workforce might replace and serve as functional equivalents for formally codified measures that help increase productivity and stabilise employment (Berthold *et al.*, 2003).

In the majority of cases (55 per cent), PECs were concluded by way of a formal company-level agreement (*Betriebsvereinbarung*) between management and the works council while another 24 per cent of the PECs were based on a labour contract (*Tarifvertrag*) that had been negotiated by the appropriate trade union and the employers' association or local management. In about 12 per cent of the cases in our sample, the labour–management pact took the form of a letter of understanding (*Regelungsabrede*) that is more informal than either a *Betriebsvereinbarung* or a *Tarifvertrag*. Finally, in the remaining nine per cent of cases, the parties applied two or more of these instruments, for example, combining a *Tarifvertrag* allowing for deviations from the industry-level wage contract, supplemented by a *Betriebsvereinbarung* which administered the implementation of these deviations at the plant level.

The economic situation (both in terms of orders and the profit situation) of companies currently with a PEC reveals substantial heterogeneity. Only a minority of the works councils rated their company's order situation at the time when the PEC had originally been negotiated as very poor (six per cent) or poor (33 per cent) as opposed to 46 per cent reporting good and 15 per cent very good. In terms of profits, however, 36 per cent of the works councils state that profits had been poor or very poor (20 per cent), although at the time they negotiated the PEC 30 per cent saw profits as good and 14 per cent very good.

Furthermore, comparing companies with and without a PEC in terms of the current firm-specific economic situation (and not in terms of the economic situation that had existed immediately prior to when the PEC had originally been concluded) reveals that companies that have concluded a pact are only in a slightly worse economic situation today than those without one (cf. Table 2). While based on chi-square tests the differences with respect to the indicator order situation are not statistically significant (Cramér's $V = 0.045$; $P = 0.207$), the differences with respect to the current profit situation point to a rather weak and statistically not well supported correlation

Table 2: Firm-specific economic indicators (in percentage of all companies)

Economic indicator	Establishments with PEC	Establishments without PEC
Order situation		
Very good	9% (48)	9% (149)
Good	53% (283)	58% (1,000)
Poor	34% (182)	30% (518)
Very poor	4% (21)	3% (56)
Profit situation		
Very good	6% (29)	8% (131)
Good	38% (197)	42% (710)
Poor	43% (227)	40% (666)
Very poor	13% (68)	10% (176)

Source: 2003 Works Council Survey.
Notes: column percentages represent firm-specific economic situation at August/September 2003.
Absolute numbers in parentheses.

between the profit situation and the likelihood of having negotiated a PEC (Cramér's $V = 0.062$; $P = 0.036$). So PECs are clearly not restricted solely to companies in economic difficulty. Both prosperous and struggling companies are currently using PECs albeit for different strategic purposes and applying different instruments as the subsequent analysis shows.

Workers' concessions

PECs encompass a broad range of measures intended to improve the conditions for employment and competitiveness. They cover the areas of working time (75 per cent of all agreements), various organisational measures (59 per cent), measures for the early retirement of senior workers (47 per cent) as well as monetary measures (42 per cent; cf. Table 3). Most notably, the area of working time measures, worksharing (i.e. reductions in working time with or without pay adjustments) plays a more important role (19 per cent) than that for agreements on the extension of working hours (13 per cent). In the area of monetary adjustments, reduced firm-specific bonuses have been used most frequently (20 per cent), while wage freezes (offsetting of scheduled wage increases against firm-specific bonuses or the delay of scheduled wage increases) are equally important. Direct cuts in base wages, though, are still relatively rare (two per cent). In addition, management and works councils often agree on organisational measures like more flexible provisions for transfers (46 per cent) or additional training (31 per cent) in order to increase labour productivity. Finally, options for senior workers to leave the company, for example state-sponsored part-time work for elderly workers (30 per cent) or early retirement incentives (35 per cent), are frequently negotiated primarily at medium to large-sized companies. By increasing employee turnover, companies are able to rejuvenate their workforces and to acquire new employees with up-to-date human capital on the external labour market.

The distinction between the four broad flexibility categories (working time measures, organisational measures, measures for socially acceptable redundancies, mone-

Table 3: Employee concessions negotiated in PECs (in percentage of establishments with a PEC; multiple answers allowed)

Concessions	Negotiated in PECs
Working time measures	75% (424)
Time off in lieu of overtime pay	38% (217)
Working time accounts	36% (204)
Reductions in the use of overtime	22% (124)
Working time reductions (with/without pay)	19% (107)
Additional part-time work	15% (85)
Working time extensions (with/without pay)	13% (72)
Options for sabbaticals	8% (47)
Short-time work (state sponsored)	7% (39)
Additional weekend work	6% (36)
Organisational measures	59% (333)
Transfers	46% (259)
Additional training	31% (175)
Work reorganisation	24% (135)
Measures for socially acceptable redundancies	47% (269)
Early retirement incentives (partly state sponsored)	35% (199)
Part-time work for elderly workers (partly state sponsored)	30% (168)
Monetary measures	42% (238)
Reduction in firm-specific bonuses	20% (114)
Offsetting scheduled wage increases against firm-specific bonuses	11% (63)
Overtime without premiums	11% (61)
Delay of scheduled wage increases	10% (58)
Downgrading of jobs	6% (32)
Base wage reductions	2% (10)
Reduction in apprentices' pay	1% (3)
Total	100% (568)

Source: 2003 Works Council Survey.
Note: absolute number of cases in parentheses.

tary measures) is to some extent artificial as most of these instruments may be negotiated for multiple purposes and generate multiple effects. For example, depending on whether reduced or extended working hours are accompanied by wage compensation, these temporal measures directly affect each individual worker's level of compensation and might well be considered a concession allowing for monetary adjustment.

Company pledges

The overwhelming majority of PECs also contain formal guarantees by the employer not to announce involuntary layoffs or plant closures and sometimes even include

Table 4: Management guarantees negotiated in PECs (in percentage of establishments with a PEC; multiple answers allowed)

Management guarantees	Negotiated in PECs
Guarantees against involuntary layoffs	71% (404)
Guarantees against plant closure	44% (250)
Guaranteed employment levels	26% (149)
Future job guarantees for current trainees	26% (146)
Guaranteed level of trainee positions	26% (145)
Additional investments	20% (116)
Guarantees against outsourcing	14% (78)
Guaranteed production lines	12% (68)
Additional hiring	8% (45)
No management guarantees	13% (74)
Total	100% (568)

Source: 2003 Works Council Survey.
Note: absolute number of cases in parentheses.

management pledges for additional investment or employment (cf. Table 4). Only 13 per cent of PECs contain no quid pro quos although the share of these one-sided agreements (i.e. agreements without formal management guarantees) has increased from the seven per cent reported in a works council survey in 1999/2000 (Seifert, 2002b).

Even though guarantees against involuntary layoffs protect the jobs of currently employed insiders, this management guarantee does not rule out the possibility that the company may cut employment by offering retirement incentives or by not reoccupying vacant positions because of natural attrition. Agreements that go still further in determining corporate employment policy are those that specify guaranteed employment levels (26 per cent) or even require the company to undertake additional hiring (eight per cent). Furthermore, indirect measures that may well protect employment in the medium to long term like additional investments (20 per cent) or the guarantee to keep certain production lines at the establishment (12 per cent) which are also sometimes negotiated.

ECONOMIC SITUATION AND CONTENTS

As the previous descriptive analysis has already shown, both prosperous and struggling companies have concluded PECs in recent years. We suggest that companies facing different economic environments adopt PECs for different strategic purposes and that the company-specific economic situation determines to a certain degree the contents of these alliances. The next step of the analysis examines the effects of firm-specific economic indicators with respect to the measures that have been negotiated in PECs.

We start with the basic proposition that the choice of qualitatively different instruments for adjustment in PECs is strongly determined by the specific business problems with which the company currently has to deal. Furthermore, the economic situation

that a company currently faces may well determine which specific instruments in a PEC can be implemented (i.e. which concessions and measures for additional flexibility are acceptable to the works council as well as to the workforce). Nevertheless, we also do not expect PECs to be exclusively determined by company interests and reflecting a purely business rationale. As PECs are not the result of unilateral management decision making but instead are an outcome of bilateral and sometimes multilateral (including trade unions and employers' associations) bargaining, they always have to be interpreted as a compromise between capital and labour based on the relative distribution of bargaining power among the parties. So we do not expect to find the full range of flexibility instruments in all economic circumstances. Furthermore, clear-cut results are still more unlikely as the parties usually combine multiple instruments that serve as complements so that PECs become a part of complex packages.

For the purpose of the subsequent analysis, we combined the 21 concession instruments that we originally reported in the descriptive analysis into six distinct concession categories (based on our conceptual considerations). The concession instruments in each single category can be regarded as functional equivalents. These six concession categories are:

1. reduction of working hours (working time reductions with/without pay; short-time work)
2. extension of working and operating hours (working time extension with/without pay, additional weekend work)
3. monetary concessions (reduction in firm-specific bonuses, offsetting of scheduled wage increases against firm-specific bonuses, overtime without premiums, delay of scheduled wage increases, downgrading of jobs, base wage reductions, reductions in apprentice pay)
4. working time flexibility (time off in lieu of overtime pay, working time accounts, reductions in the use of overtime, additional part-time work, options for sabbaticals)
5. organisational flexibility (transfers, additional training, work reorganisation)
6. socially acceptable redundancies (early retirement incentives, part-time work for elderly workers).

We propose that the likelihood to find these functionally distinct instruments in PECs is significantly related to the economic situation the company currently faces. For the subsequent theoretical discussion, we differentiate between:

1. measures expected in companies that are in a poor economic situation
2. measures expected in prosperous companies, and
3. measures that may be expected in both prosperous and struggling companies, because these instruments cannot be interpreted as short-term responses to immediate economic changes but rather have to be seen as instruments for increasing company performance in the long run.

With respect to the variables indicating the firm-specific economic situation, we draw a distinction between the two separate (although not mutually exclusive) indicators—order situation and profit situation. While the order situation determines the quantity of labour that can be purposefully employed, the company's profit situation

determines whether labour cost adjustment becomes a primary goal in the company's business strategy. So therefore we can expect the former indicator to primarily influence the choice of distinct numerical adjustment instruments in PECs, with the latter is expected to be significantly related to the choice of instruments for monetary adjustments.

Measures expected in unfavourable economic situations

For companies with a poor order situation and low capacity utilisation for the production of goods or services, a temporary reduction of working hours can be regarded as a rational adjustment strategy. Both parties at company level can expect cost benefits from this employment policy which serves as an alternative to business-related layoffs (Autorengemeinschaft, 2001). Companies (either because of a reduced wage bill or because of state subsidies when applying short-time work programmes) are able to lower their labour costs in the short run, while employees gain additional leisure time that may improve their work–life balance. This adjustment strategy favours internal, as compared with external, numerical flexibility (OECD, 1989), and varies working time in line with current product demand rather than changing the overall number of employees.

From the company's perspective, these instruments offer the financial advantage that one-time adjustment expenses like severance payments or costs for redundancy programme measures can be avoided. Dismissal costs would otherwise limit the labour cost reductions that can be achieved through staff cuts and place a strain on the company's short-term liquidity. Moreover, by reducing working time, companies are able to retain skilled workers and well-rehearsed work teams so that major organisational disruptions can be avoided and necessary corporate restructuring measures can be implemented smoothly. On the other hand, the strategy of general working time reductions might also cause negative effects as 'efficient severances' are foreclosed (Carstensen, 2000). Furthermore, companies risk the probability that highly competitive workers might leave the firm because of the income reductions and an altered labour–leisure trade-off.

From the perspective of the affected workers on the other hand, they might benefit from shorter working times because dismissals can be prevented. The trade-off between the negative effects of cuts in income resulting from shortened working times and the positive effect of avoiding job loss (i.e. avoiding job search costs and reduced post-layoff earnings) will essentially depend on the individual worker's competitive position in the external labour market. From a theoretical perspective, the income sacrificed can be regarded as an insurance premium against involuntary unemployment (Carstensen, 2000).

Using profits and not orders as the economic indicator, we expect that monetary concessions are more likely to occur in companies experiencing poor profits. These measures (which generally take the form of wage freezes and cuts in firm-specific bonuses on top of the sectoral wage standard) reduce overall labour costs, improve profits and therefore increase the company's overall level of competitiveness.

Compared with reductions in working time without wage compensation which also serve to lower labour costs, monetary concessions differ in two aspects. First, monetary concessions lower pay per hour worked so that unit labour costs are reduced. Second, the strategy of direct monetary adjustments leaves the company's total volume of work unchanged. Therefore, should the company's economic problems stem from

an insufficient order situation, underutilisation of labour will still remain. In addition, companies must again take into account the probability that wage and benefit cuts may cause skilled workers with alternative external employment opportunities (whom the company would like to retain) to leave. Furthermore, companies must also take into account staff turnover costs and expect labour productivity to decline as lower efficiency wages can lead to reduced employee motivation (Franz and Pfeiffer, 2002; Pfeiffer, 2003: 94–100). This negative effect on employee motivation and unintended staff turnover might actually be smaller than expected as cuts up until now primarily affected compensation above the industry-wide wage scale so that effective compensation is brought in line with industry-wide compensation levels. The overall effect on the German economy might be that the previously existing income advantage of workers from companies with relatively generous wage levels gradually disappears and income inequality is reduced.

For workers, both direct monetary cutbacks and working time reductions without total wage compensation have negative effects on income. However, in the latter instance, they gain more leisure time in return for the concessions. As a result, reductions in working time may well be more acceptable to the affected workforce than equivalent monetary cuts. Furthermore, unless the company's economic position indicates that a significant number of jobs are at risk, employees are unlikely to accept direct wage cuts. Therefore, we expect to find monetary adjustments in companies that have at least a satisfactory order situation and are therefore not forced to lower the company's total man-hours, but which face strong pressures for rationalisation and cost-cutting because of low profits.

Measures expected in favourable economic situations

In companies with a favourable as compared with a poor order situation, we expect to observe instruments for an extension of working and operating hours because these measures allow firms to respond quickly to rising product or service demand without having to make capital investments or having to hire additional staff in the short term. The more intensive use of the existing capital stock lowers capital costs per unit of output. However, an extension of working hours might also cause an increase in average hourly labour costs if wage premiums have to be paid, for example for the expansion of weekend work.

From the workers' point of view, income is the main potential stimulus for working longer hours and for accepting weekend work. However, the individual preferences in the trade-off between time and money are not clear-cut: while the overwhelming majority of workers reject unpleasant working hours such as weekend work, a strong minority are also interested in them (Bundesmann-Jansen *et al.*, 2000). Given heterogeneous preference structures, the acceptance of extended working and operating hours will thus depend mainly on whether the working time extension is introduced on a voluntary or mandatory basis.

Measures expected to be unrelated to the economic situation

Finally, both poorly performing and prosperous companies can be expected to implement various measures designed to increase working time flexibility and organisational flexibility as well as options for socially acceptable redundancies. These instruments do not primarily affect either the total volume of work or labour costs in

the short term but rather are intended to increase labour productivity and organisational flexibility in the long run. Instruments for working time flexibility, such as additional part-time positions, the introduction of working time accounts or reduced overtime hours, can be beneficial to both the company and the workforce irrespective of the economic situation. Part-time work expands the options for using labour more flexibly, while reducing overtime through the use of time accounts offers substantial cost advantages as overtime bonuses can be eliminated and the company's potential flexibility increased (Gross *et al.*, 1999). Additional part-time work or reduced overtime can also be of interest to workers. A fair number of workers reject full-time work and overtime hours (Bundesmann-Jansen *et al.*, 2000), preferring to work shorter working hours and accept the corresponding loss in income. So PECs that contain measures for working time flexibility may become more attractive as the agreements offer workers genuine options for organising their working time in a way that is better suited to their personal labour/leisure preferences.

Measures for organisational flexibility do also increase productivity in both poor and prosperous economic situations and may be in the interests of both the company and the workforce. Instruments like personnel transfers and work reorganisation increase organisational efficiency while workers may value the additional work sovereignty that is usually provided by, for example, semi-autonomous work teams. Additional company-sponsored training increases the level of firm-specific human capital. Thereby, the company benefits from higher labour productivity while the workers may be able to receive higher wages and enjoy greater job security.

Finally, assuming that the number of workers remains constant, instruments for socially acceptable redundancies allow companies to hire skilled workers and rejuvenate their workforces. These options for a voluntary reduction of working time or early retirement for senior workers can also lower the company's total man-hours if rationalisation measures or company mergers have resulted in excess labour despite a favourable order and profit situation. Early retirement schemes may also be quite attractive for the affected workers, as up until recently, generous state subsidies provided for high replacement wages. Depending on the individual's preference structures, the income sacrificed may be easily made up by the additional leisure time leading to a higher level of utility.

Empirical results on choice of instruments

Descriptive analysis

A simple bivariate analysis shows that the frequency of the concession instruments negotiated in PECs varies according to the companies' economic situation. Using chi-square tests, Table 5 shows that working time measures such as time off in lieu of overtime pay, working time reductions and short-time work are significantly ($P = 0.01$) more often negotiated in companies facing a poor as compared with a good order situation, whereas working time extension is more prevalent in the context of a favourable order situation. Based on our conceptual considerations though, we did not expect that some of the working time measures would also be related to the profit situation. But comparing profitable and struggling companies shows that time off in lieu of overtime pay, working time accounts and working time reductions are in fact also more prevalent in the context of poor profits, whereas firms enjoying a favourable profit situation more often than not offer options for sabbaticals to their employees. These findings suggest that some of the options for working time adjustment are also

Table 5: Employee concessions subject to firm-specific economic indicators (in percentage)

Concessions	Order situation†		Profit situation†	
	Good/ very good (%)	Poor/ very poor (%)	Good/ very good (%)	Poor/ very poor (%)
Working time measures	71**	84**	66**	85**
Time off in lieu of overtime pay	34**	49**	32**	44**
Working time accounts	33*	42*	28**	43**
Reductions in the use of overtime	20*	28*	20	26
Working time reductions (with/ without pay)	10**	34**	11**	26**
Additional part-time work	17	11	18	14
Working time extensions (with/ without pay)	17**	8**	11	13
Options for sabbaticals	10	5	12**	6**
Short-time work (state sponsored)	4**	12**	4*	9*
Additional weekend work	8*	3*	5	5
Organisational measures	60	59	61	59
Transfers	45	46	48	46
Additional training	35*	25*	38**	25**
Work reorganisation	22	29	20	27
Measures for socially acceptable redundancies	49	47	50	47
Early retirement incentives (partly state sponsored)	35	36	35	36
Part-time work for elderly workers (partly state sponsored)	31	29	29	31
Monetary measures	39*	49*	30**	52**
Reduction in firm-specific bonuses	17*	25*	12**	27**
Offsetting scheduled wage increases against firm-specific bonuses	9*	16*	7*	12*
Overtime without premiums	10	13	9	14
Delay of scheduled wage increases	9	13	4**	16**
Downgrading of jobs	6	5	4	8
Base wage reductions	3	1	<1	1
Reduction in apprentices' pay	<1	1	<1	1

Source: 2003 Works Council Survey.
Notes: †economic situation immediately prior to concluding the PEC;
(Chi-square test: $*P \leq 0.05$; $**P \leq 0.01$.)

viable options for companies that try to improve the profit situation because changes in working time policy can also be used to reduce labour costs. For example, working time reduction without wage compensation reduces the total wage bill while introducing working time accounts provides for flexible adjustment of actual working hours without having to pay overtime premiums.

As we expected, monetary concessions like reductions in firm-specific bonuses and a delay of scheduled wage increases are strongly related to company earnings and significantly more prevalent at companies experiencing poor profits. Fifty-two per cent of the companies experiencing poor profits adjusted compensation policies as compared with only 30 per cent of the companies in a strong earnings position. Finally, organisational measures as well as options for socially acceptable redundancies are unrelated to both the order and the profit situation with the exception of additional training. This is more frequently applied in profitable as compared with struggling companies.

The descriptive analysis at least partially supports our expectations in that measures for the adjustment of working hours are strongly related to the order situation. Instruments that adjust compensation heavily depend on the firm-specific profit situation, and policies for the long-term increase in organisational flexibility are rather unrelated to either the order or the profit situation. Nevertheless, to further confirm the bivariate results and to test our hypotheses more thoroughly, we now turn to the multivariate analysis.

Multivariate analysis

In order to single out the independent effects of economic indicators with regard to the specific instruments adopted in PECs, we estimated logit models that control for intervening structural variables. As dependent variables, we used the six concession categories described above (1 = the PEC contains one or more of this category's concession instruments).

We created dummy variables for both the order situation and the profit situation at the time the agreement had originally been concluded (1 = good or very good demand situation/profit situation). Based on our hypotheses developed above, these economic indicators should have the strongest single effects on the likelihood of a firm-level agreement in those models where the specific flexibility instrument serves the purpose of the short-term adjustment of working hours (order situation variable) or labour costs (profit situation variable). A series of control variables are included. First, the 'no union contract' dummy variable indicates whether or not the company is bound by either a collective labour contract or by a company-specific union contract (1 = no contract). Companies not covered by a union contract should have more leeway in negotiating flexible provisions in firm-level agreements. Second, the 'opening clause applies' dummy variable indicates whether the industry-level union contract contains an opening clause with respect to working time (reduction/extension) or monetary flexibility (1 = opening clause for the sector exists).[2] While in principle opening clauses are designed only for companies in serious economic difficulties, the objective criteria for economic hardship are not always precisely defined. Furthermore, general opening clauses that can be used independently of the specific economic situation have gained

[2] A cross-sectoral analysis on the prevalence of opening clauses in sectoral-level contracts prepared by Bispinck and WSI-Tarifarchiv (2004) was used for calculating the three opening clause dummies. Three separate dummies indicating the existence of opening clauses for working time reduction, working time extension and monetary adjustments were calculated and incorporated into the appropriate models.

in importance. Finally, the usual control variables on company size (categorical dummies), the companies' production site (1 = East Germany) and whether the firm belongs to the service sector (1 = company belongs to service sector) were incorporated.

The likelihood ratio tests as well as the values of the pseudo-R^2 that are reported in Table 6 indicate that few of the models reach a satisfactory goodness of fit at the conventional level (Greene, 2003). Obviously, the models only lead to small improvements in the share of correct predictions because of three problems. First, we could only incorporate very crude measures for both the firm-specific economic situation and the dependent variables (dummy variables). More specific measures would clearly be preferable (e.g. measuring also the magnitude of the employee concessions). Second, because of the multidimensional nature of PECs and the fact that they are not outcomes of unilateral management decision making but of bilateral bargaining, the selection of specific instruments also depends on the bargaining power of the workforce which again is likely to be determined by the median voter's competitive position in the external labour market that we could not control for. Finally, we could not control for the company's wage level and the extent of employment flexibility prior to the time the PEC had been concluded. Nevertheless, the models generally confirm our basic propositions as the economic variables are highly significant and have the expected signs in the models explaining instruments for the short-term adjustment of working hours and compensation.

The estimated coefficients for the order situation variable in the reduction of working hours as well as the extension of working and operating hours models are highly significant.[3] As expected, a favourable order situation significantly increases the chances that an agreement on the extension of working time is concluded. Conversely, with respect to measures for working time reduction, the effect of a favourable order situation is significantly negative, that is, reductions in working time are clearly more often negotiated in companies facing poor product demand. The profit situation, by contrast, plays no significant role in explaining agreements on working time extension while poor profits significantly increase the probability of an agreement on working time reduction. Obviously, as reduced working hours generally translate into reduced payrolls, companies in critical profit situations also resort to working time reductions in order to immediately cut labour costs.

The dummy variables on union contract coverage as well as on the existence of an opening clause are both insignificant. It appears that we can observe a trend towards firm-level flexibility in the area of working time that is detached from industry-wide collective regulation. The parties to firm-level PECs obviously negotiate temporal adjustments irrespective of industry-level opening clauses in existing union contracts. Either the social partners at firm level are increasingly adopting innovative strategies to substantiate rather general provisions in industry-level contracts, or they even consciously disregard existing contract provisions in the face of severe competitive threats and the risk of bankruptcy. Of the structural variables, the fact that the firm operates in eastern Germany significantly increases the likelihood that measures for working time reduction were adopted.

[3] Odd ratios above 1 indicate a positive effect on the dependent variable while negative ratios point towards a negative relationship. For categorical control variables, the coefficients indicate odd changes relative to the respective reference category. The marginal effects reported in the second columns are calculated based on the variable means and therefore have to be interpreted as probability changes relative to a hypothetical 'average' company.

Table 6: Binomial logistic regressions: economic and structural effects on the use of concessionary instruments in PECs

	Reduction of working hours†				Extension of working and operating hours‡			
Dependent variable	Odd ratios	Marginal effects	Odd ratios	Marginal effects	Odd ratios	Marginal effects	Odd ratios	Marginal effects
Good/very good demand situation	0.228***	–0.279	—	—	4.070***	0.198	—	—
Good/very good profit situation	—	—	0.426***	–0.165	—	—	1.116	0.016
101–250 employees	0.529	–0.120	0.444*	–0.157	0.752	–0.040	0.988	–0.002
251–500 employees	0.525	–0.121	0.454*	–0.153	0.836	–0.025	1.137	0.018
501–1,000 employees	0.599	–0.096	0.410**	–0.173	0.610	–0.070	0.976	–0.003
>1,000 employees	0.460**	–0.146	0.417**	–0.169	0.359**	–0.145	0.439*	–0.118
No union contract	0.719	–0.062	0.738	–0.059	1.090	0.012	1.119	0.016
Opening clause applies	1.380	0.061	1.140	0.025	1.261	0.033	1.360	0.044
Service sector	1.686*	0.099	1.191	0.034	0.563*	–0.081	0.765	–0.038
Eastern Germany	2.702***	0.187	2.104***	0.144	0.478*	–0.104	0.572	–0.080
Constant	0.176		0.318*		0.655		0.542	
N	443		437		443		437	
LR χ^2	65.334		32.143		37.276		14.412	
Prob > χ^2	0.000		0.000		0.000		0.108	
McFadden R^2	0.117		0.059		0.084		0.035	
Nagelkerkes R^2	0.185		0.096		0.124		0.052	

Source: 2003 Works Council Survey.
Notes: reference category for firm size: 20–100 employees;
*P = 0.10; **P = 0.05; ***P = 0.01;
marginal effects calculated at means;
†binary coded = 1 if any of the following instruments have been negotiated: working time reduction (with/without pay), short-time work (state sponsored);
‡binary coded = 1 if any of the following instruments have been negotiated: working time extension (with/without pay), additional weekend work.

Table 6: Continued

Dependent variable	Monetary concessions§				Working time flexibility¶			
	Odd ratios	Marginal effects	Odd ratios	Marginal effects	Odd ratios	Marginal effects	Odd ratios	Marginal effects
Good/very good demand situation	0.886	–0.030	—	—	0.919	–0.019	—	—
Good/very good profit situation	—	—	0.498***	–0.174	—	—	0.581***	–0.122
101–250 employees	0.825	–0.048	1.005	0.001	1.427	0.080	1.329	0.064
251–500 employees	0.528	–0.159	0.531	–0.158	1.129	0.027	1.187	0.038
501–1,000 employees	0.518*	–0.164	0.514*	–0.166	1.366	0.070	1.557	0.100
>1,000 employees	0.385***	–0.239	0.430**	–0.211	1.681	0.117	1.974*	0.153
No union contract	1.544	0.108	1.605	0.118	0.875	–0.030	0.779	–0.056
Opening clause applies	1.103	0.024	1.123	0.029	—	—	—	—
Service sector	1.005	0.001	1.242	0.054	0.652**	–0.096	0.772	–0.058
Eastern Germany	0.933	–0.017	0.945	–0.014	1.150	0.031	1.103	0.022
Constant	1.711		1.387		2.376*		2.201	
N	443		437		443		437	
LR χ^2	16.979		33.260		8.773		13.435	
Prob > χ^2	0.049		0.000		0.362		0.098	
McFadden R^2	0.026		0.051		0.014		0.022	
Nagelkerkes R^2	0.046		0.091		0.025		0.039	

Notes: §binary coded = 1 if any of the following instruments have been negotiated: reduction in firm-specific bonuses, offsetting of scheduled wage increases against firm-specific bonuses, overtime without premiums, delay of scheduled wage increases, downgrading of jobs, base wage reductions, reduction in apprentices' pay;

¶binary coded = 1 if any of the following instruments have been negotiated: time off in lieu of overtime pay, working time accounts, reductions in the use of overtime, additional part-time work, options for sabbaticals.

Table 6: Continued

Dependent variable	Organisational flexibility††				Socially acceptable redundancies‡‡			
	Odd ratios	Marginal effects	Odd ratios	Marginal effects	Odd ratios	Marginal effects	Odd ratios	Marginal effects
Good/very good demand situation	1.170	0.037	—	—	1.091	0.022	—	—
Good/very good profit situation	—	—	1.258	0.055	—	—	1.050	0.012
101–250 employees	1.578	0.109	1.840	0.145	1.882	0.157	2.075*	0.181
251–500 employees	0.915	–0.021	0.935	–0.016	1.796	0.145	1.894	0.159
501–1,000 employees	0.756	–0.067	0.813	–0.049	1.948*	0.166	1.743	0.138
>1,000 employees	2.039**	0.170	1.962*	0.160	5.909***	0.441	6.198***	0.452
No union contract	0.434**	–0.199	0.445**	–0.192	0.586	–0.133	0.545	–0.151
Service sector	2.078***	0.175	2.222***	0.190	0.918	–0.021	0.967	–0.008
Eastern Germany	0.832	–0.044	0.877	–0.031	0.867	–0.035	0.878	–0.032
Constant	0.603		0.504		0.518		0.480	
N	443		437		443		437	
LR χ^2	38.931		39.460		53.262		56.293	
Prob > χ^2	0.000		0.000		0.000		0.000	
McFadden R^2	0.062		0.064		0.080		0.086	
Nagelkerkes R^2	0.107		0.110		0.140		0.150	

Notes: ††binary coded = 1 if any of the following instruments have been negotiated: transfers, additional training, work reorganisation;
‡‡binary coded = 1 if any of the following instruments have been negotiated: early retirement incentives (partly state sponsored), part-time work for elderly workers (partly state sponsored).

In contrast to agreements on the extension of working times, monetary concessions in PECs do not depend on the order, but rather on the profit situation. Poor profits significantly increase the chances that the PEC contains one or more instruments that directly adjust wages and benefits. The structural control variables remain insignificant, with the exception of a negative effect of firm size. The fact that even the presence of an opening clause does not appear to be a crucial factor for explaining monetary measures could be related to the fact that, as explained above, compensation cuts in PECs are primarily related to firm-specific components above the collectively agreed union wage scale that is set for the whole industry.

We get mixed results with respect to those instruments which we expected not to be related to the economic situation as they are not used for short-term volume or labour cost adjustment but rather increase labour productivity only in the long run. Contrary to our expectations, agreements that contain provisions for working time flexibility are strongly related to the company's profit situation with profitable companies using working time flexibility to a lesser extent. Obviously, single flexitime instruments like working time accounts with time off in lieu of overtime pay are also used as cost-cutting devices by poorly performing companies. Because companies can significantly reduce their obligation to pay overtime premiums, some instruments for working time flexibility probably have to be regarded as 'soft' types of monetary concessions.

As hypothesised, instruments that increase organisational flexibility and that introduce options for socially acceptable redundancies are unrelated to the economic situation. However, the chances that early retirement incentives are introduced is significantly related to company size with the largest companies negotiating such instruments about six times as often as companies in the smallest size class. Instruments such as part-time work for older employees are economically feasible only in large companies where a significant number of older workers are employed and where a professional HR department exists that is capable of dealing with the sometimes quite complicated statutory provisions.

CONCLUSION

The recent spread in PECs represents a paradigm shift in the German system of industrial relations, both procedurally and substantively. Procedurally, opening clauses in industry-wide labour agreements delegate rights and responsibilities in the area of core employment parameters such as pay and working time, to the company level. This trend towards organised decentralisation has paved the way for the social partners at the establishment level to negotiate flexible adjustment instruments that match company-specific needs.

Substantively, the parties to PECs frequently use such agreements to increase the level of internal numerical, functional and monetary flexibility while at the same time they also extend the scope of negotiation to areas like employment policy as well as to long-term investment and production strategies that were formerly regarded as exclusive management prerogatives. Facing crisis situations, companies now have options that allow them to react with more than just strategies focusing on external flexibility. Besides layoffs as the traditional instrument for labour adjustment, they now have alternative and potentially more cost-efficient options for internal flexibility that they implement by negotiating PECs. Even though they might suffer a loss of

income, workers reluctantly agree to PECs because they generally gain job security in return for granting concessions.

Agreements to improve employment security and competitiveness have spread through large segments of the German economy independent of the business cycle. Furthermore, PECs are currently used in both weak and prosperous firms alike so that they are losing their exceptional nature. Originally conceived as adjustment instruments in crisis situations that threaten jobs and the company's very existence, PECs are fast becoming a new 'normal' regulatory instrument while collective bargaining standards are becoming guidelines that give firms considerable leeway to come to company-specific solutions. The impact of PECs on competition is setting a trend that other firms find difficult to resist.

Overall, the multivariate analysis confirms our hypothesis that the firm-specific economic situation strongly determines the contents of PECs. Companies obviously attempt to react to different economic situations (in terms of both product demand and profits) by resorting to specifically tailored instruments, such as reductions in working time to safeguard jobs, or extensions of working hours or monetary measures. The order situation was identified as the key factor determining whether agreements on the reduction or extension of working and operating times have been negotiated while the profit situation is a strong predictor for monetary concessions. In the context of poor profits, short-term capital shortages might dictate immediate reductions in labour costs that indirect measures for working time or work rule adjustment are unable to provide.

References

Ackermann, K.-F. and S. Vollmer (1999), 'Firmenspezifische Bündnisse für Arbeit und Wettbewerbsfähigkeit in der Unternehmenspraxis', in K.-F. Ackermann and M. Kammüller (eds), *Firmenspezifische Bündnisse für Arbeit. Ziele, Strategien, Unternehmensbeispiele* (Stuttgart, Schäffer-Poeschel) pp. 147–207.

Addison, J. T., L. Bellmann, C. Schnabel and J. Wagner (2003), 'German Works Councils Old and New: Incidence, Coverage and Determinants', *Schmollers Jahrbuch. Zeitschrift für Wirtschafts- und Sozialwissenschaften*, **123**, 3, 339–358.

Autorengemeinschaft (2001), 'Der Arbeitsmarkt in der Bundesrepublik Deutschland in den Jahren 2000 und 2001', *Mitteilungen Aus der Arbeitsmarkt- und Berufsforschung*, **34**, 1, 5–27.

Berthold, N. and O. Stettes (2001), 'Der Flächentarifvertrag—Vom Wegbereiter des Wirtschaftswunders zum Verursacher der Beschäftigungsmisere', in C. Ott and H.-B. Schäfer (eds), *Ökonomische Analyse des Arbeitsrechts* (Tübingen, Mohr-Siebeck) pp. 1–29.

Berthold, N., M. Brischke and O. Stettes (2003), 'Betriebliche Bündnisse für Arbeit. Eine empirische Untersuchung für den deutschen Maschinen- und Anlagenbau', *Wissenschaftliche Beiträge des Lehrstuhls für Volkswirtschaftslehre, Wirtschaftsordnung und Sozialpolitik No. 68* (Würzburg).

Bispinck, R. (1998), 'Wage-Setting System. An Analysis of Differentiation, Decentralisation and Deregulation of Sectoral Collective Agreements', in R. Hoffmann, O. Jacobi, B. Keller and M. Weiss (eds), *The German Model of Industrial Relations Between Adaptation and Erosion* (Düsseldorf, Hans-Böckler-Stiftung) pp. 9–26.

Bispinck, R. and WSI-Tarifarchiv (2004), 'Kontrollierte Dezentralisierung. Eine Analyse der tariflichen Öffnungsklauseln in 80 Tarifbereichen', *Elemente qualitativer Tarifpolitik*, **55** (Düsseldorf).

Bosch, G. (2004), 'The Changing Nature of Collective Bargaining in Germany: Coordinated Decentralization', in H. C. Katz, W. Lee and J. Lee (eds), *The New Structure of Labor Relations. Tripartism and Decentralization* (Ithaca, ILR Press) pp. 84–118.

Bundesmann-Jansen, J., H. Groß and E. Munz (2000), *Arbeitszeit '99* (Düsseldorf, Ministry of Economics and Labour).

Büttner, R. and J. Kirsch (2002), 'Bündnisse für Arbeit im Betrieb', *Edition der Hans-Böckler-Stiftung*, **61** (Düsseldorf).

Carstensen, V. (2000), 'Arbeitsplatzsicherheit durch Arbeitszeitkonten', in U. Backes-Gellner, M. Kräkel, B. Schauenberg and G. Steiner (eds), *Flexibilisierungstendenzen in der Betrieblichen Personalpolitik* (Munich, Rainer Hampp Verlag) pp. 307–332.

DGFP (Deutsche Gesellschaft für Personalführung) (ed.) (1998), *Bündnisse für Arbeit im Betrieb. Wege Betrieblicher Standortsicherung* (Cologne, Wirtschaftsverlag Bachem).

Ellguth, P. and S. Kohaut (2004), 'Tarifbindung und betriebliche Interessenvertretung: Ergebnisse des IAB-Betriebspanels 2003', *WSI Mitteilungen*, **57**, 8, 450–454.

Franz, W. and F. Pfeiffer (2002), 'The Rationale for Wage Rigidity: Survey Evidence from German and US Firms', *ZEW Discussion Paper No. 02-60* (Mannheim).

Freyssinet, J. and H. Seifert (2001), *Negotiating Collective Agreements on Employment and Competitiveness* (Dublin, European Foundation).

German Council of Economic Experts (2002), 'Twenty Points for Employment and Growth', *Annual Report 2002/2003* (Stuttgart).

Greene, W. (2003), *Econometric Analysis*, 5th edn (Upper Saddle River, Prentice Hall).

Groß, H., E. Munz and H. Seifert (1999), 'Weniger Arbeitslose durch Überstundenabbau', *WSI-Mitteilungen*, **52**, 8, 505–520.

Hassel, A. (1999), 'The Erosion of the German System of Industrial Relations', *British Journal of Industrial Relations*, **37**, 3, 483–505.

Heidemann, W. (1999), 'Betriebs- und Dienstvereinbarungen Beschäftigungssicherung. Analysen und Handlungsempfehlungen', *Edition der Hans-Böckler-Stiftung*, **8** (Düsseldorf).

Höland, A., U. Reim and H. Brecht (2000), *Flächentarifvertrag und Günstigkeitsprinzip. Empirische Beobachtungen und rechtliche Betrachtungen der Anwendung von Flächentarifverträgen in den Betrieben* (Baden-Baden, Nomos).

Jacobi, O. (2003), 'Renewal of the Collective Bargaining System?', in W. Müller-Jentsch and H. Weitbrecht (eds), *The Changing Contours of German Industrial Relations* (Munich, Rainer Hampp) pp. 15–38.

Keller, B. (2004), 'Employment Relations in Germany', in G. J. Bamber, R. D. Lansbury and N. Wailes (eds), *International and Comparative Employment Relations. Globalisation and the Developed Market Economies*, 4th edn (London, Sage) pp. 211–253.

Kohaut, S. and C. Schnabel (2003), 'Zur Erosion des Flächentarifvertrags: Ausmaß, Einflussfaktoren und Gegenmaßnahmen', *Industrielle Beziehungen*, **10**, 2, 193–219.

Massa-Wirth, H. and H. Seifert (2004), 'Betriebliche Bündnisse für Arbeit mit begrenzter Reichweite?', *WSI-Mitteilungen*, **57**, 5, 246–254.

Mauer, A. and H. Seifert (2001), 'Betriebliche Beschäftigungs- und Wettbewerbsbündisse—Strategie für Krisenbetriebe oder neue regelungspolitische Normalität?', *WSI-Mitteilungen*, **55**, 8, 490–500.

Mückenberger, U. (2003), 'German Industrial Relations in a Period of Transition', in B. Burchell, S. Deakin, J. Michie and J. Rubery (eds), *Systems of Production. Markets, Organisations and Performance* (London, Routledge) pp. 159–177.

Müller, H.-E. and A. Martin (2000), 'Beschäftigen statt entlassen', *Edition der Hans-Böckler-Stiftung*, **29** (Düsseldorf).

Müller-Jentsch, W. (1995), 'Germany: From Collective Voice to Co-Management', in J. Rogers and W. Streeck (eds), *Works Councils. Consultation, Representation, and Cooperation in Industrial Relations* (Chicago, University of Chicago Press) pp. 53–78.

OECD (1989), *Labour Market Flexibility. Trends in Enterprises* (Paris, OECD).

Pfeiffer, F. (2003), *Lohnrigiditäten im Gemischten Lohnbildungssystem* (Baden-Baden, Nomos).

Rehder, B. (2003), *Betriebliche Bündnisse in Deutschland. Mitbestimmung und Flächentarif im Wandel* (Frankfurt/Main, Campus).

Richter, G., W. Schnecking and H. Spitzley (2001), *'Beschäftigungssicherung Durch Betriebliche Arbeitszeitverkürzung', Report on the HBS-Project 99-108-3* (Bremen).

Schnabel, C. (1998), 'The Reform of Collective Bargaining in Germany: Corporatist Stability vs. Firm Flexibility', in R. Hoffmann, O. Jacobi, B. Keller and M. Weiss (eds), *The German Model of Industrial Relations Between Adaptation and Erosion* (Düsseldorf, Hans-Böckler-Stiftung) pp. 83–95.

Seifert, H. (2000), 'Negotiating Employment Security', in P. Berg (ed.), *Creating Competitive Capacity. Labor Market Institutions and Workplace Practices in Germany and the United States* (Berlin, Edition Sigma) pp. 44–71.

Seifert, H. (ed.) (2002a), *Betriebliche Bündnisse für Arbeit. Rahmenbedingungen, Praxiserfahrungen, Zukunftsperspektiven* (Berlin, Edition Sigma).

Seifert, H. (2002b), 'Betriebliche Bündnisse für Arbeit—Beschäftigen statt entlassen', in H. Seifert (ed.), *Betriebliche Bündnisse für Arbeit. Rahmenbedingungen, Praxiserfahrungen, Zukunftsperspektiven* (Berlin, Edition Sigma) pp. 65–85.

Sinn, H.-W. (2002), 'Die rote Laterne—Die Gründe für Deutschlands Wachstumsschwäche und die notwendigen Reformen', *Ifo-Schnelldienst*, **55**, 23, 3–32.

Sisson, K. and A. Artiles (2000), *Handling Restructuring. Collective Agreements on Employment and Competitiveness* (Dublin, European Foundation).

Sisson, K., J. Freyssinet, H. Krieger, K. O'Kelly, C. Schnabel and H. Seifert (1999), *Pacts for Employment and Competitiveness. Concepts and Issues* (Dublin, European Foundation).

Traxler, F. (1994), 'Collective Bargaining: Levels and Coverage', in OECD (ed.), *Employment Outlook* (Paris, OECD) pp. 167–194.

Tüselmann, H. and A. Heise (2000), 'The German Model of Industrial Relations at the Crossroads: Past, Present and Future', *Industrial Relations Journal*, **31**, 3, 162–176.