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

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Abstract

Despite its seeming lack of attractiveness to other countries, the German system of quasi-parity codetermination at company level has thus far held up fairly well. We recount the theoretical arguments for and against this form of codetermination, and survey the evolving empirical evidence as to its economic impact. Even if theory and the more recent empirical findings hold out the prospect that the apparatus of good corporate governance might include employee representation on company boards, caveats attach to the extent of representation and the composition of the worker side. But even if the entity has performed better than its external reputation might indicate, it is clearly in the process of adapting to change. In particular, the availability of alternative forms of corporate governance will increasingly shape the German institution.

JEL Classification: J50

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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 codetermination at company level (*Unternehmensmitbestimmung*), with representatives of employees sitting on company supervisory boards (see Hornung-Drauss, 2009). 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 EU legislation on worker involvement,¹ Germany has not been able to convince its neighbors or the EU to adopt its system of (quasi) parity board-level representation (although this partly reflects the desire of German employers *not* to seek harmonization to a high level; on which, see Addison, 2009). In short, although worker directors are found in most EU member states, their role is usually less comprehensive than in Germany (for a comparative analysis, see Carley, 1998; Schulten and Zagelmeyer, 1998).

What is more, competition has arisen among the various European systems of codetermination 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.² 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

¹ Discussion of workplace codetermination and its effects is provided by Addison, Schnabel, and Wagner (2004). In addition to the European Works Council directive (94/45/EC), 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), national systems for informing and consulting employees (2002/14/EC), and the information and consultation requirements of a slew of health and safety initiatives.

² In addition, we should note the evolution of case law via the decisions of the European Court of Justice as a result of which firms can incorporate in any member state even if their business activities are located elsewhere, as well as other EU legislation in the form of the 2005 Cross-Border Merger Directive (2005/56/EC) that facilitates the transfer of the registered office of an existing company to a different jurisdiction.

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

Despite the German system's lack of attractiveness to other countries, codetermination at company level has held up moderately well inside Germany. According to the Hans Böckler Stiftung (2009), a union-sponsored foundation monitoring codetermination inter al., as of 2008 – some four years after member states had to implement the Regulation/Directive (Germany, on this occasion, being two months late in complying) – 694 companies were still covered by the German Codetermination Act of 1976. But this number has fallen steadily from the maximum of 767 attained 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 On the other hand, among other flexibilities provided for by the legislation, most companies have streamlined (i.e. reduced the size of) their supervisory boards (see, in particular, Reichert, 2008).

³ 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.

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.

The fact that (quasi-parity) worker representation has neither been exported nor abandoned by German companies would suggest that there are different strengths and weaknesses of the system. Adverse consequences might indeed follow were its procedures grafted on to other economic systems while domestic consequences might be benign or even beneficial if problems are dealt with in a timely fashion. The system may thus be better than its reputation amongst foreigners – or German firms could have learned to live with worker directors in much the same way as they seem to have done with works councils (e.g. Kotthoff, 1994).

Although evaluation of codetermination strictly transcends economic issues, our main task will be to survey the evolving empirical evidence on the performance effects of worker representation on supervisory boards. A second issue of course is the system's sustainability in a world of globalization, changes in company law, and European integration, which we shall also examine. 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. We then survey the empirical evidence on the effects of the institution. Next, major challenges facing the institution are recounted. A summary concludes.

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.⁵

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, in such sector-specific companies generally employing more than 1,000 workers. Further, the appointment of a Labor 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

⁵ We should note that the rights of the supervisory board in limited liability companies or GmbHs (*Gesellschaften mit beschränkter Haftung*) differ materially from those in joint stock corporations or AGs (*Aktiengesellschaften*).

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.

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).

Finally, it should not go unmentioned that the 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, 9 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. A more recent example is provided by the internal disputation that marked the deliberations of the tripartite committee of inquiry into the workings of *Unternehmensmitbestimmung*. The body was unable to reach consensus because of sharp disagreement between the employer and union representatives, forcing the academic members to publish their own report (Biedenkopf Commission, 2006).

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 favoring codetermination. (On the two models, see for example Charreaux and Desbrières, 2001).⁶ 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.

⁶ Our discussion will also sidestep the political economy literature and in particular the *varieties of capitalism* model and notions of institutional complementarities (see Hall and Soskice, 2001).

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 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.

Nevertheless the market might be 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.⁷

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*

⁷ A related argument, noted by Dilger (2002), is that voluntary codetermination might offer a bad signal to the market by indicating that the firm requires a 'negotiation platform' with its employees to effect major changes in organization or secure wage concessions. Although such changes might be advantageous, the downside is that they flag poor extant performance and might prejudice recourse to capital markets.

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? Might not this provide a further basis for a mandate? 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 behavior 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). 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 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

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.

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. The bottom line is not only that theory offers few single valued expectations but also that practicalities cast a long shadow, making investigation of the consequences of company codetermination a multifaceted exercise.

4. The Empirical Evidence

In spite of the importance of *Unternehmensmitbestimmung* and the ongoing theoretical and political controversy inside Germany as to the consequences of the institution, the empirical literature on codetermination is still rather sparse. Three main

phases of empirical research can be identified, differentiated by complexity of research design, data sets utilized, and broad empirical results.

Using event studies and non-parametric analyses, the first-phase 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 (which was not), 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 codetermination 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 codetermined 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-codetermined 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 preceding 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 attracted 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 hallmark of the resulting second-phase literature, consisting of econometric studies and events analyses, is the use of improved data and more detailed controls. The outcome was a more pessimistic view of *Unternehmensmitbestimmung*.

The first two second-phase studies discussed here are notable for their use of larger samples of firms and regression frameworks. 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-parity 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. 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.

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 coefficient 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) when analyzing the market-to-book ratio of equity of 160 large publicly-traded companies observed in 1976, 1987, and 1991. 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.

In contrast to the two regression analyses described above, Baums and Frick (1998) conduct an events study using daily stock return data, obtaining findings that are more in line with the earlier literature. Their study 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. 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 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 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, the role of the banks in controlling equity and corporate governance, the composition of the supervisory board and the complications in ownership structure arising from 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 MTB and Tobin's q 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 averages 31 percent over the period when analyzing MTB, 26 percent when looking at Tobin's q , and 9 to 15 percent when using a nearest-neighbor (peer group or single

firm) approach. These results imply that 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.

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: 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.

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 69 percent on average over the sample period. 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), 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. By purging the data of the influence of firm size prior to estimating the influence of equal representation, Gorton and Schmid (2004) 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 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 first-phase studies have given way to improved estimates that tend to paint a much bleaker picture of the economic consequences of codetermination at board level. Although the evidence is not uniform, the balance of the second-phase literature seems to suggest that codetermination is associated with lower productivity, profitability and firm value. But, as is so often the case with studies of German institutions, a revisionist interpretation is actively under way, reflecting the insights of a number of methodologically advanced studies that form the growing third-phase literature.

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 from 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. 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 that 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 redistributive.

Kraft and Ugarković (2006) basically repeat the exercise for 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 authors' results suggest that the additional effect of the introduction of parity codetermination 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.

Another study that is very much in the spirit of FitzRoy and Kraft (2005) and Kraft and Ugarković (2006) has been conducted by Renaud (2007), using information on 250-500 companies from the German Financial Database, 1970-2000. Deploying

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 results are as follows. The basic difference-in-differences regression indicates that the introduction of near-parity codetermination increased both productivity and profitability in the affected companies in the wake of the 1976 law. 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 clear-cut and persistent differential effects. 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.

Despite its use of cross-section data, the financial study by Fauver and Fuerst (2006) is arguably the principal contribution of the third phase. It can be regarded as a companion study to Gorton and Schmid (2004) with the advantage that the authors sample *all* publicly-held firms traded on the German stock exchange in 2003 ($n = 786$) and take account of varying degrees of (optional and mandatory) labor representation. The main insight of this study is 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 labor 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 (see also a recent study by Werner and Zimmermann, 2005, that reports a significantly *negative* effect on employment of trade union representatives on company boards).

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 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.⁹ 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

⁹ 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.

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, p. 703) suggest that 'there is an inverse U-shaped relation between firm value and employee representation on German corporate boards.'

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.

While codetermination effects on productivity, profitability and other financial indicators have been investigated repeatedly, analysts 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 still lack studies of investment in physical capital. 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 appropriate the quasi-rents from that capital (see Hirsch, 2004).

Taken together, the main insights of the third-phase literature suggest that the negative productivity and profitability effects observed in the second-phase studies may be artifacts of cross-section estimation and that innovation as measured by patents may be modestly higher in codetermination regimes (even if the latter result has not been supported yet by similar evidence on R&D *inputs*). Even more intriguing are the findings of the most recent financial study of the market value of the firm, which hold out the prospect that good corporate governance might include employee representation by virtue of the monitoring function and the reduction in agency costs. But equally, they raise some caveats such as the extent of labor representation and the role of external, union representatives, suggesting that optimal representation may be below parity and should be restricted to internal representatives.

However, a problem may arise with the identification strategy used by most the studies that relies on exploiting the change from one-third to parity representation. They do not therefore compare codetermination with no codetermination but a stronger form with a lesser form of codetermination. This may be fine and interpretation of the results would be straightforward if *all* firms in the sample really did practice one-third representation before parity codetermination was imposed.

However, two recent studies cast serious doubt on this assumption. According to Troch (2009) and Wagner (2009), only about 60 percent of all limited liability companies in German manufacturing industries that fall under the Third Part Act meet the requirements of the law in having supervisory boards. This anomaly may affect the interpretation of the effects obtained in previous studies, but it also provides an opportunity for comparing companies from the same size class with and without (one-third) codetermination. In doing so and using a sample of 273 limited liability companies in manufacturing, Wagner (2009) shows that one-third codetermination is not significantly related to either firm productivity or profitability. Although this study is limited by the cross-sectional nature of the data and the small number of control variables available, it points to important topics that have to be addressed in future research (such as issues of research design and interpretation of results).

5. Policy issues

Notwithstanding the recent surge in empirical research and the additional insights gained thereby, 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 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).

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. Now there is little to suggest a move to avoid codetermination at establishment level – see Koller, Schnabel, and Wagner (2008), who report that the obligation to release works councillors from work above certain employment thresholds has not affected the employment dynamics of German establishments. Equally, it is also widely believed that most firms have learned to live with company codetermination. Indeed, one contemporary 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 towards ‘escape from codetermination’ or its ‘erosion’, as is feared by (quite a few) trade unionists” (Keller and Werner, 2008, p. 169).

But one fly in the ointment is the analysis by Eidenmüller, Engert, and Hornuf (2009a) of SE incorporations based on data collected directly from national company registers. The authors provide results from a telephone survey of SE users in Germany in May/June 2008, covering 75 percent of all SEs, supplemented with a broad-brush regression model of the determinants of SE formation in 22 European countries in 2008. The telephone survey inquired of high-level management the reasons for their companies' incorporation. From the survey, codetermination

emerged as a very important motivation for incorporating for a variety of reasons: the freezing of mandatory worker representation (in medium-sized companies, where transformation into an SE before crossing the threshold size to stricter forms of codetermination can be avoided by the act of incorporation), the reduction in the number of supervisory board members and other flexibilities (in the case of large companies), and the scope for avoiding codetermination altogether. Two other key reasons were the availability of a unitary board structure and transference of the registered office to another jurisdiction (i.e. corporate mobility). To be sure, these reasons also have implications for codetermination but their stated rationales were corporate cost savings (particularly for start-ups and closely held firms) and tax-related considerations, respectively. Finally, although the authors' separate country-level regression analysis of determinants of the number of SE incorporations divided by the total number of firms offers more limited support for the legal arbitrage model, there is again some support for the notion that SE formation in Germany may be motivated in small part by a desire to reduce or even avoid the effect of mandatory codetermination.

That incorporating as an SE is an attractive option is also demonstrated by Eidenmüller, Engert, and Hornuf (2009b) in an events study investigating the effect of Council Regulation 2157 on company stock market values (Tobin's q). The authors use data from Thomson-Reuters Datastream on the 30 publicly-traded stock companies that reincorporated as SEs. They present findings on firm level and average abnormal returns in the day of the announcement of reincorporation (day 0), on the days on either side of the announcement (day -1 and day 1), and over all three days (-1, 0, 1), and on cumulative average abnormal returns for event windows of various lengths. Focusing here on the latter, Eidenmüller, Engert, and Hornuf find positive and significant returns for the event windows examined suggesting that reincorporation provided relevant information for a firm's market valuation. At issue of course is the reason for these positive abnormal returns. Apart from the role of legal uncertainty (which should decrease over time) and reputation effects (the issue of image of a SE), both of which explanations are consistent with their data, the authors also examine the role of legal arbitrage as in their previous study. Specifically, they

seek to determine whether legislation that in principle allows a company to freeze the preexisting level of codetermination increases shareholder value. At one level, they again find support for legal arbitrage in that companies reincorporating in Germany constitute a clear majority of the sample (18 out of 30 firms) and Germany of course has the most stringent codetermination rules. More fundamentally, however, the strong predictions of the arbitrage model are on this occasion not upheld. Although the benefits of freezing codetermination should a priori be greatest for smaller companies, the rise in market valuation for such firms was actually smaller than average (although not significantly so). Taken together both studies seem to suggest that incorporations will continue, but it is an open question whether avoiding codetermination is the main reason or just a side effect.

6. Conclusion

Worker representation on company boards still 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, as we have seen, a recent high-level tripartite commission charged with producing proposals on how to adapt quasi-parity codetermination to changed economic and social conditions could not reach consensus (see Biedenkopf Commission, 2006; Hans Böckler Stiftung, 2007).

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 most recent financial study of the market value of the firm, which hold out the prospect that good corporate governance might include employee representation by virtue of the monitoring function and the reduction in agency costs. 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.

In the light of the conflicting evidence sketched above, it is even more of an open question as to how the German system of company codetermination will adapt. The observation that German employer organizations have intensified their lobbying activities against parity representation in recent years (favouring one-third representation as a default) may be a reflection of intensified world-wide competition on goods markets as well as of EU-wide competition in systems of codetermination as manifested in both legislation and corporate law. 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. But even if they cope – and help maintain the nation's enviable export success – the heightened degree of national controversy is unlikely to reassure already skittish international opinion of the efficacy of this particular German 'product'.

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