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Worker Directors: A German Product that Didn't Export?

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Worker Directors: A German Product that Didn't Export?

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ABSTRACT: Despite its lack of attractiveness to other countries, the German system of quasi-parity codetermination at company level has held up remarkably well. We recount the theoretical arguments for and against codetermination and survey the empirical evidence on the effects of the institution, tracing the three phases of a still sparse literature. Recent findings hold out the prospect that good corporate governance might include employee representation by virtue of the monitoring function and the reduction in agency costs, while yet cautioning that the optimal level of representation is likely below parity. And although the German system may be better than its reputation among foreigners, it might have to adapt to globalization and the availability of alternative forms of corporate governance in the EU.

ZUSAMMENFASSUNG: Trotz seiner geringen Attraktivität für andere Länder hat sich das deutsche System der quasi-paritätischen Unternehmensmitbestimmung als bemerkenswert stabil erwiesen. Wir erörtern die theoretischen Argumente für und gegen Mitbestimmung und bieten einen Überblick über die empirische Evidenz zu den Auswirkungen dieser Institution, wobei wir drei Phasen einer eher spärlichen Literatur nachzeichnen. Jüngere Erkenntnisse deuten darauf hin, dass zu einer guten Corporate Governance auch die Beteiligung der Arbeitnehmer (aufgrund ihrer Überwachungsfunktion und der Verringerung von Agency-Kosten) gehören könnte, wobei jedoch das optimale Ausmaß der Mitbestimmung unter 50 Prozent liegen dürfte. Auch wenn das deutsche System besser sein mag als sein Ruf im Ausland, muss es sich wohl an die Globalisierung und die Verfügbarkeit alternativer Unternehmensformen in der EU anpassen.

Keywords: codetermination, worker directors, board-level employee representation, firm performance, Germany

JEL classification: J50

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“Europeanization’ is likely to encourage new representative structures and processes and to create some opportunities for changed outcomes – which may not however be grasped” (Hyman, 1997, p. 322).

1. MOTIVATION

Germany is the world’s biggest exporter of goods. One of the few products made in Germany that has not been exported successfully is the German system of co-determination at company level (Unternehmensmitbestimmung) with representatives of employees sitting on company supervisory boards (sometimes called “worker directors”). In contrast to employee representation via works councils at establishment level (betriebliche Mitbestimmung), which is found in many European countries in various forms and which has also played a role as a template in the formulation of legislation on European Works Councils (94/45/EC) in the EU,[1] Germany has not been able to convince its neighbours or the EU to adopt its system of (quasi) parity board-level representation. In short, although there do exist systems of board-level employee representation in most EU member states, these are usually not as comprehensive as the German system (for a comparative analysis, see Carley, 1998; Schulten and Zagelmeyer, 1998).

What is more, competition has arisen among the various European systems of co-determination since the European Company Statute (Council Regulation 2157/2001 and Council Directive 2001/86/EC) adopted by the EU in 2001 gives companies the option of forming a European Company (Societas Europaea, SE) which may operate on a European-wide basis. Under the legislation, a German business establishing an SE can choose between the current two-tier system of corporate governance in Germany (with its separation of powers between a management board and a supervisory board) and alternative, one-tier systems common in other EU member states (such as the U.K.) where there is a single board of directors. In the latter case, companies would not have to adhere to German codetermination laws (whereas an existing German public limited company converting itself into an SE registered in Germany would have to stick to its current form of codetermination). Further, in the case of SEs formed via cross-border mergers, or the creation of a joint holding company or subsidiary, a fall-back solution in the law stipulates

[1] Discussions of this form of codetermination and its effects are provided by Addison, Schnabel, and Wagner (2004) and Gumbrell-McCormick and Hyman (2006). The practice of German codetermination at establishment level has also guided a number of other European-level initiatives featuring employee participation or having a participation component such as Community legislation on collective redundancies/mass layoffs (98/59/EC), transfers of undertakings (2001/23/EC), and national systems for informing and consulting employees (2002/14/EC), inter al.

that the most extensive form of codetermination should apply to the merged company.[2] This too might encourage companies to locate or relocate their new headquarters outside Germany.[3]

Despite the German system's lack of attractiveness to other countries, codetermination at company level has held up remarkably well inside Germany. According to Hans Böckler Stiftung, a union-sponsored foundation monitoring codetermination, as of 2006 – some two years after member states had to implement the Regulation/Directive (Germany, on this occasion, being two months late in complying) – 721 companies were still covered by the German Codetermination Act of 1976. This number is slightly down on the maximum of 767 in 2002. Although some German companies close to the employment threshold for introduction of (quasi) parity-based codetermination have set up SEs with a single board of directors not including employee representatives, none of the large public limited companies in Germany that have turned themselves into SEs (e.g. Porsche, BASF and Allianz) has deviated from (quasi) parity representation of shareholders and employee representatives.[4]

This raises the question of why parity codetermination at company level has survived in Germany (and whether it will be able to survive in the future). Have companies learned to live with worker directors – as they apparently have with works councils (see Kotthoff, 1994) – and just fear the hassle of switching to SEs? Or is the system simply better than its reputation among foreigners? Since the first of these questions is difficult to investigate empirically (because surveying managers is likely to result in answers that are deemed to be politically correct), this paper will focus on the second question and survey the empirical evidence on the economic effects of employee representation on company supervisory boards (Unternehmensmitbestimmung) in Germany.[5] Our treatment proceeds as follows. We first sketch the institutional framework of codetermination at company level in Germany before recounting the theoretical arguments for and against. Next, we

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[2] Note that these are just two examples of the directive's potential impact on codetermination. In the case of SEs formed through mergers (or via the formation of a holding company or subsidiary), it is also possible for an agreement between the special negotiating body and central management to result in a lesser degree of board-level participation than the highest proportion that applies within the participating companies. All that is required here are the votes of two-thirds of the SNB members representing at least two-thirds of the total workforce. This option is not available in the case of a company conversion.

[3] Such fears are not only voiced by trade unionists in Germany. For the U.K., Hyman (1997, p. 310) notes "that regulation at the level of the European Union (EU), while in general modest, may encourage the implementation of 'alien' representative mechanisms in Britain."

[4] For details and examples, see the foundation's webpage (http://www.boeckler.de) as well as the recent analysis by Keller and Werner (2008). Somewhat in contrast, Stettes (2006) reports that in 2005 every seventh newly-established private limited company in Germany was registered according to the legal form of the U.K., thereby avoiding German codetermination laws.

[5] For a survey of the earlier theoretical and empirical literature, see Junkes and Sadowski (1999).

survey the empirical evidence on the effects of the institution. Finally, in our concluding remarks, we draw together the threads of the preceding arguments and offer a brief perspective.

2. INSTITUTIONAL FRAMEWORK

In the German two-tier system of corporate governance, the supervisory board has basically four functions (according to the 1965 Stock Corporation Act, Aktiengesetz). It approves the appointment of management board members; it monitors the management board (which has to inform it of the broad lines of business policy and corporate planning on an annual basis and of business operations on a more regular basis); it can codetermine business operations requiring its approval; and it scrutinizes the annual accounts of the company or group.

Various laws and their amendments stipulate that differing shares of seats on the supervisory board be allocated to employee representatives, so that there exist three different regimes of codetermination at company level in Germany:

- full-parity codetermination for the coal and steel industries under the 1951 Codetermination Act,
- almost-equal or quasi-parity representation under the 1976 Codetermination Act for corporations having more than 2,000 employees (where the chairman of the board, elected by the shareholders, has the casting vote in case of a tie),
- one-third representation in companies with between 500 and 2,000 employees under the 1952 Works Constitution Act.

The 1951 Act on the Codetermination of Employees in the Supervisory and Management Boards of Companies in the Coal, Iron and Steel Industry (or Montan-Mitbestimmungsgesetz, as it is also known) established supervisory boards ranging in size from 11 to 21 members, according to share capital, comprising equal numbers of shareholder and employee members and one neutral member. Further, the appointment of a Labour Director (who serves on the management board) requires the agreement of the employee representatives.

In 1976 under the Codetermination Act (Mitbestimmungsgesetz), equal but not full-parity representation (hence ‘quasi-parity’ representation) was extended from coal, iron and steel to corporations of all other industries where there are as a rule more than 2,000 employees. The number of seats on the supervisory board is a function of employment: 12 members if the employment total does not exceed 10,000, 16 if it exceeds 10,000 but is less than 20,000, and 20 where it is greater than 20,000. Election of the chairman and vice-chairman of the supervisory board in each case requires majorities of two-thirds of the votes. If neither gains the necessary votes, the shareholder (employee) representatives elect the chairman (vice-chairman). This procedure ensures that the chairman is always a shareholder representative and he/she has an extra, tie-breaking vote (unlike the situation in the coal, iron and steel industries). The law also made provision for the inclusion of managerial employees, who were given one seat on the supervisory board.

The 1952 Works Constitution Act (Betriebsverfassungsgesetz) introduced a weaker form of codetermination by providing for one-third representation of employees on the supervisory boards of large and medium sized corporations with more than 500 employees. The sections of the 1952 Works Constitution Act dealing with supervisory board membership in companies with 500 to 2,000 employees were amended in the so-called Third Part Act (Drittelbeteiligungsgesetz) of 2004.[6]

To summarize, the proportion of worker representatives on company boards varies from one-third, in companies with between 500 and 2,000 employees, to one-half, in companies with more than 2,000 employees. In the latter, the chair in effect represents the shareholders and has the casting vote. The exception is the larger coal or iron and steel companies where the chair is independent; hence the expression full-parity representation. The number of members of the supervisory board is determined either by the share capital or employment of the company or group. The election procedure for employee representatives is complicated and varies by type of company and type of codetermination (for details, see Addison, 2009).

Empirical analyses of the effects of board representation have either exploited differences between codetermination and no codetermination or between the various types of codetermination. As we shall see, the early literature revealed few effects of board representation while the subsequent financial literature proved more pessimistic. Latterly, with the German national innovation debate, codetermination has received modest support from several innovation studies preceded by a panel study of productivity. Before reviewing these findings, however, we must first briefly discuss some theoretical arguments on (board-level) codetermination.

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6 It should be noted that codetermination legislation has generated fierce and ongoing employer resistance, and companies (as well as unions) have engaged courts at all levels on codetermination issues. For example nine corporations and 29 employers associations challenged the 1976 Act on constitutional grounds, as infringing the property rights of shareholders. The Federal Constitutional Court in its decision of March 1, 1979, upheld the constitutionality of the law, arguing that shareholder rights were protected because the supervisory board chairman still had the casting vote, while noting that the private property rights enshrined in the constitution had also to serve *public* welfare as might obtain from heightened industrial peace and thence improved economic performance.

3. THEORETICAL REMARKS

In (continental) European countries, codetermination is usually justified by traditional political and social arguments such as the "democratization of the employment relationship" and by notions of "stakeholder value", all of which imply that the interests of all relevant groups should be represented in a company's board. However, even economic reasoning focusing on orthodox notions of corporate governance centred on "shareholder value" admits of arguments favouring codetermination.[7] The basic orthodox economic starting point is that codetermination may be a safeguard for the employee side against opportunistic behavior on the part of employers. Absent some form of protection (either institutional or contractual), so the argument runs, employees will be unwilling to undertake reliance investments such as firm-specific skills acquisition. The upshot is that in circumstances where not all coalition-specific resources are owned by one party, codetermination may provide a governance structure that is capable of dealing with maximizing agents with conflicting interests (Furubotn, 1988, p. 168).

However, the codetermination structure envisaged in this hypothetical joint-investment firm where the employees are residual claimants is voluntary. By contrast, under mandatory codetermination major control rights are ceded to employees irrespective of whether or not they have made coalition-specific investments. Further, they are given no income rights in the firm, and normally do not share directly in the residual, and cannot transfer property rights in the job to others, and so on. Politics, so the argument runs, now replace economic responsibility. Employees making decisions do not bear the full cost of their decisions. The situation is to be contrasted with a proper allocation of property rights in the joint investment firm – a sharing of control rights via codetermination – which assures that those making decisions bear the full cost of their actions. This incentive structure promotes both productivity-enhancing incentives as well as relatively lower transaction costs.

Yet, as we all know, such voluntary arrangements have not emerged. Why is this? For his part, Furubotn (1988) speculates that this is because employees can gain more from the political solution of mandatory codetermination than through private bargaining with the firm. After all, they get up to one-half of the seats on the supervisory board without any corresponding duty to invest. But the 'no-show' result has been exploited more generally by Jensen and Meckling (1979), who argue that employee board membership must be detrimental to shareholder value because it has not been embraced by employers. Indeed, they would see the force feeding

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[7] On the two models, see for example Charreaux and Desbrières (2001).

and strenuous opposition of German employers to parity or quasi-parity codetermination as testimony to their indirect argument as to the inefficiency of mandatory codetermination.

Another explanation could be that the market is systematically biased against codetermination. The starting point is the argument by Levine and Tyson (1990) to the effect that codetermination will be underprovided by the market on prisoner's dilemma grounds. The maintained hypothesis is that codetermination is valuable to all firms but to sustain it a compressed wage structure and dismissals protection are required. In these circumstances, any single innovating firm will suffer an externality and adverse selection: its stars will be spirited away by 'traditional' firms, who can offer these workers higher rewards by virtue of their supposedly sharply differentiated wage structures, and it will simultaneously attract the work shy who are now protected from dismissal. On both counts, the codetermined firm will not emerge voluntarily and must be mandated.

Another line of argument is more compelling because it explicitly recognizes rent seeking on the part of labour. Freeman and Lazear (1995) contend that although codetermination raises the joint surplus it raises the rent going to labour more. Employers duly resist codetermination and it has to be mandated albeit coupled with institutional limits on the ability of the employee side to extract rents. The inference of the Freeman-Lazear model (which, however, is constructed around betriebliche Mitbestimmung via works councils) is that the allocation of control rights to corporate assets may have important implications for economic efficiency but that the absence of the institution outside of a mandate is not necessarily decisive.

Thus far we have assumed an identity of interest between management and shareholders. What if managers are imperfect agents of the shareholder principal? One of the few analyses to exploit such agency considerations is Jirjahn's (2003) treatment of executive incentives and firm performance. Jirjahn's treatment has a basis in two key associations: first, the relationship between codetermination (in his model it is works council presence rather than worker representation on company boards) and self-enforcing contracts; and, second, the relationship between agency problems and trustful employee relations. An agency problem may have a commitment value in making self-enforcing contracts feasible. But the introduction of profit sharing for managers may give them the incentive to break implicit contracts with the employees on behalf of profit-maximizing owners with adverse consequences for trust. Where codetermination and self-enforcing contracts are substitutes (i.e. the reputation effects mechanism is strong), the impact of codetermination on firm performance will be stronger in firms with less severe agency problems. Since profit sharing reduces agency problems, the interaction effect between codetermination and profit sharing for managers will be positive, and hence productive of firm performance. The converse applies where codetermination is complementary to self-enforcing contracts (i.e. reducing the employer's incentive to renege on an implicit agreement) and agency increases the range of self-enforcing contracts.

Next consider active rent seeking. Such behaviour on the part of management decreases the range of feasible self-enforcing contracts by hindering cooperative industrial relations. Interaction effects again depend on the relationship between codetermination and self-enforcing contracts in building trust. If they are substitutes, negative interaction effects are expected because, absent managerial profit sharing, codetermination may curb more ambitious rent seeking activities. Any such role for codetermination is attenuated where profit sharing provides an incentive for management to establish trust. Where codetermination and self-enforcing contracts are complementary, on the other hand, the role of codetermination will be more effective in firms with profit sharing.

The model is ultimately inconclusive, but it is an interesting application of property rights in the context of a contracts model.[8] Although they have largely been neglected, property rights considerations would seem to loom large in the area of employee board representation. To take just one example, inefficient supervisory board structures might dominate diffuse stockholding in circumstances where the alternative is labour-controlled boards.

If Jirjahn's model is firmly set in the framework of betriebliche Mitbestimmung, some recent theoretical models have examined board representation more directly in bargaining models. In particular, Kraft (2001) considers a model in which shareholders bargain with employee representatives about employment but not wages. In situations of oligopoly, Kraft shows that for some range of bargaining power in this oligopoly model a prisoner's dilemma exists. In short, the firm is better off under a codetermination mandate irrespective of whether other firms are subject to the mandate, and yet all firms are best off if none of them is subject to codetermination (see also Kraft, 1998).[9] Kraft asks whether firms would have an incentive to introduce codetermination voluntarily (if they become aware of the effects in strategic interaction). Here he refers to the "many unfortunate aspects of codetermination" in terms of investment and finance (Kraft, 2001, p. 563). He also

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8 In fitting a productivity equation to pooled data for 438 German plants observed in 1994 and 1996, Jirjahn (2003) reports that both codetermination and executive profit sharing are positively associated with value-added per employee, but the interaction term is negative. Accordingly, on this model at any rate, either profit-sharing reduces the commitment value of agency in situations where codetermination cannot foster trust without the cooperation of management, or management rent seeking is curbed by profit sharing and codetermination is not so important in building cooperation in circumstances of reduced opportunism on the part of management.

9 Kraft (2001) tests his model by focusing on the determinants of the price-cost margin in 22 German firms, 1972-1994. Evidence compatible with codetermined firms evincing different behaviour is obtained.

notes that codetermination is unlikely to develop naturally given the restriction of the model that bargaining be restricted to employment alone.

A final theoretical development of the codetermined firm in oligopoly is offered by Granero (2006), who considers a duopoly model in which one of the firms is subject to codetermination while its rival is not. He considers the implication of codetermination for R&D and employment. There are two main theoretical results of this strategic R&D model. First, in the absence of bargaining but where there is a utilitarian management, the output best-response function of the codetermined firm shifts out. This can lead the codetermined firm to undertake more R&D investment (and more employment) if the degree of codetermination is 'intermediate.' Second, where there is bargaining – again over employment but not wages which are taken to be exogenous to the firm – the increase in R&D is unambiguous because employment commitments rule out any secondary reduction in employment resulting from the positive effect of R&D on labour productivity. As with Kraft (2001), the relevance of the model ultimately hinges on the nature-of-bargaining assumption, but it again serves to demonstrate that theoretical guidance as to the effect of codetermination is not unequivocal.

Finally, since Granero's model alerts us to certain practicalities such as the 'threshold value' of codetermination (viz. intermediate rather than high codetermination), what other practicalities of German Unternehmensmitbestimmung have to be borne in mind? Corporate control rights in the form of votes are valuable (e.g. by analogy between voting and non-voting shares) but it is not clear that seats are valuable. Relatedly, and abstracting from the rarity of full-parity representation, only almost-equal representation (rather than one-third representation) may affect firm performance. Further, rent seeking can take a number of forms: codetermination may be used as an inter-temporal insurance vehicle protecting employees from adverse shocks and more generally by limiting shareholder's flexibility. And if the U.S union literature (as reviewed by Hirsch, 1991) is applicable, shareholders for their part may take countervailing measures. They might increase firm leverage or they might even seek to change the remuneration of the supervisory board. It follows from these practicalities that investigation of the consequences of company codetermination is a multifaceted exercise.

4. THE EMPIRICAL EVIDENCE

The early literature suggested that codetermination at company level (measured by the introduction of the 1951, 1952, and 1976 Acts) had minimal impact on corporate performance. As far as Montanmitbestimmung is concerned, in comparing two industries subject to parity codetermination with the textile industry, Svejnar (1981) reported that the introduction of codetermination was associated with significantly higher relative earnings in one but not the other. Benelli, Loderer, and Lys (1987) report that the variance in annual stock returns in industries subject to full parity co-determination was lower than in other industries, 1954-1976, implying that less risky investments were being undertaken. But the difference between the two-digit industry groups was not statistically significant. Turning to the 1976 Act, Benelli, Loderer, and Lys in an examination of monthly portfolio return variances in 40 co-determined firms over a period before and after passage of the 1976 Act report a decline in variance, but the same was true of the control sample of 18 non-co-determined firms. And average monthly stock returns dipped in both sets of firms prior to the passage of the Act. Similarly, analysis of differences in means among matched pairs of codetermined and non-codetermined firms over an interval pre-ceding and following passage of the legislation indicated no statistically significant differences in leverage, profitability, dividend payout, capital intensity, and labour costs. Finally, in an analysis of variance, Gurdon and Rai (1990) found materially higher profitability (but lower productivity) in their sample of codetermined firms post 1976 than for the control group (of 26 firms).

Each of the above studies has come in for trenchant criticism for reasons that include sample size, data frequency (in the case of stock returns), lack of controls for other relevant economic or organizational variables, focus on a single event, and narrow reach. The second-phase studies that we next examine in more depth attend to some of these criticisms. They also offer a more pessimistic view of Unternehmensmitbestimmung. That said, in the latest phase the most recent, single-issue treatments are more upbeat.

The first study identified here is notable for its use of a larger sample of firms (but see below) and regression framework. FitzRoy and Kraft (1993) estimate translog production functions for a sample of 112 firms using two cross sections of data for 1975 and 1983, namely the last year before passage of the 1976 Act and an ‘equivalent’ (i.e. recession) year sufficiently long after event for the law to have taken effect. The analysis hinges on the 68 firms that had over 2,000 employees in both years and which therefore changed their codetermination status from one-third to quasi-party codetermination. In each cross section, the dummy variable COD identifies firms with 2,000 or more employees, so that the change in the point estimate identifies the effect of the change in the law.[10]

The authors run three sets of regressions for each cross section: value added, total labour cost per employee, and return on equity. In a final regression, they consider the determinants of productivity growth, 1975-83. The value-added regressions record a significant coefficient estimate for 1973 and an insignificantly negative co-efficient estimate for 1983. The difference between coefficients is statistically significant at the .10 level. That said, the labour cost regressions do not suggest that wages increased, even though the COD coefficient estimates were significantly positive in both years. Yet return on equity did decline significantly over the two years, while the total factor productivity equation indicated that the move to quasi-parity codetermination was associated with a reduction in growth. This was the first study to suggest that the shift to quasi-parity codetermination after 1976 might have measurable private costs: a productivity loss of just under 20 percent of value added. Yet the rent seeking mechanism does not appear to be wages but rather “increased job security and immobility” (FitzRoy and Kraft, 1993, p. 374).

Results consistent with those found by FitzRoy and Kraft are reported by Schmid and Seger (1998) in a German-language study of a sample of 160 large publicly-traded companies observed in 1976, 1987, and 1991. (We will abstract from that part of the authors’ study dealing with voting blocks in company meetings and revisit this issue below in the final analysis considered here.) The dependent variable in this regression study is the market-to-book ratio of equity and the comparison group is again firms with one-third employee representation. Unlike FitzRoy and Kraft (1993), however, this study does not contrast the performance of a given firm before and after the passage of legislation but instead pools the observations and uses year dummies and control variables specific to the firm to net out the effects of codetermination. (We note that this approach and the unbalanced number of firms in the various years is heavily criticized by Junkes and Sadowski, 1999). The coefficient estimate for COD implies an 18 percent decline in share prices. As the authors put it, shareholders would have been willing to cede around 22 percent of the current value of their pre-legislation investment to cancel that legislation, where this ‘willingness to pay’ is the market price of the loss of control rights experienced by shareholders.

The next study examined here by Baums and Frick (1998) is an events study using daily stock return data whose findings are more in line with the earlier literature. It

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[10] Note that the omitted category consists of publicly-traded companies (because of the need to obtain financial information) but since these are necessarily non-codetermined they are not typical of the firmament of such companies.

examines over a period of more than twenty years (January 1, 1974 – December 31, 1995) the outcome of 23 court decisions concerning application of the 1976 Act, either extending or restricting codetermination. (The cases in question were either litigated by the relevant industrial union or by firms seeking to reject the union's claims.) In other words, the sample arguably identifies those cases most likely to suffer material loss as a result of passage of the 1976 Act. Familiarly, the authors compute abnormal returns and the sum of abnormal returns (or cumulated abnormal returns) for the 28 firms in question.[11] The authors consider the abnormal returns on the event days – the date the judicial decision was issued – as well as cumulated abnormal returns in the ten days before and after the event (plus a variety of longer event windows), and also present regression estimates inter alia of the contribution of the type of decision reached (extension/restriction), the outcome (firm wins, union wins, or neither wins), the type of court involved (court of first instance, Appellate Court, Federal Civil Court, Federal Constitutional Court) and reach or ambit of the decision (affecting the firm only or having an economy-wide impact).

Baums and Frick (1998) report that abnormal returns on the event day were modestly positive and were larger (smaller) where there was an extension (restriction) of codetermination rights, although in neither case were these changes statistically significant. Cumulated abnormal returns evinced no pattern, and were not systematically related to type of decision. Nor for that matter did company success (or failure) lead to an increase (decrease) in abnormal returns on either the event day or thereafter. Turning to the authors' regression analysis, in no case were the structural characteristics of the court decision statistically significant determinants of the abnormal return or the cumulated abnormal return.

This issue of 'employer friendly' and 'employee friendly' legal decisions offers an interesting approach to investigating the consequences of codetermination. The fact that the authors were unable to find statistically significant stock market reactions to the verdicts, one way or another, is intriguing. The authors do, however, offer two possible reasons for their finding that stockholders did not experience financial losses due to legal decisions that extended codetermination rights. First a technical reason: the judgment dates used did not correspond to the (unobserved in this study) announcement dates on which information about the disputes or lawsuits was disseminated in the press. In short, the results may have been an artifact of the data, hiding real losses of stockholders. Second, the judicial decisions observed may not have been that important. More important in this respect perhaps were the dates corresponding to the introduction of the Act (July 1, 1976) and the ruling of

[11] 28 firms rather than 23 because in one case 6 companies lodged a joint appeal to the Federal Constitutional Court.

the Federal Constitutional Court that the Act was constitutional (March 1, 1979). Acting against this latter interpretation, however, is the authors' separate sectoral analysis that fails generally to detect negative (positive) changes in average abnormal returns in the sectors most (least) impacted by the Act, comparing the two-and-one-half year period prior to the introduction of the Act/declaration of its constitutionality and the ten days thereafter.

The most detailed study to date of the effects of codetermination on firm financial performance by Gorton and Schmid (2004) reaches more concrete conclusions and provides results more in keeping with the U.S. union literature (e.g. Hirsch, 1991, chapter 4) other than in one important respect. The authors examine the consequences of codetermination for the largest 250 non-financial traded stock corporations in Germany using pooled cross-section time-series data for the sample period 1989-1993. They consider in turn whether quasi-parity codetermination (as compared with one-third representation) affects the performance of the firm – and the manner of that influence – and whether, as reported in the U.S. literature, shareholders responded by taking countervailing measures (such as the assumption of increased debt) to offset the influence of the employee board members.

The authors pay especial attention to the ownership structure of the German corporation and to the monitoring function. Some relevant distinguishing characteristics of the German governance system to keep in mind here are the importance of block share holding, and the role of the banks in controlling equity and corporate governance. Also relevant is the composition of the supervisory board where one-third of shareholder representatives have no equity interest in the company and where the labour side consists of several groups (of workers who are not affiliated with unions or works councils, of union representatives, and of middle management). Finally, as far as ownership structure is concerned, the German situation is complicated because of pyramiding and cross-shareholding. This brings about a distinction between cash flow rights and control rights. In their study, Gorton and Schmid thus use the notion of 'ultimate ownership.' And ultimate ownership emerges as highly concentrated. In their estimating equations, the authors control for the equity control rights held by three types of (ultimate) owners that have been found in the literature to affect the stock market performance of the firm: government, banks, and insiders. They also control for shareholder concentration through the size of the largest existing stake of equity control rights, using a categorical variable.

In analyzing the effect of codetermination on the economic performance of the firm, Gorton and Schmid (2004) use two forward-looking financial indicators: the market-to-book ratio of equity (MTB) and Tobin's q (i.e. the market value of the firm divided by the replacement cost of assets). But they range much further afield and also examine the effects of codetermination on company leverage, the wage bill-to-employees ratio, the employee-to-sales ratio, and the compensation of the management board and the supervisory board.

Beginning with financial performance, their econometric estimation proceeds using a regression discontinuity approach. Familiarly, the principal codetermination regressor picks up the effect of quasi-parity representation as opposed to one-third representation. The authors present semi-parametric regression estimates for (logarithmic) MTB for each of the five years 1989-1993. In each case, the coefficient estimate for COD is negative and statistically significant. The stock market discount ranges from 21 percent in 1989 to 43 percent in 1992, averaging 31 percent over the period. In short, going from one-third to almost-equal worker representation appears to have very serious consequences for shareholder wealth, providing a backdrop to the strong opposition of German employers to the 1976 legislation noted in section 2.[12] Gorton and Schmid then check the robustness of their main results. They first reestimate the regression discontinuity model substituting Tobin's q for MTB and then deploy a nearest-neighbour approach using both performance indicators. Use of Tobin's q yields a narrow spread of statistically significant negative effects of quasi-parity codetermination in the range 24 percent to 29 percent, and averaging 26 percent in the period 1989-1993. Use of a nearest-neighbour (peer group or single firm) approach yields a smaller discount in the range of 9 to 15 percent.[13]

The balance of the authors' analysis is given over to investigating whether codetermination alters the objective function of the firm and possible shareholder countermeasures. In seeking an answer to the former question, Gorton and Schmid (2004) examine the effects of board representation on managerial compensation and find that average management board compensation is contemporaneously negatively linked to performance (measured by MTB) in quasi-parity codetermined firms, and conversely for their counterparts with one-third employee board membership. As far as labour's objectives are concerned, the authors' regression discontinuity estimates point to an absence of any effect of codetermination on the ratio of the (log) wage bill to the number of employees. This result is attributed by the authors to a wage determination process that is conducted outside the firm at industry or regional level. But if codetermination has no measurable impact on earnings, material effects are reported for employment, alternatively measured by

[12] Interestingly, the second most important influence on this profit measure is the fraction of control rights exercised by the government! A one percentage point increase in this fraction decreases the stock market valuation of the firm by between 0.26 and 0.41 percent. The effect of insiders on performance is generally positive in that the greater the equity control rights held by management, other employees, and families, the better financial performance. The influence of the other regressors is mixed.

[13] When one-third representation is compared with almost-equal representation, the stock market premium is correspondingly higher, in the range of 38 to 67 percent.

the (log) ratio of employees to sales and the (log) ratio of the wage bill to sales. Averaged over each of the five years in the sample period, codetermination is associated with a 48 percent longer payroll and a 55 percent higher payroll. The obvious implication is that codetermination results in overstaffing and success by the employee side in altering the objective function of the firm.[14]

In the final part of their analysis, Gorton and Schmid examine whether shareholders take countermeasures that limit – presumably at some cost – worker appropriation of the firm's surplus. Using their nearest-neighbours approach, they report that shareholders respond to quasi-parity representation by increasing the performance sensitivity of supervisory board compensation. That is to say, the pay of non-executive directors is more sensitive to firm performance when employees have quasi-parity board representation than when one-third of the board is made up of worker representatives. In the spirit of the U.S. union literature, the authors also test whether leverage is higher under quasi-parity representation. Their regression discontinuity regressions indicate that the effect of equal representation is to increase the debt-equity ratio by between 47 and 81 percent over the sample period, or by 69 percent on average. Accordingly, Gorton and Schmid (2004, p. 895) conclude: "Shareholders attempt to align with shareholder wealth the interests of employer representatives on the supervisory board by linking employer compensation to firm performance and by leveraging up the firm."

Although Gorton and Schmid's study has received some criticism by reason of its cross-section methodology (where firm specific effects and survivor effects cannot be controlled for), note that the authors are able to distinguish between the influence of (quasi) equal representation and firm size. Their identification strategy hinges on the regression discontinuity introduced by the binary nature of the codetermination variable. Specifically, equal representation is a discontinuous function of firm size (the number of employees of the group of affiliated firms) and firm size (measured by stock market capitalization) is assumed to have a continuous effect on firm performance. In the authors' semi-parametric model, firm size is included in the nonparametric component and the binary codetermination variable is in the parametric component. The goal is to purge the data of the influence of firm size prior to estimating the influence of equal representation in the third step (Gorton and Schmid, 2004, Appendix C). In short, their results do not appear to confound the effect of this type of codetermination with a size effect, subject to the caveat that their sample is restricted to only the largest firms (that is, they do not consider firms

[14] But we should note that Gorton and Schmid (2004, p. 890) caution that "codetermination-induced productivity effects cannot be ruled out."

with less than one-third employee board representation – on the possible consequences of which see below).

Summarizing the literature up to this point, we might argue that the anodyne results from the widely-criticized early studies have given way to improved estimates that tend to paint a much bleaker picture of the economic consequences of codetermination at board level. But, as is so often the case with studies of German institutions, a revisionist interpretation is actively under way.

In the first place, FitzRoy and Kraft (2005) have revised their earlier finding that the 1976 Act adversely impacted labour productivity (although they do not investigate whether the same holds true for firm profitability and the other indicators examined in their 1993 study). The authors now seek to control for unobserved firm heterogeneity or firm-specific effects, necessarily neglected in their earlier cross-section study. Using panel data for 179 manufacturing firms from 1972-1976 and 1981-1985 (i.e. pre- and post-1976 panels), they regress (log) sales on a codetermination dummy defined as firm size greater than or equal to 2,000 in both panels and an additional codetermination dummy defined as codetermined firms only after 1980. The latter variable thus picks up the effect of moving form one-third to quasi-parity codetermination, while the former variable is designed to control for any possible size effect present in the 2,000 employee limit. Other regressors are labour, capital, material inputs, overtime hours, concentration, and imports and exports. Since conventional firm-fixed effects cannot be distinguished from codetermination effects, the authors proceed by allowing some of the other explanatory variables to be related to firm-specific effects and others not, using the Hausman-Taylor method in which both codetermination variables are instrumented. The authors' Cobb-Douglas production function estimates suggest that the switch from one-third to quasi-parity codetermination raised productivity by less than one percent. An alternative specification also allowing for the effect of one-third representation prior to 1976, defined as firms with more than 500 but less than 2,000 employees, produced similar results for the change to almost equal parity representation (although the omitted category now comprises very much smaller firms than before) and a positive coefficient estimate for the new codetermination dummy (subject of course to the caveat than no before-and-after test is employed here). On net, the authors conclude that they can now reject the view that the 1976 Act had effects that were primarily redistributional.

Kraft and Ugarković (2006) basically repeat the exercise for the 'missing dependent variable': the rate of return on equity. That is, their estimations use panel data for 179 companies from 1971 to 1976 and from 1981 to 1986 applying the Hausman-Taylor approach. The regressors include a quadratic in establishment size, capital intensity, market share, the six-firm concentration ratio, export and import shares, extent of overtime working, and three age dummies – and, in one specification by way of a robustness check, a dummy variable for those firms with one-third employee board representation throughout (although this does not allow them to recoup a before-and-after outcome for this lesser-codetermination argument). The authors' results suggest that the additional effect of the introduction of parity code-termination to the initial difference between potential parity codetermination firms and the rest was a small positive value, implying a modestly favourable impact on the return on equity of the 1976 strengthening in the codetermination law.

Analysts thus far have neglected the issue of investment which is the missing link in the study of codetermination and allocative efficiency. With the national innovation debate in Germany (see Nationales Reformprogramm Deutschland, 2005), however, the role of company boards in influencing intangible capital has attracted some scrutiny. To date there have been just two innovation studies, both using patents as the output indicator and building on theoretical models of strategic R&D introduced in section 3 (using the symmetric bargaining case). Kraft, Stank and Dewenter (2003), in an analysis of patent data for 1971 to 1990 covering 162 stock companies (62 of which were codetermined after 1976), report evidence of modestly higher R&D activity (circa 4 percent) among codetermined firms. And a similar conclusion is reached by Kraft and Stank (2004).

But we lack studies of investment. Even if none of the studies reviewed here has obtained evidence of higher wages under quasi-parity codetermination, several have pointed to lower profitability which may adversely impact investment in imperfect capital markets. In the interstices, it is also worth noting here that although patents might be expected to exhibit a relationship with codetermination largely similar to that obtaining in the case of R&D inputs, codetermined companies may patent, given their innovation capital, as a means of reducing rent appropriation. As pointed out in the U.S. union literature, patents offer the opportunity for firms to license product and process innovations, to transform what might otherwise be firm-specific innovative capital into general capital and thereby lessen any ability on the part of the employee side on the supervisory board to ap-propriate the quasi-rents from that capital (see Hirsch, 2004).

We conclude this review with two recent further studies: one by Renaud (2007) that is very much in the spirit of FitzRoy and Kraft (2005) and Kraft and Ugarković (2006); and the other by Fauver and Fuerst (2006) that is a companion study to Gorton and Schmid (2004). We begin with Renaud's analysis of 250-500 companies from the German Financial Database, 1970-2000, which uses the dummies COD and COD80 and the Hausman-Taylor (1981) approach. Renaud (2007) provides three sets of regressions. The first offers a difference-in-differences analysis of value added and profits in which 1970-1976 is the pre-treatment period and 1980-2000 is the post-treatment period. The second seeks to determine the effects of parity codetermination over time using differences in the trends of productivity and profits in quasi-parity codetermined firms and the rest of the sample with one-third employee board representation. The third is a changing parameters model combining elements of the two former approaches. The regressors in the productivity model in addition to the two codetermination variables are employment, capital, age dummies, unit labour costs, and time and industry dummies. The price equation adds capital intensity and the debt ratio as regressors.

The results are as follows. The basic difference-in-differences regression points to mixed coefficients estimates for COD but positive and statistically significant estimates for COD80, indicating that the introduction of near-parity codetermination increased both productivity and profitability in the affected companies in the wake of the 1976 law.[15] The trend estimates of productivity and profitability are mixed. Thus, there is no suggestion of any differential productivity growth favouring quasi-parity codetermined firms after 1980 or indeed any initial differences between the two sets of firms. For profitability, the initial difference is actually negative and statistically significant but the trend interaction terms indicate that the profitability situation for quasi-parity codetermined firms improved after 1980 relative to the control group. As far as the evolution of the trend is concerned, the author obtains no differential effects in any year after 1980 for productivity while in the case of profitability just one interaction term (for the most recent year) is positive and well determined. For both trend analyses, Renaud (2007) cautions that any observed trend differences between the two groups of firms might result from other unobserved influences on the two outcome indicators not captured by the specification. So perhaps the most reasonable conclusion from this study is that codetermined companies did not suffer from the 1976 law.

This brings us in conclusion to the important study by Fauver and Fuerst (2006) in which it is argued that prudent levels of employee representation on company boards can improve board-level decision-making. It is further argued that the potential payoff can be expected to be greater in industries requiring more intense coordination and information-sharing activities, and that the presence of labour representatives can enhance the monitoring of managers and thereby reduce shirking activities. No such favourable inferences are drawn with respect to union representation on company boards.[16]

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[15] Although, as the author admits, the implied increases in productivity and profits – at 16.8 percent and DM 60.5 million, respectively – seem “pretty high intuitively” (Renaud, 2007, fn. 22).

[16] For an interesting German-language study using data for 2002 and 2003 which reports a significantly *negative* effect on employment of trade union representatives on company boards, see Werner and Zimmermann (2005).

Fauver and Fuerst (2006) examine a larger sample of firms than Gorton and Schmid (2004), including firms without any employee board representation, albeit for 2003 alone. The sample consists of all publicly-held firms traded on the German stock exchange at that time (n = 786). The authors present a series of cross-sectional regressions using Tobin's q, supplemented with logit regressions of dividend payment inter al. In addition to the key labour representation measure – namely the presence of one or more employee board level representatives – the covariates include firm size, business segment, geographic diversification, ownership concentration, bank board members, industry concentration, leverage (total debt divided by total assets), and several interaction terms.

In the initial regressions, the key employee representation indicator has no effect on firm value as measured by Tobin's q. However, when interacted with industries supposedly requiring greater coordination, labour involvement and more specialized employee skills sets (together process complexity) the coefficient estimate for the interaction term is positive and statistically significant throughout. Voluntary representation, captured by a variable that takes the value of one where the number of employee representatives exceeds the legal limits, always has a positive influence on shareholder value. By the same token, union representation is uniformly insignificant.[17] As far as ownership concentration, industrial diversification and industrial concentration are concerned, employee representation offsets negative effects and amplifies positive effects on shareholder value. For example, employee board members appear to monitor and reduce the appropriation of small shareholders by powerful blockholders who would otherwise govern the firm to maximize their own private benefit.

Returning to the point that industries requiring more intense coordination, integration of activities, and information sharing benefit more from codetermination, there is some indication that employee representation that 'weakly exceeds one-third but is strictly less than 50 percent' in interaction with these industry indicators (e.g. trade, manufacturing and transportation) evinces a positive and statistically significant effect on firm value while all other employee representation levels are statistically insignificant. So Fauver and Fuerst (2006) speak of some optimal level of representation.

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[17] Logit results are also provided for dividend payouts (circumstances where the firm pays a dividend =1, 0 otherwise). Firms are significantly more likely to pay dividends when there are employee representatives on the board and the interaction of employee representation with the operating income to sales ratio is also positive, which Fauver and Fuerst (2006) take to suggest that labour facilitates the payment of a cash dividend and mitigates appropriation by insiders and large shareholders. In short, employee representatives bring to the table a knowledge base that complements that of shareholder representatives.

Finally, and abstracting here from some important governance issues (including managerial agency costs) because of space constraints, the authors claim they are able to reproduce Gorton and Schmid's (2004) results when they restrict the sample to the top 250 companies and use these authors' measure of employee representation (i.e. quasi-parity representation = 1, 0 otherwise) and controls. Accordingly, Fauver and Fuerst (2006) conclude that the difference between the two studies is due to (a) sample size considerations, (b) the greater likelihood of union representatives as opposed to true employees being on company boards in the Gorton-Schmid sample, and (c) the interaction of complex and high coordination industries and employee board representation neglected by Gorton and Schmid.

5. CONCLUSIONS

Worker representation on company boards arouses strong feelings. At one extreme it is viewed as tantamount to wealth confiscation (e.g. Alchian, 1984, p. 46) with palpably adverse consequences for firm performance. At another, it is viewed as helping guarantee cooperative labour relations, with long-term gains in terms of productivity and improved worker morale. Intermediate positions would recognize the joint occurrence of allocative and distributive effects, permitting either increases or decreases in overall welfare (according to the position taken on the ability of the German system to mediate the conflict between the two forces).

The official German position would appear to be that codetermination is an essential and indispensable element of the social market economy. However, a recent high-level government commission charged with producing proposals on how to adapt quasi-parity codetermination to changed economic and social conditions could not agree on a fundamental revision of codetermination.[18] Opinions of the main interest groups in Germany are sharply divided on the efficacy of quasi-parity codetermination. Although unions argue that codetermination is a successful cornerstone of the German model, the employer organizations seek a ratcheting

[18] More precisely, since the tripartite Biedenkopf Commission was unable to reach consensus, the three academics on the nine-member committee published their own report. This stated that "…the academic members see no overall reason to place in doubt the positive forecast of the legislation of 1976, and to propose a fundamental revision of the legislation, let alone its repeal", concluding that codetermination at company level had strengthened the motivation and sense of responsibility of workers and fostered social harmony (Hans Böckler Stiftung, 2007, p. 3). One main recommendation was that existing legislation be made simpler and more flexible on the basis of negotiations between the two sides, proposing that the worker side encompass representatives of the works council, the union, and senior management according to their composition on the relevant board and that decisions be reached on the basis of a three-quarters majority. The other main recommendation was that the patchwork of inconsistent requirements of the existing legislation (e.g. the differing reporting responsibilities of the management board to the supervisory board by type of company) be rendered consistent.

back to one-third codetermination as a default position. They point to a report issued by the Cologne Institute for Economic Research (Institut der deutschen Wirtschaft Köln) covering approximately 200 private limited companies which concluded that parity codetermination was a source of locational disadvantage. For example, roughly one-half of establishments with (quasi) parity representation indicated that the participation of employee representatives slowed the decision making process. The perceptions of firms with one-third employee representation were altogether more positive, even if a majority of both sets of companies reacted negatively to the participation of external union representatives. And overall, more than 40 percent of all companies surveyed viewed mandatory codetermination as either a great or a slight obstacle to attracting investment and to mergers with German or foreign companies (for details, see Vogel, 2007).

The union side has reacted forcefully, buttressing its advocacy of a strengthening of codetermination (via a reduction in the 1976 Act’s employment size threshold) with favourable commentary as to the impact of the status quo ante contained in selected academic studies (including, for example, the commissioned study by Vitols, 2006). It has also pointed to commissioned survey results according to which 74 percent of the German public view codetermination as a locational advantage and 82 percent of respondents favour the status quo as regards the codetermination rights of employees in supervisory boards (Hans Böckler Stiftung, 2004).

Against this background we have considered the arguments for and against employee representation on the supervisory board. Theory offers guidance but does not allow an unequivocal position to be taken on the issue, absent very stringent assumptions. As usual, therefore, we were led to consider the empirical evidence, tracing three phases in a still sparse literature. The first, comprising a mix of event studies and non-parametric analyses, failed to detect any systematic effect of board codetermination on firm performance. The widely recognized limitations of this research led to a second-phase literature comprising econometric studies and events analyses containing controls lacking in the earlier literature and richer stock market data. Although the evidence from this second phase is not uniform, the balance of the evidence suggests that codetermination is associated with lower productivity, lower profits, a lower market-to-book ratio of equity (and q-ratio), higher labour costs (if not wages), longer payrolls, and some suggestion of shareholder countermeasures. Finally, the most recent literature provides several reversals of finding and several new results. First, there is the suggestion that the negative productivity and profitability effects observed in the second-phase literature may be artifacts of cross-section estimation. Second, there is the suggestion that innovation as measured by patents may be modestly higher in codetermination regimes. Both are interesting findings even if the innovation result may not be particularly compelling until supported by similar evidence on R&D inputs. But most intriguing of all are the findings of the two modern financial studies of the market value of the firm. They hold out the prospect that good corporate governance might include employee representation by virtue of the monitoring function and the reduction in agency costs.[19] But equally, they raise some very important caveats such as the extent of labour representation and the role of external, union representatives, suggesting that optimal representation may be below parity and should be restricted to internal representatives. The latter research is arguably the more fundamental and should inform the more conventional econometric studies more than it has to date.

This, then, is the current state of play in the board-level codetermination literature. Further progress in this area would seem to await more detailed analysis of German corporate governance, tantalizing glimpses into which are offered by both the theory and the most detailed of the extant financial studies. And at some stage investigation of the interaction between board membership and works councils needs to be attempted, which is not an easy assignment given the size thresholds of even one-third employee representation and the strong direct association between works council presence and establishment size. Finally, researchers should try to examine a more comprehensive set of outcome indicators while recognizing the limitations of the data.

Despite the research limitations and desiderata mentioned above, a tentative conclusion from our reading of the empirical literature would be that – at least in the past – the German system of codetermination at company level has not had (positive or negative) economic effects of a magnitude that would induce (other) companies (and governments) to adopt the system or to wholly abandon it. Although there are some indications that German companies have tried to avoid or circumvent codetermination,[20] most companies seem to have learned to live with it. A recent survey concludes that even the establishment of the European Company (SE) offering alternative forms of corporate governance without parity representation does not seem to have changed this: “At least for the time being there is no trend

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[19] See also the findings of a survey among representatives of the group of executive managers on the supervisory board by Jürgens and Lippert (2005), which suggest that all groups on the supervisory board contribute specific areas of knowledge and that each of these groups may be indispensable.

[20] There is anecdotal evidence that some companies in Germany have stopped growing or split up before crossing the threshold levels of employment at which quasi-parity codetermination starts or that they scaled down the employment size of their operations. Unfortunately, empirical investigation of such cases is lacking. But in a recent study with a bearing on the strictures of codetermination at establishment level (i.e. the works council machinery), Koller, Schnabel and Wagner (2008) do not find any evidence that the obligation to release works councillors from work above certain employment thresholds has affected the employment dynamics of German establishments.

towards ‘escape from codetermination’ or its ‘erosion’, as is feared by (quite a few) trade unionists” (Keller and Werner, 2008, p. 169). Taken together, these pieces of evidence suggest that the German system of codetermination may simply be better than its reputation abroad.[21]

That said, it is assuredly still an open question as to whether and how the German system will adapt to the process of globalization and the availability of alternative forms of corporate governance in the European Union. The observation that German employer organizations have intensified their lobbying activities against parity representation in recent years (favouring one-third representation instead) may be a reflection of intensified world-wide competition on goods markets as well as of EU-wide competition in systems of codetermination. It also ties in with the insights of the recent study by Fauver and Fuerst (2006) that employee representation which is below 50 percent may be better for firm value. Even abstracting from employer efforts, the German system may have to undergo some changes because the decline in union density and works council coverage alike means that new institutions might have to arise even to meet EU directives on measures to inform and consult employees.

As a sort of litmus test of codetermination, it will be interesting to see whether codetermined companies in Germany will be as flexible and successful in adapting to the challenges of globalization and of the current economic crisis as companies without quasi parity board-level representation. If they do more than cope, Germany may not only retain its status as one of the world’s leading exporters but might also be more successful in exporting its system of company-level codetermination.

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[21] Note that in the survey by the Cologne Institute for Economic Research mentioned above almost equal shares of establishments with parity representation according to the 1976 Codetermination Act judged codetermination positively or negatively (34.2 and 37.8 percent, respectively). Among firms falling within the ambit of one-third representation, the acceptance rate was even higher (56.5 percent); see Vogel (2007).

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