

**FRIEDRICH-ALEXANDER-UNIVERSITÄT
ERLANGEN-NÜRNBERG**

Lehrstuhl für VWL, insbes. Arbeitsmarkt- und Regionalpolitik
Professor Dr. Claus Schnabel

**Diskussionspapiere
Discussion Papers**

No. 16

**The Reform of the German Works Constitution
Act: A Critical Assessment**

JOHN T. ADDISON, LUTZ BELLMANN, CLAUS SCHNABEL,
AND JOACHIM WAGNER

DECEMBER 2002

ISSN 1615-5831

Editor: Prof. Dr. Claus Schnabel, Friedrich-Alexander-Universität Erlangen-Nürnberg
© John T. Addison, Lutz Bellmann, Claus Schnabel and Joachim Wagner

The Reform of the German Works Constitution Act: A Critical Assessment*

John T. Addison,^a Lutz Bellmann,^b Claus Schnabel,^c and Joachim Wagner^d

ABSTRACT: Since 1920 the thrust of German law on workplace codetermination has changed on a number of occasions. In the latest swing of the legislative pendulum, the formation of works councils has been facilitated and their authority strengthened. The present paper outlines the terms of the new Works Constitution Reform Act and evaluates the case for it. First, we provide new information on the incidence and coverage of works councils. Second, we review the evidence on the effect of works councils on firm performance, focusing on some new results based on matched plant data. If the evidence on works council frequency points to a codetermination deficit, any such shortfall does not appear to have negative consequences for the workplace productivity, profitability, and employment.

ZUSAMMENFASSUNG: Seit 1920 hat sich das Mitbestimmungsrecht in Deutschland mehrfach geändert. Die letzte Änderung brachte eine Erleichterung der Errichtung und eine Stärkung von Betriebsräten mit sich. Die vorliegende Arbeit skizziert die wichtigsten Bestimmungen des Betriebsverfassungs-Reformgesetzes und beurteilt dieses aus ökonomischer Sicht. Dabei liefern wir aktuelle Informationen über die Häufigkeit und die Deckungsrate von Betriebsräten und diskutieren die empirische Evidenz zu den Auswirkungen von Betriebsräten auf den Firmenerfolg, wobei wir uns auf neue Schätzergebnisse auf der Basis von Betriebsvergleichen stützen. Selbst wenn aufgrund der geringen Häufigkeit von Betriebsräten ein Mitbestimmungsdefizit konstatiert werden kann, scheint dieses keine negativen Auswirkungen auf die betriebliche Produktivität, Profitabilität und Beschäftigung zu haben.

KEYWORDS: Works councils, codetermination, Germany

JEL-CLASSIFICATION: J50

* We thank Holger Alda for his help with the IAB data. Helpful comments were received from seminar participants at the Center for Labor and Employment Law, New York University, and at the meeting of the Verein für Socialpolitik (German Economic Association) in Innsbruck.

^a Prof. Dr. John T. Addison, Department of Economics, Moore School of Business, University of South Carolina (U.S.A.), Columbia SC 29208, USA and IZA, ecceaddi@moore.sc.edu

^b Lutz Bellmann, Institut für Arbeitsmarkt- und Berufsforschung der Bundesanstalt für Arbeit, Regensburger Straße 104, D-90478 Nürnberg, and IZA, lutz.bellmann@iab.de.

^c Claus Schnabel, Friedrich-Alexander-Universität Erlangen-Nürnberg, Lehrstuhl für Arbeitsmarkt- und Regionalpolitik, Lange Gasse 20, D-90403 Nürnberg, claus.schnabel@wiso.uni-erlangen.de.

^d Joachim Wagner, Universität Lüneburg, Institut für Volkswirtschaftslehre, D-21332 Lüneburg, HWWA and IZA, wagner@uni-lueneburg.de.

1. INTRODUCTION

For many years the German system of codetermination has been regarded as exemplary, in much the same manner as that country's system of apprenticeship training.¹ Indeed, with the precipitous decline in private-sector union density in many nations, the German system of worker participation has enjoyed further popularity as a potential solution to the problem of sub-optimal worker involvement hinted at by the facts of union decline. Even the United States has flirted with works councils on the German pattern.² More tangibly, the European Union has used the German institution as something of a template in designing various of its measures seeking to increase worker participation, the most recent example being legislation in March 2002 establishing a general framework for determining minimum information and consultation rights for workers at the workplace (Official Journal, 2002).

If foreign observers have seen much to admire in the works council apparatus, their German counterparts have expressed concern with its operation. These concerns were rehearsed before a special Codetermination Commission/*Kommission Mitbestimmung*, set up in 1996 by the Bertelsmann and Hans Böckler Foundations. The Commission reported in 1998. Its main conclusions were that codetermination at the establishment level was under-provided by the market despite the mandatory (but not automatic) status of works councils under law, and that changes needed to be made to the structure and mode of functioning of codetermination so as to defend its economic performance (Kommission Mitbestimmung, 1998). The deliberations of the Commission, coupled with strong demands from the union movement for reform, provided the basis for a new Works Constitution Act which entered into law in July 2001 and which increases the influence of the works council.

In the present paper, we examine the most recent information from a nationally representative data set to determine whether the evidence on works council incidence and coverage is supportive of a codetermination 'deficit.' We further consider the likely economic consequences of the new legislation, drawing on an existing body of empirical research dealing with works council effects on firm

¹ In what follows, we restrict our attention to the codetermination at the workplace (*betriebliche Mitbestimmung*) and not that at the enterprise level through worker representation on company supervisory boards (*Mitbestimmung auf Unternehmensebene*).

² See, for example, the deliberations of the Dunlop Commission (1994).

performance. Given the statistical limitations of the extant literature, we seek to advance the debate on what works councils do by offering a new empirical analysis based on matched samples of establishments. Specifically, we examine the effects of works council *formation* on labor productivity, financial performance, and employment development. In this exercise we again use the most comprehensive data set available to researchers.

The outline of the paper is as follows. First, we sketch the backdrop to the revision of the Works Constitution Act. Second, we identify the principal changes introduced by the new law. Third, we address the perceived costs and benefits of these changes as they were expressed in the charged political debate surrounding the legislation. Fourth, we examine the pertinent facts on works council incidence and impact. An interpretative section linking our findings to the revised architecture of codetermination concludes.

2. THE EVOLUTION OF WORKPLACE CODETERMINATION

In Germany, the history of co-determination at the workplace dates back to World War I with the formation of workers' committees (*Arbeiterausschüsse*) to mobilize union support for the war effort. Works councils *per se* were formally established shortly thereafter under the Works Councils Law (*Betriebsrätegesetz*) of 1920. Works councils and unions were abolished during the National Socialist era, and only reemerged during the occupation years – first on an *ad hoc* basis and then under laws passed by individual *Länder*. The procedures obtaining in the various regions of the country were consolidated under the 1952 Works Constitution Act (*Betriebsverfassungsgesetz*). Because the national law gave fewer codetermination rights than the various state provisions that it replaced, and because works councils were now to be formally independent from as opposed to being subordinate to unions as under the 1920 legislation, the 1952 Act is often depicted as a defeat for labor. But further changes in the law occurred in 1972, some three years after the election of a coalition government of Social Democrats and Free Democrats. The new Works Constitution Act widened and strengthened the rights of works councils. Additionally, it improved the access of unions to the workplace and promoted collaboration between works councils and unions.³

³ A more detailed discussion of the evolution of the law is contained in Addison, Schnabel, and Wagner (2000a).

The immediate backdrop to the most recent changes in the law⁴ is provided by the deliberations of the Codetermination Commission and the debate pursuant to its conclusions. Among other things, the Commission was set up to evaluate experience with the workings of the 1972 Act. It comprised high-ranking representatives from the scientific, business, union and political communities, and was supported by specially-commissioned academic reports.⁵ The Commission's final report, entitled *Co-Determination and New Business Cultures – Conclusion and Perspectives*, was presented in May 1998 (Kommission Mitbestimmung, 1998).⁶ It reasoned that it cannot be decided from either theory or the empirical evidence whether the overall effect of works councils is positive or negative: "In the real world codetermination as an institution generates both efficiency-reducing misallocation and efficiency-raising productivity and cooperative effects. The net impact of these parallel and simultaneous partial effects cannot be determined a priori" (English translation, para. 27; Kommission Mitbestimmung, 1998, paras. 5.22-5.23, pp. 64-65). Although the Commission did not offer any concrete proposals for the reform of existing legislation, it emphasized the presence of a large and growing codetermination-free zone (see English translation, para. 19; Kommission Mitbestimmung, 1998, pp. 50-51). And it warned that: "A gradual erosion [of the institution of codetermination] cannot, in the public interest, be left to the vagaries of the market" (Kommission Mitbestimmung, 1998, para. 6.16, p. 76).

Contemporaneous with the publication of the final report of the Commission, the Federation of German Unions presented its own draft proposals for reform (see Deutscher Gewerkschaftsbund, 1998). The union demands were largely accommodated by the Social Democrat-Green coalition government, elected in the Fall of 1998. But although the new administration quickly announced its intention to reform and strengthen codetermination at the establishment level,⁷ formulation of the controversial draft legislation was to be delayed for more than two years. The government's bill was debated before the Committee for Labor and Social Order of the lower house on May 14, 2001. A slightly modified version of the bill was passed

⁴ We here abstract from changes in the law implemented in 1989 (*Gesetz zur Änderung des Betriebsverfassungsgesetzes über Sprecherausschüsse der leitenden Angestellten und zur Sicherung der Montan-Mitbestimmung* of December 1, 1998). This legislation established executive councils for senior executives and made provision for a modest extension of information and consultation rights for works councils proper in the event of changes in technology.

⁵ See, for example, Streeck and Kluge (1999), and Frick, Kluge, and Streeck (1999).

⁶ An English-language summary of the report can be downloaded at www.mpi-fg-koeln.mpg.de/endbericht/inhalt_e.html.

⁷ See *Aufbruch und Erneuerung – Deutschlands Weg ins 21. Jahrhundert, Koalitionsvereinbarung zwischen der Sozialdemokratischen Partei Deutschlands und Bündnis 90/Die Grünen*, Bonn, 20. Oktober 1998, Abschnitt 1.8; www.bundesregierung.de:80/02/0203/020200/00.htm.

by the lower chamber on June 22, 2001, and approved by the upper house on July 13, 2001. The Act became effective on July 28, 2001.⁸

3. CHANGES IN THE LAW

The principal changes introduced under the Works Constitution Reform Act are as follows. First, the character of the works council becomes more diverse than heretofore. For example, divisional works councils can be introduced for special product or business units, or joint works councils can be set up across several establishments.⁹ Second, in establishments employing between 5 and 50 employees the voting procedure for setting up a works council is simplified. The streamlined procedure has two stages: the nomination of candidates by an electoral board (*Wahlvorstand*), followed one week later by another works meeting (*Betriebsversammlung*) in which the works council is elected directly in a secret ballot of all employees present. In larger establishments with 51 to 100 employees, the two sides can voluntarily decide to use the new simplified procedures. A related change is that in undertakings where there is a group-level works council (*Konzernbetriebsrat*) the latter body can directly set up an electoral committee to supervise the election of a works council in an establishment under a so-called “mentoring principle.” Third, the size of the works council is increased via a reduction in the employment thresholds used to determine the number of councilors. Table 1 compares the old and new regulations in this regard, showing for example that in establishments with 150 employees the size of the council is increased from 5 to 7 members, or roughly 5 percent of the workforce. Fourth, employers are now required to make provision for a full-time works councilor in establishments with 200 or more employees, instead of 300 employees as before. The employment thresholds for additional full-time councilors are also lowered. Table 2 contrasts the number of such paid full-time works councilors by establishment employment size threshold under the old and new legislation. (Provision is also made for these positions to be filled on a part-time basis by both regular and part-time workers.)

⁸ There is as yet no official translation of the new law. The Works Constitution Reform Act is published in *Deutscher Bundestag, 14. Wahlperiode, Drucksache 14/5741 April 2, 2001*. (This is available on the web at: www.bundestag.de.) The new Act is published in stand-alone form in the Federal Law Bulletin, *Bundesgesetzblatt BGBl. I S. 1852*. (This is again available on the web at: www.bma.bund.de/download/gesetze/BetrVG.pdf.)

⁹ Where a company is restructured, the works council has a residual mandate for up to six months.

Table 1

Membership of the Works Council by Establishment Size, Pre-existing and Current Legislation

Works Constitution Act		Works Constitution Reform Act	
No. of employees	No. of works councilors	No. of employees	No. of works councilors
5-20	1	5-20	1
21-50	3	21-50	3
51-150	5	51-100	5
151-300	7	101-200	7
301-600	9	201-400	9
601-1,000	11	401-700	11
1,001-2,000	15	701-1,000	13
2,001-3,000	19	1,001-1,500	15
3,001-4,000	23	1,501-2,000	17
4,001-5,000	27	2,001-2,500	19
5,001-7,000	29	2,501-3,000	21
7,001-9,000	31	3,001-3,500	23
		3,501-4,000	25
		4,001-4,500	27
		4,501-5,000	29
		5,001-6,000	31
		6,001-7,000	33
		7,001-9,000	35
In establishment with >9,000 employees the number of councilors is increased by 2 members for each incremental 3,000 employees.		Unchanged	

Note: The establishment size intervals pertain to number of employees with voting rights normally employed at the workplace.

Table 2

Number of Works Council Members Released from Their Work Duties by Establishment Size, Pre-existing and Current Legislation

Works Constitution Act		Works Constitution Reform Act	
No. of employees	No. of paid, full-time works councillors	No. of employees	No. of paid, full-time works councillors
300-600	1	200-500	1
601-1,000	2	501-900	2
1,001-2,000	3	901-1,500	3
2,001-3,000	4	1,501-2,000	4
3,001-4,000	5	2,001-3,000	5
4,001-5,000	6	3,001-4,000	6
5,001-6,000	7	4,001-5,000	7
6,001-7,000	8	5,001-6,000	8
7,001-8,000	9	6,001-7,000	9
8,001-9,000	10	7,001-8,000	10
9,001-10,000	11	8,001-9,000	11
		9,001-10,000	12
In establishments with >10,000 employees one further member of the works council is released for each incremental 2,000 employees.		Unchanged	

Note: The establishment size intervals refer to normal employment levels.

Fifth, the influence of the works council in matters of employment protection and the training of the workforce is strengthened. The works council may now initiate and codetermine vocational training measures in respect of employees whose qualifications are likely to be rendered obsolete. Also, the works council is granted codetermination rights in the execution (although not the introduction) of teamworking arrangements. Sixth, the employer has to furnish the works council at his own expense with access to modern information and communications equipment, such as the internet and e-mail. Moreover, the works council is entitled

to consult with internal and external experts, and can delegate some of its tasks to working groups in establishments with more than 100 employees. Seventh, an equality quota (*Gleichstellungsquote*) mandates that the gender which is in the minority at the establishment be represented on the works council at least in proportion to its employment share. Finally, the legislation cedes codetermination rights to the works council on environmental protection issues, and equips it with the means to combat racism in the workplace through an extension of its power to withhold consent in matters of the engagement and transfer of personnel. Where a company is restructured, the works council has a residual mandate for up to six months.¹⁰

Several of the above measures directly increase the likelihood of works council formation. Other of the measures that increase the competence or authority of the works council might also be expected to stimulate works council formation while also impacting firm performance and costs. Each theme is taken up in what follows.

4. SOME GERMAN CONSIDERATIONS AND CONTROVERSIES

Although there are no official statistics on the incidence of works councils, piecemeal evidence has indicated that their frequency is indeed modest among small and medium-sized workplaces – we provide definitive evidence of this, below. It was the growing importance of such establishments, especially in the service sector, that provided the basis of the Codetermination Commission's diagnosis of a "codetermination-free zone." For the Federal government this perceived participation gap was central to its reform of the Works Constitution Act. Yet it should be borne in mind that the size threshold for works council formation is just 5 employees (of whom 3 must be 'eligible' to be works councilors) and that employees alone decide whether or not they want a works council. Once the procedure is initiated by employees the election of a works council is to all intents and purposes automatic, in the past no less than today. Nevertheless, in advocating a streamlining of the voting procedures in smaller establishments,

¹⁰ Other provisions of the legislation include increased youth and trainee representation and the right of such groups to form their own committees in establishments with over 100 employees; the right of temporary agency workers to participate in works council elections in the companies to which they are assigned after three months' service; and the requirement that the works council examine a specific issue raised from the shop floor where this is supported by at least 5 percent of the workforce. On these and the above changes in the law, see BMA-Pressstelle (2001); www.bma.bund.de/presse.asp?id=1436.

supporters of the legislation in part argued that the complexity of the electoral procedure dissuaded employees from setting the electoral process in motion and/or presented employers with the opportunity to delay matters and even to prevent the election of a works council (on which, see Schumacher and Böhmer, 1995).

In any event, the welfare consequences of incomplete works council coverage are unclear in general because of the two-faces of the entity, by analogy with the union institution (see Freeman and Medoff, 1984). On one side, the face of the works council is that of an instrument of collective voice. It provides workers with a means of expressing discontent other than through quits, implying reduced hiring and training costs and increased firm-specific investments. The works council also collects and aggregates information about the preferences of all workers, allowing management to select a more appropriate mix of compensation and personnel practices. Other things being equal, the creativity of consultation and the heightened job security stemming from codetermination should serve to further reinforce these pro-productive effects. But there is another side – a monopoly face – to consider. Thus, the power conveyed by knowledge and legal entitlement also allows the works council to delay and alter profit-maximizing decisions and to redistribute the joint surplus in favor of labor. If such actions also influence the decision to invest in physical and intangible capital, there can be dynamic as well as static inefficiencies.

Expressed somewhat differently, the legal obligations imposed on the employer by the Works Constitution Act can complement market forces (specifically, reputation effects) by reinforcing the credibility of the employer's commitment to take workers' interests into account. While protecting workers' reliance investments, the transfer of control rights to the worker side goes against the competitive grain. Within limits, however, worker rent seeking may be compatible with an increase in the joint surplus (Freeman and Lazear, 1995). The key is the availability of some device that can limit redistribution while preserving the potential efficiency gains from cooperation. Here, the German law may convey a decisive advantage and allow a partial decoupling of production from distribution issues. This is because of so-called "peace obligation" of works councils (i.e. they cannot call strikes) and the dual industrial relations system in which the works council machinery is embedded (i.e. wages are typically determined not at the workplace but under industry-wide/regional collective agreements). The fact that works councils cannot formally bargain over wages is not the end of the story since their codetermination and decision rights may afford numerous opportunities for extracting pecuniary and

non-pecuniary concessions. Nevertheless, enough has been said to establish the crucially important German dimension to the broader debate over works councils.

Apart from the aim of increasing works council penetration among small and medium-sized enterprises, it was a stated goal of the Federal government to increase the number of works councilors and to improve works council operation. To the latter end, as we have seen, the new regulations provide that works councils are to be equipped with information and communication equipment, to have improved access to internal and external experts, and the opportunity to delegate tasks to working groups. In addition, provision is made for the part-time release of works councilors and for more paid full-time works councilors. Each measure to a smaller or greater degree implies an increase in the costs of operating a works council. The costs have exclusively to be borne by employers. Mid-size establishments are likely to be most affected. For example, an establishment employing 200 employees now has for the first time to bear the costs of one paid full-time works councilor. This development alone represents an increase in its wage bill of one-half of one percent.

The Federal government accepted that there were cost implications, noting in the preamble to its draft legislation of November 2000 that: "Democracy is not cost neutral. This principle also applies to democracy at the workplace and to the resulting system of establishment-level codetermination." But it proceeded to argue that: "The benefit of an operational system of codetermination outweighs the additional expense."¹¹ Elaboration of this argument is contained in the justification for the actual legislation: "The additional costs to the establishment have to be set against the advantages from worker participation. Codetermination establishes trust. This trust facilitates flexible and process-open forms of cooperation and thus, for example, lowers transaction costs in the establishment. In addition, employees who know that their interests are represented in the firm and works councils that are able to incorporate these interests into the decision making process can increase the productivity of the undertaking and thence the competitiveness of the German economy (see Report of the Codetermination Commission, p. 64f., paras. 22-23)."¹²

This line of official reasoning is notable in two respects. First, the language of the Codetermination Commission, on which the government draws, is in practice much

¹¹ Begründung zum Entwurf eines Gesetzes zur Reform des Betriebsverfassungsgesetzes [Referentenentwurf] p. 23.

¹² Deutscher Bundestag, 14. Wahlperiode, Drucksache 14/5741 of 2. 4. 2001, p. 32.

more guarded. As we have seen, the Commission concedes that, at the theoretical level, it is not possible to determine *a priori* which of the works council's two faces dominates. Second, as regards the facts of the matter, the Commission interprets the empirical evidence at that time as "equivocal." (On each point, see Kommission Mitbestimmung, 1998, paras. 5.22, 5.14, pp. 61, 64.)

But the stance of the opposition political parties, the CDU/CSU and the FDP, was scarcely more refined than that of the Federal government. In testimony before the Committee for Labor and Social Order of the German lower house, each focused exclusively on the costs side – occasioned by the increase in the number of regular and paid works councilors – and the implications for the competitiveness of and employment in small and medium-sized enterprise in particular.¹³ Consonant with most other parliamentary testimony, pro and con, neither submission offered economic data or econometric evidence in support of its position.¹⁴

In what follows, we seek in some measure to fill this gap by surveying the econometric evidence on works council incidence and impact – much of which was available at the time of the Commission's report – and to update this information with new findings from a nationally representative data set. The goal is to provide pointers as to the likely impact of the reforms as well as to chart the state of play in research into the economic effects of German works councils.

5. WORKS COUNCIL PRESENCE AND IMPACT: A SURVEY OF THE EVIDENCE

Although research on works councils is limited there have been some major advances in recent years with the availability of new data sets. (The early literature was based on very small samples of firms that were investigated and

¹³ In fact, the political opposition sought to roll back works council influence, not simply maintain the *status quo ante*. The CDU/CSU recommended that works councils should be set up in plants with less than 21 employees only if a majority of employees voted in favor, while the FDP argued that the number of works councilors should fall below the levels set under the previous legislation and that the threshold size for paid full-time councilors should be raised and their number reduced (see, respectively, Deutscher Bundestag, 14. Wahlperiode, Drucksache 14/5753 of 3. 4. 2001, p.2; p. 3).

¹⁴ See Deutscher Bundestag, Ausschuss für Arbeit und Sozialordnung, 14. Wahlperiode, Ausschussdrucksache 14/1512 of 10. 5. 2001 (which is available at the web site: www.bundestag.de). Notable exceptions to this statement are the contributions of the Society of Self-Employed Businesses (*Arbeitsgemeinschaft Selbständiger Unternehmer*), the Cologne Institute for Business Research (*Institut der deutschen Wirtschaft Köln*), and the Institute for Labor Law and Industrial Relations in the European Community (*Institut für Arbeitsrecht und Arbeitsbeziehungen in der Europäischen Gemeinschaft*), which did refer to the econometric evidence; *ibid.*, at respectively, pp. 133, 147, and 163.

reinvestigated; for surveys of this literature, see Addison, Kraft, and Wagner, 1993; Addison, Schnabel, and Wagner, 2000a). Here we propose to largely limit our review to studies using larger, more representative data sets because these enable us more effectively to address the key themes of works council incidence/coverage and works council impact along various dimensions of economic performance.

Our starting point is works council incidence and coverage. As we have seen, the Codetermination Commission noted the (sharply increasing) presence of a “codetermination-free zone” in which there was neither board level nor works council codetermination. It reported that as of the mid-1990s this sector encompassed some 60.5 (45 percent) percent of all private sector (private and public sector) employees; corresponding values for 1984 were 50.6 (37.0) percent (Kommission Mitbestimmung, 1998, Tables 1 and 2, pp. 53-54).

Despite the lack of official data, information from several sources confirm that large numbers of establishments and employees in the private sector do not have works councils.¹⁵ In Table 3 we provide the most up-to-date and representative information on works council incidence and coverage by establishment size, using current data from the IAB (*Institut für Arbeitsmarkt- und Berufsforschung der Bundesanstalt für Arbeit*/Institute for Employment Research of the Federal Labor Office) Establishment Panel, described below. The data are for the private and public sectors combined and cover establishments with five or more employees (the minimum size of establishment that may elect a works council). They reveal a pattern of spotty works council incidence among smaller establishments and correspondingly low employment coverage. But the proportion of workplaces with works councils reaches a little over 50 percent (as does the share of employment represented by works council establishments) for plants with 51-100 employees. And works council incidence and coverage continues to increase in step with establishment size, although less so for eastern than for western Germany. In overall terms, works councils are encountered in just 16.3 percent of all German establishments with 5 or more employees, even if the share of employment accounted for by works council establishments is sharply higher than this (53 percent).

¹⁵ For information on works council frequency using data on approximately 1,000 manufacturing establishments in Lower Saxony (the data set is described below), see Addison, Schnabel, and Wagner (1997). Corresponding information for the German machine tool industry is provided by Funder and Seitz (1997) and Dilger (2002), and results from a national employment-based survey of more than 1,500 manufacturing establishments in 1985 are contained in Frick and Sadowski (1995).

Table 3

Incidence and Coverage of Works Councils in Germany in 2000 (in percent)

Size interval (no. of employees)	Western Germany			Eastern Germany			Germany		
	Incidence ^a	Coverage ^b	Share ^c	Incidence	Coverage	Share	Incidence	Coverage	Share
5-20	9.3	10.5	25.7	7.8	9.8	27.8	9.1	10.4	26.0
21-50	29.9	31.5	14.8	29.9	30.8	18.4	29.9	31.3	15.4
51-100	52.9	53.4	11.4	51.2	51.3	13.1	52.6	53.0	11.7
101-200	68.6	69.5	11.5	69.1	69.7	11.7	68.7	69.5	11.6
201-500	81.4	82.6	14.1	76.2	77.4	12.8	80.6	81.8	13.9
500>	93.3	93.5	22.5	82.1	86.3	16.2	91.7	92.6	21.4
<i>Average</i>	16.6	54.1		15.4	47.1		16.3	53.0	

Notes: ^adenotes the proportion of establishments in the class interval having works councils, ^b gives the proportion of employees in the class interval employed in firms with works councils, and ^c represents the employment share of the class interval. All data are weighted.

Source: IAB Establishment Panel, 2000.

The direct association between works council coverage and establishment size can reasonably be linked to the potential influence of the works council. After all, participation rights increase with employment size not only with respect to number of (unpaid and full-time) works councilors, noted earlier, but also regarding the right to detailed information on personnel movements and notification of reductions in force (>20 employees), the establishment of an economics committee (>100 employees), and the involvement of the works council in developing guidelines for criteria in personnel selection and movements (>1,000 employees). There are of course a variety of other employment size-related factors that may be at work here, including the public-goods aspects of many working conditions, monitoring considerations, internal labor market structuring and, less positively, worker dissatisfaction associated with routinized, regimented work settings.

There have been a number of analyses seeking to identify the determinants of works council presence. Here we identify two such studies based on the Hannover Firm Panel. The population of this four-wave panel is all manufacturing firms with at least five employees in the *Land* of Lower Saxony. The sample of

establishments is stratified by firm size, with over-sampling of larger firms. The first wave of the panel was completed in 1994 and contains information on 1,025 establishments; with sample attrition, the sample size had fallen to 709 plants at the time of the final wave in 1997 (see Brand, Carstensen, Gerlach, and Klodt, 1996). Addison, Schnabel, and Wagner (1977) provide a multivariate regression analysis of the determinants of works council presence, using data from the first wave of the panel. In addition to structural variables (such as establishment size and age), the authors include several variables intended to capture a 'taste for collective representation' on the part of the workforce, such as the percentage of blue-collar, female, part-time, and shift workers. To test for some associations suggested by the earlier empirical literature, they also deploy a number of 'participation' variables – in the form of dummies for teamworking and profit sharing – as well as the percentage of workers covered by incentive pay. Separate (probit) estimates are provided for all establishments and for a sub-sample of plants with 10-249 employees (in which range between 10 percent and 84 percent of plants have works councils).

Across both samples there is a consistent relation between the structural variables and work council presence. Thus, the probability of observing a works council increases with establishment size (albeit at a decreasing rate) and with the age of the plant, and is also greater if the establishment is a branch plant. As far as the taste for collective representation variables are concerned, these all behave in the anticipated manner but only the (inverse) relation between the female share of the workforce and works council presence is statistically significant across both samples. The effect of the participation variables is rather interesting. There is, for example, the suggestion that teamworking is associated with a reduced probability of observing a works council. (The same is true for employee profit sharing but in this case the coefficient estimate(s) is poorly determined.) This result is *prima facie* consistent with the managerial competence argument of FitzRoy and Kraft (1985, 1987) that better managers can devise efficient communication and motivational alternatives to the *impedimenta* of a bureaucratized, time-consuming works council apparatus.

In a more recent analysis, using pooled data from the 1994 and 1996 waves of the Hannover Firm Panel, Hübler and Jirjahn (2001) essentially confirm all (but one) of these results, including the negative association between teamworking and works council presence (but see below). In addition, they report that works councils are more likely in circumstances where employers provide further training, and where there are flexible working time arrangements, as might be explained by the specific

role reserved for the works council in each area. On the other hand, the authors find that works councils are less likely to be encountered in plants making use of the newest production technology. In general, their results from this univariate probit exercise are replicated using a bivariate probit approach, accommodating simultaneous coverage or otherwise by a collective bargaining agreement. We will return to the issue of collective bargaining coverage when considering the economic impact of works councils, only noting here that data on union membership is too imprecise in this data set to allow serious investigation of the link between this other conventional measure of union influence and works council incidence.

The bottom line is that the existing pattern of works council frequency seems to be fairly well explained by structural/organizational factors and elements associated with the specific functions of the works council. There is nothing to contradict the Codetermination Commission's claim as to the extent and composition of the codetermination-free zone. The only fly in the ointment, as it were, is the finding that teamworking is negatively associated with the likelihood of observing a works council since this may suggest the availability of other methods of employee involvement that may substitute for the representative participation of the works council. Moreover, further analysis of the Hannover Panel also indicates that teamworking is more than twice as likely to be practiced than representative participation through a works council (Addison, Schnabel, and Wagner, 2000b). Are we to conclude from this that codetermination-free should not be equated with *participation-free*? Perhaps. But there are a number of grounds for caution in this regard. The first is that teamwork as defined in the survey – namely, “groups characterized by expanded involvement in decision making and increased responsibility” – is not a full functional alternative to a works council. Second, there must be some concern as to the national representativeness of the frequency of teamworking as revealed in what is after all a regional, manufacturing sample. Third, it may well be that although works councils are negatively associated with teamworking they are nonetheless positively associated with other human resource practices such as training and group incentives that are complements to teamworking (see Jirjahn, 2002).¹⁶ Finally, of course, there is no guarantee that either mechanism is optimally provided by the market.

¹⁶ The evidence is decidedly mixed. For example, using the Hannover Panel, Schnabel and Wagner (2001) report that the presence of a works council is negatively related to teamworking and positively related to management consultation of the workforce. And for the German machine tool industry, Frick (2001a) reports that the extent of high performance work practices is higher in the absence of a works council (and, in their presence, where an existing works council behaves antagonistically).

Putting aside for the moment these difficult interpretative issues, what evidence is there in the literature that a codetermination gap – as measured by works council absence – leads to a performance gap? The early literature documenting works council impact on establishment or firm performance is scarcely supportive of the German mandate. Practically every study points to adverse or at best statistically insignificant economic effects of the institution.¹⁷ But if the early evidence was generally pessimistic – sometimes profoundly so – as regards works council impact, problems of small sample size dog the estimates. The samples of firms/workplaces never exceed 75 units, and the studies differ by sector, time interval, and outcome indicator. Accordingly, there is a very real issue as to the representativeness of their findings. Biases associated with the likely nonrandom distribution of works councils also cast a longer shadow in exercises of this nature.¹⁸ Moreover, the studies typically do not venture beyond the deployment of a works council dummy variable to gauge the impact of the institution, although we know from industrial relations studies that the institution is unlikely to be a datum.¹⁹

Even before the Codetermination Commission had issued its report, however, results from a much larger dataset – the Hannover Firm Panel – had become available. Although problems of statistical inference still attach to estimates of works council impact derived from this data set (see below), the findings do raise some disturbing issues that might have been expected to have informed the public debate. Among other things, the new studies look to differences in works council impact by establishment size. This strategy seeks in part to address the dummy variable problem. But it is less a response to potential differences in works council type than it is a reflection of the common sense notion that the costs of operating a works council might be higher for smaller establishments and the benefits correspondingly smaller because of the availability of informal solutions.

¹⁷ For evidence on total factor productivity, see the studies by FitzRoy and Kraft (1987) and Addison, Kraft, and Wagner (1993); on profitability, see FitzRoy and Kraft (1985), Addison, Kraft and Wagner (1993), and Addison and Wagner (1997); on investment in physical capital, see Addison, Kraft and Wagner (1993); and on investments in intangible capital, see FitzRoy and Kraft (1990), Schnabel and Wagner (1994), and Addison and Wagner (1997). Even in the case of labor turnover, Kraft (1986) reports that *individual* voice seemingly dominates collective voice (proxied by works council presence) as a means of lowering quits.

¹⁸ But see the attempt to model works council endogeneity in FitzRoy and Kraft (1987) and Addison and Wagner (1997). In the case of the former study, however, note that the firms in the sample populated an association promoting employee ownership.

¹⁹ Of the earlier studies, only Addison and Wagner (1997) offer a measure of the degree of participation or voice of the works council. More recently, analysts have exploited information from a question in the 1996 wave of the NIFA-Panel for the German machine-tool industry that asks the manager respondent to rate the relationship with the works council; see, for example, Frick (2001a) and Dilger (2002).

In addition, to the extent that works council authority and bureaucratization are increasing in establishment size, there are grounds for expecting differences in impact at certain employment thresholds. For the very smallest firms with 5-20 employees the constraint of a single works councilor may pose few difficulties, whereas in firms with 21-100 employees the growth in the number of councilors (3 up to 50 employees, 5 thereafter) and the requirement that the works council receive detailed information on personnel movements (plus documentation) as well as notification of reductions in force may be a real constraint. Of course, the rights of the works council increase further as establishment size climbs above 100 employees, beginning with the establishment of an economics committee (>100 employees), continuing with the appointment of full-time works councilors (at 300 [now 200] employees), through to the development of guidelines for criteria in personnel selection and movements (>1,000 employees). Indeed, the biggest extension of codetermination authority may accompany parity worker representation on company boards, although the complication here is that practically all establishments in the sample have works councils well before this particular size threshold (>2,000 employees) is reached.

There are, then, grounds for examining differences in works council effect by establishment size. Table 4 provides summary results by three employment size intervals for six outcome indicators, again using the first wave of the Hannover panel. The regressions from which these estimates of works council effect are derived contain a large number of control variables, and are available from the authors on request. Published variants are contained in Addison, Schnabel, and Wagner (1998, 1999, 2000b, 2001).²⁰

Consistent with the early literature the table contains results for labor productivity and profitability, adding findings for wages and employment. Beginning with labor productivity (measured as value added per worker), there is no indication among small and medium-sized plants that productivity is higher in works council regimes. (In this sample, 98 percent of establishments with 5-20 employees do not have a work council, as compared with 48 percent of plants with 21-100 employees.). As is evident, pro-productive effects are restricted to establishments with more than 100 employees (only 9 percent of which do not have works councils). On this evidence there is no disadvantage attaching to the absence of representative participation in the large majority of establishments.

²⁰ See also the studies by Jirjahn (1998) and Hübler and Jirjahn (2001), who do not differentiate by establishment size, and Jirjahn (2002) who does.

Table 4
Effects of Work Councils on Various Indicators of Establishment Performance by Establishment Size Interval^a

Indicator	Estimation procedure	Establishment size interval		
		5-20	21-100	>100
Labor productivity	OLS	none	none	positive*
Profitability	Ordered probit	negative**	negative**	none
Wages	OLS	none	positive**	none
Hires	OLS	none	none	negative*
Departures	OLS	none	none	none
Labor fluctuation	OLS	none	none	none

Notes: ^a Details of the regressions are available from the authors on request. Published results for all establishments and the 21-100 employee sub-sample are given in Addison, Schnabel, and Wagner (1998). **, * denote statistical significance at the .05 and .10 levels, respectively.

Source: Addison, Schnabel, and Wagner (2000b).

For its part, profitability is distinctly lower in small and medium-sized establishments.²¹ (The profitability variable is subjective and is expressed in index form according to management's assessment of establishment earnings – where 1 is “very bad” and 5 denotes “very good”). At issue is the mechanism producing this result. The information in the third row of the table hints that rent-seeking in the form of higher wages might be the culprit, but not only are the (three performance) measures not commensurate but there are few indications of why this might be more pronounced in medium-sized than in larger-scale plants, although it might be the case that in larger plants more of the wage is taken out in fringes.²²

²¹ Dilger (2002) also identifies profitability-reducing effects of works councils in the NIFA-Panel.

²² For the most thorough examination to date of the routes through which the remuneration package may be enhanced, see Addison, Schnabel, and Wagner (2001).

The results for several measures of labor turnover contained in the next three rows of the table are notable for their general statistical insignificance. With the exception of the finding of reduced hires in larger plants with works councils (which may of course flag ‘insider’ behavior), there is no suggestion that works council presence is associated with reduced turnover either in terms of quits or gross flows as might be suggested by collective voice considerations. That said, quits are inadequately measured since the ‘departures’ variable also includes dismissals, retirements, and deaths.²³

On balance, this evidence is by no means as prejudicial to works councils as that reported in the earlier econometric literature.²⁴ By the same token, there is nothing in the data to suggest that smaller establishments suffer practically from a codetermination deficit and some evidence that they may be at a disadvantage from having a works council. In short, the *economic* justification for stimulating works council formation through legislation is unclear for the majority of workplaces, although for larger establishments it may well be the case that legislation is not a constraint or even in accord with their organizational needs.

Abstracting from further refinements that can be made to the underlying model – examples would include the incorporation of collective bargaining agreements and high performance work practices²⁵ – there remain problems of statistical inference attaching to all cross-section estimates of this type despite the improvement in

²³ In contrast, Frick (1997) reports that the presence of a works council serves to reduce quits, whereas the frequency of hiring is in general found to be unaffected (see also Frick and Sadowski, 1995). Dilger (2002) also finds that works council presence is associated with significant reductions in several measures of labor turnover.

²⁴ In a production function study using the 1998 wave of the IAB Establishment Panel (see the next section), Frick (2001b) obtains more positive evidence, although he does not differentiate by establishment size. Specifically, he finds that works council presence is associated with 25 (30) percent higher labor productivity in western (eastern) Germany. These huge point estimates may reflect omitted variables bias and an inadequate measure of capital (proxied by the log of replacement investment). Using the same data set and applying first differences, we were unable to replicate this result – the results are available on request. Similarly, using a stochastic production frontier approach, Schank, Schnabel, and Wagner (2002) fail to detect material differences in establishment efficiency by works council status.

²⁵ Thus, Hübler and Jirjahn (2001) have argued that where the establishment is covered by collective agreement this will serve to dissipate distributional conflict at the workplace and at the same time amplify any pro-productivity effect of the works council. (Recall that works council presence and collective bargaining coverage are endogenous in the empirical model and handled via a double-selection methodology.) The authors’ results point to higher productivity in works council regimes but only where the establishment is covered by a collective agreement. That said, wages appear to be higher under works councils irrespective of whether or not the plant follows a collective agreement. For its part, German work on high performance work practices is in its infancy and pending analysis of what bundles belong together *and* their impact on productivity it is perhaps overambitious to anticipate a consistent association between works councils and any single practice.

establishment and industry controls. Moreover, there are major difficulties in exploiting the longitudinal capacity of the dataset in question and hence in controlling for firm heterogeneity. In the Hannover Firm Panel only a very small number of plants record a change in works council status (i.e. the introduction or abolition of a council), so that a fixed effects model cannot be used to investigate works council impact while controlling for time invariant unobserved heterogeneity.²⁶ Arguably, such concern with econometric issues (rather than cursory examination of the empirical evidence) weighed heavily on the Codetermination Commission, leading it to adopt its agnostic position on the efficiency consequences of workplace codetermination. Be that as it may, in what follows we present new results using an improved methodology that addresses some of these concerns.

6. WORKS COUNCIL FORMATION AND PLANT PERFORMANCE: NEW EVIDENCE FROM THE IAB ESTABLISHMENT PANEL

Our survey of the extant empirical evidence has revealed that most of what we know of works councils' impact on firm performance has a basis in cross-section data. In an attempt to get a firmer grip on the causal effects of works councils, we now deploy an alternative empirical strategy. The idea is to look at the effects of works council *formation* (rather than *presence*) on firm performance in the years after a works council has been formed by comparing establishments introducing works councils with *matched* establishments that have continued to operate without them. Here we will be using changes data, which might be expected to exacerbate measurement error. In the case of works council formation, however, we would argue that the discrete nature of the event and the fact that it is not a business secret means there is little risk the event will go unreported.

Our empirical strategy can only be undertaken using a data source that covers a large number of establishments over several years, with corresponding information on works council status and several indicators of firm performance. To the best of our knowledge there is only one longitudinal data set in Germany that fulfils these rather demanding requirements. This is the IAB Establishment Panel of the Institute for Employment Research of the Federal Labor Service that we used earlier to

²⁶ The use of a random effects approach is also contraindicated because such effects have to be uncorrelated with the variables included in the performance equation, and it is hard to argue that any unobserved plant characteristic (e.g. management quality) is uncorrelated with observables such as plant size or innovativeness used to explain, say, profitability or growth outcomes.

provide descriptive information on works council incidence and coverage (see Table 3).

Each year since 1993 (1996), the IAB Panel has surveyed several thousand establishments from all sectors of the economy in western (eastern) Germany. It is based on a stratified random sample – strata for 16 industries and 10 size classes – from the population of all establishments with at least one employee covered by social insurance. To correct for panel mortality, exits, and newly-founded units, the data are augmented regularly, producing an unbalanced panel. Participation of establishments is voluntary, but the response rates (which exceed 70 %) are high compared with other non-official German firm panel studies. Data are collected in personal interviews with the owners or senior managers of the establishments by professional interviewers. The panel is created to serve the needs of the Federal Labor Service, and so its focus is on employment related matters (Kölling, 2000).

Information on the works council status of establishments in western and eastern Germany is available for the 1996, 1998, and 2000 waves of the panel. In order to investigate the impact of works council formation, as a first step we identified all those establishments without a works council in 1996. (We excluded establishments in the non-profit sector and also those from banking and insurance because they do not report sales turnover, our proxy for labor productivity.) Plants subsequently reporting they had a works council 1998 that was still operational in 2000 form our group of 'treated' establishments. Establishments without a council over the entire sample period, 1996 to 2000, form our 'control' group. The former group comprises 31 establishments. Average employment in this group was 79.9 employees in June 1996 (the range being from 2 to 695 employees). Just one establishment had more than 300 employees, and only four had between 100 and 300 employees. Clearly, then, the large majority of plants introducing works councils are small. The control group contains 1,513 establishments.

There are some marked differences between the treated and the control group in 1996 when neither had works councils. Table 5 examines these differences for several workplace characteristics that have been found to be associated with works council presence. Thus, for example, it can be seen that establishments introducing a works council initially had a higher number of employees. This result is consistent with the view that employees in larger establishments are more likely to elect a works council because participation rights increase with establishment size. Plants introducing councils also have, on average, higher shares of both blue-collar and shift workers and a lower proportion of female employees. As noted

earlier, these associations probably reflect different 'tastes' for collective representation among workers, as well as the special rights of works councils (e.g. in matters concerning the regulation of working time). Each of these differences in mean values is statistically different from zero at the 10 percent level or better. Furthermore, 16 percent of establishments introducing a works council, but only 8 percent of other establishments, were branch plants. This difference would be consistent with a demonstration effect emanating from the mother plants to its affiliate, but on this occasion the difference in means is not statistically significant at conventional levels. Finally, the profit situation in the two groups also does not differ significantly on average.²⁷

Table 5
Mean Values of Variables for Establishments Introducing/Not Introducing a Works Council, All Establishments^a

Variable	Establishments introducing a works council (n = 31)	Establishments not introducing a works council (n = 1,513)	Prob-value for H ₀ : diff. of means = 0 ^b
Number of employees	79.90	34.48	0.066
Branch plant (<i>dummy</i> : 1 = yes)	0.16	0.08	0.261
Share of blue-collar workers (<i>percent</i>)	62.55	51.11	0.100
Share of shift workers (<i>percent</i>)	22.16	7.76	0.037
Share of part-time employees (<i>percent</i>)	14.86	14.80	0.990
Share of female employees (<i>percent</i>)	30.62	40.12	0.073
Profit situation (<i>dummy</i> : 1 = 'very good,' 'good')	0.42	0.33	0.337

Notes: ^aData are for 1996 when establishments from both groups did not have a works council. ^bTwo-sample t-test with unequal variances.

Source: Authors' own calculations from the IAB Establishment Panel.

²⁷ The IAB Establishment Panel contains a subjective measure of profitability according to a five-point scale ranging from *very good* to *very bad* (using the grades common in German schools, namely, *sehr gut*, *gut*, *befriedigend*, *ausreichend*, and *mangelhaft*). The profit measure used in Tables 5 and 6 is a dummy variable that takes the value of one for establishments reporting a very good or good profit situation, zero otherwise.

The implication of the material in Table 5 is that the introduction of a works council is not a random occurrence. The different 'starting conditions' imply that observed differences over the sample period in the performance of establishments that did or did not introduce a works council cannot unambiguously be interpreted as a causal effect of that entity. If establishments from both groups differ significantly at a point in time when none of them (yet) had a works council, one would expect them also to display differences some years later. This conclusion applies equally to those plants in which a works council was set up had the event not taken place. In short, we have no information on the counterfactual, namely, what would have happened in our 31 establishments had they not experienced the formation of a works council. In sum, we cannot be sure that observed differences in performance between plants that introduced a works council vis-à-vis those that did not are caused by a works council.

This problem closely resembles that encountered in, say, the evaluation of active labor market programs. If participants, or treated units, are not selected randomly from a population but are instead selected (or self-select) according to certain criteria, the effect of a treatment cannot be evaluated by comparing the average performance of the treated and the non-treated. Given that each unit (establishment, person, etc.) either participated or not, we have no information about its performance in the counterfactual situation. A promising solution is to select from the control group a sub-sample of units in such a way that every treated unit is matched to an untreated unit that is as similar as possible (ideally, identical) at a point prior to the treatment. Differences between the two groups (the treated and the matched non-treated) after the treatment can then with more assurance be attributed to the treatment (see Heckman, LaLonde, and Smith, 1999).

To repeat, in our empirical investigation the treated group consists of the 31 establishments that introduced a works council in 1998. For each of these firms we then searched for the most similar establishment from the universe of 1,513 establishments without a works council between 1996 and 2000. That is, we looked for a firm with the same (or very similar) number of employees, branch-plant status, share of blue-collar, shift, part-time and female workers, profit situation, region (western or eastern Germany), and industry affiliation. Technically this was achieved by first computing the so-called *propensity score*. This score is computed from a probit regression of a dummy variable indicating whether or not an establishment introduced a works council in 1998 on all the relevant establishment characteristics mentioned above (as measured in 1996). A vector of variables was

then assembled for each establishment consisting of the value of its propensity score, the number of its employees in 1996, and the location dummy for western/eastern Germany. (The motivation for including two variables that already appear in the score explicitly in the matching is that they are potentially highly correlated with the outcome variables – but not influenced by them – as well as with selection; on which, see Lechner, 2002). Finally, for each of the 31 establishments that introduced a works council, the most similar non-introducing plant – specifically, that establishment with the vector exhibiting the minimum Mahalanobis distance from the vector of the introducing establishment – was selected and matched to this unit.²⁸ (Note that in this process each ‘control’ (i.e. member of the initial control group) is never used more than once to form a twin, so that the results reported below are based on 31 totally different pairs of treated and non-treated plants.) These matched non-treated establishments now form the control group used in our subsequent empirical analysis.

Table 6 indicates that the matching was successful. A comparison of the mean values of variables in 1996 for the two matched sets of plants – those that subsequently introduced a works council and those that did not – shows no statistically significant differences at conventional levels. In other words, both groups of establishments are very similar. Causal effects of introducing a works council can now be identified with more confidence by comparing the mean values of a number of performance indicators for the two samples. We shall focus on four performance indicators, measured in change form over the entire sample period.

Prior to introducing these variables, however, we return to the point that matching on observables does not solve all problems. Absent very rich data, the establishments in which works councils are set up could be ‘odd men out’ in some unidentified ways. For example, might not ‘rich’ firms adopt works councils to share their bounty or, alternatively, might not ‘troubled’ firms adopt them as a quid pro quo for concessions elsewhere. If so, our approach could still suffer from the standard selection problems. By way of response, we note that two variables

²⁸ The calculation of the Mahalanobis distance (MD) is as follows. Let x^a and x^b be the column vector of matching variables for plants with and without a newly-established works council. Let G be the inverse of the covariance matrix. The Mahalanobis distance (MD) is then

$$MD = (x^a - x^b)' G (x^a - x^b).$$

This is a weighted sum of the squared differences of the variables, where the weights – taken from the covariance matrix – take into account the different dimensions of measurement of the elements in the vector of matching variables (namely, propensity score, number of employees, and the location dummy). For a theoretical discussion of the propensity-score-based Mahalanobis distance matching technique, see Rosenbaum and Rubin (1985). Matching was performed in Stata 7.0 using the PSMATCH command (Sianesi 2001).

included in the underlying probit – the initial profit situation and industry affiliation of establishments – capture in a rough and ready way some such aspects of firm heterogeneity. It is also important to recognize that works councils are *elected* by workers rather than *adopted* by firms, even if the (unmodeled) resistance of management may be expected to mediate the outcome.

Table 6

Mean Values of Variables for Establishments Introducing/Not Introducing a Works Council, Matched Establishments^a

Variable	Establishments introducing a works council (n = 31)	Matched establishments not introducing a works council (n = 31)	Prob-value for H ₀ : diff. of means = 0 ^b
Number of employees	79.90	75.75	0.893
Branch plant (<i>dummy</i> : 1 = yes)	0.16	0.06	0.236
Share of blue-collar workers (<i>percent</i>)	62.55	56.92	0.524
Share of shift workers (<i>percent</i>)	22.16	24.39	0.809
Share of part-time employees (<i>percent</i>)	14.86	11.40	0.547
Share of female employees (<i>percent</i>)	30.62	37.60	0.337
Profit situation (<i>dummy</i> : 1 = 'very good,' 'good')	0.42	0.52	0.453

Notes: ^aData are for 1996 when establishments in both groups did not have a works council. Matching was achieved using the propensity score plus the number of employees in 1996 and a dummy for eastern/western Germany using the PSMATCH procedure written by Barbara Sinesi (2001) for use with Stata 7. ^bTwo-sample t-test with unequal variances.

Source: Authors' own calculations from the IAB Establishment Panel.

With these preliminaries behind us, we next consider the four outcome variables used in this inquiry: the *change in the quit rate*; the *growth in labor productivity*; *establishment growth*; and the *change in the profit situation*. The change in the quit rate is measured by the percentage point difference in the share of employees who voluntarily separated from their establishments in 1996 and 2000. Collective voice considerations and works councils' governance attributes might suggest that the quits of dissatisfied employees should be reduced (and transformed into voice) after the formation of a works council. The growth in labor productivity is proxied by the percentage change in sales per employee over the same period. We used turnover rather than the more conventional value added measure because the data set had a large number of missing values for purchases of intermediate products – a crucially important consideration given the small number of plants introducing works councils. (As a practical matter, however, the course of turnover and value added per employee is strongly positively correlated, 1996-2000.) Both the broad collective voice model and the works council-specific of Freeman and Lazear (1995) would point to productivity increases due to enhanced cooperation in the wake of works council introduction. As we have seen, this very argument was used by the Federal government in justification of its reform proposals. Turning to establishment growth, this variable is simply measured by the percentage change in the level of employment. If the introduction of a works council is generally beneficial, as claimed by the German authorities, then other things being equal the plant should prosper and grow faster than other firms. If, however, works councils are downright injurious or if they pursue an insider-oriented policy, employment growth would be dampened or even reversed. Finally, the change in the profit situation is indicated by a dummy variable that assumes a value of one in the case of a reduction in profitability between 1996 and 2000, zero otherwise. If the far-reaching rights of the works council are deployed for rent-seeking purposes, or if the operation of a works council is relatively expensive, establishment profits can be expected to fall following its formation.

Mean values of each of these performance indicators for the two types of plant are reported in the first two columns of Table 7.²⁹ The probability values cited in the next column indicate in all cases that the null-hypothesis of no difference in means cannot be rejected, assuming a normal distribution. Since outliers can be important, especially with only 31 pairs of observations, we also tested for differences in means using the Wilcoxon signed rank test. The results of this nonparametric test are provided in the final column of the table. They are again

²⁹ Because of missing data on sales and the quit rate these two performance indicators could not be computed for all plants. Accordingly, the number of cases used in the calculations differ.

supportive of the null hypothesis of there being no differences in means as between the treatment group and the controls. (The one possible exception is the productivity measure where the difference – in favour of the former – is now weakly significant.) Overall, then, the suggestion is that the introduction of a works council does not appear to have a causal effect on the mainstream indicators of firm performance considered here. The caveat in all of this is sample size: the small number of matched pairs clearly increases the difficulty of finding statistically significant differences in performance outcome between the two samples.

Table 7

Mean Values of Performance Indicators in Establishments Introducing/Not Introducing a Works Council, Matched Establishments^a

Performance indicator	Establishments introducing a works council	Matched establishments not introducing a works council	Prob-value for H ₀ : diff. of means = 0 ^b	Prob-value for Wilcoxon test
Change in quit rate (percentage points)	1.09 (n=30)	-0.05 (n=30)	0.4109	0.6699
Growth in sales per employee (percent)	32.56 (n=25)	8.87 (n=25)	0.1865	0.0980
Growth in number of employees (percent)	6.83 (n=31)	16.81 (n=31)	0.4087	0.3320
Change in profit situation (dummy: 1 = deterioration)	0.35 (n=31)	0.26 (n=31)	0.4169	0.7963

Notes: ^aData are for 2000 compared with 1996 when establishments from both groups did not have a works council. Matching was achieved using the propensity score plus the number of employees in 1996 and a dummy for eastern/western Germany using the PSMATCH procedure written by Barbara Sianesi (2001) for use with Stata 7. ^bTwo-sample t-test with unequal variances.

Source: Authors' own calculations from the IAB Establishment Panel.

More generally, although the failure to report any differences may look disappointing, recall that the proponents of the new law have argued that substantial benefits will accrue from increasing works council penetration among smaller firms. We do not find any empirical evidence in favor of this proposition in our analysis of matched samples of what are mostly small firms. In particular, neither labor turnover nor labor productivity seems to be improved by works council formation. Furthermore, these two results have to be seen against the backdrop of the administrative costs of setting up and running a works council. To be fair, these costs have not manifested themselves in statistically significant changes in financial performance, although they may have been too small to be reflected in our rather blunt profitability measure. In any event, we see nothing in our results to support the German government's assertion that "[t]he benefit of an operational system of codetermination outweighs the additional expense."³⁰

7. CONCLUSIONS

The Works Constitution Act has once again been overhauled. The changes introduced are designed to make works council formation easier and to stiffen codetermination through more permanent works councilors and enhanced works council authority. The changes in the law follow on the heels of the report of a high-level commission of inquiry into the functioning of the German codetermination system. Although this *Kommission Mitbestimmung*, or Codetermination Commission, eschewed making specific legal recommendations and accepted that the economic impact of the institution was ambiguous, it nevertheless chose to emphasize the existence of a codetermination gap and further argued that the provision of worker representation could not be left to the vagaries of the market.

The goal of the present treatment has been threefold: first, to describe the background to and nature of the legislative changes; second, to link the legislation to what we know of the economic impact of works councils; and, third, to offer a new test procedure in an attempt to tackle some of the problems encountered in the empirical literature. In the first context, we had no difficulty in demonstrating the tenuous nature of the link between economic analysis and policy formation – irrespective of the political complexion of the policy maker. Using nationally representative data, we were also able to confirm the existence of a large codetermination-free zone. Almost all small establishments and one-half of

³⁰ See note 11 *supra*.

medium-sized plants have no works council and as a result no formal vehicle for codetermination. Less clear, however, is whether this description should be taken to imply an equivalent absence of participation. Frankly, our understanding of the degree of substitutability or complementarity between works councils and other participation measures is too rudimentary to form a judgment on this important issue.

Second, we interpreted the existing empirical evidence rather differently than did the Commission. Given that the costs of operating a works council are likely to be greater for smaller establishments, where works council coverage is currently patchy at best, we find it interesting that the Commission failed to report that it is precisely among such establishments that the evidence is least favorable to works councils. For their part, larger plants seemingly find works councils less of a constraint. In general the economic justification for works council legislation is weak, although we had occasion to mention some recent research suggesting that the policing role of the industry-wide collective agreement might allow the productive potential of the works council to be realized by ensuring a partial decoupling of production from distribution issues.

Third, in recognition of the limitations of the existing literature, we provided some brand new evidence on the effects of works council *formation* on establishment performance, using longitudinal data from the IAB Establishment Panel for 1996-2000. Our approach was to control for selection using matched samples of plants that did and did not introduce works councils. The upshot of this nonparametric test procedure was that although there were some large differences in the means of the change variables for the two types of plants, none was statistically significant at conventional levels. In short, we were unable to reject the null that the introduction of a works council had no effect on any of the measures of establishment performance examined. Although these results are at odds with the earlier, cross-section evidence to the extent that the sample of plants introducing works councils were predominantly small establishments with less than 100 employees, they are also quite contrary to the strong null that is the Federal government's position.

Given the small sample of establishments and the relatively short time frame examined we must be cautious in applying our findings to the regime shift. But it is not clear that works councils to be established in the wake of the Works Constitution Reform Act should be any more pro-productive than the cases we have examined. Indeed, the greater facility in setting up works councils and the

enhanced authority of the institution might hint at less favorable outcomes. But the simple facts are that we do not know and in the absence of data permitting a natural experiment we are unlikely to be able to quantify the effects of the legislation with any precision. However, the growth in works councils can be monitored and establishment behavior tracked over succeeding waves of the IAB panel with a view to detecting structural breaks in key performance indicators. We would argue that recent EU legislation on national systems for informing and consulting workers serves to reinforce the importance of this follow-up inquiry.

One final observation is in order. As we have noted, the Codetermination Commission did not actually call for legal action, instead preferring a subtle mix of self-regulation at the firm and establishment level together with action on the part of the social partners (Kommission Mitbestimmung, 1998, pp. 113-120). It further recommended that the special requirements of small and medium-sized firms should be taken into account by allowing them greater flexibility to tailor their codetermination regime to their specific needs. None of this was taken up by the government in framing the new law. There is a certain irony in the outcome of events, but the Commission can scarcely be surprised by the bluntness of legislative regulation given its diagnosis of a "codetermination-free zone" and reference to "equivocal" empirical research and the "vagaries" of the market.

REFERENCES

- Addison, John T., Kornelius Kraft, and Joachim Wagner. 1993. "German Works Councils and Firm Performance." In *Employee Representation: Alternatives and Future Directions*, ed. Bruce E. Kaufman and Morris M. Kleiner, pp. 305-336. Madison, Wisc.: Industrial Relations Research Association.
- Addison, John T., Claus Schnabel, and Joachim Wagner. 1996. "German Works Councils, Profits and Innovation." *Kyklos* 49 (4): 555-582.
- _____. 1997. "On the Determinants of Mandatory Works Councils in Germany." *Industrial Relations* 36 (October): 419-445.
- _____. 1998. "Betriebsräte in der deutschen Industrie: Verbreitung, Bestimmungsgründe und Effekte." In *Ökonomische Analysen betrieblicher Strukturen und Entwicklungen – Das Hannoveraner Firmenpanel*, ed. Knut Gerlach, Olaf Hübler, and Wolfgang Meyer, pp. 59-87. Frankfurt and New York: Campus Verlag.
- _____. 1999. "Verbreitung, Bestimmungsgründe und Auswirkungen von Betriebsräten: Empirische Befunde aus dem Hannoveraner Firmenpanel." In

Die wirtschaftlichen Folgen der Mitbestimmung, ed. Bernd Frick, Norbert Kluge and Wolfgang Streeck, pp. 223-252. Frankfurt and New York: Campus Verlag.

- _____. 2000a. "Nonunion Representation in Germany." In *Nonunion Employee Representation – History, Contemporary Practice, and Policy*, ed. Bruce E. Kaufman and Daphne G. Taras, pp. 365-385. New York: M.E. Sharpe.
- _____. 2000b. "Die mitbestimmungsfreie Zone aus ökonomischer Sicht." *Hamburger Jahrbuch für Wirtschafts- und Gesellschaftspolitik* 45: 277-292.
- _____. 2001. "Works Councils in Germany: Their Effects on Establishment Performance." *Oxford Economic Papers* 53 (October): 659-694.
- Addison, John T., and Joachim Wagner. 1997. "The Impact of German Works Councils on Profitability and Innovation: New Evidence from Micro Data." *Jahrbücher für Nationalökonomie und Statistik* 216 (1): 1-20.
- BMA-Pressestelle. 2001. "Reform des Betriebsverfassungsgesetzes, Die Neuregelungen." Press Release of 22 June 2001. Berlin: Bundesministerium für Arbeit und Sozialordnung (BMA)
- Brand, Ruth, Vivian Carstensen, Knut Gerlach, and Thomas Klodt. 1996. "The Hannover Panel." Discussion Paper No. 2, University of Hannover, May.
- Deutscher Gewerkschaftsbund [Bundesvorstand]. 1998. "Novellierungsvorschläge des DGB zum Betriebsverfassungsgesetz 1972." Düsseldorf: Deutscher Gewerkschaftsbund, Februar.
- Dilger, Alexander. 2002. *Ökonomik betrieblicher Mitbestimmung*. München and Mering: Rainer Hampp Verlag.
- Dunlop Commission. 1994. *Commission on the Future of Worker-Management Relations. Fact Finding Report*. Washington, D.C.: U.S. Department of Commerce/U.S. Department of Labor.
- FitzRoy, Felix, and Kornelius Kraft. 1985. "Unionization, Wages, and Efficiency: Theories and Evidence from the U.S. and West Germany." *Kyklos* 38 (4): 537-554.
- _____. 1987. "Efficiency and Internal Organization: Works Councils in West German Firms." *Economica* 54 (November): 493-504.
- _____. 1990. "Innovation, Rent-Sharing and the Organization of Labor in the Federal Republic of Germany." *Small Business Economics* 2 (2): 95-103
- Freeman, Richard B. and James L. Medoff. 1984. *What Do Unions Do?* New York: Basic Books.
- Freeman, Richard B. and Lazear, Edward P. 1995. "An Economic Analysis of Works Councils." In *Works Councils: Consultation, Representation, and Cooperation in Industrial Relation*, ed. Joel Rogers and Wolfgang Streeck, pp. 27-50. Chicago, Ill.: University of Chicago Press.
- Frick, Bernd. 1997. *Mitbestimmung und Personalfuktuation*. München and Mering: Rainer Hampp Verlag.

- Frick, Bernd. 2001a "High Performance Practices und betriebliche Mitbestimmung: Komplementär oder substitutiv? – Empirische Befunde für den deutschen Maschinenbau." Wittener Diskussionspapiere, Heft Nr. 88, University of Witten-Herdecke, December.
- Frick, Bernd. 2001b. "Ökonomische Analyse der deutschen Betriebsverfassung." Wittener Diskussionspapiere, Heft Nr. 89, University of Witten-Herdecke, December.
- Frick, Bernd and Dieter Sadowski. 1995. "Works Councils, Unions, and Firm Performance." In *Institutional Frameworks and Labor Market Performance*, ed. Friedrich Buttler, Wolfgang Franz, Ronald Schettkat, and David Soskice, pp. 46-81. London and New York: Routledge.
- Frick, Bernd, Norbert Kluge, and Wolfgang Streeck (eds.). 1999. *Die wirtschaftlichen Folgen der Mitbestimmung*. Frankfurt and New York: Campus Verlag.
- Funder, Maria and Beate Seitz. 1997. "Unternehmens(re)organisation und industrielle Beziehungen in Maschinenbau." *WSI Mitteilungen* 50: 57-64.
- Heckman, James J., Robert J. LaLonde, and Jeffrey A. Smith. 1999. "The Economics and Econometrics of Active Labor Market Programs." In *Handbook of Labor Economics Volume 3A*, ed. Orley C. Ashenfelter and David Card, pp. 1865-2097. Amsterdam: North-Holland.
- Hübler, Olaf and Uwe Jirjahn. 2001. "Works Councils and Collective Bargaining in Germany: The Impact on Productivity and Wages." Discussion Paper No. 332, Institute for the Study of Labor (IZA), July.
- Jirjahn, Uwe. 1998. *Effizienzwirkungen von Erfolgsbeteiligung und Partizipation*. Frankfurt/Main and New York: Campus Verlag.
- Jirjahn, Uwe. 2002. "Executive Incentives, Works Councils and Firm Performance," Unpublished paper, University of Hannover.
- Kölling, Arnd. 2000. "The IAB Establishment Panel." *Schmollers Jahrbuch* 120: 291-300.
- Kommission Mitbestimmung. 1998. *Mitbestimmung und neue Unternehmenskulturen – Bilanz und Perspektiven*. Gütersloh: Verlag Bertelsmann Stiftung.
- Kraft, Kornelius. 1985. "Exit and Voice in the Labor Market: An Empirical Study of Quits." *Journal of Institutional and Theoretical Economics* 142 (December): 697-715.
- Lechner, Michael. 2002. "Some Practical Issues in the Evaluation of Heterogeneous Labour Market Programmes by Matching Methods." *Journal of the Royal Statistical Society, Series A*, 165 (1): 59-82.
- Official Journal. 2002. "Directive 2002/14/EC of the European Parliament and of the Council of 11 March 2002 Establishing a General Framework for Informing and Consulting Employees in the European Community." *Official Journal of the European Communities* L80 of 23.3.2002, pp. 29-33.

- Rosenbaum, Paul R. and Donald B. Rubin. 1985. "Constructing a Control Group Using Multivariate Matched Sampling Methods That Incorporate the Propensity Score." *The American Statistician* 39 (February): 33-38.
- Schank, Thorsten, Claus Schnabel, and Joachim Wagner. 2002. "Works Councils – Sand or Grease in the Operation of German Firms?" Working Paper 281, Faculty of Economics and Social Sciences, University of Lüneburg, November.
- Schnabel, Claus and Joachim Wagner. 1994. "Industrial Relations and Trade Union Effects on Innovation in Germany." *Labour* 8 (Autumn): 489-503.
- Schnabel, Claus and Joachim Wagner. 2001. "Verbreitung und Bestimmungsgründe verschiedener Formen der Arbeitnehmerpartizipation in Industriebetrieben." *Industrielle Beziehungen* 8: 445-462.
- Schumacher, Harald, and Reinhold Böhmer. 1995. "Betriebsräte – Dummes Zeug." *Wirtschaftswoche* No. 14, May 30, pp. 80-93.
- Sianesi, Barbara. 2001. "Implementing Propensity Score Matching Estimators With Stata." Paper prepared for the U.K. Stata Users Group, VIIth Meeting, London, May.
- Streeck, Wolfgang, and Norbert Kluge (eds.). 1999. *Mitbestimmung in Deutschland – Tradition und Effizienz*. Frankfurt and New York: Campus Verlag.

In der Diskussionspapierreihe sind bisher erschienen:

Previously published Discussion Papers:

1	Addison J.T., Schnabel C., Wagner J.	Die <i>mitbestimmungsfreie Zone</i> aus ökonomischer Sicht	05/2000
2	Jahn E.J., Wagner T.	Substitution and Crowding-Out Effects of Active Labour Market Policy	06/2000
3	Wegener T.	Institutionelle Aspekte der Regionalisierung von Wirtschafts- und Strukturpolitik	09/2000
4	Kölling, A., Schnabel, C., Wagner, J.	Bremst das Schwerbehindertengesetz die Arbeitsplatzdynamik in Kleinbetrieben?	01/2001
5	Schnabel, C., Wagner, J.	Verbreitung und Bestimmungsgründe verschiedener Formen der Arbeitnehmerpartizipation in Industriebetrieben	06/2001
6	Jahn E.J., Wagner T.	Labour's Law?	06/2001
7	Niederalt, M., Schnabel, C. Kaiser, Chr.	Betriebliches Ausbildungsverhalten zwischen Kosten-Nutzen-Kalkül und gesellschaftlicher Verantwortung – Einflussfaktoren der Ausbildungsintensität von deutschen Betrieben	11/2001
8	Kohaut, S. Schnabel, C.	Tarifverträge – nein danke!? Einflussfaktoren der Tarifbindung west- und ostdeutscher Betriebe	12/2001
9	Jahn, E.J.	Brauchen wir einen allgemeinen Kündigungsschutz?	02/2002
10	Addison, J.T., Bellmann, L., Schnabel, C., Wagner, J.	German Works Councils Old and New: Incidence, Coverage and Determinants	05/2002
11	Jahn, E.J. Wagner, T.	A Hiring Subsidy for Long-Term Unemployment in a Search Model with PES and Random Search	05/2002
12	Goerke, L. Schnabel, C.	On Strike Insurance	06/2002
13	Kölling, A. Schnabel, C. Wagner, J	Establishment Age and Wages: Evidence from German Linked Employer-Employee Data	06/2002

- | | | | |
|----|--|--|---------|
| 14 | Kölling, A.
Schank, T. | Skill-Biased Technological Change,
International Trade and the Wage Structure | 09/2002 |
| 15 | Schnabel, C. | Determinants of trade union membership | 10/2002 |
| 16 | Addison, J.T.,
Bellmann, L.,
Schnabel, C.,
Wagner, J. | The Reform of the German Works
Constitution Act: A Critical Assessment | 12/2002 |

An updated list of discussion papers can be found at the homepage:
<http://www.arbeitsmarkt.wiso.uni-erlangen.de/>

Eine aktualisierte Liste der Diskussionspapiere findet sich auf der Homepage:
<http://www.arbeitsmarkt.wiso.uni-erlangen.de/>