# Does board-level employee representation impact firms' value? Evidence from the European countries

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## Abstract

**Purpose** – Using, for the first time, a sample of European listed firms from 30 countries with different legal regimes of board-level employee representation (BLER), the purpose of this paper is to examine the impact of BLER on firms' value of European public companies, where employee representation is voluntary or imposed by law depending on the country of origin.

**Design/methodology/approach** – Using a difference-in-differences approach and a matching procedure, the authors analyze the impact of BLER on firms' value.

**Findings** – The results of this paper suggest that BLER adopted voluntarily affects positively firms' value comparing to a group of firms where employee representation is in some way mandatory. Moreover, the findings of this paper show that firms from countries where BLER is not imposed by law tend to pay higher dividends. Nevertheless, the evidence presented in this paper only holds for low levels of employee representation on the board.

**Research limitations/implications** – This research not only provides some evidence in favor of the codetermination on corporate governance but also offers new avenues for discussing the conditions necessary for codetermination to be effective, especially the level of employees' participation on board.

**Practical implications** – This study provides to policymakers new insights for them to gain perspective, analyze and decide if codetermination is a useful tool to improve firms' performance or at least in what conditions it should be applied.

**Social implications** – This study incentives the discussion of the proper way to include workers in firms' boards with expected benefits on firms' performance, economies and societies.

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JEL classification - F30, G15, G30, G34, G38

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Journal of Financial Regulation and Compliance Vol. 30 No. 4, 2022 pp. 465-488 Emerald Publishing Limited 1358-1988 DOI 10.1108/JFRC-10-2021-0082 JFRC 30.4 Originality/value – This paper provides evidence of a positive (but limited) impact on firms' value derived from voluntary codetermination.

**Keywords** Board-level employee representation, European listed firms, Firms' value, Payout policy **Paper type** Research paper

## 466 1. Introduction

In recent years, there has been a growing debate about how firms should adapt their corporate governance structures to cope with new challenges posed by sustainability, economic growth and social inclusion concerns. The necessary adaptation process grounds on new business dynamics headed for more inclusive labor markets, where employee ownership and employee participation in business decisions play a major role. For start, this could be achieved with a set of company policies guided by a long-term outlook, which includes, among others, the reformulation of shareholder and executive incentives and compensation plans (OECD, 2018), to moderate short-termism and its perils for a "sustainable company" outline (Jackson and Petraki, 2010). Even if both shareholders and managers align their interests on short-term outcomes, precluding any agency conflict will be made at the expense of long-term prospects, harming employees and other stakeholders' interests (Dallas, 2012).

As Conchon and Waddington (2011) point out, the main issue emerges from the bulk of empirical studies on the effectiveness of corporate governance systems: almost all of them proceed from a shareholder-oriented view. This perspective usually overlooks the importance of employee representation at the corporate decision-making level, as it does not fit the foundations of the reigning principal–agent theory (Allen *et al.*, 2015; Gold and Waddington, 2019). Furthermore, the plethora of legal systems and institutional settings across European Union (EU) countries do not lead to a clearer picture, making it more difficult to capture the role of employees' representation on firms' performance.

Even so, the widespread of board-level employee representation (BLER) throughout European companies is already a reality, and not a singularity (Conchon and Waddington, 2011), though there is no clear-cut evidence on how this corporate governance mechanism affects firms' value.

Therefore, in face of such a lack of conclusive evidence on the role of BLER on firms' value, we contribute to the literature discussing the effects of BLER on European listed firms. Differently from the majority of prior research (that focuses on single-country studies or on a small group of countries with the same legal regime), we explore different legal BLER regimes. Our general goal is to determine the effect of codetermination on firms' value and firm's payout ratio on a sample of European public firms. More specifically, we pretend to test the role of the voluntary codetermination process on firms' performance expecting that voluntary codetermination has advantages over imposed BLER processes. Additionally and having in mind the pros and cons outlined in BLER literature, we also pretend to examine if there is a recommended level of voluntary employees' participation or at least an interval of recommended level participation that impacts positively firms' value.

In fact, the assortment of corporate governance systems and company laws in the EU, despite the efforts for harmonization, has contributed to a European landscape that can be portrayed by different incidence levels of BLER. Following Conchon and Waddington (2011), Conchon *et al.* (2015) or Gold and Waddington (2019), EU Member States, plus Iceland, Norway and Switzerland, can be classified into three groups (until 2015 [1]):

- no regulation countries with no legal provisions or another type of institutional arrangements supporting BLER: Belgium, Bulgaria, Estonia, Iceland, Italy, Latvia, Lithuania, Malta, Romania, Switzerland and the UK;
- (2) limited regulation scope countries where BLER regulation is restricted to some public sector or privatized enterprises: Greece, Ireland, Poland, Portugal and Spain; and
- (3) wide regulation scope countries where BLER is widespread over national laws and other institutional settings [2]: Austria, Croatia, Czech Republic [3], Denmark, Finland, France, Germany, Hungary, Luxembourg, the Netherlands, Norway, Slovakia, Slovenia and Sweden.

Thus, we assign firms from countries included in the group:

- (1) and (2) as the non-codetermination subsample, which is also our group of interest; and
- firms from countries included in (3) as the codetermination subsample, acting as our control group.

Our final sample comprises 15,236 firm-year observations, related to 1,671 listed firms from 30 European countries over the 2006–2015 period.

We test our research hypotheses using different regression methodologies. Our main results provide evidence that BLER adopted voluntarily by firms (from countries where there is no wide BLER regulation scope) impacts positively firms' value relative to a control group of firms (from countries where BLER is in some way mandatory). Moreover, firms from BLER noncodetermination group seem to pay higher dividends than firms included in the control group.

To rule out the possibility of our evidence is resulting from differences in firm-level characteristics, in particular, size differences, we adopt as a robustness check a procedure based on matching observations in the same industry and year and by the closest *Size*, *Sales Growth*, *ROA* and *Leverage* variables. This further analysis supports our main results. In addition, we uncover that our previous evidence, on average, holds for low levels of employee representation (on the board of firms from non-codetermination BLER countries).

Overall, our conclusions contribute to address the role of BLER in the corporate governance framework; moreover, we discuss this issue from the perspective of the advantages of voluntary BLER participation.

The remaining of this study is organized as follows. Section 2 provides a review of the related literature to our research hypotheses. Section 3 describes the data, empirical models and variables. Section 4 presents and discusses the empirical results. Section 5 outlines our main conclusions.

## 2. Literature review and research hypotheses

One can define BLER, also known as codetermination, as the employees' right to attend and participate in the firm's board [4]. However, the question of if and how BLER impacts firms' value is still waiting for robust supporting evidence. At one hand, the mainstream literature on corporate governance, namely, the shareholder-value-oriented approach, says very little about BLER. On the other hand, the few existing studies provide mixed evidence about BLER's effect at the performance level.

As pointed out by Forcillo (2017), some researchers argue that BLER has negative effects on firms' performance (or at least may produce negative consequences after the BLER threshold is reached [5]), as the interests of workers on the board could not be aligned

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towards those of shareholders. In fact, the primary goal of shareholders is to maximize their investments' return, whereas the workers' interests lie in their job role and their salary (Hansmann, 1990). Moreover, it is argued that the presence of workers on the board could delay decisions in terms of planning and innovation of processes, looking to maximize their own interests and not shareholders' interests (Pejovich, 1978). Another negative argument for BLER is that the presence of workers on the board requires specific competencies (e.g. knowledge of corporate strategies) that often they do not have, and therefore, they may be not qualified to cover such role (Huse *et al.*, 2009). This argument is consistent with the idea of workers' influence over firm governance could impede efficient decision-making and lead to "hold-up" problems that discourage capital formation because potential investors know that the outcome of their investment can be captured by workers (Jensen and Meckling, 1979; Dammann and Eidenmueller, 2020).

In addition, and according to Williamson (1975), it is not possible to reach an effective model of governance through a system of BLER because it is imposed exogenously by the law (in certain countries and under specific conditions). If it was efficient, then the shareholders would voluntarily adopt such a model. This view is consistent with Jensen and Meckling (1979, 474), who claim that if BLER is "[...] beneficial to both stockholders and labor, why do we need laws which force firms to engage it? Surely, they would do so voluntarily", meaning that in cases where workers are able to add value to the firms' management, the codetermination could be voluntary and produce positive effects. Gorton and Schmid (2004), addressing the case of the German codetermination system (domestically mandatory), namely, the BLER's intensity impact wherein workers representatives must comprise one-third (a half) of the supervisory board of companies with 500 (2,000) or more employees, find that BLER could be detrimental to firms' value (measured by Tobin's Q). Thereby, firms, where equal representation is applied, underperform by 31% of those with one-third of worker representatives on the board. In a recent study involving German firms, Eulerich et al. (2020) uncover evidence that codetermination reduces, on average, firms' value. Moreover, the authors' findings reveal that employees are able to extract benefits from shareholders through increases in salaries and in employees' number and decrease the value of dividends paid to shareholders; these effects are mitigated by the presence of strong shareholder monitors or high analyst coverage.

On the other side of this discussion, there is a branch of literature that provides evidence of the advantages deriving from the adoption of BLER (Boneberg, 2010). Some of those studies sustain the positive effects of BLER on workers' motivation, which in turn impacts positively firms' performance. The findings of Levine and Tyson (1990) support the presence of workers on the board because this gives them more responsibility, more motivation and, therefore, more involvement in business decisions. Freeman and Lazear (1995) suggest that codetermination allows for a better exchange of information between the board and workers. So, during any period of crisis, codetermination allows a reduction of any probability of strikes and, therefore, greater cooperation between shareholders and workers. In fact, studies carried out by Cable and FitzRoy (1980) and FitzRoy and Kraft (1993), analyzing the performance of German companies, also support evidence that parity codetermination had brought positive effects on productivity to the bigger companies. Moreover, Renaud (2007) analyzed the differences in terms of productivity and profitability of German firms; his results indicate that with the transition from a quasi-parity to parity codetermination, there was an increase in productivity and firms' value. Supporting the Lisbon Strategy of the EU based on active workers' participation, Kluge and Wilke (2007) claim that countries with participation rights for employees, on average, perform better in

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the rankings of the World Economic Forum's Business Competitiveness Index than those without this type of rights. Furthermore, Kleinknecht (2015) emphasizes that a greater diversity of the board can bring better decisions, increasing the quality of monitoring and making better decisions (in the long run) for the company, without thinking merely of shortterm profit. Still, with the focus on German codetermination, Freeman and Lazear (1995) and Lin et al. (2018) find that BLER is a good instrument for interest alignment between managers and debtholders, avoiding expropriation and proposing that employee representatives and debtholders risk profiles are very alike, thus inciting managers to address long-term interests of all of the company's stakeholders and weakening the dominant short-term performance orientation. Furthermore, stronger work participation in decision-making increases firms' leverage with a lower cost of debt, longer maturities and fewer covenants. Moreover, those firms present more stable cash flows and have lowered their idiosyncratic risk. Further, Fauver and Fuerst (2006), using a sample of German listed firms, assert and show evidence that firms with BLER are more prone to pay dividends, which can indicate that BLER triggers the moderating effect of dividends on opportunistic costs (e.g. cronyism) incurred by insiders and large shareholders (Easterbrook, 1984; Faccio et al., 2001; and, in some way, Jensen, 1986). This argument is well expressed by Fauver and Fuerst (2006, 682):

We therefore anticipate that a labor presence on the board should reduce asset stripping, management perk-taking, and management salaries, and increase the payout of cash flows in the form of shareholder dividends.

Still in the German context, Chyz *et al.* (2019) find employee representation on audit committees as the most influential codetermination mechanism associated with reduced aggressive financial reporting (such as tax policy aggressiveness and earnings manipulation). GregoriČ and Rapp (2019) found that firms with BLER are associated with a lower sensitivity of employment cuts to firm performance during crises periods; they have shown that this lower sensitivity was in part ensured through downward adjustments in the labor costs per employee, presumably through the implementation of flexible time agreements, reorganizations of bonus systems, temporary layoffs and work-sharing agreements.

In another context, Hollandts *et al.* (2009) find a significant and positive relationship between employee representation and firm performance (measured by the return on equity) using a French sample.

One of the strongest results on the benefits of BLER came from a study provided by Jäger *et al.* (2021), which showed that shared governance resulted in positive effects on capital formation as the result of worker involvement in investment decisions; such fact could be derived from worker representatives have longer-term views than shareholders or executives or also because shared governance generally facilitates cooperation between firms and their employees.

Anyway, for the positive effects of BLER to be effective, some conditions must hold, as it is not automatic; in literature, BLER efficacy has been linked to the employers' attitudes towards workers' voice (Holland, 2014; Jirjahn and Mohrenweiser, 2016) or to the ability of employees (Huse *et al.*, 2009). More specifically, GregoriC and Poulsen (2019, 244) state:

The latter will be more likely when employers acknowledge the positive effects of BLER, in terms of higher employee commitment, investments in firm-specific knowledge, productivity and improved employee–employer cooperation.

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Complementarily, the benefits of the codetermination can also be associated with better socially responsible behavior of firms, then resulting in competitive advantages for organizations and, in turn, be beneficial for shareholders in terms of corporate financial performance (Van der Laan *et al.*, 2008), where company social responsibility activities act as a moderator between BLER and financial performance (Lopatta *et al.*, 2020); in this context, Scholz and Vitols (2019) show a positive relationship between codetermination and corporate social policies as the adoption of targets for reducing pollution in Germany. Surprisingly, corporate social responsibility (CSR) is only marginally addressed in literature but could be an important argument in favor of codetermination (Nekhili *et al.*, 2020). Besides CSR, Rosenbohm and Haipeter (2019) also find that corporate structures (such as headquarters location or the level at which supervisory boards are established) are powerful resources available to employee representatives.

In brief and drawing on these studies, one can expect that BLER's efficacy could be higher when employers are more supportive of it, and employees are more suited to play the role of managers. Complementarily, as pointed out by Jackson (2005), the difference in BLER benefits across countries is also explained by unions' strength, political systems and the degree of concentrated corporate ownership.

Building on this study objectives, on the overall previous evidence and on Jensen and Meckling arguments, we postulate as our first set of hypotheses that BLER will have positive effects on firm' value, as well as on payout ratio, in countries that voluntarily adopt the employee representation on their boards. Thus, we defend the idea that just when the stakeholders believe in codetermination (and find a proper equilibrium between shareholders and workers' interests) that it really works and can be a governance mechanism leading to improved firm's performance.

- *H1a.* Board representation by directors elected by employees has a positive impact on firms' value from countries included in the non-codetermination group.
- *H1b.* Board representation by directors elected by employees has a positive impact on firms' payout ratio from countries included in the non-codetermination group.

Nevertheless, concerning the impact of BLER on firms' value and discussing with further detail the previous argument, Gorton and Schmid's (2004) observed that the prudent use of labor in corporate governance can be value-enhancing, but the excessive influence of labor can create a firm that is a "country club" for workers.

Also, Germain and Lyon-Caen (2016) developed a corporate board theoretical model showing that low levels of employee representation on the board may increase the shareholder's value, affecting positively the strategic choices made by the firm, which leads to more investment in long-term projects. They also showed that employee representation increases the shareholder value if the conflict of interest is not too severe, and employees can provide valuable enough information. This is consistent with Fauver and Fuerst's (2006) research, who found that a limited employee representation increases significantly the value of large German firms.

Accordingly, we also intend to test if there is evidence of such alleged harmful effects of BLER (on firms' value) when labor representation surpasses a certain level. Thus, we will test further this prediction. Therefore, we formulate our second set of hypotheses.

*H2a.* Low levels of employee representation on the board have a positive impact on firms' value from countries included in the non-codetermination group.

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*H2b.* Low levels of employee representation on the board have a positive impact on firms' payout from countries included in the non-codetermination group.

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## 3. Data and methodology

## 3.1 Data

Following prior studies (Knyght et al., 2010; Vitols, 2010; Aubert et al., 2017; Kim and Patel, 2017), we use the information on publicly traded companies from the European Foundation of Employee Share Ownership (EFES). The EFES data set includes all economic and financial information about employee share ownership, employee share plans and participation, as well as about corporate governance and about the ownership structure of the largest 2.747 European public companies. We then matched with Thomson's Datastream and Worldscope databases to collect market variables and accounting data for the 2006–2015 period. We exclude financial firms because their accounting standards are structurally different from commercial firms and also exclude observations without available information on total assets, market and book value of equity. To reduce the effect of outliers, we winsorize all continuous variables at the 1% in each tail of the distribution. Thus, we assign firms from countries included in Groups (1) and (2) as the noncodetermination subsample, our group of interest, which includes countries where there is no wide regulation for BLER as Belgium, Bulgaria, Estonia, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Spain, Switzerland and the UK and firms from countries included in Group (3) as the codetermination subsample (where there is a wider regulation for BLER) such as Austria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Luxembourg, The Netherlands, Norway, Slovakia, Slovenia and Sweden.

Our final sample comprises 15,236 firm-year observations, related to 1,671 listed firms, from 30 European countries across the 2006–2015 period, where the non-codetermination (codetermination) group sums 925 (746) firms.

Panel A of Table 1 describes our sample by country, and Panel B (Panel C) describes it by industry (the type of control).

In Panel A, we observe that most firms in the non-codetermination group are from Italy, Switzerland and the UK; together, they count two-thirds of observations. Regarding the codetermination group of countries, France and Germany sum about 50% of total observations. Panel B shows that most firms belong to the manufacturing sector in both groups. Concerning the type of control, we can see in Panel C that most firms have dispersed ownership, whereas family management has a significant weight mainly in firms from codetermination BLER countries (21% in the codetermination versus 11% in the noncodetermination group).

#### 3.2 Empirical methodology

To test the impact of BLER on firms' value (and also on payout ratio), we follow the intuition of prior research (Fauver and Fuerst, 2006; Ginglinger *et al.*, 2011) and estimate the following models:

$$Y_{i,t} = \alpha_i + \beta_1 DEMP_{i,t} + \gamma_1 (\text{Firm Level}) + \gamma_2 (\text{Governance level}) + \mu_i + \gamma_t + \varepsilon_{i,c,t}$$
(1.1)

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30,4	Subsample:	Non-codeter No. Firms	mination Obs.	Codeteri No. Firms	nination Obs.
	Panel A – sample description by country				
	Austria	-		27	263
	Belgium	50	464		
<b>472</b>	Bulgaria	6	38		100
<b>T</b> / <i>D</i>	Croatia			11	102
	Czech Republic			8	73
	Denmark	C	50	42	375
	Estonia	6	58		500
	Finland			55	523
	France			204	1927
	Germany	00	050	172	1590
	Greece	36	350	-	50
	Hungary	0	10	5	50
	Iceland	3	19		
	Ireland	18	161		
	Italy	117	1,075		
	Latvia	3	29		
	Lithuania	4	31		
	Luxembourg	_		6	46
	Malta	5	48		
	Netherlands			51	460
	Norway			77	697
	Poland	81	734		
	Portugal	23	218		
	Romania	4	31		
	Slovakia			1	10
	Slovenia			9	86
	Spain	63	586		
	Sweden			78	733
	Switzerland	110	1,007		
	The UK	396	3,452		
	All countries	925	8,301	746	6,935
	Panel B – sample description by industry				
	Industry	140	1.914	110	1.005
	Agriculture, Forestry, Fishing (1–9); Mining (10–14); Construction (15–17)	140	1,314	112	1,005
	Industry 2	259	2 353	250	2 3/1
	Manufacturing (20–39)	200	2,000	200	2,011
	Industry 3	221	2 000	170	1 590
	Transportation (40–49)	221	2,000	110	1,000
	Industry A	52	447	31	305
	Wholesale (50-51): Retail (52-50)	02	-11/	01	000
	Industry 5	247	2 187	183	1 634
	Services (70–89)	241	2,107	105	1,004
	A11	025	8 201	746	6 025
	All	525	8,301	740	0,555
	Panel C – sample description by type of control				
	No controlling owner	491	4,557	236	2,363
	State ownership	37	354	58	505
Table 1	Private	138	1,094	83	694
Sample description				(c	ontinued)
Sample description				(3	

Subsample:	Non-codetermination No. Firms Obs.			ination Obs.	Board-level employee
Corporate	86	744	114	1 028	representation
Executive	41	363	58	530	
Founders	18	136	14	128	
Family	105	973	160	1,486	
Foundation	8	71	20	171	473
Employees	1	9	3	30	
All	925	8,301	746	6,935	

**Notes:** Panel A describes the number of firms ("No. Firms") and the number of observations ("Obs.") by the non-codetermination and codetermination groups over 2006–2015. *Non-Codetermination* represents a group of countries where there is no specific legislation on BLER or where legislation is restricted in scope. *Codetermination* represents a group of countries where BLER legislation is wide in scope. Panel B (Panel C) describes the sample by five-industry classification groups, based on SIC codes (type of control)

$$\begin{split} Y_{i,t} &= \alpha_i + \beta_1 DEMP_{i,t} + \beta_2 DEMP_{i,t} \times Non - Codetermination_c + \gamma_1 (\text{Firm Level}) \\ &+ \gamma_2 (\text{Governance level}) + \mu_i + \gamma_t + \varepsilon_{i,c,t} \end{split}$$

(1.2)

Table 1.

where  $Y_{i,t}$  proxies for firms' value  $(Q_{i,t})$ , measured as the market value of equity plus book value of assets minus book value of equity, divided by total assets. In regression estimates, we also use the ratio market-to-book value and payout ratio as alternates dependent variables. Our difference-in-differences model, shown in equation (1.2), displays our variable of interest is  $DEMP_{i,t} \times Non - Codetermination$ , that captures the difference in firms' value between the non-codetermination and codetermination groups, where  $DEMP_{i,t}$  is an indicator variable that equals 1 if directors of firm *i* were elected by employees and 0 otherwise. We do not include the variable Non – *Codetermination*, which assumes 1 if firm *i* is included in the group where BLER is voluntary because of the fixed effects framework. Following previous research (Fauver and Fuerst, 2006; Ginglinger et al., 2011), we also include a set of controls that comprise firm- and governance-level variables, as follows: Size is the natural logarithm of total assets; ROA is measured as earnings before interest and taxes scaled by total assets; *Capex* is capital expenditures scaled by total assets; *Leverage* is the total debt over total assets; *Control stake* is the percentage of shares owned by controllers; and *Employees* stake is the percentage of shares owned by employees. All variables are summarized in Appendix. We also include  $\mu_i$  that represents firm (or industry/country) fixed effects. All regressions include year ( $\gamma_t$ ) fixed effects. We clustered standard errors in different combinations (as shown in Tables 3–6). Table 2 reports the descriptive statistics for the main firm- and governance-level variables for the full sample and by noncodetermination and codetermination groups.

In Table 2, we observe that the non-codetermination group displays higher (Tobin's) *Q* and *Market-to-Book* value than the codetermination group, and those differences are statistically significant. On the contrary, firms from countries of the non-codetermination group have a lower number of Executive Board members, their employees hold a lower stake in companies and they present a lower concentration of ownership (measured by the *control stake*) than firms from countries in the codetermination group.

			Full sampl	e	Not	n-codetermi	nation		Codetermina	ition
30,4	Subsample:	п	Mean	Median	п	Mean	Median	п	Mean	Median
	Size	15,236	13.969	13.743	8,301	13.867	13.581	6,935	14.091***	13.952***
	ROA	14,964	0.0338	0.0865	8,134	0.0394	0.0926	6,830	0.027	$0.0808^{***}$
	(Tobin's) Q	15,236	1.2657	0.9364	8,301	1.298	0.9569	6,935	1.2271****	$0.9134^{***}$
	Market book (MBV)	15,236	1.2946	0.9017	8,301	1.3446	0.9319	6,935	1.2349***	0.871***
474	Payout ratio	15,234	0.3999	0.2804	8,298	0.3924	0.2842	6,935	0.4088	0.2769
	Leverage	15,234	0.2323	0.2147	8,300	0.2303	0.2146	6,934	0.2346	0.2147**
	Capex	13,481	0.118	0.037	7,338	0.1125	0.0364	6,143	0.1244**	$0.0378^{***}$
	Sales growth	13,560	0.0838	0.0497	7,373	0.0862	0.051	6,187	0.0809	0.0482
	Cash flow	13,532	0.0787	0.0769	7,361	0.0809	0.077	6,171	$0.076^{***}$	0.0769
	Top executives	15,024	3.5625	3	8,164	3.4366	3	6,860	3.7124***	$3^{***}$
	Employees' stake (%)	15,236	8.4993	1.0617	8,301	7.7265	1.1688	6,935	9.4242***	$0.9182^{***}$
	Control stake (%)	15,019	29.8127	27.045	8,124	24.0066	0	6,895	36.6537***	38.62***
	Notes: Table 2 repo and codetermination there is no specific represents a group o <i>ROA</i> is measured as the market value of of assets. <i>Market book</i> measured as cash d	orts descr legislat f countri s earning equity pl is the r ividends	riptive sta n 2006 an ion on Bi es where I gs before i us book va narket va divided b	tistics for d 2015. <i>N</i> LER or v BLER legis nterest an alue of ass lue of equ ov net inco	the full on-Code where le slation is d taxes sets min- ity divi- ome. Le	sample an <i>terminatio</i> gislation s wide in s scaled by us book va ded by th <i>verage</i> is t	d by subsi n represent is restrict cope. <i>Size</i> total asset ilue of equi- te book va- he total d	amples of nts a group ed in s is the lo ets. (Tob alue of lebt ove	of non-codet oup of count cope. <i>Codet</i> ogarithm of t <i>bin's</i> ) <i>Q</i> is m ed by the bo equity. <i>Payo</i> r total asset	ermination tries where ermination otal assets. easured as ok value of out ratio is s. Capex is

Table 2.Descriptive statistics

## 4. Empirical results

#### 4.1 The impact of board-level employee representation on firms' value

mean statistical significance at the 1%, 5% and 10% levels, respectively

According to our *H1a*, our first empirical task is to test if BLER has a positive impact on firms' value in the set of countries included in the non-codetermination group (Table 1). Consistent with Jensen and Meckling (1979) arguments, we expect that firms will adopt voluntarily BLER when they predict a net positive benefit in doing so. Thus, we test this argument by running different specifications of equations (1.1) and (1.2). Table 3 shows the results.

capital expenditures scaled by total assets. *Sales growth* is the percentage change in sales over a year. *Cash flow* is net income plus depreciation and amortization costs divided by total assets. *Top executives* is the number of board members. *Employees' stake* is the percentage of shares owned by employees. *Control stake* is the percentage of shares owned by controllers. Variables are defined in Appendix. For each variable, the mean, median and number of observations are displayed. Differences in means are tested

using t-statistic test and differences in medians are tested using Wilcoxon rank sum test. \*\*\*, \*\* and \*

Taken together, and as one can observe in Table 3, our main results provide evidence that BLER adopted voluntarily by firms from countries where such regulation is not compulsory impacts positively firms' value relative to a control group of firms from countries where BLER is in some way mandatory.

Models (1)–(6) show estimates from regressing equation (1.1) and considering only the non-codetermination group, whereas Models (7)–(12) provide results for the full sample estimating equation (1.2). Taking Model (1) as an example, (Tobin's) Q is 0.0712 higher for firms that voluntarily adopt BLER compared to firms that did not do that among the non-codetermination group (variable DEMP). Besides, this effect is even more pronounced when compared the differences between the non-codetermination and codetermination groups. Hence, in equation (1.2), the estimates of our variable of interest,  $DEMP_{i,t} \times Non - Codetermination$ , which captures the difference in firms' value for the non-codetermination group relative to the codetermination group, is positive and significant across estimations.

Rull cammle	MBV (7) (6) (7)	$\begin{array}{llllllllllllllllllllllllllllllllllll$	2) to test $HIa$ . The dependent variable is $Q_{i,t}$ sets (ratio of the market value of equity over otherwise. Non-Codetermination is a dummy r where legislation is restricted in scope and 0 ad industry are used in different schemes to firm, industry and country level as indicated firm, industry and country level as indicated	Board-lev employ representati 4'
	Q (5)	0.0712*** 0.0712*** 0.0183 (- 0.0183 (- 0.1553*** 0.1553** 0.1553** 0.1553** 0.1553** 0.1216 (- 5.7896	Models (7)–(1) led by total as loyees and 0 m on BLER o ar, country as ar, country at ) clustered at	
mination	MBV (4)	0.0826* (1.72) -0.3408*** (-7.99) 0.0426** (2.45) 0.0253*** (2.39) -0.0859 (-0.40) 0.0067 (0.28) -0.0008 (-0.67) 6.3498*** (10.74) No Yes No Yes No Yes No S92	equation (1.2) in ue of equity divid e elected by emp specific legislatic ffects by firm, ye ffects by firm, ye pectively	
Non-molet	1001-0000 (3)	$\begin{array}{c} 0.0712 \ (1.62) \\ -0.0359^{***} \ (-5.28) \\ -0.0183 \ (-1.04) \\ 0.1553^{**} \ (2.95) \\ 0.1553^{**} \ (2.95) \\ 0.0076 \ (0.59) \\ 0.0076 \ (0.59) \\ 0.0076 \ (0.59) \\ 0.0076 \ (0.59) \\ 0.0076 \ (0.59) \\ 0.0076 \ (0.59) \\ 0.126 \\ 0.126 \\ 892 \\ 892 \end{array}$	Models (1)–(6) and ts minus book val s 1 if directors were s where there is no Appendix. Fixed e: Appendix fixed e: standard errors in nd 10% levels, res	
	MBV (2)	$\begin{array}{l} 0.0826^{****} \left( 2.70 \right) \\ -0.3408^{****} \left( -5.69 \right) \\ 0.0426 \left( 0.98 \right) \\ 0.0426 \left( 0.98 \right) \\ 0.0067 \left( 0.30 \right) \\ -0.0068 \left( -0.49 \right) \\ 0.0067 \left( 0.30 \right) \\ 0.0008 \left( -0.49 \right) \\ \mathrm{Firm} \\ Y \mathrm{es} \\ \mathrm{No} \\ $	of equation (1.1) in ] s book value of asses s book value of asses variable that equal: he group of countrie able 2 and also in $\perp$ s. Robust <i>t</i> -statistics nce at the 1%, 5% a	
	Q (1)	$\begin{array}{l} 0.0712^{****} \left( 2.77 \right) \\ -0.0359^{****} \left( -5.55 \right) \\ -0.0183 \left( -0.46 \right) \\ 0.1553^{***} \left( 2.55 \right) \\ 0.1553^{***} \left( 2.55 \right) \\ 0.1256 \left( 0.55 \right) \\ -0.0005 \left( -0.34 \right) \\ 5.6834^{****} \left( 7.53 \right) \\ Firm Yes \\ No \\ No \\ No \\ No \\ 0.126 \\ 892 \\ 892 \end{array}$	gression estimates value of equity plu $P_{i,i}$ is an indicator m <i>i</i> is included in t z as described in T le or omitted factors statistical significa	
Subsamle.	Dependent variable: Model:	DEMP DEMP*Non-Codetermination Size ROA Capex Levenage Control Employees' stake Control Employees' stake Contror Firm FE Founder FE Industry FE Country FE Observations R <sup>2</sup> Observations R <sup>2</sup> Number of firms	<b>Notes:</b> Table 3 presents re ( <i>MBV</i> ) meaning the market book value of equity). <i>DEN</i> variable that assumes 1 if fi otherwise. All variables are control for any unobservablin the table.	Table The impact of box level emplo representation firms' value: n res

JFRC		09) 36) 35) 35) 01)
30,4	MBV (12)	$\begin{array}{c} -0.2494^{*} (-2) \\ -0.2494^{*} (2, -2) \\ -0.2619^{***} (-2) \\ 0.0418 (1.04) \\ 0.0121 (4^{**} (3) \\ 0.0013 (1.33) \\ 0.0013 (1.33) \\ 5.0253^{***} (9, -1) \\ 1.33) \\ 5.0253^{***} (9, -1) \\ 1.33) \\ 1.630 \\ 1,630 \\ 0.116 \\ 0.116 \end{array}$
476		
	Q (11)	$\begin{array}{c} -0.2130 \ (-1.37) \\ 0.2202 ^{***} \ (-6.25) \\ -0.2202 ^{***} \ (-6.25) \\ -0.014 \ (-0.03) \\ 0.1212 ^{*} \ (2.66) \\ -0.1802 \ (-1.11) \\ 0.0041 \ (0.21) \\ 0.0041 \ (0.21) \\ 0.0041 \ (0.21) \\ 0.0041 \ (0.21) \\ 0.0041 \ (0.21) \\ 0.0041 \ (0.21) \\ 1.630 \\ 0.1111 \\ 1,630 \end{array}$
	Full sample MBV (10)	$\begin{array}{c} -0.2494^{***} (-2.40) \\ 0.3375^{****} (-2.33) \\ 0.3375^{****} (3.23) \\ -0.2619^{****} (3.23) \\ 0.0418 (1.36) \\ 0.1914^{****} (3.18) \\ -0.0220 (-0.14) \\ 0.0084 (0.51) \\ 0.0084 (0.51) \\ 0.0013 (1.06) \\ 5.0253^{****} (6.05) \\ 5.0253^{****} (6.05) \\ 0.0013 (1.06) \\ Yes \\ No \\ Yes \\ 1,630 \\ 0.116 \\ 1,630 \end{array}$
	C (6)	$\begin{array}{c} -0.2130 \ (-1.50) \\ 0.2770^{*} \ (1.92) \\ -0.2202 \ ^{***} \ (-3.47) \\ -0.0012 \ ^{***} \ (3.07) \\ 0.1212 \ ^{***} \ (3.07) \\ 0.1212 \ ^{***} \ (3.07) \\ 0.0011 \ (1.26) \\ 0.0011 \ (1.26) \\ 0.0011 \ (1.26) \\ 1.4530 \ ^{***} \ (4.85) \\ Country \\ No \\ Yes \\ No \\ Yes \\ 13,069 \\ 0.1111 \\ 1,630 \end{array}$
	MBV (8)	$\begin{array}{c} -0.2494^{****}_{***} (-3.15)\\ 0.3375^{****}_{***} (4.13)\\ -0.2619^{****}_{***} (4.13)\\ 0.0418 (1.14)\\ 0.01914^{****}_{***} (-6.33)\\ 0.0018 (1.14)\\ 0.01144^{****}_{***} (4.12)\\ -0.0020 (-0.113)\\ 0.0008 (10.38)\\ 0.0013 (1.04)\\ 5.1043^{****} (8.89)\\ 1.06\\ 13,069\\ 0.116\\ 1,630\end{array}$
Table 3.	Subsample: Dependent variable: Model:	DEMP DEMP*Non-Codetermination Size ROA Capex Leverage Control Employees' stake Constant SE cluster Firm FE Vear FE Industry FE Country FE Country FE Country FE Country FE Country FE Country FE Country FE Number of firms Number of firms

As an example, in Model (7), (Tobin's) Q for the non-codetermination group is 0.2770 higher relative to the codetermination group, *ceteris paribus*. And this effect does not depend on the proxy used to capture firms' value, (Tobin's) Q or the *market-to-book* value, although the economic magnitude is slightly different (0.2770 vs 0.3375).

Our findings suggest that the decision to voluntarily adopt BLER results in a positive and significant net benefit comparing to firms that do not adopt BLER, in the same pool of non-codetermination employee representation regime countries, and with firms from countries where BLER is largely regulated by law.

Overall, the results support the argument that BLER when adopted on a voluntary basis impacts (more) positively firms' value.

## 4.2 The impact of board-level employee representation on firms' payout

Following the intuition of Fauver and Fuerst (2006), we also expect that firms adopting voluntarily BLER are more prone to pay dividends. So, as postulated in *H1b*, we predict that BLER would have a higher positive impact on the payout ratio of firms from countries included in the non-codetermination group. Thus, we test our assumption by estimating our set of equations. Table 4 reports the results.

Table 4 shows coefficients' estimates from regressing equation (1.1), including only the non-codetermination group in Models (1)–(3). As expected, coefficients' estimates of  $DEMP_{i, b}$  our binary variable that assumes 1 if a firm included in the non-codetermination group adopted voluntarily employee representation on the board, are positive and significant in all models. Taking Model (1), firms with BLER pay, on average, more 8.66% than firms without employee representation. Estimations resulting from regressing equation (1.2) are presented in Models (4)–(6). Our main variable of interest,  $DEMP_{i,t} \times Non - Codetermination$ , is positive and significant, meaning that those firms from countries included in the non-codetermination group.

# 4.3 The impact of board-level employee representation on firms' value (and payout) robustness checks

Our previous findings suggest that voluntary BLER impacts positively firms' value. Furthermore, results also suggest that firms from countries included in the non-codetermination group are more prone to pay higher cash dividends. However, and aiming to find further evidence to support our results, we adopt as a robustness check a procedure based on matching observations between non-codetermination and codetermination groups in the same industry and year and by the closest *Size, Sales Growth, ROA* and *Leverage* variables (as mentioned before, all variables are as described in Appendix). The coefficients' estimates were obtained by regressing equation (1.2) on the matched sample. Table 5 provides the results.

Panel A of Table 5 replicates our analysis of Table 3, and Panel B replicates the analysis in Table 4. Our variable of interest is  $DEMP_{i,t} \times Non - Codetermination$  that captures the impact of BLER on firms' value (payout ratio) for the matched sample. Although the coefficients' estimates of our variable of interest are positive and significant across estimations, the economic magnitude is lower in coefficients displayed in Panel A – impact on firm's value – and higher in the case of payout ratio (Panel B). This effect was expected because of the matching procedure, which selects identical observations from non-codetermination and codetermination groups based on the criteria described above, which in turn decreases the variance across observations. However, the BLER effect still holds for firms that voluntarily adjusted their boards to

Board-level employee representation

JFRC 30,4	Subsample: Dependent	Non-code	termination			Full S	ample
	variable.			Pavor	it ratio		
	Model:	(1)	(2)	(3)	(4)	(5)	(6)
	DEMP	0.0866***	0.0866***	0.0866***	-0.1454*	-0.1454*	-0.1454
478	DEMD * Nor	(6.10)	(4.72)	(11.88)	(-1.67)	(-1.68)	(-1.60)
	DEMP * Non- Codetermination				0.2519***	0.2519***	0.2519***
	Couetermination				(2.89)	(3.05)	(2.69)
	Size	0.0235	0.0235	0.0235*	0.0350**	0.0350*	0.0350*
		(1.28)	(1.64)	(1.68)	(2.41)	(2.01)	(2.13)
	ROA	0.1453***	0.1453***	0.1453***	0.1393***	0.1393***	0.1393***
		(6.69)	(9.71)	(9.42)	(8.32)	(8.91)	(14.10)
	Capex	0.0092	0.0092	0.0092	0.0399**	0.0399*	0.0400
		(0.36)	(0.50)	(0.51)	(2.14)	(1.72)	(1.55)
	Leverage	$-0.5286^{***}$	$-0.5286^{***}$	$-0.5286^{**}$	-0.4867 ***	-0.4867 ***	$-0.4866^{***}$
		(-7.05)	(-10.88)	(-4.38)	(-8.46)	(-9.00)	(-7.04)
	Control	0.0042	0.0042	0.0042	-0.0061	-0.0061	-0.0061
		(0.19)	(0.17)	(0.28)	(-0.41)	(-0.36)	(-0.47)
	Employees' stake	0.0007	0.0007	0.0007	0.0003	0.0003	0.0003
	Constant	(0.99)	(0.88)	(1.35)	(0.51)	(0.48)	(0.56)
	Constant	0.4625*	0.5609****	0.5609***	0.3435	0.3435	0.3403
	CE alvester	(1.76)	(3.16)	(2.86) In decement	(1.64)	(1.47)	(1.33) In duation
	SE Cluster Firm FE	ГШШ Voo	No	No	Г II III Voc	No	No
	Ver FF	Vec	Vec	Vec	Ves	Vec	Vec
	Industry FF	No	No	Ves	No	No	Ves
	Country FE	No	Yes	No	No	Yes	No
	Observations	7.053	7.053	7.053	13.069	13.069	13.069
	$R^2$	0.070	0.070	0.070	0.056	0.056	0.056
	Number of firms	892	892	892	1.630	1.630	1.630

Table 4. The impact of boardlevel employee representation on firms' payout: main results **Notes:** Table 4 reports regression estimates of equation (1.1) in Models (1)–(3) for the non-codetermination subgroup and of equation (1.2) in Models (4)–(6) for the all sample to test *H1b*. The dependent variable is *payout ratio* that is the cash dividends divided by net income. *DEMP<sub>i,t</sub>* is an indicator variable that equals 1 if directors were elected by employees and 0 otherwise. *Non-Codetermination* is a dummy variable that assumes 1 if firm *i* is included in the group of countries where there is no specific legislation on BLER or where legislation is restricted in scope and 0 otherwise. All variables are as described before and also in Appendix. Fixed effects by firm, year, country and industry are used in different schemes to control for any unobservable or omitted factors. Robust *t*-statistics standard errors in parentheses (. . .) clustered at firm, industry and country level as indicated in the table. \*\*\*, \*\* and \* mean statistical significance at the 1%, 5% and 10% levels, respectively

include employee representation compared with firms from codetermination regimes but with very similar firm-specific attributes.

Finally, we address potential endogeneity associated with the adoption of BLER in the non-mandatory group of countries, using a two-stage least squares estimation procedure. In the first stage, we estimate BLER using the five-industry classification groups, based on SIC codes (see Panel B of Table 1); then we use the fitted values in the second-stage regressions. The results, not reported by brevity [6], are consistent and qualitatively similar to the ones shown previously.

Subsample:			Matchee	d sample			Board-level
Dependent variable:	Q	MBV	Q	MBV	Q	MBV	employee
Model:	(1)	(2)	(3)	(4)	(5)	(6)	representation
Panel A – The impact of hoard	-level employee r	ebresentation or	ı firms' value				
DEMP	-0.0397	-0.0720**	-0.0397	-0.0720	-0.0397	-0.0720*	
Diam	(-1.55)	(-2.19)	(-1.02)	(-1.28)	(-1.32)	(-1.87)	
DEMP*Non-Codetermination	0.1220***	0.1617***	0.1220***	0.1617***	0.1220***	0.1617***	479
DEMI Non-Codetermination	(7.46)	(7.18)	(10.02)	(8.11)	(6.92)	(5.85)	775
Size	(7.40)	_0.9197***	-0.1671**	0.11)	0.52)	(0.00)	
Size	( 2.05)	( 2.80)	(-2.61)	(-2.2127)	( 2.80)	( 2.50)	
POA	(-2.55)	(-2.05)	(-2.01)	(-2.21)	(-2.00)	(-2.30)	
KOA	(2.19)	(2.60)	(4.14)	(2.90)	(2.60)	(2.40)	
C	(3.12)	(3.09)	(4.14)	(3.69)	(2.00)	(5.40)	
Capex	0.0408	0.0990	0.0408	0.0990*	0.0408	0.0990*	
T	(0.99)	(1.35)	(1.24)	(1.81)	(1.37)	(1.82)	
Leverage	-0.3816**	-0.0598	-0.3816*	-0.0598	-0.3816	-0.0598	
	(-2.11)	(-0.21)	(-1.73)	(-0.29)	(-1.45)	(-0.14)	
Control	0.0045	0.0201	0.0045	0.0201	0.0045	0.0201	
	(0.30)	(0.62)	(0.28)	(0.63)	(0.30)	(0.51)	
Employees' stake	0.0027**	0.0030*	0.0027**	0.0030	0.0027***	0.0030***	
	(2.57)	(1.88)	(2.38)	(1.58)	(7.80)	(4.78)	
Constant	3.6186***	4.1788***	3.6186***	4.1788***	3.6186**	4.1788**	
	(4.33)	(3.91)	(3.77)	(2.99)	(3.73)	(2.98)	
SE cluster	Firm	Firm	Country	Country	Industry	Industry	
Firm	Yes	Yes	No	No	No	No	
Year	Yes	Yes	Yes	Yes	Yes	Yes	
Industry	No	No	No	No	Yes	Yes	
Country	No	No	Yes	Yes	No	No	
Observations	3.463	3.463	3.463	3.463	3.463	3.463	
$R^2$	0.156	0.162	0.156	0.162	0.156	0.162	
Number of firms	1 268	1 268	1 268	1 268	1 268	1 268	
Matching quality	1,200	1,200	1,200	365	1,200	1,200	
	1 1 .1						
Panel $B$ – The impact of board-	level employee re	epresentation or	i payout ratio				
Subsample:			Match	ed sample			
Dependent variable:	(1)		Payo	out ratio		(2)	
Model:	(1)			(2)		(3)	
DEMP	-0.276	35***		$-0.2765^{***}$		$-0.2765^{***}$	
	(-12.47)		(-	-10.83)		(-8.43)	
DEMP*Non-Codetermination	0.375	51***		0.3751***		0.3751***	
	(28.37)			(37.11)		(44.60)	
Size	0.046	57		0.0467		0.0467	
	(1.21)			(1.38)		(1.09)	
ROA	0.829	98***		0.8298***		0.8298***	
	(5.75)			(6.55)		(5.88)	
Capex	-0.019	90		-0.0190		-0.0190	
*	(-0.39)		(	-0.29)		(-0.28)	
Leverage	-0.419	98***		-0.4198***		-0.4198***	
-	(-3.30)		(	-3.30)		(-6.10)	Table 5.
Control	-0.054	46**		-0.0546		-0.0546**	The impact of board
	(-2.33)		(	-1.60)		(-3.97)	lavel amplement
	0.000	)9	(	0.0009		0.0009	ievei empioyee
Employees' stake	(					(0.07)	representation on
Employees' stake	(0.83)			(0.77)		(0.97)	
Employees' stake	(0.83)	)7		(0.77) 0.1707		(0.97) 0.1707	firms' value and on
Employees' stake Constant	(0.83) 0.170	)7		(0.77) 0.1707		(0.97) 0.1707	firms' value and on payout ratio:

30.4	Panel B – The impact of board	d-level employee representation or	<i>i payout ratio</i>		
00,1	Subsample:		matched sample		
	Dependent variable:		Payout ratio		
	Model:	(1)	(2)	(3)	
		(0.30)	(0.34)	(0.30)	
	SE cluster	Firm	Country	Industry	
100	Firm FE	Yes	No	No	
480	Year FE	Yes	Yes	Yes	
	Industry FE	No	No	Yes	
	Country FE	No	Yes	No	
	Observations	3,463	3,463	3,463	
	$R^2$	0.138	0.138	0.138	
	Number of firms	1,268	1,268	1,268	
	<b>Notes:</b> Panel A of Table dependent variable is $Q_{i,i}$ of equity divided by total an indicator variable that regression estimates of equivalent estimates es	e 5 presents regression est $(MBV)$ is the market value assets (ratio of the market value equals 1 if directors were equation (1.2) using as dependent	imates of equation (1.2) for a m of equity plus book value of asse- value of equity over book value of lected by employees and 0 other ent variable is <i>Payout ratio</i> that	atched sample. The ts minus book value of equity). <i>DEMP</i> <sub>i,t</sub> is vise. Panel B reports is the cash dividends	

Table 5.

divided by net income. All variables are as described before and also in Appendix. Fixed effects by firm, year, country and industry are used in different schemes to control for any unobservable or omitted factors. Robust *t*-statistics standard errors in parentheses (...) clustered at firm, industry and country level as indicated in the table. <sup>\*\*\*, \*\* and</sup> <sup>\*</sup> mean statistical significance at the 1%, 5% and 10% levels, respectively. The quality of the matching is reported by the *p*-value of Likelihood-ratio

## 4.4 The impact of board-level employee representation levels on firms' value (payout)

So far, our evidence supports the argument that voluntary BLER impacts positively firms' value and also that those firms are more prone to pay higher dividends. However, if such positive impact is only observed in firms from non-codetermination countries, then we hypothesize that there must be a difference in employee representation levels between firms from non-codetermination and from codetermination BLER countries. Following the insights of, for example, Gorton and Schmid (2004), Fauver and Fuerst (2006) and Balsmeier *et al.* (2013), whose studies provide evidence that different levels of BLER impact firms' value in different ways, we re-estimate equation (1.1), replacing the  $DEMP_{i,t}$  by three indicators of employee representation levels:

- (1) BLER 0–33% (*DEMP 0–33%*) that equals 1 if employee representation is strictly higher than 0 but is strictly less than 33% and 0 otherwise;
- (2) BLER 33–50% (*DEMP 33–50%*) that assumes 1 if employee representation is equal or strictly higher than 33% but is strictly less than 50% and 0 otherwise; and
- (3) BLER > 50% (*DEMP* > 50%) that assumes 1 if employee representation equals or exceeds 50% and 0 otherwise.

Panel A shows the results using (Tobin's) Q as dependent variable (and market-to book value as an alternative variable), while Panel B displays results using as dependent variable the payout ratio. The estimates provided in both panels for *DEMP 0–33%*, the lowest level of employee representation, are very similar in sign and magnitude to the ones found in our main results, namely, in Tables 3 (Models (1)–(6)) and 4 (Models (1)–(3)). Regarding moderate and the highest level of employee representation, *DEMP 33–50%* and *DEMP > 50%*,

							Board-level
Subsample:			Non-codet	ermination			employee
Dependent variable:	Q	MBV	Q	MBV	Q	MBV	chiployee
Model:	(1)	(2)	(3)	(4)	(5)	(6)	representation
Panel A – The impact	t of hoard-level	employee repre	sentation levels	on firms' valu	2		
DEMP 0–33%	0 0712****	0.0826***	0 0712	0.0826*	0 0712**	0.0826*	
	(2.77)	(2.70)	(1.62)	(1.72)	(3.22)	(2.76)	101
DEMP 33-50%	0.0227	-0.0014	0.0227	-0.0014	0.0227	-0.0014	481
	(0.42)	(-0.02)	(0.35)	(-0.02)	(0.66)	(-0.02)	
DEMP >50%	0.1473	0.0892	0.1473	0.0892	0.1473**	0.0892**	
	(1.33)	(1.32)	(1.29)	(0.66)	(4.45)	(2.60)	
Size	$-0.3063^{***}$	$-0.3415^{***}$	$-0.3063^{***}$	$-0.3415^{***}$	$-0.3063^{***}$	$-0.3415^{***}$	
	(-5.55)	(-5.70)	(-5.31)	(-8.07)	(-7.66)	(-7.41)	
ROA	-0.0184	0.0425	-0.0184	0.0425**	-0.0184	0.0425	
	(-0.46)	(0.98)	(-1.04)	(2.44)	(-0.36)	(0.84)	
Capex	0.1556**	0.2257***	0.1556***	0.2257**	$0.1556^{**}$	0.2257**	
	(2.55)	(2.86)	(2.96)	(2.40)	(3.57)	(3.93)	
Leverage	-0.2217	-0.0852	-0.2217*	-0.0852	-0.2217	-0.0852	
	(-1.02)	(-0.32)	(-1.76)	(-0.39)	(-0.75)	(-0.23)	
Control	0.0075	0.0064	0.0075	0.0064	0.0075	0.0064	
	(0.54)	(0.29)	(0.58)	(0.27)	(0.66)	(0.34)	
Employees' stake	-0.0005	-0.0008	-0.0005	-0.0008	-0.0005	-0.0008	
Constant	(-0.34)	(-0.49)	(-0.59)	(-0.67)	(-0.60)	(-0.61)	
Constant	5.6918	6.2091	5.7978	6.3619	5.7978	6.3619	
CE alwatan	(7.53)	(7.54)	(7.61)	(10.83)	(11.23) In decement	(11.49) In duatana	
SE Cluster	FIIII	FIIII	Country	No	Mo	Mo	
Voor FF	Voc	Voc	Voc	NO Voc	NO Voc	NO	
Industry FF	No	No	No	No	Vec	Vec	
Country FF	No	No	Ves	Ves	No	No	
Observations	7.053	7.053	7.053	7.053	7.053	7.053	
$R^2$	0.126	0.120	0.126	0.120	0.126	0.120	
Number of firms	892	892	892	892	892	892	
Panel B – The impact	of board-level e	employee repres	sentation levels	on payout ratio	0		
Subsample:			Non-coo	leterinination			
Dependent variable:			Pay	out ratio			
Model:	0	(1)		(2)		(3)	
DEMP 0-33%	0.0	0866		0.0866		0.0866	
DEMD 22 500/	(6.	11)		(4.74)		(12.04)	
DEMP 33-50%	0.0	0217		0.0217		0.0217	
DEMD > E00/	(0.	00) 1996		(0.90)		(1.33)	
DENIF >30 /0	-0.	1620		-0.1620		-0.1820	
Sizo	(-1.	10)		(-1.17)		(-0.96)	
JIZE	(1)	97)		(1.63)		(1.66)	
ROA	(1.	1452***		$0.1452^{***}$		0.1452***	
Rom	(6)	69)		(9.73)		(9.38)	
Capex	(0.	0095		0.0095		0.0095	TT 11 0
eapon	(0.3	38)		(0.52)		(0.53)	Table 6.
Leverage	-0.	5261***		-0.5261***		-0.5261**	The impact of board-
U	(-7.9	03)		(-10.93)		(-4.31)	level employee
Control	0.0	0041		0.0041		0.0041	representation levels
						(continued)	on firms' value and
						(commund)	on payout ratio

Table 6.
The impact of board-
level employee
representation levels
on firms' value and

on payout ratio

IFPC				
30,4	Panel B – The impact of b Subcomple:	ooard-level employee represe	ntation levels on payout ratio	
,	Dependent variable:		Payout ratio	
	M 1 1	(1)		(0)
	Wodel:	(1)	(2)	(3)
		(0.19)	(0.17)	(0.27)
	Employees' stake	0.0007	0.0007	0.0007
482		(0.99)	(0.88)	(1.35)
	Constant	0.4673*	0.5656	0.5656**
		(1.78)	(3.19)	(2.86)
	SE cluster	Firm	Country	Industry
	Firm FE	Yes	No	No
	Year FE	Yes	Yes	Yes
	Industry FE	No	No	Yes
	Country FE	No	Yes	No
	Observations	7,053	7,053	7,053
	$R^2$	0.071	0.071	0.071
	Number of firms	892	892	892
	Notes: Panel A of Table	e 6 reports regression estin	nates of equation (1.1) to test $H2a$ it	cluding employee
	representation by levels	s as in Fauver and Fue	rst (2006): 1) DEMP 0-3.3% equa	ls 1 if employee
	representation exceeds 0	but is strictly lower than	33% and 0 otherwise, 2) DEMP 3.	3-50% equals 1 if
	employee representation	equals or exceeds 33% by	ut is strictly lower than 50% and 0	otherwise and 3)
	DEMP > 50% equals 1	if employee representation	equals or is higher than 50% and	0 otherwise. The
	dependent variable is $Q_i$	$_{t}$ (MBV) is the market value	e of equity plus book value of assets	minus book value
	of equity divided by total	assets (ratio of market val	ue of equity over book value of equit	y). Panel B reports
	regression estimates usir	ng as dependent variable is	Payout ratio that is the cash divider	nds divided by net
	income, as postulated in	H2b. All variables are as d	escribed before and also in Appendit	x. Fixed effects by
	firm, year, country and i	ndustry are used in different	nt schemes to control for any unobs	ervable or omitted
	factors. Robust t-statistic	s standard errors in parent	heses () clustered at firm, industry	and country level

Table 6.

respectively, results are on average not statistically different from 0. This evidence is consistent with the idea that only low levels of employee representation impact positively firms' value and also the payout ratio.

as indicated in the table. \*\*\*, \*\* and \* mean statistical significance at the 1%, 5% and 10% levels,

### 5. Main conclusions

respectively

As Hayden and Bodie (2021) pointed out, there is a continuous disintegration of the intellectual foundations of the modern corporation, which raises questions about the core principles. That is the case of the shareholder primacy norm and the exclusive shareholder franchise; in fact, nowadays, it is clear that such arguments are sustained by flawed assumptions about the nature of shareholders or even stay in contradiction with the fundamental precepts of standard economics that are supposed to constitute their foundations.

As firms' corporate governance moves away from the existing corporate order, we all need further and further to discuss alternatives to a new effective corporation framework. That is why is so important to study the shortcomings and the strengths of the BLER as a model of shared corporate governance. Moreover, this research is also important, as codetermination not only is about workers participation in the corporations' decisions but may also benefit other corporate counterparts, as their interests line up with those of employees; that is the case of creditors because both groups are mainly interested in the long-term firm survival. Using, for the first time, a sample of European listed firms from 30 countries with different legal regimes of BLER that we assign as non-codetermination and codetermination groups, we investigate the impact of BLER on firms' value and on cash dividends payout ratio. For the period 2006–2015, we test our hypotheses using different regression techniques and alternative proxies for firms' value.

Our main results suggest that firms that adopt voluntarily BLER (i.e. firms from countries where BLER is not imposed by law) experience higher valuations relative to a control group of firms from countries where BLER is in some way mandatory. Additionally, this BLER effect also impacts positively the payout ratio of our non-codetermination group. Further, we match observations from both groups, non-codetermination and codetermination groups, in the same industry and year and by the closest *Size, Sales Growth, ROA* and *Leverage* variables, to control for firm-specific characteristics that might impact our main results derived from non-observable features not captured by our fixed effects framework. This analysis gives additional support to our main results.

Moreover, we examine if this BLER effect holds across different levels of employee representation; our evidence points out that this effect only holds for lower levels of BLER. Overall, these results are consistent with Jensen and Meckling (1979) view; firms from non-codetermination regimes will voluntarily adopt BLER when they believe that will improve shareholders' wealth.

In short, our study shows evidence of a positive (but limited) impact on firm value of voluntary codetermination, which contributes to reinforce the argument (already stated by other authors as Berglund and Holmén, 2016) that for well-run firms is recommended to take employee interests properly into account, independently of whether they are represented on the board.

However, it is noteworthy to mention that our study is also subject to some limitations, in which the main one is the coverage of our primary source of data. The EFES database is only available since 2006 and only includes listed firms with more than €200m in stock market capitalization, which turns reasonable to assume that a part of listed companies is left aside. Despite that, our study makes a contribution to BLER literature and can be used by decision-makers to incentive the discussion of the proper way to include workers in firms' boards with expected benefits on firms' performance, economies and societies.

## Notes

- 1. In the time span between 2006 and 2015, there are two distinct classification moments: 2011 and 2015 and there is just one difference related to the Czech Republic.
- 2. Although such determination may have (in some countries) a threshold of employees' number before being mandatory,
- 3. BLER is not mandatory since 2014 for private sector companies.
- 4. More precisely, it means "the right to elect or appoint some of the members of the company's supervisory or administrative organ; or the right to recommend and/or oppose the appointment of some or all of the members of the company's supervisory or administrative organ" (Article 2 Council Directive 2001/86/EC).
- 5. Balsmeier, Bermig and Dilger (2013) find a concave relationship between board-level representation and firm's value; the authors show that moderate employee participation in corporate board decision-making can enhance firm's value.
- 6. Results are available upon request.

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,			
	Variable	Definition	Source
	Firm level		
400	(Tobin's) $Q$	Market value of equity plus book value of assets minus book value of equity divided by total assets	Worldscope
488	Capex	Capital expenditures (CAPEX) divided by total sales	Worldscope
	Cash flow	Net income plus depreciation and amortization expenses divided by lagged total assets	Worldscope
	Leverage	Short-term plus long-term debt divided by total assets	Worldscope
	Market book	The market value of equity divided by the book value of equity	Worldscope
	Payout ratio	Ratio of cash dividends to net income	Worldscope
	KOA Salaa amaaath	Earnings before interest and taxes (EBI1) divided by total assets	Worldscope
	Sales growth	Sales growth is measured as the percentage change in sales over year $i = 1$ to t	worldscope
	Size	Logarithm of total assets	Worldscope
	Governance level		Wolfdoope
	DEMP	Indicator variable that equals 1 if directors were elected by employees and 0 otherwise	EFES
	Employees' stake	Percentage of shares owned by employees	EFES
	Executive board members	Number of executive board members	EFES
	Type of control	Stake types: i) No controlling owner, ii) State ownership, iii) Private, iv) Corporate, v) Executive director, vi) Founders, vii) Family, viii)	EFES
	Control stake	Poundation and IX) Employees Percentage of shares owned by controllers	FFFS
	Industry level	recentage of shares owned by controllers	LILO
Table A1.Definitions andsources of the	Sic code Industry	Four-digit standard industrial classification (SIC) code Five-industry classification groups, based on SIC codes: Industry 1: Agriculture, Forestry, Fishing (01–09), Mining (10–14), Construction (15– 17); Industry 2: Manufacturing (20–39): Industry 3: Transportation (40– 49); Industry 4: Wholesale (50–51), Retail (52–59); and Industry 5: Services	Datastream

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