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The effect of employee workplace representation on firm performance: A cross-country comparison within Europe

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THE EFFECT OF EMPLOYEE WORKPLACE REPRESENTATION ON FIRM PERFORMANCE A CROSS-COUNTRY COMPARISON WITHIN EUROPE

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Abstract

In this paper, we contribute to the extant Industrial Relations literature, which is almost completely confined to estimating the effects of worker participation within a single country, by conducting a comparative multi-country study using unique data from the European Company Survey 2009. We compare representation regimes within the European Union. We categorize the EU Member States into five clusters with similar participation characteristics: the Germanic, French, Anglo-Saxon, Scandinavian and transition cluster. Across these clusters, we first estimate the effects of the presence of what we refer to as an information and consultation body on firm performance, measured by economic performance of the establishment as assessed by managers-respondents. Second, we estimate the effects of managerial attitudes on performance, as we assume – and find – that only taking into account the mere presence of a worker representation is insufficient, as mutual understandings between management and employee representatives affect the functioning of the employee representation body, and hence firm performance.

Keywords: employee representation, works councils, firm performance, international comparison, Europe, ECS2009

JEL classification: J53, M54

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1. Introduction

Within the European Union, worker representatives at the firm level have been granted minimum information and consultation rights since the Directive 2002/14/EC has come into effect in all Members States in the course of the first decade of the 2000s. The underlying rationale is twofold. On the one hand, the Directive intends to give employees more democratic rights, as a counterforce to powerful employers. On the other hand, the Directive expresses the assumption that more worker participation is to the benefit of the enterprise at large by promoting economic competitiveness (ETUI, 2009). In this paper, we want to explore to what degree employee representation at the workplace indeed contributes to the performance of the firm by systematically comparing the firm-level performance effect in different industrial relations regimes across Europe.

At the country level, this question has already been addressed quite extensively, albeit foremost with respect to Germany. In Germany, a long tradition of co-determination research has produced much evidence as to the effects of German works councils on a variety of indicators of company performance (for an overview, see Addison, 2009). In a few other European countries, similar work has been conducted, albeit to a much more modest extent. For instance, in the United Kingdom, a flow of research is based on the British Workplace Employee Relations Surveys (WERS), analyzing the effect of employee involvement on firm performance (e.g., Addison and Belfield, 2001; Bryson et al., 2006). Furthermore, a few French studies focus on the impact of trade unions (Bryson et al., 2011) and works councils (Fairris and Askenazy, 2010) on firm performance. Finally, in the past few years, the effect of Dutch works councils has been analyzed (e.g., Sapulete et al., 2011; Van den Berg et al., 2011).

International comparative work is, however, predominantly available in the form of qualitative case studies. Cross-country quantitative studies, comparing the effects of the

workplace representation system on organizational performance across countries, as of yet hardly have been done. As Bryson and Frege (2010: 232) note: “In spite of the growth in comparative workplace data, articles that compare and contrast findings across countries remain relatively rare.” In the specific research field with regard to the economic effects of worker representative bodies, notable exceptions stem from Bryson and Dale-Olsen (2008), comparing Norway and Britain, Addison et al. (2009), comparing Germany and Britain, and Bryson et al. (2011), comparing France and Britain. The drawback of these studies is that they all utilize and compare data from two different national surveys. We are not aware of any empirical study that compares a whole range of countries, let alone a study that uses a single multi-country survey in order to investigate differences and similarities across countries concerning the effects of employee representation on firm performance.

In the current paper, we make use of the European Company Survey 2009 (hereafter referred to as ECS), which offers an opportunity to fill this gap in the literature. We will only look at worker involvement in the private sector, as the estimated effects thereof on economic performance indicators are interpretable in a more straightforward way than with respect to the public sector (cf. Van den Berg et al., 2009). In order to compare countries that are very different as to their industrial relations regimes, we adopt a five-cluster classification (following Altmeyer, 2005a and 2005b), each cluster featuring similar workplace representation regimes. Employee representation has several manifestations, among which trade unions, works councils, health and safety committees, and (joint) consultative committees. Trade unions are foremost known for their bargaining function, whereas the other forms of representation focus on their deliberative function. The focal point of our study is on

the effects of this second type of representation, the so-called ‘information and consultation bodies’ (I&C bodies¹) such as works councils and joint consultative committees.

Additionally, we contribute to the extant literature by paying attention to both I&C bodies and trade unions. We will argue that because these two types of worker representation fulfill (partly) different roles, they are therefore expected to have a different impact on firm performance. Following upon this logic, we will explore two related moderating effects: the joint presence of I&C bodies and trade unions plus the joint effect of I&C bodies and sectoral agreements. Moreover, as will be clarified below, we strongly believe that simply estimating the effect of the mere existence of a worker representation body on firm performance does not suffice. Therefore, we will perform a subgroup analysis on those establishments that have a worker representation body, and estimate to what degree a good relationship between management and worker representation body enhances firm performance. Finally, we take the moderating effect of firm size into account, because presence and effectiveness of a worker representation body is likely to vary with firm size.

2. Brief overview of the theoretical and empirical literature

2.1 The mainstream approach

Extant Industrial Relations theory on the economic effects of I&C bodies can be traced to Hirschman (1970), who convincingly argued that when workers are given a collective voice, chances increase that their grievances are taken into account and that their interests are served. This, in turn, will boost their satisfaction with the job and commitment to the firm, which translates into higher productivity and a reduced loss of human capital investments, as workers are more inclined to stay in the same organization. Freeman and Medoff (1984) developed this voice logic further with respect to a unionized setting, and Freeman and Lazear

¹ We will use the term I&C body when we refer to the overarching concept of a formal firm-level employee representation institution. We will use the terms works council and joint consultative committee, respectively, when we are discussing a cluster of countries with one of these specific forms of representation.

(1995) did so regarding a works council setting. Freeman and Lazear demonstrate that the deliberative rights of works councils may actually lead to a win-win outcome, benefiting capital and labor alike. First, sharing information can improve communication between management and worker representatives, which in turn is likely to enhance trust. This proves to be especially relevant in bad economic times by preventing industrial unrest, and hence by avoiding a decline in labor productivity (Van den Berg et al., 2011). Second, consultation of the works council by management may help in solving organizational bottlenecks, as employees can have valuable input in finding workable remedies. Third, co-determination rights give employees more control over their own working conditions and work security, which prompts them to stay loyal to the firm in the longer run, and accordingly invest extra effort to the benefit of the organization.

Granting rights to worker representatives, be it by law or as a result of collective bargaining, can thus increase the joint surplus benefiting the firm as a whole. But Freeman and Lazear (1995) also show that the balance may tip at the detriment of the firms' owners when works councils become too powerful and, consequently, appropriate a too large piece of the pie. In addition, Kaufman and Levine (2000) argue that the functioning of a worker representation body is associated with direct costs such as that following from the loss of working hours due to meetings and other representation activities such as schooling, and expenses related to the use of facilities and the hiring of outside advisors. Next to that, indirect costs may occur in the form of a delay in decision-making or a bad or below-par resolution due to a lack of know-how among the worker representatives.

One important moderator is the size of the firm. In smaller establishments, the occurrence of a formal worker representation body is less likely as the distance between employer and work floor is much smaller. Several forms of direct participation can be seen instead (cf. Addison, 2009: 24). Mirror-wise, very large establishments almost always install

an I&C body, at least in the countries where formal worker participation is an accepted, and often legally mandatory, practice (such as in, e.g., Belgium, Germany and the Netherlands, to name just a few). Next to the oftentimes mandatory nature of works councils above a certain establishment size threshold, the high incidence is attributed to a higher need for formalized worker representation in large firms with more impersonal work relationships (Addison et al., 2001). A second reason to assume that firm size can be a moderator follows from the fact that the number of electives and their rights increase with establishment size in several countries with mandatory I&C bodies (European Commission, 2008). Addison et al. (2001) estimate the effects of works council presence on several performance indicators, and clearly find that the impact of councils in smaller establishments (20-100 employees) is negligible, as opposed to their results when combining small and large firms.

Whether the net effect of employee representation is positive or negative will depend on the country-specific and firm-specific context at hand. Such conditional effects need to be determined empirically. Recent findings for Germany by Mueller (2011, 2012) show a significantly positive effect of works council presence on profit and productivity, respectively. But overall, the extensive list of Germany-based papers still provides mixed evidence, both depending on the specific data set used and on the dependent variable employed. This becomes clear from two large literature overviews (Addison, 2009; Jirjahn, 2010b), in which positive, negative and no effects of works council presence are reported in relation to performance indicators such as labor productivity, profitability and innovation, *inter alia*. These mixed findings are even more remarkable given the fact that the majority of the studies are based on one and the same large panel data set. Hence, methodological difficulties are quite persistent (Addison, 2009).

2.2 Additional insights: attitudes, collective bargaining, and institutional environment

In mainstream formal worker representation literature, it is customary to analyze the effect of the mere presence of an I&C body on performance indicators, irrespective of the question as to whether the body in question actually functions well. That is, the key independent variable is a simple yes-or-no dummy variable – nothing more, nothing less. In practice, however, a large number of works councils and similar formal worker representation bodies are either not very active or can even be hostile toward management. Moreover, the understanding with management is oftentimes insufficient (e.g., Frege, 2002). These properties undermine the theoretically expected beneficial effects of worker participation. Our proposition is that only an effective, good functioning worker representation body, which is recognized as such by management, can create value. A relatively small, but growing number of empirical studies offer evidence in support of this claim.

An early contribution is from Kotthoff (1981, 1994), who distinguishes different types of German works councils that each demonstrates different behavior toward management, with different degrees of effectiveness. Quoting Pfeiffer (2011: 2), in Kotthoff's work "effective works councils are characterized as respected regulators, as respected surveillance, or as cooperative counter-power." Remarkably, Kotthoff's 1994 follow-up study among the same works councils reveals that the majority of the works councils that underperformed in 1981 had turned into effective worker representation bodies, owing to a changed working climate in which the works council was treated by management as a full-fledged conversation partner (Frege, 2002). This 'learning experience' is also found by Jirjahn et al. (2011), who report that the longer a works council is already active in the firm, the more influential the works council is and the better is the mutual understanding with management. Moreover, works council age has a significant beneficial effect on both productivity and quit rates. These

findings add a dynamic dimension to the literature: as works councils learn over time, they are better able to contribute to a well-functioning company.

More evidence on the impact of attitudes comes from Nienhüser (2009), who finds that strong German works councils strike more works agreements than their weaker counterparts. He also analyzes the determinants of management's assessment of works agreements, revealing that works councils less willing to cooperate affect management's valuation of the works agreements negatively. In a similar vein, Bryson et al. (2006) establish with British data that firms in which managers are more responsive to worker involvement are associated with higher (perceived) labor productivity. Similarly, Dutch research by Van den Berg et al. (2011) ascertains that management's willingness to cooperate with the works council enhances the firm's economic position, and so does a constructive attitude of the works council toward management. Moreover, if the works council is timely informed and asked for advice, this impacts firm performance positively as well. In all, these results support the notion that group dynamics (parties' attitudes and interaction processes) play an important role in determining the influence of I&C bodies.

Moreover, the attitude and role of trade unions should be taken into account as well, for at least two reasons. First, companies that are bound by a collective labor agreement concluded between employers and unions at the industry or sector level may well experience fewer frictions between management and I&C bodies at the firm level, because then distributional conflicts regarding the terms of employment have already been resolved (cf. Hübler and Jirjahn, 2003). Second, in many countries, works councils and trade unions have strong links at the workplace level. Firms in countries like France and Spain do have works councils installed, but they are classified as 'union dominated' (Altmeyer, 2005a). So, as the bargaining role of trade unions entails a stronger emphasis on negotiations and possibly strikes, the deliberative role of works councils tends to be surpassed in these countries.

Consequently, their influence may be smaller than in countries such as Austria, Germany and the Netherlands, where no formal role is granted to trade unions at the establishment level.

Finally, when assessing the effect of formal worker representation on firm performance, the effect of the institutional environment cannot be ignored: the effectiveness of an I&C body is, at least in part, determined by (in)formal rights – i.e., whether such bodies mainly have a consulting function or possibly a bargaining function as well, and whether only workers sit in such bodies or whether they form a joint committee together with employer delegates. As Biagi and Tiraboschi (2010) argue, joint consultation committees such as in Japan and the United Kingdom have been installed to create mutual trust and understanding, so as to smoothen the firm's operations. However, joint committees are associated with downsides as well: if they are employer-initiated, they often serve only the interests of the employer (e.g., Knudsen, 1995; Frege and Godard, 2010). A cross-country comparative study can reveal the extent to which nation-level institutional differences impact the effect of formal worker representation on firm performance.

3. Different employee representation systems in the EU

Different employee representation systems can be found within the European Union, reflecting different nation-specific historical paths and institutional traditions. An often applied but very crude subdivision is to classify countries into either the set of liberal market economies (LMEs) or that of coordinated market economies (CMEs) (cf. Hall and Soskice 2001). This would imply a European Union with two liberal Anglo-Saxon nations in the LME category and the remaining 25 EU countries in the CME set. After all, the UK and Ireland are the only two Member States where industrial relations are much less governed by legislation or collective labor agreements (Knudsen, 1995, Addison et al., 2009). In these two countries, formal worker participation is not legally mandated, whilst the voluntarily installed labor

representatives in the workplace are not entitled to extensive information and consultation rights. Although the Information and Consultation Directive has been converted into national laws in the UK and Ireland, its implementation actually reflects a very “minimalist approach” (Hall 2005: 111) in order to ensure maximum flexibility for employers.

By and large, all continental EU Member States are associated with coordinated market economies, including legal worker involvement rights. However, this classification masks massive variety as to their formal employee representation systems. So, we need to refine the simple CME-LME dichotomy. The extant literature features different categorizations. For instance, in the study by Visser (2009), Belgium is classified in the same group as Germany and the Netherlands because they share a corporatist welfare regime, social partnership in industrial relations and a dual worker representation system. By contrast, Van Geys (2006) concentrates on the different types of dual channel systems at the workplace level: since Belgian industrial relations are dominated by unions, whereas in Germany and the Netherlands the works council dominates over the union, they fall into different categories. In the similar vein, the United Kingdom and Ireland, on the one hand, and Finland and Sweden, on the other hand, are both considered as varieties of the single channel system (Van Geys, 2006). In other studies, the two country groups are positioned in different systems because in Ireland and the UK the unions do not hold much power, whilst they are very influential in Scandinavia (e.g., Altmeyer 2005a).

3.1 Country clusters

In order to arrive at a good categorization of worker representation regimes, we need to classify the EU countries on the basis of those features that we consider most relevant for our comparative study. These features follow from the above argument. We are foremost interested in the effect of an I&C body on firm performance. Here, we want to distinguish

between bodies at the workplace level with much versus little power, which is connected to their legal prerogatives and to the question whether the I&C body is a committee consisting jointly of workers and employer's delegates or of workers exclusively. In addition, we want to take into account the role of trade unions – not only because the latter could dominate over the former at the workplace level, but also because the occurrence (or absence) of collective labor agreements at the sector level could impact the relationship between management and the I&C body, and hence the degree of influence of these worker representation bodies.

The Member States all have their own peculiarities, but can nevertheless be grouped into five different clusters. We will adopt the division constructed by Altmeyer (2005a, 2005b). His classification mainly serves the purpose to create awareness among German works councils in multinational enterprises that cross-country differences cannot be ignored and that these could impact (the effect of) their actions when dealing with sister companies abroad. So, for our purposes, his classification covers the features that we find most important. The traditional division of the European representation systems is into four 'models' of worker participation (Altmeyer, 2005a): the Germanic, the French, the Anglo-Saxon and the Scandinavian model.² The extension of the EU in 2004 and 2007 added ten new transition countries, which had already begun a conversion toward other forms of worker participation beside trade unions since the fall of the iron curtain in 1989. Although these ten countries have each chosen a different pace and a partly different (legal) interpretation of worker involvement, they are presently all considered as belonging to a separate fifth cluster

² Of the 27 EU Member States, three countries only have trade unions without any form of formal works council representation: Cyprus, Malta, and Sweden. Given our main interest in the effect of I&C bodies, we have decided to remove Cyprus and Malta from further analysis. We decided to keep Sweden in, though, because the union delegates in this country have been given many of the legal rights that are typically assigned to formal works councils in other European countries.

(Altmeyer, 2005b), as their familiarity with private enterprises and worker participation rights is still relatively limited.³

Table 1 below summarizes the main characteristics of worker representation in each cluster. These characteristics concern the most important representation body (and whether or not this is a pure worker or a joint body), the extent of the legal (I&C) rights of these bodies, and the main level of bargaining. The final row in the table presents the figures of the European Participation Index that indicate the strength of overall worker participation per cluster. Although this index includes the influence of workers on the board level as well, which is not subject of our study, the figures are in line with the characteristics per cluster, as will become clear below.

Table 1: Key worker participation characteristics per country cluster

	Germanic	French	Anglo-Saxon	Scandinavian	Transition
Main representation body (at the workplace level)	Works council	Union	Union	Union	Union <i>or</i> works council*
Secondary representation body (at the workplace level)	–	Works council (joint*)	Joint consultative committee	Cooperation committee (joint)	Works council <i>or</i> union*
Information rights**	+++	++	+	+++	+ / ++
Consultation rights**	+++	++	+	+++	+ / ++
Co-decision rights**	+++	–	–	++	– / +
Main level of bargaining	Sector	Sector	Firm	Sector	Firm <i>or</i> sector*
European Participation Index (unweighted average per cluster)***	0.64	0.45	0.27	0.82	0.36

* Depending on the country at issue: see main text.

** Explanation of the symbols: – means absent, while +, ++ and +++ indicate an increasing degree of rights.

*** Figures in this row are based on Vitols (2010:12) and show the unweighted average of three dimensions: formal workplace participation, board representation by workers, and collective bargaining representation (union density + collective agreement coverage).

Note: based on Altmeyer (2005a, 2005b, 2008); European Commission (2008); Aumayr et al. (2011).

³ Through time, however, their learning experience might contribute to their effectiveness, as the study by Jirjahn et al. (2011) suggests.

The *Germanic cluster* consists of the three countries that have of old granted the most extensive legal rights to works councils: Austria, Germany and the Netherlands. In all three countries, the works councils do not only have comprehensive rights with respect to information and advice, but moreover far-reaching co-determination rights – much more so than in any other EU country as regards I&C bodies (Altmeyer, 2005a; European Commission, 2008). In addition, works councils in these three Member States are pure worker representation bodies and are far more important than trade unions at the workplace level (Van Geys, 2006). On the whole, collective bargaining occurs mostly at the sector level (European Commission, 2008), which ensures that works councils can primarily concentrate on their deliberative role. Since they are required by law to serve the interests of the company at large, they are forbidden to organize strikes. Furthermore, despite the fact that, in all three countries, a large percentage of the eligible firms (especially the small ones) do not have a works council installed, the long tradition of worker participation is deeply rooted in society. Therefore, worker representation is widely accepted (e.g., Addison, 2009; Van het Kaar and Looise, 1999).

The Southern European or *French cluster* includes Belgium, France, Luxembourg, Spain, Portugal, Italy and Greece. Notwithstanding many cross-country differences, the similarities are such that they justify this classification into a single group. For one, mandatory works councils officially exist in all but one of the countries (Italy),⁴ but have on the whole been granted less wide-ranging legal rights. They do enjoy rather extensive information and consultation rights (in line with the Directive), but have no, or hardly any, co-decision rights. Moreover, these worker representation bodies are dominated by active and politicized trade unions. Overall, bargaining mainly takes place at the sector level (European Commission, 2008). However, this does not mean that industrial conflicts are mainly confined

⁴ In Italy, one of two types of union bodies exercises the same basic I&C rights granted elsewhere in Europe to works councils. Therefore, in this study, this body is taken to be similar to a works council (cf. Aumayr et al., 2011: 37).

to this sector level, as this cluster of countries can be characterized by workers' inclination to go on strike (which is a legal right) and by the employers' inclination to take up a unilateral and patriarchic stance. In Belgium, France and Luxembourg, works councils consist of employers' delegates, being chaired by the employer (Altmeyer, 2005a).

The *Anglo-Saxon* cluster consists of Ireland and the United Kingdom. The characteristics of these two liberal market economies have already been discussed above. Industrial relations are determined mainly by voluntarism and much is still at the employer's will, as the trade unions lost their power. Also, the legal right to strike is limited (European Commission, 2008). The law does not specify that much regarding worker participation, while the Directive has been interpreted in a very minimalistic way. Works councils are not mandatory. Instead, employers have sometimes erected joint consultative committees (JCCs), in which non-union worker representatives sit together with employer delegates. The employer may decide to consult with shop stewards (union delegates) and/or with JCC members. In either case, this concerns rather modest information and consultation rights (cf. Kersley et al., 2006; Aumayr et al., 2011). The terms of employment are either negotiated upon with trade unions or, more often, determined unilaterally by the employer at the firm level. This holds especially for the UK, but also in Ireland collective bargaining only covers 35 per cent of the private sector workers (European Commission, 2008).

The *Scandinavian* cluster includes Denmark, Finland and Sweden.⁵ Sweden does not have works council representation, but only trade unions. Denmark and Finland are characterized by trade union representation, like Sweden, but feature so-called cooperation committees as well, which are joint worker-management I&C bodies – mandatory by law (since 2007) in Finland and resulting from collective labor agreements in Denmark, and dominated by union delegates in both countries (Aumayer et al., 2011; European

⁵ Norway is disregarded, as a non-EU country not being included in the ECS data set.

Commission, 2008; Jevtić, 2012). Contrary to the Anglo-Saxon cluster, trade unions in Scandinavia organize the majority of all workers, deriving much influence from sectoral and national collective labor agreements, which grants them rather strong co-decision rights that are in many respects comparable to those in the Germanic cluster. In this ‘consensus model’, strikes are rare (Altmeyer, 2005a; 2008; European Commission, 2008).

Finally, the *transition* cluster consists of Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. As former communist countries, trade unions traditionally have a stronghold in all these Member States. But gradually, and accelerated by the introduction of the Directive, all countries have implemented laws that give either some or considerable rights to works councils, which all consist exclusively of workers (Altmeyer, 2005b; Aumayer et al., 2011; Van Geys, 2006). The vanguard is formed by Hungary and Slovenia, where works councils were already installed in the early 1990s, given not only information and consultation rights, but some co-decision rights as well. So, in these countries, the role of the trade unions is now limited to negotiation. In the other countries, the role of the trade unions has remained much larger. In the majority of these countries, the law gives permission to erect works councils, with ensuing I&C rights. But if trade unions are active, they are supposed to take the lead, assigned with I&C rights as well. By and large, strikes are rather rare in transition countries (European Commission, 2008). Based on recent data from the ECS survey (see also Table 2 below), works council representation is doing relatively well in terms of incidence, despite the formal dominance of trade unions (Aumayer et al., 2011).

3.2 Theoretical expectations

Based on the scope of legal rights for worker representatives (and whether or not we are dealing with pure worker bodies or joint committees), we expect the least impact on firm

performance from worker bodies in the Anglo-Saxon cluster, and the most impact in the Germanic cluster. The other three regimes are located somewhere in between these two extremes, with possibly the Scandinavian cluster more in the vicinity of the Germanic cluster, and the French cluster more close to the Anglo-Saxon cluster. The impact in the cluster with transition economies is difficult to predict, given the relative short experience with legal rights of worker representation bodies in these former communist countries.

However, we should not be surprised to find little direct impact from worker bodies on firm performance altogether, as there could be several moderating contingencies that play a role. We focus on four such contingencies. First, the influence of an I&C body may differ in proportion to the size of the firm. In mandatory regimes, works councils usually function better in very large enterprises, where they are an accepted phenomenon (e.g., for Germany, see Dribbusch, 2011). In contrast, in firms just over the legal size threshold, works councils are either absent or only installed because they must be, affecting their impact negatively. In voluntary regimes, this could be the other way around: if an I&C body is erected on the accord of the firm, this is done so because benefits are foreseen. Second, we expect to find a difference between firms that are covered by a collective labor agreement and firms that are not. In the former case, the worker representatives do not need to bargain over terms of employment, but can concentrate on their deliberative function. Third, the influence of a works council may be impeded by the incidence of a (strong) trade union. Then, the trade union takes the front seat, leaving little room for the works council to have an effect. Fourth, prior research has shown that the mere presence of a worker representation body is not (always) a sufficient condition for affecting economic performance. Rather, what matters is whether or not worker representatives and management have a good working relationship.

4. Research design

4.1 Modeling

We estimate two models to analyze the influence of an I&C body on the economic performance of the firm. In the first model, we estimate the effect of the mere presence of such a body on the economic performance of the establishment (I&C model); in the second model, the attitudes of managers and the I&C body regarding their relationship are taken into account (attitude model). In Section 4.3, we will elaborate on all separate dependent and independent variables used in this model. The I&C-model can be written as:

$$\begin{aligned} \text{EconomicSituation} = & \beta_0 + \beta_1 I \& C + \beta_2 \text{Union} + \\ & \beta_3 \text{Workforce} + \beta_4 \text{HRM} + \beta_5 \text{IR} + \beta_6 \text{Firm} + \varepsilon \end{aligned}$$

where *I&C* represents the presence of the I&C body, *Union* the presence of a trade union in the firm, *Workforce* is a vector of characteristics of the workforce (high skilled and gender), *HRM* (human resource management) represents the incentive pay scheme for workers, *IR* (industrial relations) denotes absence or presence of collective labor agreement at the sector level, and *Firm* is a vector of firm characteristics (firm size, sector, productivity growth, and personnel-related issues). We will present two estimates for the I&C-model: one with and one without the interaction of I&C body with firm size. With this interaction, we test whether or not the effect of the I&C body is different for firms of different size categories. Similarly, we will investigate whether the influence of an I&C body is different if a trade union representative is present or if a sector agreement is applicable.

In the attitude model, the same characteristics are included, with two attitude variables added:

$$\begin{aligned} \text{EconomicSituation} = & \beta_0 + \beta_1 \text{Attitude} + \beta_2 \text{Union} + \\ & \beta_3 \text{Workforce} + \beta_4 \text{HRM} + \beta_5 \text{IR} + \beta_6 \text{Firm} + \varepsilon \end{aligned}$$

where the vector *Attitude* represents both the positive attitude and the negative attitude of I&C bodies (see below). For the attitude model, too, we will present two estimates: one with and one without interaction terms of positive attitude with firm size.⁶

4.2 Employee representatives in the data

The data stem from the European Company Survey 2009 (ECS 2009), which was collected by Eurofound (European foundation for the Improvement of Living and Working Conditions). Within each of the 30 countries of the European Union, 27 Member States and three candidate member countries (Croatia, Macedonia and Turkey),⁷ approximately 1,000 firms were approached with a questionnaire for both management (in all cases) and a worker representative (in part of the cases), with both parts containing mostly different questions. For the analysis in this study, only the management questionnaire is used. In our sample, the incidence of I&C bodies and trade unions for 25 Member States within the five clusters is presented in Table 2. On average, 42 per cent of the firms have reported a union and 46 per cent of the firms mention that they have a certain type of I&C body.⁸

Within the *Germanic* cluster, Austria and Germany do not have union representatives at the firm level. Only Dutch firms have a trade union delegation, while about 56.5 per cent of the overall 1,755 firms have a works council. The underlying percentages for Austria and Germany exceed the officially reported works council figures (Allinger, 2011; Dribbusch,

⁶ We also estimated a model with interaction terms of the negative attitude variable by firm size, but the results were not informative in any way (available upon request).

⁷ Because candidate states do not comply yet with the EU (legislative) rules, and since the Directive is our point of departure, we disregard these countries.

⁸ Within the Germanic cluster, the I&C body is the works council for all three countries. In addition, for Germany, both the 'Runder Tisch' and the 'Belegschaftssprecher' are included for firms without a works council. Within the French cluster, the I&C body is, again, the works council for most countries. Only for Italy, the union delegations 'Rappresentanza sindacale unitaria' and 'Rappresentanza sindacale aziendale' are included as I&C bodies. In the absence of a works council for Belgium, the 'Health and Safety committee' is included, and for Luxembourg the 'Délégation du personnel'. Within the Anglo-Saxon cluster, the I&C body is the 'Joint consultative committee' or the 'Employee forum' for the UK, and the 'Statutory employee representation forum' for Ireland. Within the Scandinavian cluster, the I&C body is the 'Cooperation committee' both for Denmark and Finland. Finally, within the transition cluster, all countries have a works council.

2011), which is partly due to the fact that the official firm size threshold is just five employees in these two countries, whereas the ECS only includes firms with ten or more workers. This same argument explains mirror-wise why the ECS figure for the Dutch subsample is lower than the officially reported percentage (Visee and Mevissen, 2009), as the legal firm size threshold in the Netherlands is 50 workers.

Table 2: Trade unions and I&C bodies in five separate country clusters in the sample

Country	Sample N	Presence (in %)	
		Union	I & C body
Germanic cluster	1755	2.22%	56.30%
AT (Austria)	558	0.00%	41.04%
DE (Germany)	785	0.00%	64.97%
NL (Netherlands)	412	9.47%	60.44%
French cluster	4069	24.16%	47.51%
BE (Belgium)	520	45.58%	60.58%
EL (Greece)	613	10.44%	6.69%
ES (Spain)*	958	0.00%	65.87%
FR (France)	573	51.83%	76.79%
IT (Italy)	750	46.80%	49.73%
LU (Luxembourg)	168	0.00%	67.26%
PT (Portugal)	487	6.98%	4.11%
Anglo-Saxon cluster	580	27.07%	28.45%
IE (Ireland)	266	28.20%	22.93%
UK (United Kingdom)	314	26.11%	33.12%
Scandinavian cluster	1669	69.50%	27.98%
DK (Denmark)	485	66.60%	48.66%
FI (Finland)	639	68.86%	36.15%
SE (Sweden)	545	72.84%	0.00%
Transition cluster	1310	45.27%	37.10%
BG (Bulgaria)	46	56.52%	36.96%
CZ (Czech Republic)	189	75.13%	7.41%
EE (Estonia)	30	33.33%	33.33%
HU (Hungary)	140	55.71%	53.57%
LV (Latvia)	33	48.48%	57.58%
LT (Lithuania)	44	31.82%	34.09%
PL (Poland)	245	46.94%	29.39%
RO (Romania)	211	17.54%	71.09%
SK (Slovakia)	79	56.96%	32.91%
SI (Slovenia)	293	37.54%	30.03%
Total	9383	31.25%	43.05%

* For Spain, the ECS data set contains missing values for the presence of a union representative (Aumayer et al., 2011: 47).

Source: ECS 2009.

Within the *French* cluster, 24 per cent of the firms have a union present and 47.5 per cent operate a works council type of body. Among the countries, the ECS percentages in this cluster are quite different, but they seem to be in line with statistics reported elsewhere (e.g., Fulton, 2011), in as far as official figures are publicly available and taking into account that the ECS records firms employing ten or more employees whilst the firm size threshold for establishing a works council is 50 employees in the majority of the countries in this cluster. Luxembourg does not have a union representative at the establishment level.

Within the *Anglo-Saxon* cluster, 27 per cent of the 580 remaining firms have union representatives, while 28.5 per cent of these firms have a JCC type of body. According to Fulton (2011), the ECS figure for the I&C bodies in the UK is very close to the WERS 2004 figure. No official numbers are available for Ireland. Within the *Scandinavian* cluster, 69.5 per cent out of 1,669 firms have a union present, and 28 per cent run a cooperation committee. As explained above, Sweden does not have an I&C body inside the firm. Based on Fulton (2011), we can conclude that official figures are not available for Finland, while for Denmark the estimate is that 70 per cent of all eligible firms have a cooperation committee. The percentage in Table 2 is lower, which is partly attributable to the Danish firm size threshold of 35 workers, with the ECS data including firms as of ten employees.

Within the *transition* cluster, 45 per cent of 1,310 firms have a trade union and 37 per cent a works council. Just like in the French cluster, the percentages are quite different among the countries. According to Fulton (2011), official statistics are missing for all transition countries, so we cannot tell to what degree the ECS figures are in line with actual numbers. The very low proportion of works councils in the Czech Republic reflects the reported union dominance in this country (Altmeyer, 2005b). The only figure mentioned by Fulton (2011) concerns Hungary, where a labor force survey in 2004 indicates that about one third of the

firms had a works council installed. Given the legal firm size threshold of 50 workers in this country, the slightly lower ECS figure is not surprising.

Comparing the clusters, we observe that the incidence of an I&C body is higher than that of the trade union within the Germanic and French clusters. In the Scandinavian and transition clusters, this is the other way around. In the Anglo-Saxon cluster, the ratio is almost fifty-fifty. Although the incidences of trade union and I&C body are not independent,⁹ they are neither perfect substitutes nor perfect complements.

4.3 Sample description

For the attitude model, only firms are selected that have reported presence of an I&C body *and* of which the management has assessed the attitude of the sitting employee representatives. Because for a subsample of these firms a union is present as well, the assessment of the attitude of the employee representatives might refer to either the I&C body or to both worker representation types.¹⁰ For reasons of comparison between the two types of models in our analyses, the I&C-model is therefore based on a subsample consisting of all the firms that are selected for the attitude model, *plus* the firms reporting not having an I&C body as the reference category. In Table 3 the mean, standard deviation and, if applicable, the frequency distribution of the variables are provided. The included variables are from ‘predefined’ questions in the ECS that do not provide any additional clarification as to how exactly a certain variable is measured (e.g., economic situation and productivity).

In both models, our dependent variable is firm performance, which is proxied in the ECS by asking the respondent from management to subjectively assess the so-called ‘economic situation’ of the firm on a five-point Likert scale. For all country clusters, around

⁹ The χ^2 -test statistics of independence of trade union and I&C body presence are equal to 25 for the Germanic, 2,300 for the French, 155 for the Anglo-Saxon, 278 for the Scandinavian, and 379 for the transition cluster (all p -values are equal to 0.000). Details are available upon request.

¹⁰ Selecting firms with only an I&C body and no trade union present would have obstructed the analysis for some clusters because the number of observations would have become too low.

half of management's respondents evaluate the economic situation as quite to very good, ranging from 48 per cent for the Anglo-Saxon cluster, via 49 per cent for the transition cluster, 50 per cent for the Germanic cluster and 53 per cent for the French cluster, to 61 percent for the Scandinavian cluster. Variance is substantial, as a rather large percentage of manager-respondents characterize the economic situation of their firm as quite or very bad. Our key independent variables I&C body and trade union are concisely shown once again. As said, in a few countries, establishments reported systematically the absence of an I&C body or trade union altogether. Because we wanted to take the information of these establishments into account in our analyses, we decided to put the presence of an I&C body (or trade union) variable at zero, and constructed two extra dummy variables to correct for the difference between incidentally "not present" and structurally "non-existent".

In the attitude model, two variables are added, based on the following two statements by managerial respondents: (1) 'The employee representation helps us in a constructive manner to find ways to improve the workplace performance', which is interpreted as a positive attitude; and (2) 'The involvement of the employee representation often leads to considerable delays in important management decisions', which is interpreted as a negative attitude. The attitude model is estimated for the subsample of firms with an I&C body. Within the Germanic, Anglo-Saxon and transition cluster, approximately 65 per cent of the manager-respondents state that they agree or strongly agree with the positive attitude statement. The other two clusters deviate: 80 per cent of the manager-respondents in the Scandinavian cluster agree with the positive attitude statement, whereas only 11 per cent in the French cluster agree. For the negative attitude, the majority of management's respondents disagrees or disagrees strongly with the negative attitude statement. Hence, overall, management values the attitude of the employee representatives as constructive.

The remaining explanatory variables correspond to the overarching labels included in the estimation models as introduced above. ‘Workforce’ covers the percentage high-skilled workers and percentage female employees. ‘HRM’ includes the number of different types of incentive pay: performance-related pay, profit sharing, and share-ownership. ‘Industrial Relations’ contains a dummy for the presence of a sectoral labor agreement. ‘Firm characteristics’ include firm size (five categories), type of industry (service sector, with manufacturing and building trade as the reference category), productivity growth (four answer categories), and five types of personnel-related issues. Firm size is included as a moderating variable. Bivariate analyses reveal that I&C body and firm size are no perfect substitutes,¹¹ and that, on average, larger firms more often have an I&C body vis-à-vis their smaller counterparts. Within each cluster, we have firms without an I&C body that should have one, by law, and firms with an I&C body that are not obliged to have one. With respect to sector agreement as a moderator, the bivariate analyses show that I&C body and sector agreement are independent for the Anglo-Saxon, Germanic and transition clusters, but not so for the French and Scandinavian clusters, albeit not being perfect substitutes.¹²

¹¹ The χ^2 -test statistics of independence of I&C body and firm size are equal to 730 for the Germanic, 989 for the French, 224 for the Anglo-Saxon, 372 for the Scandinavian, and 420 for the transition cluster (all p -values are equal to 0.000).

¹² The χ^2 -test statistics of independence of I&C body and sector agreement are equal to 1.47 (p -value = 0.225) for the Germanic, 79.05 (p -value = 0.000) for the French, 1.32 (p -value = 0.251) for the Anglo-Saxon, 4.50 (p -value = 0.034) for the Scandinavian, and 1.33 (p -value = 0.248) for the transition cluster.

Table 3: Descriptives, maximum and minimum of the variables used by country cluster

	Germanic		French		Anglo-Saxon		Scandinavian		Transition			
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Min	Max
Economic situation	3.44	0.92	3.49	0.86	3.33	0.98	3.68	0.96	3.43	0.83	1	5
Very bad (1)	0.03		0.02		0.05		0.02		0.02			
Quite bad (2)	0.11		0.09		0.14		0.10		0.10			
Neither good nor bad (3)	0.35		0.36		0.33		0.27		0.40			
Quite good (4)	0.40		0.44		0.39		0.42		0.42			
Very good (5)	0.10		0.09		0.09		0.20		0.07			
Representation												
I&C body	0.56		0.48		0.28		0.28		0.37		0	1
Trade union	0.02		0.24		0.27		0.70		0.45		0	1
Positive attitude*	3.65	1.05	3.50	1.03	3.97	0.80	4.00	0.93	3.64	0.95	1	5
Strongly disagree (1)	0.04		0.05		0.01		0.01		0.02			
Disagree (2)	0.12		0.15		0.04		0.06		0.10			
Neither agree nor disagree (3)	0.18		0.18		0.10		0.10		0.20			
Agree (4)	0.48		0.52		0.58		0.52		0.52			
Strongly agree (5)	0.19		0.11		0.26		0.31		0.16			
Total (N)	988		1.933		165		467		486			
Negative attitude*	2.51	1.17	2.71	1.13	2.80	1.12	2.20	1.06	2.54	1.07	1	5
Strongly disagree (1)	0.19		0.11		0.09		0.15		0.14			
Disagree (2)	0.42		0.43		0.49		0.59		0.48			
Neither agree nor disagree (3)	0.14		0.16		0.14		0.10		0.14			
Agree (4)	0.19		0.24		0.22		0.13		0.21			
Strongly agree (5)	0.06		0.06		0.06		0.03		0.04			
Total (N)	988		1.933		165		467		486			
Workforce												
High skilled (%)	13.50	18.53	21.61	26.06	24.81	28.17	15.78	22.22	16.62	20.07	0	100
Female (%)	29.93	25.45	33.10	26.55	32.99	24.67	31.49	26.64	36.41	27.78	0	100

* The two attitudinal variables are based on the following two statements by managerial respondents: 1) 'The employee representation helps us in a constructive manner to find ways to improve the workplace performance' which is interpreted as a positive attitude; and 2) 'The involvement of the employee representation often leads to considerable delays in important management decisions' which is interpreted as a negative attitude.

Table 3 continued

HRM												
Incentive pay	0.74	0.76	0.68	0.78	0.62	0.76	0.88	0.82	0.83	0.77	0	3
0 types	0.44		0.49		0.53		0.37		0.37			
1 type	0.40		0.37		0.34		0.41		0.44			
2 types	0.15		0.11		0.11		0.19		0.16			
3 types	0.01		0.03		0.02		0.03		0.02			
Industrial Relations												
Sector agreement	0.62		0.62		0.37		0.61		0.17		0	1
Firm characteristics												
Firm size												
10-19	0.23		0.27		0.25		0.29		0.19		0	1
20-49	0.24		0.27		0.27		0.29		0.22		0	1
50-249	0.30		0.29		0.32		0.28		0.31		0	1
250-499	0.13		0.11		0.09		0.08		0.14		0	1
500+	0.10		0.06		0.07		0.06		0.14		0	1
Service sector	0.42		0.45		0.46		0.44		0.39		0	1
Productivity growth	2.66	0.90	2.54	1.02	2.47	1.03	2.80	0.86	2.73	0.99	1	4
Decreased (1)	0.11		0.18		0.22		0.08		0.13			
Remained about the same (2)	0.30		0.30		0.28		0.24		0.26			
Increased slightly (3)	0.40		0.30		0.31		0.46		0.35			
Increased considerably (4)	0.18		0.21		0.19		0.21		0.26			
Personnel related problems (%):												
Absenteeism	0.19		0.17		0.09		0.17		0.22		0	1
Difficulties in retaining staff	0.07		0.11		0.06		0.05		0.17		0	1
A need to reduce staff levels	0.25		0.31		0.44		0.37		0.33		0	1
Low motivated staff	0.10		0.21		0.14		0.12		0.22		0	1
Other personnel problems	0.14		0.09		0.09		0.11		0.13		0	1
N	1755		4069		580		1669		1310			

Source: ECS 2009.

4.4 Methodology

Both the I&C and the attitude model cannot be estimated using simple OLS. For the I&C model, we have to take into account the potential endogeneity of the I&C body. For example, Jirjahn (2010a) and Fairris and Askenazy (2010) address the issue of the possible non-randomness of the selection for an I&C body within firms. Looking at the data, for each cluster separately, we see firms without an I&C body that should have one by law and firms that have an I&C body voluntarily. Put differently, a management's discrete choice for having an I&C body installed can be influenced by the manager-respondent's subjective assessment of the firm's economic situation. If that is the case, then the I&C body variable is endogenous: unobserved characteristics might influence the manager's choice for an I&C body and her/his appraisal of the firm's economic situation.

To tackle the endogeneity issue, a so-called treatment model is estimated. The treatment – that is, the presence of an I&C body – is regressed on typical aspects of the cluster that serve as exclusion restrictions (Maddala, 1983; Hamilton and Nickerson, 2003; Bascle, 2008). Typical aspects can be found in the legal domain, proxied by the country the firm is located in, and whether or not the firm is a domestic or a foreign firm. We assume that the legal domain does influence the incidence of an I&C body, but not the economic position of the firm. Furthermore, an international enterprise is less likely to be well accustomed to the institutional environment of the host country, and hence will be less likely to support the installment of an I&C body. A recent finding by Jirjahn and Mueller (2012) confirms this intuition in the sense that their study shows a significantly negative relationship between German works councils in foreign-owned establishments, on the one hand, and productivity, on the other hand.

The econometric I&C model consists of two equations. The first equation is the selection equation that explains the presence of an I&C body:

$$I \& C = \begin{cases} 1 & \text{if } I \& C^* > 0 \\ 0 & \text{otherwise} \end{cases}$$

with $I \& C^* = \alpha_0 + \alpha_1 Z + \alpha_2 X_{I\&C} + \mu$, where $X_{I\&C}$ is a vector of characteristics that are also part of the explanatory variables in the main equation. Here, only the size variable is part of both the main and selection equation. Z is a (vector of) variable(s) that does influence the choice for an I&C body but not the assessment of the economic situation of the firm (i.e., the legal situation proxied by the country dummies and domestic ownership). This first-stage equation is a probit model. The second equation is the main equation that explains the economic situation of the firm:

$$EconomicSituation = \beta_0 + \beta_1 I \& C + \gamma X_{EcSit} + \rho \sigma^2 \lambda + \varepsilon$$

where $I \& C$ represents the mere presence of an I&C body and X_{EcSit} consists of the vector of all explanatory variables described above. It can be shown that the difference in the assessment of the economic situation for firms with and without an I&C body depends on the direct effect of an I&C body on the economic situation and the relationship between the error terms of the two equations (Jirjahn, 2010a):

$$E(EcSit \mid I \& C = 1) - E(EcSit \mid I \& C = 0) = \beta_1 + \rho \sigma_\varepsilon^2 \lambda$$

with $\lambda = \frac{\phi}{\Phi(1 - \Phi)}$, ϕ and Φ evaluated at $\beta_0 + \beta_1 I \& C + \gamma X_{EcSit}$, and ρ the correlation of the error terms of the I&C selection equation and the main I&C equation.

The sign of the estimate for ρ offers the opportunity to give an economic interpretation of the relationship between the economic situation and the presence of an I&C body (cf. Jirjahn, 2010a). If the correlation is positive, this indicates that I&C bodies primarily take up their representative (voice) role, with the aim of strengthening the economic position of the firm to the benefit of workers and owners alike. However, if the sign is negative, this suggests that I&C bodies are inclined to show rent-seeking behavior, in which they serve the

interests of the workers, possible at the expense of the firm as a whole. The identification of this treatment-effect model can be solely based on the non-linearity of the auxiliary variable λ in the treatment model. However, adding exclusion restrictions is preferred. But even if these instruments turn out to be weak, then estimating a treatment-effect model still takes care of correcting for the potential endogeneity of the I&C body.¹³

For the attitude model, we have to take into account sample selection bias. Looking at the data, the assessment of the attitude of I&C bodies by manager-respondents is only known for firms with a form of employee representation. However, for firms without employee representatives, management has an opinion about the attitudes of I&C bodies as well. Since these are not revealed, the data on attitudes are censored. Instead of estimating a selection model taking into account the censoring of the attitude variables, we assume that the choice for an I&C body at the same time reveals the opinion of managers about the attitude of I&C bodies. So, as in the treatment-effect model, the first equation is the selection equation that explains the presence of an I&C body. Then, the attitude model boils down to the well-known Heckman's two-steps estimator (Maddala, 1983; Winship and Mare, 1992; Hamilton and Nickerson, 2003; Bascle, 2008):

$$EconomicSituation = \beta_0 + \beta_1 Attitude + \beta_2 X_{EcSit} + \rho\lambda + \varepsilon$$

with $\lambda = \frac{\phi}{(1 - \Phi)}$, the inverse Mills' ratio, ϕ and Φ evaluated at $-(\alpha_0 + \alpha_1 Z + \alpha_2 X_{I\&C})$, and

ρ the correlation of the error terms of the I&C selection equation and the main attitude equation.¹⁴

¹³ A note should be made on the use of a treatment-effect model for analyzing the economic situation as the dependent variable. Since the economic situation is measured on a five-points Likert scale, an ordered probit model would have been the preferred estimation techniques. However, a treatment-effect model does not easily allow for a categorical dependent variable. Because the endogeneity of the presence of an I&C body is likely to be more of a problem than the ordered categorical nature of the economic situation, we prefer the use of a treatment-effect model.

¹⁴ It could be argued that the attitude characteristics can be endogenous as well: the manager-respondent's assessment of the economic situation might influence his appraisal of the attitude of the I&C body. However, we assume that the attitude characteristics are exogenous.

5. Findings

5.1 Results of the I&C models

The ten columns in Table 4 all report the estimates based on the treatment procedure. The ensuing selection equations can be found in the Appendix. Here, we will concentrate on the results of the two main models: the odd numbered columns depict the results of the basic model, while the even numbered columns show the results when interaction effects of I&C body with firm size are added. For reasons of parsimony, we will focus on the outcomes of our key explanatory variables, and only mention other outcomes when expedient. Central to this study is the effect of the presence of worker representation on firm performance, as measured by the perceived economic situation of the manager-respondent's establishment. Additionally, we separately look at the effect of the presence of trade union representation to correct for the – possibly adverse – effect thereof, under the assumption that trade union delegates emphasize matters of redistribution instead of consultation. To the best of our knowledge, studies at the country level usually do not include the effects of union presence, due to missing data.

The estimates reported in the odd numbered columns in Table 4 reveal a few surprising outcomes. The findings remain unchanged when different versions of the model are estimated. Hence, they are robust for different specifications of the model (available upon request). A very persistent finding is the significantly negative sign of the works council dummy in the Germanic cluster, whereas the Anglo-Saxon cluster produces a significantly positive sign for the presence of a joint consultative committee (JCC). The other three clusters do not come up with a significant effect for the I&C body variable. This pair of significant results suggests exactly the opposite of what was expected beforehand.

Based on the (theoretical) literature and on the strong legal rights of works councils in the Germanic cluster, the presence of a works council is argued to have a stimulating effect on

firm performance, but we find the reverse. At the same time, in the Anglo-Saxon cluster, the estimated effect of a JCC on the economic situation of the firm is positive, which goes against the expectation, given the voluntary nature of this body and the meager rights of worker representatives. Apparently, the mechanism seems to work the other way around: in countries where the installation of an I&C body is mandatory and where delegates have been given substantial legal power, this obstructs firm performance; in contrast, in countries where the I&C body is predominantly installed voluntarily by the employer, the benefits thereof are reaped. That is, the marginal effect of an extra firm with an I&C body in a voluntarist setting has a much stronger (positive) impact on the performance outcome than in an institutional setting where worker involvement is much more common. In the appraisal, we will return to this key finding.

Other relevant results stemming from the basic models concern, for instance, the significantly negative effect of trade union presence in the French and in the transition cluster. This supports the argument that in these two clusters of countries the trade unions of long have a dominant role in negotiating the terms of employment to the benefit of the employees, if necessary by means of strike. Furthermore, we find opposite results for firm size in the Germanic and transition clusters as compared to the Anglo-Saxon cluster. In the former two, firms with a larger number of employees exhibit a positive relationship with the assessed economic situation; in the latter cluster, exactly the reverse relationship exists. The remaining significant control variables all have the expected sign in all cluster equations.

Turning to the even numbered columns of Table 4, we see the results of including firm size as a moderator. Interaction of the presence of an I&C body with the four firm size categories produces the following significant outcomes. Again, the Germanic cluster comes forward. Column 2 shows that the effect of works council presence is very negative in the smallest firms (10-19 workers), possibly reflecting the lack of need for official representation

in firms with a low number of employees. Shifting to the slightly larger firms (20-49 workers), this effect becomes less negative. However, shifting further to the largest firm categories aggravates the negative effect, again. Remarkably, the positive effect occurs exactly with regard to the firm size category for which works councils are not mandatory in all three countries, notably the Netherlands. This finding is in line with the Anglo-Saxon result of the basic model that voluntary employee participation structures are associated with better firm performance.

Another remarkable finding, as reported in the even numbered columns, leaving aside the largest size category as this does contain too few firms, the firm performance effect of the presence of an I&C body tends to become more negative (or less positive) with an increase in firm size in the first four clusters: the first three clusters are associated with significant coefficients, while an *F*-test reveals that this also holds for the joint effect in the fourth cluster. In contrast, the opposite happens in the transition cluster. There, as compared to the smallest category of firms, the larger firms, especially the fourth firm size category (200-499 workers), reveal a positive firm performance effect of the presence of works councils. Apparently, in these young EU Member States, where works councils are a rather new phenomenon, their contribution to the functioning of the firm turns out quite differently than in the older Member States, both the ones with a longer worker participation tradition and the Anglo-Saxon countries with a voluntarist tradition.¹⁵

We also estimated the effect of the two other moderators: (1) the interaction of the presence of an I&C body with the presence of a trade union; and (2) the interaction of the presence of an I&C body with the occurrence of a collective labor agreement at the sector level. The results are rather mixed. We therefore decided to only briefly discuss the significant findings without presenting all the estimation details. Note that the French cluster

¹⁵ As an aside, we also note that including the interaction effects with respect to firm size does not change any of the outcomes with respect to the control variables in any of the clusters.

is not associated with any significant interaction outcomes, and neither are the Scandinavian and transition clusters. Only the Anglo-Saxon and Germanic clusters reveal significant interaction effects. Full estimation results are available on request.

For the Germanic cluster, both added interaction terms separately show joint significance with I&C body presence. The significantly negative firm performance effect of the works council is reinforced by the presence of the union, as well as by a collective labor agreement at the sector level. The first result is less surprising than the second finding. With respect to the latter, this is contrary to our theoretical expectation, and opposite to the empirical finding of Hübler and Jirjahn (2003). We assumed that the presence of a sector agreement would reduce possible conflicts on labor issues at the firm level, but the opposite seems to be the case.

The Anglo-Saxon cluster does produce another interesting outcome. Like for the Germanic cluster, both added interaction terms appear to be jointly significant with the presence of an I&C body (here, JCC). However, exactly as the mirror image of the findings for the Germanic cluster, the significantly positive effect of the JCC is reinforced by the presence of a trade union, as well as by the presence of a sector agreement. So, in this cluster, the theoretical argument as to the smoothening effect of the existence of a sector agreement on labor relations within the firm is confirmed. The result on the interaction effect of the JCC with the trade union is rather remarkable, given the originally negative sign of trade union variable in the basic model estimation. When both types of employee representatives are present in the firm, the positive effect of the JCC dominates the negative effect of the trade union. Apparently, communication via a JCC softens the tough labor relations that often exist between employers and unions.

Table 4: Explaining the firms' economic situation through the presence of worker representation in five county clusters*

	Germanic		French		Anglo-Saxon		Scandinavian		Transition	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I&C body#	-0.659*** (-3.936)	-0.779*** (-4.130)	-0.061 (-1.096)	-0.015 (-0.183)	1.303** (2.126)	1.948** (2.308)	-0.206 (-1.399)	-0.166 (-0.635)	0.0380 (0.387)	-0.163 (-0.886)
Trade union#	0.204 (1.490)	0.172 (1.264)	-0.111*** (-2.665)	-0.102** (-2.443)	-0.147 (-1.598)	-0.141 (-1.550)	-0.002 (-0.0393)	-0.006 (-0.111)	-0.208*** (-3.800)	-0.217*** (-3.947)
Sector agreement	-0.012 (-0.307)	-0.0199 (-0.495)	-5.67e-06 (-0.000)	-0.005 (-0.196)	-0.140* (-1.823)	-0.163** (-2.123)	0.007 (0.146)	0.005 (0.113)	-0.082 (-1.508)	-0.081 (-1.483)
Size_1	-	-	-	-	-	-	-	-	-	-
Size_2	0.050 (0.813)	-0.0278 (-0.385)	0.017 (0.502)	0.008 (0.201)	-0.051 (-0.411)	-0.025 (-0.179)	0.042 (0.672)	0.016 (0.224)	0.158** (2.439)	0.116* (1.646)
Size_3	0.257*** (2.767)	0.456*** (4.159)	0.047 (1.244)	0.030 (0.654)	-0.347* (-1.893)	-0.283 (-1.416)	-0.017 (-0.209)	0.000 (0.001)	0.270*** (3.460)	0.263*** (3.123)
Size_4	0.358*** (2.712)	0.817*** (3.346)	-0.022 (-0.435)	0.070 (0.956)	-0.541* (-1.906)	-0.828*** (-2.587)	-0.069 (-0.597)	0.074 (0.556)	0.363*** (3.821)	0.299*** (2.808)
Size_5	0.228 (1.628)	1.057*** (3.365)	0.006 (0.0973)	0.178 (1.517)	-0.552 (-1.545)	-0.595 (-1.400)	-0.162 (-1.233)	-0.265* (-1.787)	0.334*** (3.323)	0.409*** (3.544)
I&C x Size_1		-		-		-		-		-
I&C x Size_2		0.245** (2.031)		0.000 (0.002)		-0.294 (-1.154)		0.086 (0.496)		0.280 (1.614)
I&C x Size_3		-0.211* (-1.783)		-0.007 (-0.096)		-0.596** (-2.326)		-0.068 (-0.386)		0.181 (1.117)
I&C x Size_4		-0.416* (-1.912)		-0.171* (-1.704)		0.081 (0.253)		-0.335 (-1.427)		0.309* (1.709)
I&C x Size_5		-0.791*** (-2.755)		-0.258* (-1.840)		-0.457 (-1.329)		0.189 (0.673)		0.0346 (0.191)
High skilled	0.001 (0.937)	0.001 (1.117)	0.001** (2.043)	0.001** (2.102)	0.002 (1.169)	0.002 (1.191)	-0.000 (-0.243)	-0.000 (-0.165)	0.002* (1.772)	0.002* (1.839)
Female	0.001 (1.395)	0.001 (1.310)	0.000 (0.311)	0.000 (0.286)	0.002 (1.337)	0.002 (1.191)	-0.001 (-1.105)	-0.001 (-1.034)	-0.000 (-0.00825)	-0.000 (-0.0701)
Incentive pay	0.020 (0.702)	0.020 (0.722)	0.034** (2.091)	0.036** (2.212)	-0.041 (-0.809)	-0.034 (-0.664)	0.042 (1.441)	0.042 (1.449)	0.033 (1.216)	0.032 (1.166)

Absenteeism	-0.041 (-0.785)	-0.034 (-0.642)	-0.015 (-0.428)	-0.012 (-0.351)	0.137 (1.039)	0.149 (1.138)	-0.161** (-2.564)	-0.164*** (-2.614)	-0.137*** (-2.610)	-0.143*** (-2.725)
Difficulties in retaining staff	-0.121 (-1.559)	-0.130* (-1.687)	-0.042 (-1.078)	-0.041 (-1.064)	-0.189 (-1.147)	-0.168 (-1.023)	-0.210** (-2.140)	-0.212** (-2.167)	-0.113** (-1.960)	-0.110* (-1.903)
A need to reduce staff levels	-0.731*** (-15.46)	-0.724*** (-15.38)	-0.511*** (-18.58)	-0.510*** (-18.55)	-0.458*** (-5.887)	-0.447*** (-5.783)	-0.483*** (-10.11)	-0.481*** (-10.03)	-0.486*** (-10.74)	-0.490*** (-10.83)
Low motivated Staff	-0.228*** (-3.302)	-0.215*** (-3.147)	-0.148*** (-4.706)	-0.149*** (-4.730)	-0.118 (-1.067)	-0.133 (-1.205)	-0.249*** (-3.520)	-0.248*** (-3.515)	-0.216*** (-3.973)	-0.218*** (-3.998)
Other personnel Problems	-0.117** (-2.042)	-0.105* (-1.842)	-0.185*** (-4.364)	-0.186*** (-4.400)	-0.497*** (-3.786)	-0.497*** (-3.844)	-0.181** (-2.529)	-0.188*** (-2.629)	-0.122** (-1.966)	-0.121** (-1.960)
Service sector	0.121*** (2.711)	0.109** (2.451)	0.084*** (3.239)	0.083*** (3.205)	0.185** (2.268)	0.210** (2.574)	0.051 (0.999)	0.047 (0.917)	0.025 (0.568)	0.026 (0.586)
Productivity Growth	0.188*** (8.541)	0.189*** (8.662)	0.167*** (13.43)	0.167*** (13.47)	0.202*** (5.427)	0.200*** (5.408)	0.090*** (3.413)	0.089*** (3.374)	0.161*** (7.547)	0.159*** (7.450)
<i>Lambda</i>	0.283*** (2.797)	0.383*** (3.611)	-0.033 (-0.959)	-0.048 (-1.327)	-0.792** (-2.197)	-0.976** (-2.229)	0.082 (0.860)	0.065 (0.560)	-0.005 (-0.0710)	0.012 (0.175)
Constant	3.312*** (33.24)	3.356*** (33.08)	3.278*** (67.11)	3.270*** (65.38)	2.862*** (17.57)	2.777*** (15.35)	3.782*** (36.35)	3.783*** (35.49)	3.074*** (37.44)	3.105*** (36.86)
Observations	1755	1755	4069	4069	580	580	1669	1669	1310	1310
Wald chi2	957.4	991.0	1645	1654	214.7	224.6	447.9	455.7	567.4	574.8
Prob>chi	0	0	0	0	0	0	0	0	0	0

Notes: *t* statistics in parentheses; and *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$.

* The equations of the selection models can be found in the Appendix.

If by law countries do not have a union representative or a works council at firm level, a dummy variable was added to take into account this special type of missing information, which is coded 0 if the information is available and 1 if not. For reasons of parsimony, these dummies are not shown in this table.

Source: ECS 2009.

We have performed a number of robustness checks. First, a comparison of the results for the treatment-effect model and an ordered probit model, without correcting for endogeneity, shows no differences in signs and significances for our key concepts I&C body and trade union. As expected, only the size of the coefficients does differ. Second, restricting the sample to small firms – i.e., with 99 or less employees – does not give different signs for our pair of key concepts either. The size of the effect does alter, and occasionally the significance of the coefficients changes. Third, the model is estimated for the sample of firms without an I&C body plus the firms with an I&C body and information on the attitude variable. When adding the firms that do have an I&C body but for which the information on the attitude variable is not available, the results do not change. Finally, the findings for both key concepts are robust for different operationalizations of control characteristics such as those regarding the workforce and HRM.

5.2 Results of the attitude models

The estimation outcomes of our attitude models are presented in Table 5. Here, we focus on all firms that have reported to have an I&C body installed. Recall that we estimate the effects of two attitudinal variables, based on the following two statements by managerial respondents: (1) ‘The employee representation helps us in a constructive manner to find ways to improve the workplace performance’ (positive attitude); and (2) ‘The involvement of the employee representation often leads to considerable delays in important management decisions’ (negative attitude). We start by looking at the results of the basic model without interaction effects, in the odd numbered columns. Since the negative attitude variable does not produce any significant coefficient at all, we will only discuss the results with respect to the well-disposed attitude toward worker participation.

For three of the five clusters, we find a significantly positive effect on the firm's economic situation stemming from the positive attitude variable. Apparently, in the Germanic, the French and the Scandinavian clusters, a positive mutual relationship between management and I&C body stimulates firm performance. This substantiates earlier findings that were based on a data set concerning the Netherlands (Van den Berg et al., 2011) and the WERS data in the UK (Bryson et al., 2006). When compared to the significantly negative result for the works council dummy in the Germanic cluster, this result suggests that within the firms that have a works council installed, the attitude toward worker involvement is decisive for the economic outcome, and not the mere presence of such a council. Remarkably, the strong positive effect of the JCC dummy in the Anglo-Saxon model does vanish completely when looking at managerial attitudes. Probably, the voluntary installation of the JCCs *per se* already is an indicator of a supportive approach to worker involvement, so that the attitude model does not add anything to the findings of the I&C model. With respect to the five basic attitude models in Table 5, the only model in which the trade union continues to have a negative influence is in the transition cluster.

With respect to the control variables, we observe the importance of including the variable measuring productivity growth. As can be seen from all but two columns (regarding the Scandinavian cluster), this variable turns out positive, and very significantly so. This is a very reassuring finding, by suggesting that reversed causality may not be that much of an issue in our data.¹⁶ After all, it could be argued that a positive attitude not only determines the firm's economic situation, but that this relationship could equally well run the other way around. By controlling for productivity growth, this reversed causality issue might (partially) be corrected for. Concerning the remaining control variables, we can suffice by concluding that all significant estimates have the expected sign.

¹⁶ Of course, causality cannot be properly examined with our cross-section data anyway. Still, the pattern of findings might be somewhat informative in this respect, as discussed in the main text.

Table 5: Explaining the firms' economic situation through attitudes in five country clusters

	Germanic		French		Anglo-Saxon		Scandinavian		Transition	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Positive attitude (1)	0.051*	0.154*	0.040**	-0.025	-0.032	0.135	0.121**	0.247	-0.015	0.679***
	(1.958)	(1.933)	(2.244)	(-0.461)	(-0.357)	(0.304)	(2.354)	(1.491)	(-0.400)	(3.701)
Negative attitude (2)	-0.022	-0.020	-0.015	-0.016	-0.077	-0.078	-0.047	-0.044	-0.039	-0.042
	(-0.877)	(-0.811)	(-0.932)	(-0.977)	(-1.198)	(-1.193)	(-1.064)	(-0.990)	(-1.279)	(-1.381)
Trade union	0.162	0.153	-0.053	-0.048	-0.026	-0.040	-0.151	-0.116	-0.217***	-0.202***
	(1.050)	(0.993)	(-0.917)	(-0.822)	(-0.171)	(-0.262)	(-0.944)	(-0.709)	(-2.740)	(-2.603)
Sector agreement	-0.026	-0.028	-0.003	-0.003	-0.115	-0.111	-0.0370	-0.0442	-0.186**	-0.171**
	(-0.463)	(-0.510)	(-0.0911)	(-0.0835)	(-0.796)	(-0.761)	(-0.420)	(-0.503)	(-2.119)	(-1.973)
Size_2	0.271**	0.635	0.126*	-0.229	-0.165	-0.572	-0.022	1.093	0.364**	3.025***
	(2.371)	(1.617)	(1.812)	(-0.948)	(-0.587)	(-0.250)	(-0.080)	(1.283)	(2.283)	(3.473)
Size_3	0.372**	0.808**	0.256***	-0.00736	-0.025	0.604	-0.289	0.273	0.401**	2.852***
	(2.334)	(2.174)	(3.077)	(-0.0313)	(-0.063)	(0.306)	(-0.678)	(0.314)	(2.423)	(3.706)
Size_4	0.604***	1.478***	0.196*	0.005	0.339	1.679	-0.572	-0.337	0.559***	3.784***
	(2.779)	(3.502)	(1.957)	(0.019)	(0.723)	(0.766)	(-1.011)	(-0.325)	(2.988)	(4.726)
Size_5	0.485**	0.285	0.248**	0.082	0.365	1.323	-0.485	-1.472	0.397**	3.649***
	(2.085)	(0.619)	(2.202)	(0.282)	(0.540)	(0.598)	(-0.722)	(-1.141)	(2.062)	(4.618)
Attitude 1 x Size_2		-0.096		0.099		0.087		-0.274		-0.667***
		(-0.956)		(1.535)		(0.162)		(-1.401)		(-3.109)
Attitude 1 x Size_3		-0.115		0.073		-0.148		-0.148		-0.611***
		(-1.288)		(1.187)		(-0.323)		(-0.818)		(-3.204)
Attitude 1 x Size_4		-0.237**		0.052		-0.317		-0.0701		-0.831***
		(-2.460)		(0.747)		(-0.631)		(-0.332)		(-4.145)
Attitude 1 x Size_5		0.057		0.045		-0.227		0.212		-0.834***
		(0.543)		(0.581)		(-0.464)		(0.827)		(-4.259)
High skilled	0.002	0.002	0.001	0.001	0.002	0.002	-0.002	-0.0019	-0.000	-0.000
	(1.316)	(1.228)	(0.647)	(0.651)	(0.848)	(0.824)	(-1.003)	(-0.807)	(-0.199)	(-0.202)
Female	0.002	0.002	0.001	0.001	0.007**	0.007**	0.001	0.001	-0.001	-0.001
	(1.259)	(1.238)	(1.257)	(1.198)	(2.266)	(2.146)	(0.566)	(0.599)	(-0.867)	(-0.759)
Incentive pay	0.026	0.027	0.056**	0.056**	0.003	0.014	0.092	0.102*	0.091**	0.093**
	(0.714)	(0.765)	(2.387)	(2.393)	(0.0362)	(0.165)	(1.640)	(1.814)	(2.231)	(2.332)
Absenteeism	0.004	-0.001	-0.015	-0.013	-0.147	-0.113	-0.114	-0.100	-0.189**	-0.149*
	(0.052)	(-0.010)	(-0.334)	(-0.288)	(-0.655)	(-0.503)	(-1.102)	(-0.968)	(-2.426)	(-1.938)
Difficulties in retaining staff	0.010	0.014	-0.064	-0.062	-0.376	-0.360	-0.108	-0.137	-0.165*	-0.153*
	(0.104)	(0.139)	(-1.044)	(-1.017)	(-1.110)	(-1.062)	(-0.516)	(-0.656)	(-1.860)	(-1.758)
A need to reduce staff levels	-0.714***	-0.717***	-0.623***	-0.625***	-0.439***	-0.435***	-0.468***	-0.477***	-0.397***	-0.406***
	(-11.56)	(-11.68)	(-15.60)	(-15.65)	(-3.059)	(-3.009)	(-5.415)	(-5.536)	(-5.648)	(-5.902)

Low motivated staff	-0.240** (-2.432)	-0.240** (-2.447)	-0.112** (-2.371)	-0.112** (-2.362)	0.041 (0.204)	0.036 (0.180)	-0.0924 (-0.711)	-0.112 (-0.863)	-0.186** (-2.135)	-0.210** (-2.453)
Other personnel problems	-0.162** (-2.193)	-0.169** (-2.307)	-0.108* (-1.873)	-0.107* (-1.860)	-0.676*** (-3.422)	-0.642*** (-3.193)	-0.305** (-2.535)	-0.271** (-2.231)	0.028 (0.277)	0.039 (0.386)
Service sector	0.171*** (2.735)	0.160** (2.562)	0.145*** (3.667)	0.145*** (3.651)	0.163 (1.007)	0.169 (1.013)	0.011 (0.118)	0.006 (0.0621)	0.070 (1.003)	0.078 (1.137)
Productivity Growth	0.156*** (5.250)	0.156*** (5.291)	0.126*** (6.662)	0.126*** (6.681)	0.180*** (2.604)	0.173** (2.482)	0.074 (1.390)	0.075 (1.416)	0.140*** (4.145)	0.136*** (4.079)
<i>Lambda</i>	0.487*** (2.856)	0.491*** (2.895)	0.222*** (3.373)	0.225*** (3.424)	0.404 (0.802)	0.427 (0.833)	-0.206 (-0.541)	-0.243 (-0.640)	-0.027 (-0.383)	-0.042 (-0.597)
Constant	2.219*** (7.341)	1.828*** (4.394)	2.818*** (18.66)	3.052*** (12.83)	2.479** (2.152)	1.755 (0.763)	3.750*** (5.330)	3.239*** (3.411)	3.219*** (10.85)	0.472 (0.616)
Wald chi2	282.2	300.3	520.0	523.4	73.96	75.98	75.61	82.12	147.8	178.9
Prob>chi	0	0	0	0	9.54e-09	7.35e-08	4.97e-09	7.25e-09	0	0
Observations	988	988	1933	1933	165	165	467	467	486	486

Source: ECS 2009.

In the even numbered columns of Table 5, we report the estimates after including the interaction effects of the positive attitude variable with firm size. We find noteworthy results for the Germanic, Scandinavian and transition clusters.

With respect to Germanic cluster, Column 2 shows that the originally enhancing effect of the positive attitude on the firms' economic situation at first fades away (hence, becomes less positive) when companies grow larger, and even turns negative for the size category 200-499. However, the largest size category produces a more positive effect, but this only concerns approximately ten per cent of the firms in the Germanic subsample. A similar pattern can be found for the Scandinavian cluster. At first sight, this model does not seem to produce significant results, but the underlying *F*-test indicates that the positive attitude toward worker participation in combination with the four size classes is jointly significant (available upon request). These findings suggest that the positive atmosphere between management and I&C body is primarily present in small companies, and possibly in the very large enterprises as well. In small establishments, this could be related to the more informal relationships that can often be found in smaller organizations; in the largest establishments (500+), this might be due to the presence of very formal but at the same time very professional consultative structures.

The transition cluster shows a slightly deviating pattern, because here the originally positive effect of the positive attitude variable only deteriorates when firms grow larger. Contrary to the Northern and Western European Member States, where worker participation, especially in the large enterprises, has a long and established history, this tradition is not there yet in transition countries. And as already noted above, the transition cluster is the only one in which the effect of trade union presence remains strongly negative. So clearly, industrial relations function differently in Eastern Europe.

Finally, we estimated two more interaction effects for the attitude model. Again, for the sake of parsimony, we decided not to report the detailed outcomes (which are available upon request), but rather briefly discuss a few noteworthy findings. The Germanic, French and Anglo-Saxon clusters are associated with a significantly positive result for the interaction of the positive attitude with the presence of a trade union. This suggests that the incidence of a trade union in the workplace fosters this positive attitude toward worker involvement. Maybe, the presence of a relatively tough trade union delegation drives management more in the direction of the relatively cooperative I&C body. As far as the interaction of a positive attitude with a sector agreement is concerned, we find two clusters with a significant outcome. For the French cluster, the initially positive impact of the positive attitude variable is mitigated by the presence of a sector agreement. For the Scandinavian cluster, this is the other way around: the initially positive impact of a positive attitude is further enhanced by the presence of a sector agreement. Apparently, collective labor agreements at the sector level have quite a different impact on industrial relations in one cluster as compared to another.

6. Conclusion

In this paper, we contribute to the extant literature by performing an international comparative study into the effects of worker participation on firm performance with a single cross-country survey data set. We categorize the EU Member States into five clusters with similar employee participation characteristics: the Germanic, French, Anglo-Saxon, Scandinavian and transition cluster. We perform two types of analysis. First, we estimate the effects of the presence of an information and consultation (I&C) body on the perceived economic situation of the establishment, as assessed by manager-respondents. Additionally, we analyze the effect of trade union presence. Second, we estimate the effects of managerial attitudes toward worker participation on this same performance indicator, because we believe that only taking into

account the mere presence of a worker representation body does not suffice, as the issue is whether or not this worker representation body is functioning adequately.

The first analysis generates the remarkable finding that works council presence has a very negative influence on the firms' economic situation in the Germanic cluster, whereas the effect of the I&C body is very positive in the Anglo-Saxon setting. Based on the literature and on the degree of prerogatives for workers in these two clusters, respectively, the opposite result might have been expected. Apparently, in countries where worker involvement is mandatory and where employee delegates have been given substantial legal power, this rather obstructs firm performance. In contrast, in countries where the I&C body is much more of a voluntaristic nature, the firm may benefit from installing such a form of worker representation. Additionally, the effect of trade union presence is significantly negative in the French and transition clusters, underscoring the more active and ideological role of trade unions in these parts of the EU. As far as the combined effects of I&C body's presence with union presence and with a sectoral labor agreement are concerned, we find contrasting results for the Germanic and the Anglo-Saxon cluster, which again highlights the differences within the European Union.

The second analysis confirms our theoretical expectation that a management that is receptive to worker involvement is associated with a positive effect on the economic situation of the firm. Overall, this effect is smaller as firms grow larger. In the Germanic and Scandinavian cluster, the effect increases again for the largest enterprises, suggesting that management and worker representatives in large establishments have learned to deal with their relationship in a professional manner, which pays off well. The opposite effect is found in large firms in the transition cluster, where the existence and rights of works councils are still a rather recent phenomenon. Finally, our additional analyses reveal that the combined effect of a positive attitude with trade union presence has a beneficial effect on the firms'

economic situation in Anglo-Saxon, Germanic and transition clusters, whereas the combined effect of a positive attitude with the presence of a sectoral labor agreement produces divergent results for the French and the Scandinavian cluster. In the French cluster, the incidence of a sector agreement reduces the positive impact of a positive attitude, whereas the opposite is the case in the Scandinavian cluster. This shows once more that the large differences in worker representation regimes are associated with divergent outcomes in our analyses. These findings justify our choice to classify the European countries into five distinct groups.

An intriguing finding is that presence of a worker representation body has a positive effect on firm performance in the Anglo-Saxon cluster, but a negative impact in the Germanic cluster. One interpretation is that this implies that worker representation is particularly likely to affect firm performance positively if installed voluntarily. Enforcing such bodies upon enterprises by law might well have a counterproductive effect. However, as is clear from the positive effect of a favorable management attitude, this interpretation cannot reveal the whole story. In the end, a constructive management – worker representation relationship is critical. Moreover, although the effect of I&C bodies in the Germanic cluster is negative and in the Anglo-Saxon cluster positive, this does not mean that the economic situation is better in the Anglo-Saxon cluster. Alternatively, a negative impact of worker representation may well coincide with better overall economic circumstances than a positive impact. Moreover, worker participation is not a yes-or-no instrument: perhaps, depending upon institutional and organizational contingencies, an optimal degree and nature of worker representation can be identified, especially after taking mutual understanding between management and worker representatives into account. Clearly, these intriguing issues need further work.

For sure, our study is rather explorative in nature, as there is not much empirical literature available on the effects of worker participation outside Western Europe (notably Germany, the Netherlands, France and the UK). The ECS data set is the first large-scale

international survey that allows for comparisons between industrial relations regimes across different countries. Although the data are not perfect, the advantage of a single and identical survey for so many divergent countries should not be underestimated. Moreover, collecting perfectly comparable information across countries as to industrial relations and worker representation is anything but easy, if possible at all, given the large and subtle differences in institutional regimes. Rather than pooling countries in five clusters based on their legal environment with respect to worker representation, we could have conducted analyses for the 25 countries separately. However, such a research strategy would have produced a massive number of findings which in combination with the low number of observations per country cannot be interpreted easily.

In the future, follow-up work can be done to complement the current study. First, to keep the analyses tractable, we also decided to limit our study to a single dependent variable: the manager-respondents' assessment of their firm's economic position. Future work can focus on other performance-related dependent variables such as labor productivity and working climate. Second, the richness of the ECS data offers possibilities to analyze answers by worker respondents, even though this will imply that the number of usable observations will decrease substantially. Third, further analyses can be done on the Germanic and French clusters as works councils are mandatory beyond a certain firm size threshold in these two clusters. Fourth, we could study in greater detail the effects of worker participation on firms that have installed a council voluntarily, those that have evaded the installation of a council, and those that have set up a council forced by the law. Fifth and finally, to date, international comparative research has basically been confined to the analysis of private sector firms, but the ECS dataset offers the opportunity to explore the effects of worker involvement in the public sector as well.

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Appendix Selection equations with Table 4 (odd columns), explaining incidence I&C body

	Germanic	French	Anglo-Saxon	Scandinavian	Transition
Size_1	-	-	-	-	-
Size_2	0.436*** (4.559)	0.575*** (8.916)	0.199 (1.097)	0.773*** (6.842)	0.435*** (3.149)
Size_3	1.335*** (14.05)	1.375*** (20.34)	0.708*** (4.170)	1.571*** (13.22)	1.287*** (10.12)
Size_4	2.240*** (15.01)	1.785*** (18.29)	1.088*** (4.873)	2.201*** (11.00)	1.541*** (10.13)
Size_5	2.394*** (13.01)	2.086*** (15.34)	1.352*** (5.425)	6.751 (0.0462)	1.582*** (10.26)
Domestic owner	0.175*** (3.097)	0.0821** (2.137)	0.174** (2.242)	0.107* (1.747)	0.0370 (0.654)
Germany	-				
The Netherlands	-0.283*** (-3.151)				
Austria	-0.909*** (-10.79)				
Belgium		-			
Greece		-2.022*** (-18.49)			
Spain		0.201*** (2.617)			
France		0.488*** (5.360)			
Italy		-0.258*** (-3.182)			
Luxembourg		0.405*** (3.146)			
Portugal		-2.394*** (-17.98)			
Ireland			-		
United Kingdom			0.324*** (2.726)		
Denmark				-	
Finland				-0.634*** (-7.119)	
Sweden				-11.40 (-0.0558)	
Bulgaria					-
Czech Republic					-1.347*** (-5.379)
Estonia					0.150 (0.453)
Latvia					0.756** (2.401)
Lithuania					0.126 (0.433)
Hungary					0.563** (2.366)
Poland					-0.184 (-0.818)
Romania					1.136*** (4.912)
Slovenia					0.0958 (0.428)
Slovakia					-0.129 (-0.507)
Constant	-0.633*** (-6.730)	-0.686*** (-7.640)	-1.531*** (-8.461)	-0.981*** (-8.481)	-1.473*** (-6.246)
Observations	1755	4069	580	1669	1310