THE GERMAN MODEL OF CORPORATE AND LABOR GOVERNANCE

Dieter Sadowski, Joachim Junkes and Sabine Lindenthal†

I. NEW DEVELOPMENTS OF THE CORPORATE AND LABOR GOVERNANCE SYSTEM

The European Union is approaching. Three years ago, the new European currency—the Euro—was introduced. But, of course, that was only one minor part of the economic integration. Another part is the adjustment of the member states' highly disparate labor and corporate governance systems. One first step in this direction was the implementation of the European Works Councils.

The European Union directive on European Works Councils came into force on September 22, 1996. The purpose of the directive is set out in Article 1. It is "to improve the right to information and consultation of employees" in European multinationals by establishing "a European Works Council or a procedure for informing and consulting employees" where the employees request it. The directive is framed in such a way that it leaves the details on the structure and powers of each European Works Council to be negotiated at the company level, although there are safeguards in the case of a failure to agree.[1]

---

† Dieter Sadowski is Professor for Business Administration at the University of Trier and Director of the Institute of Labor Law and Industrial Relations in the European Community, Trier, Germany. Joachim Junkes is Research Assistant at the Faculty of Business Administration, University of Trier. Dr. Sabine Lindenthal is Post-Doc at the Institute of Labor Law and Industrial Relations in the European Community, Trier. While the paper was written, Dieter Sadowski was Fellow at the Institute for Advanced Study at Berlin. The support he received there is gratefully acknowledged; in particular, we thank Mitch Cohen for his style editing.

1. *See, e.g.*, Wolfgang Lecher, *Resources of the European Works Council—Empirical Knowledge and Prospects*, *in* 3 TRANSFER 276, 278-301 (1999); Willy Buschak, *Five Years After: A Look Forward to the Revision of the EWC Directive*, *in* 3 TRANSFER 384, 384-392 (1999); Thomas Blanke, *European Works Councils as an Institution of European Employee Information and Consultation: Overview of Typical Features of National Transposition Provisions, Outstanding Legal Questions and Demands for Amendments to EWC Directive 94/45/EC*, *in* 3 TRANSFER 360, 366-383 (1999).

The most ambitious harmonization project in this context is the adjustment to a uniform corporate governance system, which turned out to be more complicated than the directive on European Works Councils. Questions of worker codetermination have prevented the creation of a European stock company for almost 30 years. The proposals for a standardized European stock company, presented for voting in the last two years, had taken a form almost parallel to the guideline for European Works Councils until after the Nice summit where a solution was finally found in early 2001. In a *Societas Europae*, consisting of companies of different member states, individual negotiated agreements about the relative strength of representative organs are to be preferred to a rigid, uniform regulation. In case that no agreement can be negotiated, a fallback regulation is laid down that protects, in principle, national codetermination rights.[2]

Beside these new developments on the supra-national level, there have also been certain changes within the national framework of the German labor and corporate governance system. One change to corporate law was passed in 1994, affecting small stock corporations with less than 500 employees; in 1998, a broader law reform passed called "*Gesetz zur Kontrolle und Transparenz im Unternehmensbereich* (*KonTraG*)." Changes to the German labor governance system are also realized by a recent amendment of the Works Constitution Act (*Betriebsverfassungsgesetzes*).

The "*Gesetz für Kleine Aktiengesellschaften und zur Deregulierung des Aktienrechts*" ("Law for Small Stock Companies and to Deregulate Stock Law") went into effect on August 10, 1994. Its goal was to make it more attractive for mid-sized companies to go public. It stipulates that stock companies founded after August 10, 1994, and employing fewer than 500 people, are exempt from codetermination on the company level. Companies founded before that cutoff point that are not family businesses still fall under the rule that one-third of the seats on the supervisory board must be filled by employee representatives (*cf*. Paragraph 76, Section 6 of Germany's 1952 Labor Management Act). Employee codetermination on the supervisory board met with "strong reservations"[3] from mid-sized

2. *See, e.g.*, Peter M. Wiesner, *Der Nizza-Kompromiss zur Europa AG—Triumpf oder Fehlschlag?*, 22 ZEITSCHRIFT FÜR WIRTSCHAFTSRECHT (ZIP) 397, 397-398 (2001); Ebba Herfs-Röttgen, *Arbeitnehmerbeteiligung in der Europäischen Aktiengesellschaft*, 8 NEUE ZEITSCHRIFT FÜR ARBEITSRECHT (NZA) 424-429 (2001); Anonymous, *European Company Statute Close to Adoption*, 325 EUR. INDUS. REL. REV. (EIRR) 14-16 (2001).

3. *See* Dietrich Bihr, *Die Kleine AG—"Rechtsform" für den Mittelstand?*, 54:18 BETRIEBS-BERATER 920-923 (1999).

entrepreneurs. Its removal aimed to eliminate a "powerful psychological hindrance"[4] for many managers of mid-sized businesses. Surprisingly enough, a first empirical study about the adoption of this law found almost one-third of the addressees being unfamiliar with this.[5]

On March 5, 1998, the Bundestag passed the "*Gesetz zur Kontrolle und Transparenz im Unternehmensbereich*" (*KonTraG*, "Law on Control and Transparence in Enterprises") to reform the law on stock. On the one hand, to reduce conflicts of interests, it requires more transparency. It also improves the enforcement mechanisms for board member liability, both for the management board and the supervisory board. The requirement to meet more frequently (at least four times a year) was also instituted. The new Reform Act did not include any changes concerning codetermination in the supervisory board.[6] But the 2001 bill to amend the *Betriebsverfassungsgesetz* (*BetrVG*, Labor Management Act) wants to "modernize" different regulations concerning temporary workers; it reduces the threshold where works councilors have to be released completely from their duties, and establishes a new codetermination right with regard to further training and consultation rights in the field of environmental protection.[7] Another suggestion from the employers' side, for example, is "to permit, along with the basic models of the labor management act (operation level works councils, company works councils, and group works councils), negotiated models to which the legal co-determining rights stipulated in the labor management act would be transferred."[8] In their "Bonn Declaration for Modern Labor Management," the unions call for a redefinition of the concepts of a plant (*e.g.*, with respect to telework) and of employees. The *Kommission Mitbestimmung* (Co-Determination Commission) also recommends greater leeway in mandatory labor governance.[9]

How should these new developments be judged? We will attempt to examine Germany's corporate and labor governance

4. *See, e.g.*, Hans Joachim Priester, *Die Kleine AG—Ein neuer Star unter den Rechstformen?*, 51:7 BETRIEBS-BERATER 335 (1996).

5. *See* RAMONA SCHAWILYE, EDUARD GAUGLER & DETLEF KEESE, DIE KLEINE AG IN DER BETRIEBLICHEN PRAXIS 132 (1999).

6. Originally, a reduction of the entire supervisory board was also discussed; of course, this would also have affected the employee representatives. This suggestion met intense resistance from the unions.

7. *See* HANDELSBLATT, February 15, 2001, at 4.

8. *See* Eckard Kreßel, *Anpassung des Betriebsverfassungsrechts an veränderte wirtschaftliche Rahmenbedingungen*, 52 ARBEIT UND ARBEITSRECHT 148 (1998).

9. *See, e.g.*, Peter Hanau, *Modernisierung des Betriebsverfassungsgesetzes*, 54 ARBEIT UND ARBEITSRECHT 203 (1999).

systems in the context of a micro-economic efficiency analysis—without pretending that historically economic reasons outweighed political reasons to establish codetermination.[10] For a better understanding of the new national and supra-national developments and the economic effects of the German corporate and labor governance system, we start with a short description of the institutional framework. Section III briefly recapitulates the theoretical economic discussion of codetermination on the operational and company levels, but we will distinguish between the different variants of codetermination only when an argument is not valid for all of them. Our interest is in the question of whether the inefficiency of codetermination arrangements can be traced to their involuntary or at least rarely voluntary origin. In other words, under what conditions can a legal solution be more efficient than a voluntary market solution? We are also interested in the robustness of the arguments found in the literature. In section IV, we discuss the difficulties of empirically testing the arguments advanced and we evaluate the existing empirical studies.

II. THE LEGAL FRAMEWORK OF THE GERMAN CORPORATE AND LABOR GOVERNANCE SYSTEM

A. Corporate Governance

In contrast to the Anglo-Saxon one-tier board system, the German corporate governance system consists of a two-tier board structure: a management board (*Vorstand*) that runs the firm and a separate supervisory board (*Aufsichtsrat*) with outside directors only.[11] The main duty of the supervisory board is to select and appoint the management board, to supervise it and, if necessary, to dismiss its members (§ 84 and § 111 AktG). Certain transactions of the executive board may be subject to the supervisory board's explicit approval. But day-to-day management is strictly reserved for the management board. The Corporation Law requires at least four supervisory board meetings per year (§110 AktG) and usually there are no more than this. The composition of supervisory boards varies according to the size and legal form of the company involved. There

10. *See* Stephen Bainbridge, *Corporate Decisionmaking and the Moral Rights of Employees*, 43 VILL. L. REV. 741, 807 (1998).

11. Within the European Union, one can find one-tier board structures in the United Kingdom, Ireland, Italy, Spain, Portugal and Greece, while Germany, Switzerland, Austria, the Netherlands and the Scandinavian countries have the two-tier system. France and Belgium have a mixed system with both board forms available. *See, e.g.*, Klaus J. Hopt, *The German Two-Tier Board: Experience, Theories, Reforms*, *in* COMPARATIVE CORPORATE GOVERNANCE 232 (Hopt et al. eds., 1998).

are also extra branch provisions for companies in the coal, steel and mining industry (*Montanindustrie*).

For stock corporations (*Aktiengesellschaft (AG)*) and limited liability companies (*Gesellschaft mit beschränkter Haftung (GmbH)*) outside the iron and coal industries with more than 2,000 employees, the Co-Determination Act of 1976 prescribes a varying size for the supervisory board (12, 16 or 20 members), depending on the number of the corporation's employees. The composition is a quasi-parity representation of shareholders and employees—"quasi" because in the case of a tie, the chairman of the supervisory board, who is always a shareholder representative, has a double vote. The employee side must include at least one blue- and one white-collar worker, one managerial employee and two trade unionists. The exact size of each group depends on the composition of the whole corporation (§ 7 and § 15 MitbestG). The employee representatives receive their mandate from the workforce by election—the only exception is the trade union representatives, who are appointed directly by the trade union. Shareholder representatives are elected at the general meeting of shareholders (§ 101 AktG) and one can usually find lawyers, bank representatives, delegates of other corporations, politicians and retiring members of the managing board, in particular, the president or CEO on this side of the supervisory board. Generally, a single person can hold up to ten mandates on different supervisory boards—a regulation especially relevant for shareholder representatives and trade unionists.[12]

According to the Industrial Constitution Act (*Betriebsverfassungsgesetz-BetrVG*) only one-third of the members of the supervisory board is appointed by the employees and two thirds by the shareholders. This applies to all stock corporations and limited liability companies with more than 500 and less than 2,000 employees, except firms belonging to a single physical person or to a partnership of physical persons. As mentioned in the introduction, the new law for small stock corporations stipulates that there need be no more codetermination in the supervisory board for corporations with less

12. *See, e.g.*, Dieter Sadowski, Joachim Junkes & Sabine Lindenthal, *Labour Co-Determination and Corporate Governance: The Economic Impact of Marginal and Symbolic Rights*, *in* CORPORATE GOVERNANCE: ESSAYS IN HONOR OF HORST ALBACH (Joachim Schwalbach ed., 2001); Eddy Wymeersch, *A Status Report on Corporate Governance Rules and Practices in Some Continental European States*, *in* COMPARATIVE CORPORATE GOVERNANCE (Klaus J. Hopt et al. eds., 1998).

than 500 employees that were established after August 1994 or are family enterprises.[13]

The supervisory board of corporations of the coal, steel and mining industry with more than 1,000 employees consists of at least eleven members (up to a maximum of 21, depending on the size of the firm), with an equal number of representatives of the shareholders and the employees. A further "neutral" member (with a casting vote) is appointed by the majority of both sides of the supervisory board. In addition, an *Arbeitsdirektor* is appointed as a member of the managing board; he is elected at the suggestion of the majority of the representatives of the employees.[14]

In the literature, there is very little information about the typical practice in and the actual behavior of employee representatives on supervisory boards. According to the information in the newspapers, it is common for shareholder and labor representatives to vote with one voice. One exception to this "tradition" could be observed in the nomination of the new CEO of BMW. The employees voted against Wolfgang Reitzle, which was the only candidate at that time. Formally, the shareholders votes were high enough to accept Reitzle as CEO. But *he* did not accept his election because of the employee's decision against him. A similar case could be observed at the Salzgitter AG. The employee representatives in the supervisory board aimed at dismissing the CEO. What was extraordinary about this case was that one of the shareholder representatives strongly claimed that he would vote together with the employees. The CEO resigned in the end. But these cases really were exceptions and the norm is decisions with one voice. Sometimes, the employee representatives not only agree in the boardroom, but also even back the management in public, as it happened in one of the few hostile takeovers in Germany, the Krupp-Thyssen merger, a few years ago. Here, the employee representatives on the board helped in organizing the resistance against the takeover by mobilizing not only the Social-democratic government of the state Northrhine-Westfalia, but also the public. The takeover finally passed, but the original plans had to be considerably modified.

13. *See, e.g.*, Johannes Semler, *The Practice of the German Aufsichtsrat*, *in* COMPARATIVE CORPORATE GOVERNANCE (Hopt et al. eds., 1998); Theodor Baums & Bernd Frick, *Codetermination in Germany: The Impact of Court Decisions on the Market Value of Firms*, 1 ECON. ANALYSIS 2 (1998); Margaret M. Blair & Mark J. Roe, *The Market Value of the Codetermined Firm*, *in* EMPLOYEES AND CORPORATE GOVERNANCE 206, 206-235 (1999).

14. Semler, *supra* note 13; Baums & Frick, *supra* note 13; Wymeersch, *supra* note 12.

Table 1: Codetermination in the Supervisory Board

	Co-Determination Act 1976 (*Mitbestimmungs-gesetz*)	Industrial Constitution Act (*Betriebsverfassungs-gesetz*)	Co-Determination Act of the Coal and Steel Industry (*Montanmit-bestimmungsgesetz*)
Legal Status of Company	Stock corporations, limited liability corporations, special cooperations (outside coal, steel and mining industry)	Stock corporations, limited liability corporations, special cooperations, (outside coal, steel and mining industry and excluding family firms)	Corporations of the coal, steel and mining industry
Size of Company	More than 2,000 employees	More than 500, less than 2,000 employees	More than 1,000 employees
Size of Board	12, 16 or 20 members	3-21 (number must be divisible by 3)	11-21 members (odd number)
Proportion of Employee Participation	"quasi-parity" repre-sentation: equal number of labor and shareholder representatives, but in case of tie, extra vote for shareholders	one-third representation of labor	equal representation and a "neutral" member (neither employee nor shareholder) with a casting vote
*No. of firms**	728	40,000	45
*No. of employees**	5.2 Mio	9,1 Mio**	400,000

****Source*:** MITBESTIMMUNG UND NEUE UNTERNEHMENS-KULTUREN 43-52 (Bertelsmann Stiftung & Hans Böckler-Stiftung eds., 1998).

**The numbers mount to roughly 40% of all private sector employees; public sector representation is almost complete (7.9 Mio employees in 1994).

B. Labor Governance

National Works Councils in Germany not only have broader information and consultation rights than do European Works Councils, they also posses certain codetermination rights. Pure information and consultation rights are given in personnel planning, changes in work processes, the working environment, job content and new technology. Far-reaching codetermination rights predominantly exist in "social" matters: principles of remuneration, the introduction of new payment methods, bonus rates, performance-related pay, daily and weekly work schedules, overtime, short-time working, holidays, and technical monitoring devices. They also apply to personnel matters, such as recruitment, transfer, and dismissal. Unlike collective

bargaining, where strikes and lockouts are means to solve industrial conflict, only peaceful negotiations are allowed in the exercise of participation rights by works councils. Works councils and management can reach binding firm-level agreements, so-called works agreements (*Betriebsvereinbarungen*).[15]

Works councils are elected for a four-year period by all employees age 18 or over. Even though they are formally independent of unions, there are interdependencies: about 75% of works councilors are unionized and works councils are a major resource in the recruitment of new union members. The number of works councilors depends on firm size: In establishments with 20 employees, only one works councilor is elected. In workplaces with more than 1,000 employees, for instance, 15 members are elected. In establishments with more than 300 employees, one councilor has to be exempted from his regular work. The number of exempted works councilors also increases with establishment size. In companies with several works councils at establishment level, a company works council must be formed (*Gesamtbetriebsrat*). It deals with matters concerning the company as a whole. Accordingly, a group works council (*Konzernbetriebsrat*) may be established in a group of companies.[16]

III. ECONOMIC DISCUSSION OF THE EFFICIENCY OF CODETERMINATION ARRANGEMENTS

A. Economic Effects of Worker Codetermination

Economists typically use two different criteria to measure efficiency. A situation is termed "Pareto efficient" when no one can increase his own benefit by deviating from the situation without simultaneously reducing the use to others. A situation is termed "Kaldor-Hicks efficient" if it maximizes the sum of benefits for all participants, regardless of the distribution of benefits among individuals. To judge the efficiency of codetermination arrangements,

15. *See, e.g.*, Bernhard Nagel, *Entscheidungsperspektiven von Euro-Betriebsräten und Deutsche Mitbestimmung*, 8 WSI MITTEILUNGEN 494-524 (1996), and Otto Jacobi, Berndt Keller & Walther Müller-Jentsch, *Germany: Codetermining the Future?*, *in* INDUSTRIAL RELATIONS IN THE NEW EUROPE 218-270 (Anthony Ferner & Richard Hyman eds., 1992).

16. *See, e.g.*, WALTHER MÜLLER-JENTSCH, SOZIOLOGIE DER INDUSTRIELLEN BEZIEHUNGEN. EINE EINFÜHRUNG 267 (2nd ed., 1997), or MANFRED WEISS, EUROPEAN EMPLOYMENT AND INDUSTRIAL RELATIONS GLOSSARY: GERMANY 201 (1992).

the resulting costs and benefits must be estimated for the groups involved.[17]

Codetermination arrangements have direct costs, such as releasing employees from production, providing offices and election and meeting expenses, as well as indirect costs, such as more difficult decision making and the resulting delays. Many economists go even further, arguing that separating residual decision rights[18] from residual income claims,[19] means that those who make a decision, no longer bear the associated consequences and that this dilutes the rights of disposal. Thus, they argue, employees could use their codetermination rights to share in company profits without assuming a part of the associated risk.[20]

On the other hand, a positive effect of codetermination is that dissatisfied employees now more often choose to articulate their dissatisfaction ("voice"), rather than choosing the option of leaving the company ("exit").[21] The resulting drop in the separation rate leads to substantial cost reductions for both parties. For the employer, the expenses for new hiring are reduced, especially the costs of training new employees. The extent of these costs depends primarily on the necessary company-specific knowledge of the affected workplace. In addition to reducing the separation rate and the associated costs, the "voice" option could also increase work satisfaction and, thus, productivity. Positive productivity effects of codetermination can also be expected from management's improved access to information and the resulting reduction of operational inefficiencies, as well as from a constructive resolution of conflicts.[22] But it is certainly not easy to estimate the extent and sum of such effects.

---

17. The effects on company profits and on shareholder value are not considered alone, but set in relation to the growth in benefits of the employees.

18. Residual decision rights mean the rights to allocate production factors used in the company; *see, e.g.*, OLIVER D. HART, FIRMS, CONTRACTS AND FINANCIAL STRUCTURE 63 (1995).

19. Residual income claims mean the financial claims remaining after satisfying the claims of employees, suppliers, providers of loan capital and the state; *see id*.

20. *See, e.g.*, Eirik Furubotn, *Codetermination and the Modern Theory of the Firm: A Property-Rights Analysis*, 61 J. OF BUS. 178 (1988).

21. The distinction between "exit" and "voice" was introduced by ALBERT O. HIRSHMAN, EXIT, VOICE AND LOYALTY (1970). It was later taken up in RICHARD B. FREEMAN & JAMES L. MEDOFF, WHAT DO UNIONS DO? (1984), to analyze the effects of U.S. unions.

22. *See, e.g.*, Richard B. Freeman & Edward P. Lazear, *An Economic Analysis of Works Councils*, *in* WORKS COUNCILS—CONSULTATION, REPRESENTATION, AND COOPERATION IN INDUSTRIAL RELATIONS 27-49 (Joel Rogers & Wolfgang Streeck eds., 1996).

B. Can Laws be More Efficient than Market Solutions?

If codetermination arrangements are, on balance, advantageous for all concerned, as claimed by their economic proponents, why don't they arise voluntarily in companies, instead of requiring legal compulsion? For Michael Jensen and William Meckling, the answer is clear: Mandatory codetermination arrangements cannot be Pareto efficient.[23] Various authors have questioned the soundness of this indirect argument for a negative net effect of works councils and codetermined supervisory boards. They try to show that the fact that codetermination is not voluntarily agreed does not permit the conclusive deduction of the economic inefficiency of the codetermination laws.[24]

In the following, we examine the attempts to invalidate Jensen and Meckling's simple considerations, with particular attention to whether some companies' and employers' associations' legal suits against various codetermination arrangements can be reconciled with these considerations.[25] While the following arguments were mainly created to describe the works councils' situation, they can also be applied fairly well to supervisory board codetermination.

1. The Collective Action Problem

The proponents of transaction costs theory argue that in a world without negotiation costs, Jensen and Meckling would indeed be right and it would in fact be efficient to negotiate all employee claims individually. Where negotiations are expensive, collective negotiations with employee representatives could be worthwhile. But negotiations on procedures would in turn have to be conducted

23. *See* Michael C. Jensen & William H. Meckling, *Rights and Production Functions: An Application to Labor-Managed Firms and Codetermination*, 52 J. OF BUS. 4, n.474 (1979). Similar arguments are fielded by Svetozar Pejovich, *Codetermination: A New Perspective for the West*, *in* THE CODETERMINATION MOVEMENT IN THE WEST: LABOR PARTICIPATION IN THE MANAGEMENT OF BUSINESS FIRMS 3-21 (Pejovich ed., 1978); and, by Carl Christian von Weizsäcker, *Was leistet die Property Rights Theorie für aktuelle wirtschaftspolitische Fragen?*, *in* ANSPRÜCHE, EIGENTUMS—UND VERFÜGUNGSRECHTE (Manfred Neuman ed., 1984).

24. For a good overview of this, *see also* Alexander Dilger, *Kann die gesetzliche Regelung betrieblicher Mitbestimmung effizient sein*, *in* MANAGEMENTINSTRUMENTE UND KONZEPTE: ENTSTEHUNG, VERBREITUNG UND BEDEUTUNG FÜR DIE BETRIEBSWIRTSCHAFTSLEHRE 209-224 (Anton Egger et al. eds., 1999).

25. According to Theodor Baums & Bernd Frick, (*see* op. cit., *supra* note 13), between Jan. 1, 1954, and Dec. 31, 1995, German courts heard 46 cases on "the application of the Co-Determination Act and the Act regulating codetermination in the mining and steel industry." A good overview of legal judgment on company codetermination is provided by Roland Köstler & Ingrid Paulus, *Übersicht Rechtsprechung zur Unternehmensmitbestimmung*, *in* ARBEITSHILFEN FÜR ARBEITNEHMER IM AUFSICHTSRAT (Hans-Böckler Stiftung ed., 1999).

individually. The costs of what would thus be, in principle, an infinite regress, make it doubtful that such organs would be voluntarily introduced. Legal regulations, on the other hand, permit collective negotiations without such coordination efforts and should thus be welcomed by employers.[26] This argument, at any rate, cannot explain why various companies have sued against legally mandated codetermination.

2. The Securing of Investments in Specific Human Capital

Some argue that the significance of investments in company-specific human capital, together with the difficulties of complete contractibility of the quasi-rents resulting from such a work relationship, is another justification for state intervention.[27] They say specific investments render employees dependent upon their employers. "Post-contractually," the employers could use the resulting dependence "to rob" the employees of their share in the quasi-rents arising in such an employment relationship. Since rational employees would anticipate this danger, they would not or only inefficiently invest in company-specific human capital. But legally mandatory employee participation in decision making and control bodies could protect the specific investments. In this respect, employee codetermination would be profitable, especially for companies with a large proportion of such specific human capital.

The German codetermination regulations do not differentiate according to this criterion (one difficult to operationalize), but require all companies to bear the costs involved in codetermination; this could lead companies in economic sectors with a low proportion of specific human capital to try to press legal suits against codetermination. To

26. Elmar Gerum & Helmut Wagner, *Economics of Labor Co-Determination in View of Corporate Governance*, *in* COMPARATIVE CORPORATE GOVERNANCE 344 (Klaus J. Hopt et al. eds., 1998).

27. Proponents of this approach view employees as investors: They invest in their own human capital. But here we must distinguish investments in general human capital, whose value is equal for all potential employers, from investments in company-specific human capital, which is useless or at least less valuable to other potential employers. Company-specific investments that lead to quasi-rents realizable solely in the company in question are thus not marketable. *See, e.g.*, Stephen C. Smith, *On the Economic Rationale for Codetermination Law*, 16 J. ECON. BEHAV. & ORG. 281 (1991); BERND FRICK, MITBESTIMMUNG UND PERSONALFLUKTUATION (1997); Joachim Junkes & Dieter Sadowski, *Mitbestimmung im Aufsichtsrat—Steigerung der Effizienz oder Ausdünnung von Verfügungsrechten*, *in* DIE WIRTSCHAFTLICHEN FOLGEN DER MITBESTIMMUNG 53-88 (Bernd Frick, Norbert Kluge & Wolfgang Streeck eds., 1999), and Sadowski, Junkes & Lindenthal, *supra* note 12. For recent American accounts of this argument, *see* Margaret M. Blair, *Firm-Specific Human Capital and Theories of the Firm*, *in* EMPLOYEES AND CORPORATE GOVERNANCE, *supra* note 13, at 58-90; John Roberts & Eric van den Steen, *Human Capital and Corporate Governance*, *in* CORPORATE GOVERNANCE, *supra* note 12.

judge the validity of this argument, we would thus have to determine from the companies and sectors from which the plaintiffs come and how large the corresponding proportion of specific human capital was in these companies and sectors.[28]

3. The Simultaneous Appearance of Allocative and Distributive Effects

Freeman and Lazear[29] argue that employee codetermination has allocative, as well as distributive effects and that these are not independent of each other. The amount and distribution of the collective creation of value would thus influence each other. On the one hand, participation induces employees to be more productive, due to enhanced motivation and improved securing of their specific human capital. On the other hand, their power to negotiate increases as well, leading them to demand a disproportionately high share of the increased earnings. Metaphorically speaking, codetermination expands the size of the pie, but it also expands the share of the employees in absolute and relative terms. If this leads to a situation in which, despite the increased productivity of their employees, employers were still worse off in absolute terms, then they would not voluntarily implement any codetermination arrangements. Expressed in terms of economics, codetermination could optimize overall welfare

28. It is difficult to determine precisely the proportion of specific human capital in various companies and sectors. *See* MARGARET M. BLAIR, OWNERSHIP AND CONTROL 263-267 (1995), where she sees three stylized facts true in almost all developed labor markets as indirect evidence that specific human capital could be of great overall significance. First, the pay for employees increases more with the duration of company affiliation than can be explained by the increase of general human capital. Second, the separation rate—whether due to firing or to quitting—falls with the duration of the employee's affiliation with the company. Finally, it is clear that the loss of income after dismissals for operational reasons is much higher for employees who have worked in the company for a long time. The question of the extent of the costs of dismissals for operational reasons is analyzed in an examination of job losses by U.S. employees in the 1980s, published by Robert H. Topel *in* STUDIES IN LABOR ECONOMICS IN HONOR OF WALTER Y. 181 (Allan H. Meltzer & Charles I. Plosser eds., 1990). Topel estimates that such firings led on average to 14% lower income in the next job. According to Blair, if this result can be generalized, it permits the following statement: In 1993, U.S. companies paid out wages and salaries amounting to $2.26 trillion, while pretax profits were $293 billion. If pre-tax profits represent the return for finance capital lenders, but only 10% of the wage payments are interpreted as returns on specific human capital (given Topel's analysis, this is a cautious estimate), then net annual profits represent only 57% of the overall returns on entrepreneurial activity. The remaining 43% went to employees as quasi-rents from specific human capital. This is not strong, but merely indirect evidence, because a tenure-related, steepening wage profile not necessarily is the result of accumulated specific human capital. Another possible explanation is that seniority wages serve as an incentive scheme; *see* EDWARD P. LAZEAR, PERSONNEL ECONOMICS FOR MANAGERS 283-299 (1998). Which explanation is the better one is yet an unresolved issue in empirical economics.

29. *See* Freeman & Lazear, *supra* note 22.

in the sense of Kaldor-Hicks, but still be inferior in Pareto terms to a situation without codetermination. In this case, a legal regulation would be required to achieve Kaldor-Hicks efficiency. Since in this model all employers would take (absolute) losses by introducing legally mandated codetermination, it would be unsurprising if they banded together to sue against codetermination laws.

4. Adverse Selection of Employees Eager for Codetermination

Another argument for the necessity of legal regulations was first advanced by David Levine and D'Andréa Tyson.[30] It is based on the assumption of a pre-contractual asymmetrical distribution of information between company management and employees. If employers cannot adequately judge the productivity of a potential employee before the contract is signed, there is a danger that codetermination rights would attract precisely the less productive employees. One example for such an adverse selection is the following: If works councils exist in a company, it is much more difficult for the employer to dismiss employees. Such a protection is highly valued, either by risk averse employees or by employees with low productivity and, therefore, with a high risk of dismissal. Levine and Tyson also assume that companies voluntarily instituting codetermination would thus take losses, even if the introduction of codetermination arrangements increased the productivity of each employee. But if codetermination regulations applied to all companies, the distribution of productive and less productive employees would be identical to that if there were no codetermination, but with increased productivity for each employee. But since the assumed adverse selection would discourage companies from taking the first step, there would be a coordination problem among the companies, thus precluding the achievement of an efficient situation. We are thus presented with a classic "prisoners' dilemma," with the result that ". . . under certain conditions, the market system may be systematically biased against participatory workplaces. . . . As a result, the economy can be trapped in a socially suboptimal position."[31] A legal regulation could counter this tendency and benefit everyone involved.

In the Levine and Tyson model, all companies profit from the codetermination arrangements (therefore 500 > 300 is chosen for the

30. See David I. Levine & D'Andréa L. Tyson, *Participation, Productivity, and the Firm's Environment*, *in* PAYING FOR PRODUCTIVITY 182 (Alan S. Blinder ed., 1990).
31. *Id*. at 235.

example in table 2), but the adverse selection of employees means that each company has an interest in suing. This too would be a prisoners' dilemma: If we assume that codetermination does not apply to any companies, it would not benefit any company to introduce codetermination since all the less productive employees would seek a job in this company (in the example: 200 < 300).[32] If all companies have codetermination arrangements, then this is better for all companies than the situation in which no companies have codetermination; but, it is still in the interest of each company to try to be excepted from this arrangement (600 > 500). The reason for this is that if a company opts out, no or fewer less productive employees would apply for jobs in such a company. In this model, the gain in benefits for the company from opting out would be greater than the loss of productivity accruing due to the lack of codetermination. A situation with only two companies can be simply illustrated:

Table 2: Example of a Prisoners' Dilemma

	Codetermination for company B	No codetermination for company B
Codetermination for company A	500,* 500	200, 600
No codetermination for company A	600, 200	300, 300

*The first entry corresponds to the company profit of company A; the second to that of company B. Only the relation of these numbers is relevant and not their absolute values.

This argument could explain why a company sues to be excepted from codetermination or tries to elude such an arrangement by changing the emphasis of its production. But it cannot explain why anyone would file a complaint of unconstitutionality in an attempt to

32. Their productivity would be higher due to codetermination than in any other company, but this would not—as assumed by Levine &Tyson—suffice to compensate for the fact that this company would have no or only fewer "good" employees.

abolish codetermination across the board,[33] since this would put the suing company in a worse position.[34]

5. The Elimination of Post-Contractual Information Asymmetry

Freeman and Lazear put forward another theoretical argument.[35] Assuming that employees are less well informed than employers about the company's economic situation, but if the company faced a crisis would be willing to make concessions, employers would have an incentive to feign such a crisis. But employees could anticipate such a pretense, so that in a real crisis, they might not believe a corresponding message and might not be willing to make any concessions. This would have negative effects for both sides. Legally mandated codetermination would create an institution that would improve access to information so that the truth of the announcement of a crisis would be credible. But what could prevent the voluntary introduction of a codetermination arrangement? To explain this, Freeman and Lazear make two more highly stylized assumptions about the participants' behavior and information. First, they assume that there are two kinds of employees: those willing to make concessions only after a credible announcement of a crisis, for example, one confirmed by an organ representing employees; and, those always willing to make concessions. They also assume that employers cannot distinguish between these two groups. This could lead some companies to decide against codetermination because they believed that employees would make concessions even without such a representative organ. Regardless of whether the employers judged the employees accurately, four situations can be distinguished as shown in Table 3.

33. An example of this is the constitutional complaint by 29 employers associations, nine companies and one stockholders association after the introduction of the MitbestG 1976; *see* BVerfGE 50/1979, at 290-381.

34. In our example with two companies, a successful common suit would result in both companies receiving "300" rather than "500," while a successful individual suit would put the suing company at "600" and push the other down to "200."

35. Freeman & Lazear, *supra* note 22. Similar arguments come from Helen Schneider, *Mitbestimmung, unvollständige Information und Leistungsanreize*, SCHWEIZERISCHE ZEITSCHRIFT FÜR VOLKSWIRTSCHAFTSLEHRE UND STATISTIK 337-355 (1983), and Eirik Furubotn & Steven N. Wiggins, *Plant Closings, Worker Reallocation Costs and Efficiency Gains to Labor Representation on Boards of Directors*, 140 ZEITSCHRIFT FÜR DIE GESAMTE STAATSWISSENSCHAFT 176 (1984).

Table 3: Summary of the Effects of the Freeman/Lazear Model

	Employer judges employees accurately	Employer judges employees inaccurately
Employees always willing to make concessions	- no voluntary codetermination - no bankruptcy through crisis - employer earns rents	- voluntary codetermination - no bankruptcy through crisis - employer earns no rents
Employees willing to make concessions only if crisis announcement is credible	- voluntary codetermination - no bankruptcy through crisis - employer earns no rents	- no voluntary codetermination - bankruptcy through crisis - employer earns no rents

In one of the four cases, legally mandating codetermination would enable the avoidance of bankruptcy because codetermination would not be voluntarily introduced, but employees would not be willing to make concessions without it. Thus, both employees and employer would improve their situation.

Can this model explain the employers' suing behavior? In two of the four resulting cases, legally mandated codetermination would change nothing for the employer because the company would have introduced codetermination voluntarily. But there is also a case in which the legal regulation would worsen the companies' position since the employees would have made concessions even without a credible crisis announcement; while in the absence of crisis, employers could still have implemented wage cuts, for example. So companies for which this is the case would have an incentive to go to court against the legal regulations.

So far, we have seen that some economic arguments indeed speak for legally mandated codetermination. Since their validity cannot be decided in thought experiments, we turn to their empirical testing.

IV. WELFARE EFFECTS OF CODETERMINATION: EMPIRICAL EVIDENCE

Unfortunately, the empirical analysis of the consequences on effectiveness of legally mandated codetermination is problematical as well. In the first section following, we give some descriptive statistics and show consequences and reservations that follow for empirical investigations. The second part summarizes the existing empirical studies analyzing the effects of employee codetermination—distinguishing between the two fields of company level codetermination and plant level codetermination. To conclude, we ask what this can tell us about the causes of these effects.

A. *Descriptive Statistics and Methodological Trap-Doors*

The total number of companies subject to company codetermination in supervisory boards is much smaller than the number of companies with works councils.[36] Neither the Works Constitution Act (*BetrVG*), nor the Co-Determination Law for Companies in the Coal, Steel and Mining Industry (*MontanmitbestG*), nor the further reaching Co-Determination Law (*MitbestG*) permit company owners or employees any kind of freedom of choice. Above the threshold of a certain number of employees, the supervisory board must include employees.[37] In 1997, 2,602 companies had a codetermined supervisory board in accordance with the BetrVG; the MitbestG covered 728 companies in 1996; and, the number of companies subject to MontanmitbestG was a mere 44 in 1997.[38]

What consequence does this have for empirical analyses of effects? If the effect of the MitbestG is studied using a cross-sectional comparison of companies codetermined with equal representation and of those with one-third codetermined supervisory boards, then, like it or not, large companies are being compared with small ones, which must be taken into consideration when interpreting the results. A longitudinal analysis—i.e., a study of affected companies before and after the MitbestG went into effect—can reduce this problem to a certain degree, though it cannot completely avoid it since changes in the law do not usually display isolated effects; instead, external, sometimes unobserved variables may also exert an influence.

The number of works councils, as the central organ of plant level codetermination, is much higher than that of the codetermined supervisory boards and not only because large companies with several plants have many works councils, but only one supervisory board: The German trade union association estimates that 40,000 plants had works councils in 1994.[39] According to § 1 BetrVG, the instituting of a works council is not simply tied to a plant's crossing the threshold of "five steady employees eligible to vote [. . .] of whom three must be

36. This is not surprising since under the BetrVG—the weakest form of company codetermination—one-third codetermination in supervisory boards is effective only in companies with at least 500 employees, while 99.8% of all companies registered by the professional trade associations have fewer than 500 employees. But 27.1% of all full-time workers work in companies with 500 or more employees. *See* BILANZ DER MITTELSTANDSPOLITIK IN DER LAUFENDEN LEGISLATURPERIODE (1998).

37. For a detailed presentation and commentary on the arrangements, *see, e.g.*, HORST NIEDENHOFF, MITBESTIMMUNG IN DER BUNDESREPUBLIK DEUTSCHLAND (1997).

38. KOMMISSION MITBESTIMMUNG, MITBESTIMMUNG UND NEUE UNTERNEHMENSKULTUREN—BILANZ UND PERSPEKTIVEN 43, 45 (1998).

39. *Id.*

eligible for election." Rather, the employees in plants suitable for works councils must actively decide to set one up.[40] No official data is available on the relative frequency of works councils, but on the basis of large samples, various studies estimate that only 17 to 24% of those plants eligible for works councils make use of this right. But this already covers between 55 and 70% of all employed in eligible plants.[41] These studies also reveal that the most important determinant for the instituting of a works council is the plant's size. Addison, Schnabel and Wagner[42] show that in their sample, only 5% of the plants with 5 to 20 employees have a works council, but all plants with over 1,000 employees have this organ of plant level codetermination. A works council is also more likely with the increase of the plant's age, the proportion of its shift workers and the proportion of employees not paid by the hour. Branch offices are also more likely to have works councils, but the higher the proportion of female and/or part-time employees, the lower the probability that the plant will have a works council.[43]

The data on the frequency of works councils suggest that there are small and medium-sized plants that are similar in many ways, but some of which have a works council and some of which do not. If the sample of an empirical study is relatively small and based on a selection that is not purely random[44] (for example, where too few small plants are included), there is the danger of loosely "comparing

40. For a precise presentation of the possible ways a works council can come into existence and of the technical procedures of elections, *see* DIETER STEGE & FRIEDRICH WEINSBACH, BETRIEBSVERFASSUNGSGESETZ (1999).

41. Based on a sample of 2,392 companies with five or more employees from the year 1987, Bernd Frick & Dieter Sadowski, *Works Councils, Unions and Firm Performance*, *in* INSTITUTIONAL FRAMEWORKS AND LABOR MARKET PERFORMANCE 46 (Friedrich Buttler et al., eds., 1995), estimate that 24% of all operations have a works council, but that this covers 60% of all employees. John T. Addison, Claus Schnabel & Joachim Wagner, *Non-Union Representation in Germany* (1999) (Working Report No. 206, Universität Lüneburg), use data from about 1,000 companies from the Hannover panel of companies to show that a mere 20.1% of all companies have works councils, but that 73.4% of all employees work for these companies. Using data from the IAB company panel from the year 1996, which includes more than 7,000 companies, it can be shown that the frequency of works councils in the old Länder (West Germany) is 17% and in the new Länder (East Germany) 15%, whereby 58% and 53% of the employees are covered, respectively. *Id*. at 9.

42. Addison, Schnabel & Wagner, *supra* note 41.

43. John T. Addison, Claus Schnabel & Joachim Wagner, *Betriebsräte in der Deutschen Industrie—Verbreitung, Bestimmungsgründe und Effekte*, *in* ÖKONOMISCHE ANALYSE BETRIEBLICHER STRUKTUREN UND ENTWICKLUNGEN 59 (Knut Gerlach et al. eds., 1998).

44. For example, if the data is based on a survey where there is no requirement to provide answers, there is always the possibility of the systematic refusal to answer, which could distort the results of the investigation (*see, e.g.*, WALTER KRUG, MARTIN NOURNEY & JÜRGEN SCHMIDT, WIRTSCHAFTS UND SOZIALSTATISTIK 109 (1994). In principle, such a database is no longer based on a purely random selection, which is problematical, but often unavoidable in the area of data on companies.

apples and oranges."[45] If the setting up or relinquishing of a works council is interpreted as an implicit choice by the staff,[46] then problems could arise in regard to causal effects of the works councils in medium-sized firms. The assumption of exogeneity[47] of the presence or absence of a works council absolutely determines the validity of estimation results, but may be false.

Furthermore, although the various laws attempt a *de jure* separation, codetermination is often *de facto* not separated from the areas of supervisory board codetermination and works council codetermination. Rather, the discussion in the previous section shows that, at least regarding supervisory board codetermination on a basis of parity under the MitbestG, such companies always have at least one works council. Further, studies of interlocking seats in such bodies show that the employee representatives in the supervisory board of a conglomerate are very often also members of the works council of the same conglomerate's largest plant.

Additionally, there is no unambiguous way of measuring welfare effects because the different actors' welfare is not directly observable. One approach is to measure productivity, e.g. by measuring value added per employee and to find out whether there is a statistical relationship between per head labor productivity and the presence or absence of certain codetermination schemes. To use the common metaphor, this may give you an idea of how big the pie a codetermined company *ceteris paribus* produces is as compared to a non-codetermined firm. But there is no relationship in a way that rising productivity automatically increases efficiency. Suppose that codetermination leads to rising productivity, but also endows workers with more negotiating power so that they can negotiate higher wages. If the increase in wages is not bigger than the increase in productivity, codetermination is Pareto-efficient because the capital owners' residual claim at worst is constant. But if the increase in wages is bigger than the increase in productivity, codetermination is not Pareto-efficient. It may be Kaldor-Hicks-efficient if the increase in

45. Bernd Frick, Gerhard Speckbacher & Jürgen Wentges, *Arbeitnehmermitbestimmung und Moderne Theorie der Unternehmung*, 69 ZEITSCHRIFT FÜR BETRIEBSWIRTSCHAFT 745 (1999).

46. This presupposes that employers do not try to prevent the establishment of a works council, even though the press often present anecdotal evidence for illegal behavior of this kind; *see, e.g.*, Harald Schumacher & Reinhold Böhmer, *Betriebsräte—Dummes Zeug*, 14 WIRTSCHAFTSWOCHE 80 (1995).

47. The assumption of exogeny means that it can be assumed that the existence or absence of a works council has an effect on the economic development of a company, but not that the economic development has any effect on the presence of a works council.

wages is bigger than the capital owners' loss. Obviously, only the analysis of productivity change does not draw a clear picture of the actors' different welfare positions.

Several studies try to focus on the capital owners welfare position. To use the common metaphor again, this gives you an impression of how big the size of the capital owners piece of the pie is. If it is *ceteris paribus* smaller than in a non-codetermined firm, codetermination is not Pareto-efficient. If it is at least as big or even bigger, you have evidence that codetermination is Pareto-efficient, assuming that codetermination does at least not decrease the employees' welfare position. But again, measuring capital owners' welfare is easier said than done. Some studies use the profit as shown in the balance as a proxy for capital owners' welfare. This measure is potentially biased because accounting policy leaves a certain leeway to manipulate accounting profits. Other studies try to avoid this source of bias by using share prices as proxies: If profits as shown in the balance are low just because of a certain accounting policy, not because of bad results and bad expectations for the future, efficient capital markets should recognize this by high share prices. But again, there is a crucial assumption: Capital markets must be efficient, i.e. share prices must fully and instantaneously reflect all available information—which is not always the case. Given all these methodological reservations, caution is advisable when evaluating the statistical evidence of the welfare effects of employee codetermination.[48]

B. Empirical Studies Analyzing the Effects of Employee Codetermination

1. Company Level Codetermination

There are few recent studies measuring the effects of supervisory board codetermination. We avail ourselves here of the results of a mere five investigations.[49] All the studies try to quantify the effects of supervisory board codetermination with quasi-equal representation as stipulated by the codetermination law; an overview is presented in Table 4. The studies are based on the following idea: The codetermined supervisory board under the MitbestG is exogenous. If

48. *See* Axel Börsch-Supan & Jens Köke, *An Applied Econometricians' View of Empirical Corporate Governance Studies*, ZEW Discussion Paper No. 00-17 (April 2000).

49. For a detailed presentation of the data selection, the method of investigation, the results and the methodological limitations of the studies presented, *see* Junkes & Sadowski, *supra* note 27, at 65.

company codetermination has an effect, it should be measurable in terms of changes in the welfare of the company's owners, since the passage of the MitbestG in 1976. If supervisory board codetermination with quasi-equal representation is Pareto-efficient, the welfare of the owners must at least not sink, while if it is Pareto-inefficient, their welfare will sink.

The one-third codetermination in the supervisory boards of corporations with at least 500 employees was already codified by the BetrVG of 1952. If the studies work with control groups, they usually include corporations with fewer than 2,000 employees, but which are also subject to one-third codetermination and that presumably have several works councils. Thus, the group of companies with supervisory board codetermination with quasi-equal representation and the one-third representation control group differ solely in terms of whether they are bound to the MitbestG or not.

The results of the studies do not give a unified view. In the framework of their event study, Guiseppe Benelli, Claudio Loderer and Thomas Lys[50] show a negative, but statistically insignificant reaction in stock prices affected by the passage of the MitbestG. But since the stock price reaction was more negative for the control group that was not affected and, since this result is statistically significant, the study permits no interpretation. Based on the examination of company indices, Michael Gurdon and Anoop Rai[51] note that companies affected by the MitbestG show positive profits, but negative productivity effects. This, too, eludes clear interpretation.

Based on the examination of company indices, Felix FitzRoy and Kornelius Kraft[52] come up with negative productivity effects and negative profit effects, both on a statistically significant level. This result is supported by the Frank Schmid and Frank Seger study,[53] that uses capital market data to show a similar effect: precisely those companies affected by the MitbestG take significant losses in market value. The authors claim ". . . to show that the market value of the company-owned capital would have risen by 21 to 24% if the

50. Guiseppe Benelli, Claudio Loderer & Thomas Lys, *Labor Participation in Corporate Policy-Making Decisions*, 60 J. BUS. 553 (1987).

51. Michael A. Gurdon & Anoop Rai, *Codetermination and Enterprise Performance: Empirical Evidence from West Germany*, 42 J. ECON. & BUS. 289 (1990).

52. Felix R. FitzRoy & Kornelius Kraft, *Economic Effects of Codetermination*, 95 SCANDINAVIAN J. ECON. 365 (1993).

53. Frank A. Schmid & Frank Seger, *Arbeitnehmermitbestimmung, Allokation von Entscheidungsrechten und Shareholdervalue*, ZEITSCHRIFT FÜR BETRIEBSWIRTSCHAFT 453 (1998).

companies subject to parity codetermination could have passed over to one-third representation."[54]

Table 4: Effect of Supervisory Board Codetermination on Firm Performance

Study	Database	Method	Results
Benelli/ Loderer/Lys (1987)	58 publicly-quoted corporations; 40 affected by the MitbestG; monthly stock prices, January 1973 to June 1983.	Event study; estimation through market model; influence of the MitbestG through dummy variable.	Negative, but insignificant price reaction in companies affected by the MitbestG. Stronger negative and significant price reaction in the control portfolio.
Gurdon/Rai (1990)	63 companies; 37 affected by the MitbestG; company data from 1970, 1975, 1980, 1985.	Non-parametric analysis of variance; influence of the MitbestG through comparing the intervals 1970-1975, 1975-1980 and 1980-1985.	Increasing profits, but falling productivity in companies affected by the MitbestG; both statistically significant. No clear reactions in the control group.
FitzRoy/Kraft (1993)	112 companies; 68 affected by the MitbestG; company data from 1975 and 1983.	Regression estimation of production function and labor cost function; influence of the MitbestG through dummy variable; longitudinal control through comparing the two years.	Significant losses of productivity and profits in companies affected by the MitbestG. No significant labor cost effect.
Schmid/ Seger (1998)	160 observations of companies; the number of companies was not specified; company data from 1976, 1987 and 1991.	Regression estimation of market to book-ratio; influence of the MitbestG through dummy variable.	Significant loss in market value in companies affected by the MitbestG.
Baums/Frick (1998)	28 publicly-quoted corporations affected by 23 court decisions concerning the implementation of the MitbestG; daily stock prices, January 1, 1974 to December 31, 1995.	Event study; estimation through market model; measuring the influence of the MitbestG based on classifications of court decisions.	No significant price reactions due to various types of court decisions. In part, contradictory signs of the coefficient estimates.

If we take into account that we are dealing with an average value, this is astonishing. Within this sample, there are supposedly companies that suffered even greater losses through the MitbestG, but probably also some with smaller negative effects or none at all. The study by Baums and Frick[55] addresses precisely the kind of companies

54. *Id.* at 468.
55. Baums & Frick, *supra* note 25.

for which it seems likely that they suffered a substantial loss through the passage of the MitbestG. In the period between January 1, 1974, and December 31, 1995, a total of 23 court decisions were made concerning the concrete implementation of supervisory board codetermination in 28 publicly quoted corporations. The judges' decisions were in part "employee-friendly," calling for further reaching codetermination arrangements in the companies concerned and, in part, "employer-friendly," putting limits on excessive codetermination arrangements. This gives us a new point of approach: If codetermination is relevant to the stock prices, then we should be able to note an economically and empirically significant difference in the abnormal stock price movement of affected companies, depending on the direction of the court decision. The objective of the Baums and Frick study in general is the effect of introduction of the MitbestG, but more specifically, it addresses the stock price reactions for individual companies whose specific implementation of the law has been influenced by court decisions. Surprisingly, the various types of court decisions yielded no statistically significant price reactions. For example, where court decisions led to an expansion of the employees' codetermination, there was a positive, though statistically insignificant, coefficient for abnormal returns—the exact opposite of what the results of Schmid and Seger would lead us to expect.

Methodological reservations are clearly called for in some of the studies. For example, Benelli, Loderer and Lys[56] expand the event window to 18 months, i.e., they seek abnormal price reactions from January 1975 to June 1976, and attribute them to the MitbestG, which is methodologically controversial to say the least.[57] Baums and Frick use a much smaller event window, which, as the authors admit, can in turn mean that they are simply looking in the wrong interval. Gurdon and Rai[58] and FitzRoy and Kraft[59] leave different intervals of several years between their periods of investigation, which could explain why their results for profitability are diametrically opposed.[60]

56. Benelli, Loderer & Lys, *supra* note 50.
57. Stephen J. Brown & Jerold B. Warner, *Measuring Security Price Performance*, 8 J. FIN. ECON. 205 (1980).
58. Gurdon & Rai, *supra* note 51.
59. FitzRoy & Kraft, *supra* note 52.
60. Given the samples of both studies are not biased and the variables in use do not suffer from measurement errors, a possible explanation for their contradicting profitability results is the use of different cross-sections: Gurdon & Rai, *supra* note 51, use company data from 1975 and 1980, whereas FitzRoy & Kraft, *supra* note 52, use data from 1975 and 1983. If something detrimental for big, codetermined firms happened between 1980 and 1983, it is measured by FitzRoy & Kraft, but not by Gurdon & Rai. But given this scenario is true, the detrimental

The results of Schmid and Seger[61] are also subject to the problem of intervals of several years; but, in our view, a much greater problem is posed by the following reservation: Cross-sectional analyses are based on the idea of determining the influence of a variable—here the MitbestG—affecting part of the cross-section in comparison with the part of the cross-section, the control group, that is not influenced. Ideally, the codetermination group and the control group would be distinguished solely by the presence or absence of influence of codetermination. Basically, this can be achieved only in an experimental situation; real company data are always characterized by other systematic influences. The two other horizontal studies in our overview of the literature try to meet this problem by carrying out not only a cross-sectional, but also a longitudinal control: The selection of companies in question is analyzed at points in time before and after the MitbestG went into effect. Thus, Gurdon and Rai[62] examined company indices from 63 companies from the years 1970 and 1975 (before the passage of the MitbestG), and from the years 1980 and 1985 (after the passage of the MitbestG); similarly, FitzRoy and Kraft[63] use end of year data from 112 companies from 1975 (before) and 1983 (after). The thought suggests itself: If a (positive or negative) influence is found in one of the cross-sections after the MitbestG went into effect, then the earlier cross-sections can be used to check whether this relation was different before. If this is not the case, it cannot be ruled out that the "effect" is merely a statistical artifact. In their 1998 analysis investigating the data for 1976, 1987, and 1991, Schmid and Seger examine cross-sections that would already have to encompass the effects of the MitbestG. The reader is almost forced to ask himself why they did not include at least one point in time for which it can be assumed that the effect of the MitbestG has not already been capitalized in the market value. In sum, these studies suggest that the question of the efficiency effects of legally mandated codetermination has not yet been empirically clarified.

development after 1980 is wrongly attributed to the enactment of the Codetermination Law in 1976, in FitzRoy & Kraft's analysis.

61. Schmid & Seger, *supra* note 53.
62. Gurdon & Rai, *supra* note 51.
63. FitzRoy & Kraft, *supra* note 52.

2. Plant Level Codetermination

The BetrVG grants employees comprehensive rights in plant level codetermination. These rights differ according to the number of employees working in the plant.[64] Empirical studies focus less on the effect of these rights individually than on the effect of the mere existence of a works council. But these studies are more numerous and more meaningful than those on codetermined supervisory boards. Another methodological approach is usually chosen: To explain a particular company's behavior or success, a dummy variable is added to the other variables that are considered explanatory. Behind the works council-dummy stand the direct costs of this institution, e.g. the expenses involved in staff meetings, the excusing of works council members from production and special representations (for example, for young people and trainees, as well as for the severely handicapped). But this variable also comprises the indirect costs, such as delays, and, of course, potential benefits, such as increased employee loyalty.

In their studies, FitzRoy and Kraft[65] claim to have found that the existence of a works council exerts a consistently negative influence on economic indicators: A works council lowers profits, labor productivity, and reduces innovation activity in the company. Schnabel and Wagner did not confirm this last result[66]; they found a positive correlation between the existence of a works council and outlays for research and development.

64. The establishment of a works council is possible if the operation has at least five constant full-time employees; more comprehensive information rights are added from 21 employees upward; from 101 employees upward, it is possible to establish a joint management-employee economic committee; with a staff of or exceeding 300, employees are freed of work duties to devote themselves to continuous works council work; and, from 1,001 employees upward, the works council can demand formal personnel selection guidelines. For details, *see, e.g.*, STEGE & WEINSBACH, *supra* note 40; NIEDENHOFF, *supra* note 37.

65. Felix R. FitzRoy & Kornelius Kraft, *Unionization, Wages, and Efficiency—Theories and Evidence from the U.S. and West Germany*, 38 KYKLOS 537 (1985); Felix R. FitzRoy & Kornelius Kraft, *Efficiency and Internal Organization: Works Councils in West Germany Firms*, 54 ECONOMICA 493 (1987); Felix R. FitzRoy & Kornelius Kraft, *Innovation, Rent Sharing and the Organization of Labour in the FRG*, 2 SMALL BUS. ECON. 95 (1990).

66. Claus Schnabel & Joachim Wagner, *Industrial Relations and Trade Union Effects on Innovation in Germany*, 8 LABOUR 489 (1994).

Table 5: Effects of Plant Level Codetermination Through Works Councils

Study	Database	Method	Results
Frick/ Sadowski (1995)	1,616 firms (down from a representative sample of 2,392 industrial and service firms). Data from 1987.	Regression analyses; rates of firing, quitting and hiring as dependent variables.	Presence of works council correlates with lower rates of firing and quitting. In times of company crisis (prosperity), presence of works council correlates with increased firing (increased hiring) rates.
Addison/ Schnabel/ Wagner (1996/1998)	1,025 manufacturing plants of a layered sample. Data from Lower Saxony in 1994.	Regression analyses; per head value added, subjective profitability measure, rates of separation, wages, and turnover as dependent variables.	Presence of works council correlates with higher work productivity and higher wages; separation rate and profits are lower; no effects on innovation behavior; in part, differing results for medium-sized plants.
Dilger (1999)	1,020 machinery plants. Data from 1994 and 1996.	Regression analyses; subjective profitability measure as dependent variable. Distinctions made between different types of works councils.	Presence of works council correlates with negative subjective profit estimate on part of the management; the more conflicted the relationship with the works council is, the worse the profit estimate.
Addison/ Schnabel/ Wagner (1999)	1,616 firms (down from a representative sample of 2,392 industrial and service firms). Data from 1987.	Regression analyses; per head value added, subjective profitability measure, rates of separation, wages, and turnover as dependent variables. Separate estimates for small (5-20 employees), medium-sized (21-200 employees), and large (>100 employees) plants.	Particularly in small and medium-sized plants: Presence of works council has no recognizable effect on per head work productivity, separation rate, or innovation behavior. Negative effect on subjective profit estimate.

In an expanded sample of a set of data of similar size, Addison, Kraft and Wagner[67] found only ambiguous and insignificant influences from works councils. A more precise specification of three works councils variables and a sample of operations in the year 1993, also

67. John T. Addison, Kornelius Kraft & Joachim Wagner, *German Works Councils and Firm Performance*, *in* EMPLOYEE REPRESENTATION: ALTERNATIVES AND FUTURE DIRECTIONS (Bruce E. Kaufmann & Morrison Kleiner eds., 1993).

failed to paint a clear picture.[68] But it is reasonable to doubt whether this clearly reflects reality or may be traceable to the use of samples of inadequately small sizes.

We will show more comprehensively the results of four more recent studies, each based on samples of at least 1,000 plants (see Table 5).[69] Frick and Sadowski[70] attempt to examine the question of whether works councils function as "collective voice" institutions and whether they have an ordering function. So that positive allocation effects can be achieved at all, works councils should bundle the employees' interests and convey them to management. This, in turn, should hold down voluntary quits in plants with works councils and, precisely, this effect was measured. Additionally, works councils reduced the number of firings, but it was shown that in times of economic crisis, a works council eased firings carried out for business reasons and ensured that more new jobs were created in upswings. In part, this was realized through the reduction of overtime work.

Addison, Wagner and Schnabel[71] confirm the finding of less fluctuation with the existence of a works council and also find higher work productivity. In their more recent investigations though, they find that the works councils have no effects on innovation and tend to correlate with higher wages for employees and lower profits for owners. Equally interesting is the finding that management in works council regimes often complains of too many employees and of excessive costs when terminating employment.

This finding contradicts the results of Frick and Sadowski,[72] who, however, based their estimate of the influence of works councils on terminating costs solely on more highly aggregated data and who judge the balance of increased firing costs and savings due to the avoidance of unwanted voluntary quitting as positive for the companies with works councils. The results of Addison, Wagner and Schnabel,[73] at any rate, cast doubt upon the Pareto-efficiency of the works council.

---

68. JOHN T. ADDISON & JOACHIM WAGNER, JAHRBÜCHER FÜR NATIONALÖKONOMIE UND STATISTIK (1997). As in all other studies, a dummy variable was initially formed to indicate the presence of a works council. To counter the problem of endogeneity, this dummy variable was instrumented in various ways. Finally, to determine the qualitative differences among works councils, the authors created a voice index, intended to reflect the actual influence of the works councils; *id.* at 11-13.

69. *Cf.* Table 5; *see also* Addison, Schnabel & Wagner, *supra* note 43.

70. Frick & Sadowski, *supra* note 41, at 46.

71. John T. Addison, Claus Schnabel & Joachim Wagner, *German Works Councils, Profits, and Innovation*, 49 KYKLOS 555-582 (1996); Addison, Schnabel & Wagner, *supra* note 43.

72. Frick & Sadowski, *supra* note 41.

73. Addison, Schnabel & Wagner, *supra* note 41; *supra* note 43, at 59.

To assume that works councils, wherever they exist, all exert a similar effect, is heroic and justifiable only with inadequate data. Regarding qualitative sociological case studies, Hermann Kotthoff[74] has created an analytic framework in which he defines two different basic types of works councils: the deficient and the cooperative works councils. The first type is characterized by being isolated from management, by being ignored by management or by accepting all of management's decisions uncritically. The cooperative works council, by contrast, has its own standpoint and is a cooperative opposing power to management. If the works council type lies in the purview of the participating actors, then their undifferentiated coding in the studies presented here is surely misleading.

Alexander Dilger,[75] in a recent econometric study referring to Hermann Kotthoff,[76] distinguishes five different forms of works councils, as perceived by management: Cooperation between management and works council can be conflicted, difficult or cooperative; and, it can also be the case that a works council lacks initiative or that management does not include it in consultation. In the context of regression analysis, where the variable to be explained is management's subjectively perceived profit situation, Dilger[77] finds that while all types of works council correlate with more negative perceptions of profit, this effect is by no means the same everywhere. A passive works council may correlate with low or insignificant losses of profit, but frequent conflicts appear to lead to significant, substantial losses of welfare for the company's owners. The author concludes from this that works councils are not Pareto-efficient, but can be at best Kaldor-Hicks-efficient. But the loss of employer welfare attributed to the works councils could be notably minimized through good cooperation between the works council and company management.

The differentiated coding of plant size has surprising consequences indeed. Addison, Schnabel and Wagner[78] answered

74. HERMANN KOTTHOFF, BETRIEBSRÄTE UND BETRIEBLICHE HERRSCHAFT; EINE TYPOLOGIE VON PARTIZIPATIONSMUSTERN IM INDUSTRIEBETRIEB (1981); HERMANN KOTTHOFF, BETRIEBSRÄTE UND BÜRGERSTATUS: WANDEL UND KONTINUITÄT BETRIEBLICHER MITBESTIMMUNG (1994).

75. Alexander Dilger, *Erträge bei differenzierter Betriebsratsbetrachtung: Erste Ergebnisse einer Untersuchung des NIFA-Panels*, *in* ZUR ENTWICKLUNG VON LOHN UND BESCHÄFTIGUNG AUF DER BASIS VON BETRIEBS- UND UNTERNEHMENSDATEN 55 (Lutz Bellmann, Susanne Kohaut & Manfred Lahner eds., 1995).

76. KOTTHOFF, *supra* note 74.

77. Dilger, *supra* note 75.

78. John T. Addison, Claus Schnabel & Joachim Wagner, *Zur ökonomischen Analyse der Mitbestimmungsfreien Zone*, Working Paper, Universität Lüneberg (1999).

their own studies of 1996 and 1998, but distinguished between works council regimes in small (5 to 20 employees), medium-sized (21 to 100 employees) and large plants (more than 100 employees). Astonishingly, in small and medium-sized plants, the presence of a works council shows no detectable effect on per head work productivity, separation rate or innovation activity, while management's subjective profit estimate tends to be worse in companies with works councils. From a micro-economic view, Addison, Schnabel and Wagner[79] find precisely "in small and medium-sized plants (. . .) no indications (. . .) that the existence of works councils is connected with efficiency advantages." Perhaps works councils in plants with 100 or less employees cannot be an efficient "collective voice" institution. The authors suspect that, in smaller plants, direct forms of employee participation, such as group work or quality circles function better than works councils. Again, the empirical studies of works councils' efficiency effects permit no definitive judgment. So far, the results of micro-economic investigations indicate "that works councils are neither the curse nor the blessing they are occasionally made out to be by their opponents and supporters, respectively."[80]

C. What is the Effect of Codetermination Rights?

It is difficult to say anything about these effects, which appear ambivalent. We will nevertheless ask about the degree to which the studies permit conclusions about the sources of possible efficiency advantages of legally mandated codetermination, which we sketched in Section III.B.

1. Transaction Costs

The argument that voluntarily negotiated codetermination rights entail too high transaction costs cannot by itself explain why companies sue against legally mandated arrangements and is thus not very robust. The empirical study by Schmid and Seger[81] also investigated the influence of owner concentration. The idea here is that the transaction costs of voluntary agreements should fall as owner concentration rises: For example, when a single owner holds three-quarters of the voting capital of a stock corporation, then the

79. Addison, Schnabel & Wagner, *supra* note 71, at 10.
80. Addison, Schnabel & Wagner, *supra* note 43, at 83.
81. Schmid & Seger, *supra* note 53.

transaction costs should not present a great obstacle against agreeing to a voluntary arrangement if this would really be Pareto-efficient. But the authors found only a single company (one where the public hand holds a majority ownership) with codetermination rights exceeding those legally required. Thus, to date, empirical data can provide no indications of the special importance of transaction costs.

2. Adverse Selection of Employees

To investigate whether and the degree to which companies required to implement codetermination attract precisely those employees who are less productive and thus more eager for codetermination, productive employees must first be distinguishable from unproductive employees. This information is not available in any set of data. The 23 court decisions on codetermination issues examined by Baums and Frick[82] provided indirect indications. If it could be shown, for example, that companies went to court in systematic attempts to place themselves under "more favorable" because less far-reaching codetermination arrangements than their direct competitors in the product market, then this would be an indirect indication of the relevance of the problem. Unfortunately, no such information is available. But it speaks against this argument that employer associations sue on behalf of entire sectors, as was indeed the case in the March 1, 1979 decision by the Federal Constitutional Court on the question of constitutionality of the MitbestG. If the argument of adverse selection were valid, the MitbestG would certainly benefit the smaller member companies of the employer associations since they could profit when productive employees leave the competitors who are required to implement codetermination. Thus, we would not expect 29 employer associations to take part in the constitutional suit.

3. Post-Contractual Information Asymmetries

The degree to which legally mandated codetermination creates organs that signal the company's economic situation to employees more credibly than voluntarily created representation does can be judged only indirectly. Speaking in favor of this argument is the finding of Frick and Sadowski,[83] that works councils lower employee separation as a whole, but that they also support the reduction of staff

82. Baums & Frick, *supra* note 25.
83. Frick & Sadowski, *supra* note 41, at 46.

required for company survival when the company is in crisis. This could mean that employees are more likely to understand economic constraints when they have a works council. But, since no precise information is available in this study on the costs of eliminating jobs, this could also mean merely that the works council is able to achieve such high levels of severance pay that the necessary job cuts are easier, but substantially more expensive to implement.

4. Specific Human Capital

It is very difficult to use an econometric design to examine the degree to which legally mandated codetermination arrangements promote investment in specific human capital because it is not possible to measure either the initial outlays or the profits of such investment. But if the dimensions of the role played by investments in specific human capital differ in different sectors, then the passage of the MitbestG or the BVerfG's decision that the law is constitutional could have triggered different reactions in these sectors. In their event study, Baums and Frick[84] presented indirect evidence by examining the stock market reactions to the two events separately for six sectors of the economy.[85] In three sectors (the chemical industry, banking and insurance, and machine building), employers' associations filed constitutional suits against the MitbestG; in the three others, no suits were filed. Again, we do not have an unambiguous picture; in particular, we can observe opposite effects ensuing from the passage of the MitbestG or from the Federal Constitutional Court's decision,[86] which is no help in interpretation.

5. Simultaneous Appearance of Allocative and Distributive Effects

The argument of Freeman and Lazear[87] that employee codetermination has allocative, as well as distributive, effects is empirically supported in particular by the works council studies of Addison, Schnabel and Wagner.[88] The latter showed increased work productivity, especially for larger operations, but also higher wages and lower profits, whereby all estimate coefficients are statistically significant. It appears that the works council, as a voice institution, provides positive allocation effects, whose precise mode of effect is

84. Baums & Frick, *supra* note 25.
85. *Id.* at 154.
86. *Id.* at 156.
87. Freeman & Lazear, *supra* note 22, at 27.
88. Addison, Schnabel & Wagner, *supra* note 43; *supra* note 71.

still unclear, but that it also increases the employees' negotiating power and thus secures them a disproportionately large part of an enlarged pie. But, together with the result of possibly simplified personnel termination in periods of crisis,[89] we can also cautiously speculate that this increased negotiating power does not endanger the existence of the company. Richard Freeman and Morris Kleiner[90] arrived at the same result for analogous behavior of unions in the United States. Future research on German codetermination should strive for a similar clarification.

V. CODETERMINATION IN GERMANY: ECONOMIC EVALUATION AND PERSPECTIVES

It is not yet possible to make a final theoretical or empirical micro-economic judgment of the codetermination laws. Codetermination laws, as a part of corporate governance systems, suggest themselves above all when all the contracts that can mediate between the claims of various interest groups are incomplete and expensive to draw up. But whether codetermination laws are efficient institutions for controlling such uncertainties depends on how incomplete the contracts in question are and on what costs would be required to create more clarity. So far, it has not been possible to determine the degree of incompleteness of such contracts,[91] nor can we assume that there is a pat prescription to "deal with" possible negative consequences of incomplete contracts. If codetermination is efficient only under certain conditions, what differentiated legal arrangements should be considered?

If codetermination arrangements are the only way to secure company-specific human capital investments and the latter are carried out to an efficient degree only through such arrangements, then codetermination laws should affect primarily those companies whose success depends in a special way upon such investments. One way to do this would be to make different arrangements in different sectors. Currently, the law governing codetermination in the coal, iron and steel industry is an example of such a sector-specific arrangement. But in the micro-economic reconstruction, first the question arises why this industry is supposed to depend in a special way on specific

89. Frick & Sadowski, *supra* note 41, at 46.

90. Richard B. Freeman & Morris M. Kleiner, *Do Unions Make Enterprises Insolvent?*, 52 INDUS. & LAB. REL. REV. 510 (1999).

91. *Cf.* Luigi Zingales, *Corporate Governance*, *in* THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 447 (Peter Newman et al. eds., 1998).

investments in the employees. And experience with the MontanmitbestG shows a practical obstacle to the implementation of sector-specific arrangements: Large modern companies no longer restrict themselves to one field of business, but are mixed conglomerates. When such a sector-specific codetermination law creates positive, as well as negative effects in the same company, how can the law determine the efficient threshold for the application of the arrangement? Even if this is done, as with the MontanmitbestG, doesn't each individual company have an incentive to try to avoid crossing this threshold, possibly by making slight shifts of emphasis in its fields of business in order to gain a comparative advantage over direct competitors—for example, in the attempt to attract the most productive employees? Sector-specific arrangements, even if they were theoretically advisable, appear very difficult to implement.

An important finding of the empirical studies is that the positive effects of works council activities seem to depend on plant size. For large plants, we can diagnose increased productivity when there is a works council, while for small and medium-sized plants, this is, at any rate, not equally obvious. Against this backdrop, the BetrVG's stipulations that works councils have more rights of influence, the larger the number of employees are efficient.

The problem of the size-sensitive efficiency of works councils is eased by the fact that works councils are not mandated, but rather, at various thresholds of plant size, employees receive a kind of option regarding their possibilities of exerting influence. We can expect rationally behaving employees to recognize that their plant may be weakened in comparison to direct competitors and that they may consequently choose not to exercise their option. The facts on the frequency of works councils permit such an interpretation. Against this backdrop, it is superficial to respond to the mere fact of an expanding zone without codetermination by demanding a legal "remedy" (as the *Kommission Mitbestimmung* does). If the structural change in Germany's economy in the 1980s and 1990s made small and medium-sized companies more important and if direct forms of participation in such companies are more efficient than legally mandated codetermination, then the economic argument, at any rate, would not speak for such a change in the law.[92]

92. *See* John T. Addison, Claus Schnabel & Joachim Wagner, *Die Mitbestimmungsfreie Zone aus ökonomischer Sicht*, 45 HAMBURGER JAHRBUCH FÜR WIRTSCHAFTS- UND GESELLSCHAFTSPOLITIK 277-292 (2000).

An equally important and as yet unanswered question is what significance Germany's codetermination system will have in the future when boundaries between countries will lose some of their importance for economic activity. Can the theoretical and empirical knowledge presented here help clear up the suspicion that a specific form of labor law weakens a place as a site for doing business?[93] Both the arrangements for European works councils and the currently discussed suggestions for a European labor law permit country specific designs for employee codetermination. It is improbable that such differences in the intensity of codetermination will trigger noteworthy employee migration. It is more likely that company sites may be strategically moved in consideration of codetermination rules perceived as inefficient. And there is the conjecture that complementarities make a piece-wise convergence of national corporate governance systems unlikely.[94]

"Successful sites for doing business must (. . .) be flexible."[95] At first glance, this appears to lead inexorably to a low-level convergence of labor law standards and thus of codetermination standards. An implicit assumption of this argumentation is that due to economic constraints, employees will defend themselves against all changes that endanger or reduce rights they have once acquired. But the studies of the effects of the codetermination institutions in Germany show that these not only do not stand in the way of changes, but also can even promote them. If, with legal support, a company political arena is constituted that can increase the legitimacy of unpopular measures, then this is certainly not the only, but a feasible and, in a consensus-oriented company, perhaps a more efficient path of change. In our view, it is premature to deduce that because the German system of legally mandated employee codetermination is relatively singular, it is therefore inefficient.[96] Seen thus, employee codetermination need not be a burden, but can also become an asset on a "second path to more flexibility."[97]

93. *See, e.g.*, Botho Graf Pückel, *Gravierende Handicaps für die Wettbewerbsfähigkeit*, *in* ARBEITGEBER 389-391 (1997); Hans Werner Busch, *Konflikt Zwischen Arbeitsrecht und Personalpolitik*, *in* ARBEITGEBER 346 (1997).

94. *See* Reinhard. H. Schmidt & Stefanie Grohs, *Angleichung der Unternehmensverfassung in Europa—Ein Forschungsprogramm*, Working Papers, Finance & Accounting No. 43, Universität Frankfurt am Main (Nov. 1999).

95. Jörg Wenzel, *Standort Bundesrepublik Deutschland*, *in* IFO-SCHNELLDIENST at 16 (1991).

96. Sadowski, Junkes & Lindenthal, *supra* note 12.

97. Kerstin Pull, *Standortfaktor Arbeitsrecht: Die Bedeutung von sunk costs für Investitionsentscheidungen*, 52 JAHRBUCH FÜR WIRTSCHAFTSWISSENSCHAFTEN 190-201 (2001).