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## ORIGINAL ARTICLE

# Owners, external managers and industrial relations in German establishments

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**Abstract**

Using data from the representative IAB Establishment Panel in Germany and estimating a heteroskedastic probit model with fixed effects, this paper finds a negative relationship between the existence of owner-management in an establishment and the probabilities of having a works council or a collective bargaining agreement. We show that family firms which are solely managed by the owners or by external executives significantly differ in the presence of these kinds of worker representation. The probabilities of having works councils and (company-level) collective agreements increase substantially if just some of the managers do not belong to the owner family. We argue that these differences cannot simply be attributed to an aversion of the owners against co-determination and unions but suggest taking account of the notion of socio-emotional wealth prevalent in family firms. In addition, our results support the idea that external managers mainly act as agents rather than stewards in family firms.

**KEYWORDS**

co-determination, collective agreement, family firm, Germany, Industrial relations, works council

**JEL CLASSIFICATION**

G32, J53, M54

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## 1 | INTRODUCTION

Although works councils and collective bargaining agreements are the two most important pillars of industrial relations in Germany and are strongly backed by labour law, some empirical studies find a negative relationship between these two variants of worker representation and the existence of owner-management in an establishment (e.g. Oberfichtner & Schnabel, 2019). This finding is sometimes attributed to an aversion of the owners against co-determination and unions, and there are plenty of examples of anti-union and anti-works council behaviour of employers even in Germany (Behrens & Dribbusch, 2013; Schlömer-Laufen, 2012). But employer opposition may seem irrational given that various theoretical approaches like exit-voice theory and institutional economics as well as many empirical studies suggest that worker representation via unions or works councils and collective bargaining can improve firm performance (Doucouliagos et al., 2017). In this view, if firms (in particular family firms) evade co-determination and collective bargaining, such a strategy may not only result in suboptimal firm management but also forego positive efficiency and welfare effects for the entire economy.

Potential advantages of worker representation and collective bargaining are, *inter alia*, that they reduce transaction costs, allow workers to safely express their dissatisfaction with working conditions (instead of quitting the job) and enable management to run a more efficient personnel policy. The downsides may be that they involve a re-distribution of profits, reduce company flexibility and limit management's leeway in running the company. In the case of family firms, which are important players in the economy,<sup>1</sup> owners are said to avoid worker representation and collective bargaining mainly because they want to maintain their full managerial freedom (Müller & Stegmaier, 2020). However, this explanation is probably too simple and difficult to reconcile with the fact that many family firms also employ external managers – paternalistic owners who are keen to preserve their prerogatives should in the same vein avoid worker participation and hiring external managers. This paradox suggests that there may be a complex relationship between owner-managers, external managers and the organization of industrial relations in family firms that is worth investigating.

The growing literature on family businesses (e.g. Klein & Bell, 2007; Tabor et al., 2018) argues that owners pursue both economic and non-economic goals, such as the maximization of so-called socio-emotional wealth (Gomez-Mejia et al., 2007, 2011), where the reputation of the family and the long-term influence of the owners on the company are as important as the profits created. In this case, it could be rational for owners to forgo some (short-term) gains of worker representation if socio-emotional wealth, such as control or reputation, is at risk. In addition, formal institutions like works councils or collective agreements limit owners' possibilities of personally taking care of their employees' problems and solving them informally, in such a way reducing paternalistic owners to 'normal' employers.

It is an open question how such a thinking of owners affects the hiring of external managers in family firms and carries over to their behaviour concerning co-determination and collective bargaining. If the predominant goal of owners was 'being the ultimate bosses' (Jirjahn & Mohrenweiser, 2016, p. 815), they should at the same time oppose worker participation and avoid hiring external managers.<sup>2</sup> Of course, employing external executives might be helpful if a family firm is

<sup>1</sup> At the end of 2017, about 90% of private sector firms in Germany were controlled by families, and 86% were managed by the owners. Fifty-eight percent of employees worked in family-controlled firms, and 53% in owner-managed firms (Familienunternehmen 2019).

<sup>2</sup> This does not mean that owner-managers do not care at all about profits, but their paternalistic motive dominates the profit motive when it comes to worker representation and hiring external executives. It is an open question whether such

growing or reorganizing, if management workload increases and/or if there is a lack of managerial skills in the owner family, but external managers probably reduce owners' control of company decisions and thus socio-emotional wealth. This potential problem may be mitigated if it is mainly executives agreeing with the goals of family firms who are hired or who self-select themselves into such firms. This type of executives would act as stewards and their management style should be similar to the behaviour of the managers from the owner family (Fang et al., 2016; Miller & Le Breton-Miller, 2006). Moreover, Demsetz (1983) states that ownership structures are the result of some profit maximizing behaviour and that 'it is foolish to believe that owners [...] relinquish control to managers who are not guided to serve their interests' (Demsetz, 1983, p. 390). Consequently, managers should have the same attitude towards worker representation as owners have, and we should find no differences in the presence of works councils and collective agreements between firms that are managed by owners or external managers. Nevertheless, some studies suggest that family managed firms do exhibit different management styles and labour relations (Belot & Waxin, 2017; Mueller & Philippon, 2011).

On the other hand, if external managers are not stewards but agents with their own goals (such as increasing productivity, profits and manager bonuses), they are probably more interested in a firm's economic performance than in maximizing socio-emotional wealth (Chua et al., 2009; Chrisman et al., 2014; Fang et al., 2016; Bandiera et al., 2018). This kind of manager is more likely to rely on (or at least not oppose) formalized industrial relations in a plant such as collective bargaining agreements and works councils that promise to reduce transaction costs and increase economic performance. In this case, we should see that in family firms where management is mixed (i.e. composed of owners and external managers), collective bargaining agreements and works councils are more likely to exist than in establishments with pure owner management. But their existence should be less likely than in externally managed establishments where owners are not involved in management.<sup>3</sup> In the end, whether owners or external managers have stronger reservations against works councils and union bargaining depends on whether managerial prerogatives or side goals like socio-emotional wealth matter more.

This complex relationship between various compositions of the management in family plants (only owners, only external managers or mixed) and worker representation via works councils and collective bargaining has not been investigated so far. Against this background, the present study contributes to the literature mainly in three ways: Firstly, using a representative establishment panel data set for Germany and a heteroskedastic panel probit model with fixed effects, we show that family firms that are solely, partially or not managed by the owners substantially differ in the presence of works councils and collective bargaining agreements. We demonstrate that the organization of industrial relations already changes if only some of the managers do not belong to the owner family. Secondly, we consider that the hiring of external managers and the composition of management in family firms is potentially endogenous. Thirdly, we point out that the black-and-white story of paternalistic owner opposition against co-determination and unions is not the whole story and that the hiring and the strategic behaviour of external managers in family firms should also be taken into account.

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owners have a more dismissive attitude towards worker representatives who (at least legally) cannot be controlled by the owners or towards external executives who are agents that can only be controlled imperfectly by the principal.

<sup>3</sup> Another possibility is that employees show different attitudes towards external managers (be they stewards or agents) than towards paternalistic owners and are, therefore, more likely to set up a works council when external managers are present.

The paper is organized as follows: Section 2 sketches the institutional background of industrial relations, worker representation and family firms in Germany and provides a brief overview of the extant literature. The data and some descriptive evidence are presented in Section 3. Section 4 describes our empirical model, a heteroskedastic panel probit model with fixed effects that takes account of potential endogeneity, and discusses the results of our econometric estimations. Section 5 concludes.

## 2 | INSTITUTIONAL BACKGROUND AND EXTANT LITERATURE

The German system of industrial relations is mainly based on two important pillars, namely collective bargaining agreements and worker co-determination at the workplace, which are formally independent from each other and serve different purposes.<sup>4</sup> Principally, firm owners and managers are free to choose whether they want to make use of collective bargaining with trade unions or conclude individual labour contracts with each employee. In contrast, it is the employees in an establishment who decide whether they want to set up a works council as a formal body of worker representation and co-determination, which could happen as a response to owner or management behaviour. The rationale behind both decisions may be different in family firms where owners are said to act more paternalistic and less profit-maximizing. Both pillars of industrial relations and their connection with firm ownership will now be explained in more detail.

Starting with collective agreements, the principle of bargaining autonomy gives employers (or employers' associations) and trade unions in Germany the right to regulate wages and working conditions without government interference. Collective bargaining agreements can be concluded either as multi-employer agreements at industry level or as single-employer agreements at company level. They are legally binding on all members of the unions and employers' associations involved, but in general they are extended to all employees working for the employers involved (no matter whether they are union members or not). Collective agreements determine wages as well as job classifications, working time and working conditions. These collectively agreed norms are minimum terms in that companies bound by collective agreements may not undercut but only improve upon these terms and conditions.

From the perspective of company owners and managers, one important advantage of collective bargaining agreements is that they reduce transaction costs by substituting one set of negotiations for a large number of individual bargains and by standardizing working conditions. In addition, multi-employer bargaining largely takes wages out of competition, shifts bargaining and industrial conflict to a level above the company (so that the working atmosphere within the plant is not negatively affected) and enables employers to pool their strength in fighting union demands (e.g. Schnabel et al., 2006; Addison et al., 2013). The downside of collective bargaining agreements is that they reduce company flexibility and wage differentiation. Probably, even more important from the perspective of owners and managers, compared to contract negotiations with individual workers, collective bargaining agreements restrict managements' leeway in running the company (particularly if they are concluded as single-employer agreements where unions are in direct contact with the company). Consequently, many employers try to avoid collective bargaining (Behrens & Dribbusch, 2013).

<sup>4</sup> For descriptions of these two pillars and their recent developments, see Addison et al. (2017) and Oberfichtner and Schnabel (2019). The latter study reports that in Germany in 2015, about 37% of establishments with five or more employees made use of collective bargaining and 12% had a works council, whereas both institutions jointly existed in about 9% of establishments.

Empirical studies for Germany have found that the incidence of collective bargaining agreements in an establishment is related to factors, such as the size, age and sectoral affiliation of the establishment or the composition of its workforce, but it may also play a role whether establishments are under foreign ownership/control or are individually owned (e.g. Kohaut & Schnabel, 2003; Schnabel et al., 2006; Addison et al., 2013). Surprisingly, there seem to exist no studies for Germany that have explicitly investigated whether establishments are more or less likely to adopt collective bargaining agreements if they are (fully or partially) run by owner-managers.<sup>5</sup>

Switching to the second pillar of industrial relations in Germany, the Works Constitution Act stipulates that works councils representing the interests of workers may be set up in all establishments that exceed a size threshold of five permanent employees. The size of the works council is fixed by law and rising with the number of employees in an establishment. Works councils have extensive rights of information (on all matters related to the discharge of their statutory functions) and consultation (on issues such as planned structural changes to the plant and manpower planning) prescribed by law. In addition, German works councils have co-determination rights on what are termed 'social matters'. These include remuneration arrangements, health and safety measures, and the regulation of working time. Works councils are independent from trade unions. Unlike unions, they must not call a strike, and they are also excluded from reaching agreement with the employer on wages or working conditions that are normally settled by collective agreements between trade unions and employers' associations at industry level.

Note that although works councils are mandated by law, they are not automatic: they must be elected by the entire workforce in the establishment, and employees are free not to set up a works council. There is some evidence (mainly from case studies) that employees occasionally decide not to set up a works council because of the more personalized relations between owner-managers and their workforce (Schlömer-Laufen, 2012) and/or because they do not want to affront their paternalistic employers (Hauser-Ditz et al., 2008). Employers may not stop the election of a works council, but sometimes firm owners or management try to prevent the introduction of a works council because they fear a restriction of their power and leeway (Behrens & Dribbusch, 2013). This is somewhat astonishing given that works councils reduce transaction costs (both for employers and employees) and have been found to have positive effects on firm productivity, so that owner-managers' opposition to worker co-determination may primarily reflect their wish to remain the ultimate boss in the establishment (e.g. Jirjahn & Mohrenweiser, 2016; Müller & Stegmaier, 2020).

Empirical studies for Germany found that the existence of works councils is related to establishment characteristics like the size and age of the plant, the composition and union density of its workforce, and the prevalence of collective bargaining (e.g. Addison et al., 2003; Hauser-Ditz et al., 2008; Ertelt et al., 2017). There is also some evidence that works councils are likely to be set up for defensive reasons, that is when the economic situation and employment prospects are bad (Jirjahn, 2009; Oberfichtner, 2019). Some studies investigated the role of firm ownership, finding that works councils are relatively rare in family firms (Schlömer-Laufen et al., 2014) and that employees in owner-managed establishments are less likely to set up a works council (e.g.

<sup>5</sup> There are two partial exceptions: Lehmann (2002) finds a negative association between collective bargaining coverage and the participation of owners in a plant's workforce (not necessarily as managers), which is statistically significant in some specifications. When looking at the joint presence of both collective agreements and works councils in German plants over 20 years, Oberfichtner and Schnabel (2019) present a cross-section analysis in which this joint presence is the dependent variable. They report a negative correlation of this very specific status with the presence of owner managers but do not analyze this in detail. In contrast, in order not to mix up very different institutions, we analyze works council presence and collective bargaining agreements separately based on a completely different theoretical background.



Schlömer-Laufen, 2012; Hauser-Ditz et al., 2013; Jirjahn & Mohrenweiser, 2016; Ertelt et al., 2017; Gerner et al., 2019).

The negative relationship between owner management and the existence of a works council is often explained by an aversion of the owners against worker co-determination (which may be respected by the employees as long as industrial relations in the plant are good). However, this explanation may be too simple and neglects some important aspects of family firms and owner management. There is a growing literature on the behaviour of family firms that is said to differ from that of other entities (Tabor et al., 2018; Klein & Bell, 2007; Bryson et al., 2016). In particular, this research assumes that family firms follow both economic and non-economic goals, like the maximization of so-called socio-emotional wealth (Gomez-Mejia et al., 2007), where the reputation of the family and the long-term influence of the owners on the company are as important as the profits created by those firms. Further, family firms often act differently from other employers, offering a higher job security while paying lower wages (Bassanini et al., 2013; Breda, 2018; Kölling, 2020). Conflicts between employers and employees are less frequent in family firms (Belot & Waxin, 2017; Breda, 2018). Moreover, several studies show that owner-run firms have a lower degree of formalization and a more personalized culture (Stewart & Hitt, 2012; Block et al., 2016). Then, one possible threat to the amount of socio-emotional wealth in the firm is the employment of non-family workers and the implementation of formal worker representation structures.

If non-family members are hired as executives, this could possibly result in a higher degree of formalization and better market performance, but also in owners' loss of control over the firm (e.g. Bandiera et al., 2018; Madison et al., 2018; Fang et al., 2016; Chrisman et al., 2014; Stewart & Hitt, 2012; Chua et al., 2009; Sonfield & Lussier, 2009). When maximizing socio-emotional wealth, the decision to hire external executives should depend on the trade-off between firm performance and family-centred goals (Salvato et al., 2012). Therefore, employing an external executive is often associated with a larger weight of economic goals (Fang et al., 2016). In addition to an economically sub-optimal degree of formalization and a more personalized culture, there are two other reasons why family-managed firms are likely to show economic underperformance. Firstly, there may be a lack of managerial skills within the owner family, especially when the firm grows and the need for these skills increases (Lin & Hu, 2007; Sonfield & Lussier, 2009). Secondly, although family firms are often seen as strongly value-oriented organizations that care about traditions and are loyal to their employees, possible family conflicts, nepotism, less attractive working conditions and the potential conflict between family goals and business goals create the impression of highly complex organizations that have a large probability of economic failure (Block et al., 2019). Against this background, it is not surprising that the majority of empirical studies find that external executives improve the business performance of family firms (Sciascia & Mazzola, 2008; Lin & Hu, 2007; Miller et al., 2013, 2014; Yopie & Itan, 2016).

The impact of external managers on the structure and performance of family firms also depends on the role of non-family executives within the company. The structures of family-run entities could be very attractive to employees who share the same informal values and who prefer environments with a family-like attitude (e.g. Block et al., 2016, 2019; Fang et al., 2016; Miller & Le Breton-Miller, 2006). This can lead to stewardship behaviour, where the goals of the owners are identical to the goals of the external executives, namely increasing the socio-emotional wealth of the firm (Miller & Le Breton-Miller, 2006). Then, stewards are likely to be not interested in changing these structures by introducing a higher degree of formalization and professionalization in the family business.

On the other side, there are potential conflicts in the economic goals between family members and external executives (Chrisman et al., 2014; Chua et al., 2009). In this case, external managers

act as agents who pursue their own goals. Of course, agency problems do not only occur in owner-run businesses but also in other firms. However, family firms may have more severe problems in controlling external managers since – due to their additional and qualitative non-economic goals – they find it more difficult to evaluate the performance of external executives (Chua et al., 2009). Family firms are only willing to hire external managers if the advantages resulting from firm growth and professionalization are larger than the potential costs of losing control over the firms' decisions (Chrisman et al., 2014; Fang et al., 2016).

Assuming that external managers act as self-interested agents, take a short-run instead of a long-run perspective, and try to maximize profits instead of socio-emotional wealth, they should favour a stronger formalization and a stricter application of economic methods over non-economic family-centred goals. Some empirical studies show indeed that a hiring of external managers comes from the need of stronger formalization of firm structures (Chua et al., 2009; Fang et al., 2016). If these managers act as agents rather than stewards, we will see a higher degree of formalization not only in the production process or in administration but also in employer–employee relationships. In the German situation, this should show up in a higher probability of observing collective agreements and works councils if at least some of the managers are not members of the owner family.

Against this theoretical and empirical background, we propose the following five hypotheses:

1. Works councils are more likely to exist in establishments where owners are not involved in the management of the firm compared to establishments where executives are exclusively from the owner family.
2. In family firms where management is mixed (i.e. composed of owners and external managers), works councils are more likely to exist than in establishments with pure owner management (but still less likely than in establishments where owners are not involved in management).
3. Collective bargaining agreements are more likely to exist in establishments where owners are not involved in the management of the firm compared to establishments with owner-managers.
4. In family firms where management is mixed, collective bargaining agreements are more likely to exist than in establishments with pure owner management (but still less likely than in establishments where owners are not involved in management). The difference between managers and owners may be larger in single-employer bargaining where the union can directly interfere in the running of the establishment and thus provoke owner opposition.
5. According to stewardship theory, it is mainly executives agreeing with the goals of family firms who are hired or self-select themselves into such firms. Since the management style and attitude towards worker representation of this type of executive should be similar to that of the managers from the owner family, the probabilities of observing a works council or a collective agreement do not differ between establishments with and without external executives.

### 3 | DATA AND DESCRIPTIVE EVIDENCE

The only dataset that allows us to continuously analyse both the coverage of collective bargaining and works councils in Germany and that also contains information on owner-managers is the IAB Establishment Panel (Ellguth et al., 2014). This panel annually surveys approximately 16,000 plants from all industries using a stratified random sample of all plants that employ at least one worker covered by the social security system at the 30th June of a year. The representative survey



is carried out orally by way of personal interviews with the owner or management of the establishment that are conducted on behalf of the Institute for Employment Research (IAB). The panel shows a very high response rate of over 70–80% for establishments that have participated more than once.

Our period of observation ranges from 2008 to 2017 because one of our explanatory variables (competition) is only available since 2008,<sup>6</sup> and 2017 was the last wave available for research when our empirical estimations were conducted. We examine only establishments (not firms) with five or more employees because works councils can only be set up in these plants. We also exclude not-for-profit organizations and establishments in the public sector where owner-management does not play a role. In total, more than 90,000 observations of the establishments are available for the subsequent analyses. Due to item-non-response in some variables, more than 70,000 complete observations are used in the regressions, with slightly differing numbers of observation in each estimation.

Since the IAB Establishment Panel has been set up for the needs of the Federal Employment Agency, detailed information on the number of workers, the composition of the workforce, the plant's exporting activity and production technology, its business policies and training activities constitutes a major part of the questionnaire. Most important for our analysis, establishments are also asked whether there exists a works council in the establishment and whether they are covered by collective agreements at industry or company level. The answers to these two questions are the dependent variables in our empirical analysis of family ownership and worker representation. If a works council exists in an establishment, our first dummy variable becomes 1 (and zero otherwise). The second dummy variable on collective bargaining coverage is 1 when the survey indicates a collective agreement at the industry or company level (and zero otherwise).<sup>7</sup>

The covariate of major interest concerns the composition of an establishment's ownership and management. Although the data do not contain direct information whether an establishment is family-owned, the IAB Establishment Panel surveys the composition of the establishment's management and reports whether the owners manage their establishment or not. It is possible to distinguish three different situations: Firstly, establishments that are managed solely by the owners or family members of the owners, which will be our reference group. Secondly, establishments where some business executives are family members (and others are not), and finally establishments without members of the owner families in the company's management. The latter group comprises all establishments that are exclusively managed by external managers, no matter whether they are family-owned or not. However, there is no information in the survey about the composition and size of the board of executives and thus about the importance of external managers to the firm. Although this may be regarded as a shortcoming of the data, what is important is that we can clearly identify if members of the owner family are involved in running the establishment. We hypothesize that establishments are likely to act differently than other entities if they are managed by the owners. Therefore, the regressions contain two dummy variables indicating whether firms operate partly or exclusively with external executives (with establishments that are managed solely by the owners or family members of the owners, being the reference category).

Table 1 contains descriptive evidence on the prevalence of works councils and collective bar-

<sup>6</sup> The variable that indicates family ownership has been collected since 2007.

<sup>7</sup> As a robustness check and in order to test the second part of hypothesis 3, we later will distinguish between collective agreements at the industry and company level. Please note that the share of establishments with collective bargaining agreements at company level in the data is rather low (5.5–7.5% per year) depending on establishment size and industry affiliation.

**TABLE 1** Prevalence of worker representation under various forms of family management

	Exclusively managed by owner families			Partly managed by external executives			Exclusively managed by external executives		
	(a) Total	(b) With works council (pct. of (a))	(c) With coll. barg. agr. (pct. of (a))	(d) Total	(e) With works council (pct. of (d))	(f) With coll. barg. agr. (pct. of (d))	(g) Total	(h) With works council (pct. of (g))	(i) With coll. barg. agr. (pct. of (g))
Total	100 (46,207)	8.01 (3700)	32.49 (15,011)	100 (7693)	38.34 (2946)	40.36 (3100)	100 (26,047)	37.90 (9872)	61.12 (15,919)
East	40.11 (18,535)	5.85 (1084)	22.27 (4128)	40.13 (3087)	29.12 (899)	30.35 (937)	37.23 (9696)	54.32 (5267)	52.27 (5068)
West	59.89 (27,672)	9.45 (2616)	39.33 (10,883)	59.87 (4606)	44.44 (2047)	46.96 (2163)	62.77 (16,351)	66.42 (10,860)	66.36 (10,851)
Establishment size (no. of employees)									
5–9	27.42 (12,548)	0.33 (42)	26.63 (3341)	5.81 (447)	6.71 (30)	18.57 (83)	5.08 (1323)	20.86 (276)	39.46 (522)
10–19	26.52 (12,139)	1.22 (148)	31.25 (3794)	10.20 (785)	8.79 (69)	26.75 (210)	9.32 (2427)	29.71 (721)	44.05 (1069)
20–49	26.38 (12,075)	6.50 (785)	32.46 (3919)	23.69 (1822)	16.03 (292)	34.30 (625)	21.56 (5615)	38.68 (2172)	48.71 (2735)
50–99	10.55 (4828)	18.99 (917)	36.89 (1781)	19.99 (1537)	36.76 (565)	35.00 (538)	17.60 (4583)	57.98 (2657)	57.12 (2618)
100–199	5.27 (2412)	35.61 (859)	44.24 (1067)	17.92 (1378)	53.99 (744)	44.63 (615)	16.90 (4403)	76.99 (3390)	64.37 (2834)
200–499	3.01 (1376)	50.07 (689)	54.14 (745)	15.97 (1228)	70.11 (861)	57.33 (704)	18.14 (4726)	86.92 (4108)	73.89 (3492)
500 and more	0.87 (396)	65.66 (260)	73.48 (291)	6.41 (493)	78.09 (385)	65.92 (325)	11.34 (2955)	94.86 (2803)	89.58 (2647)

Source: IAB Establishment Panel 2008–2017, establishments with five and more employees, no. of observations in parentheses.

gaining in family firms based on our (unweighted) sample of about 90,000 observations from the IAB Establishment Panel. During the observation period from 2008 to 2017, only 8% of establishments exclusively managed by the owners had a works council, and about 32% were bound by a collective bargaining agreement. This picture changes substantially when looking at establishments that are partly or exclusively managed by external executives. Now, works councils exist in about 38% of family firms that are partly or exclusively managed by externals, and collective bargaining is found in about 40% of establishments that are partly and in more than 61% of establishments that are exclusively managed by externals. Although the prevalence of works councils and collective bargaining is higher in Western than Eastern Germany, the pattern of higher worker representation in establishments that are not run solely by the owner families is found in both parts of the country. By and large, the same applies across different establishment sizes, even if there are a few exceptions concerning collective bargaining in very small and very large establishments with mixed management.

Our brief review of the literature on worker representation has pointed to some other variables that may explain the existence of a collective agreement or a works council. In the subsequent regressions, we therefore include additional covariates usually employed in the literature (see, e.g. Schnabel et al., 2006; Hauser-Ditz et al., 2013; Addison et al., 2013; Oberfichtner & Schnabel, 2019). Firstly, we control for the composition of the workforce in the establishments by including the employment shares of low skilled workers, employees with a university degree, female workers, part-time employees and temporary employed individuals. The IAB Establishment Panel also enables us to control for establishments' export activities and foreign ownership. We use both variables as dummies that become one if the establishment is an exporter, respectively, if it has a foreign owner. Another dummy indicates whether the establishment is a single establishment or a branch plant of a company that has several establishments. Further dummy variables show whether the establishment reports to operate in a market with high competition and whether it is in Eastern Germany. Finally, our empirical model contains several sets of dummy variables, such as year dummies and dummies for establishment size, industry affiliation and the founding year of the establishment. Descriptive statistics for the main variables are presented in the online Appendix (Table A1).

In order to account for the possible endogeneity of our owner-manager variable, the subsequent analysis applies an instrument variable approach (Wooldridge, 2015). This requires the use of additional variables that explain the existence of family-managed firms and fulfil the exclusion restriction. A strong instrument requires to be (partially) correlated with the potentially endogenous variable and must not be correlated with the error term of the regression. The first stage regression is best described as a linear prediction or reduced form estimation and 'there is nothing necessarily structural about [the] equation' (Wooldridge, 2010, p. 90). The instrument we use is the legal form of the firm. This is reflected by three dummy variables indicating partnerships, limited companies and corporations, with individual ownership as the reference category.<sup>8</sup> We argue that there is no relationship between the legal constitution of a firm and the presence of

<sup>8</sup> *Individual ownership* has no legal existence separate from its owner. An individual or sole proprietorship is simply a person who operates a business under his or her own name or a trade name. Generally, there are no legal requirements for operating a sole proprietorship. A *partnership* is formed when two or more persons enter into a legal contract in which the partners agree to operate a business and share the profits from that business. There must be at least one general partner who has unlimited liability for the legal obligations of the firm, and there may be one or more limited partners who have limited liability if they are not substantially involved in the operation of the business. This covers legal forms in Germany like, for example GbR, OHG and KG. A private *limited company* in Germany is a corporation with its own legal personality and unlimited liability with its own assets. The partners are only liable to the company; their liability is

works councils and collective bargaining in Germany (and previous studies like Oberfichtner & Schnabel, 2019 have not found that the legal form has a significant influence on worker representation). But it is obvious that firms with the legal forms of a single ownership or a partnership are closely related to the owner. Moreover, it is less probable to observe owner managers in firms with a broad distribution of shares (as in some corporations). From our point of view, it is unlikely that the choice of legal form is predominantly influenced by the desire for control over the company or the company capital. In addition to sole proprietorship, all other legal forms also allow absolute control over the actions of a company. For instance, even in a joint stock company, the owners can keep all stocks. Moreover, the existing literature discusses four other reasons that primarily determine the choice of legal form. These are (1) differences in liability (e.g. Easterbrook & Fischel, 1985), (2) different types of taxation (e.g. Goolsbee, 2004), (3) variations in external funding possibilities (e.g. Chen & Qi, 2016), and (4) changing transaction costs, in particular for growing companies (e.g. Harhoff et al., 1998).

#### 4 | ECONOMETRIC MODEL AND EMPIRICAL RESULTS

Our econometric model is based on the dichotomous nature of the endogenous variables, that is the (non-)existence of collective agreements and works councils. Assuming a normal distribution of the observations on these kinds of worker representation, we use the following probit estimation model (Wooldridge, 2010):

$$P(y_{it} = 1|x_{it}) = \Phi(x_{it}\beta), \quad (1)$$

where  $y_{it}$  becomes 1 if establishment  $i$  has a works council or a collective agreement;  $t = 1, \dots, T$ , and  $x_{it}$  is a vector of covariates containing the explanatory variables discussed in the previous section as well as an intercept.  $\beta$  are the parameters of the variables, and  $\Phi$  is the standard normal cumulative distribution function (cdf). There are several inferences that might bias the regression outcome of the probit model in Equation (1). In particular, the subsequent regressions should consider unobserved firm-fixed heterogeneities, the probable endogenous nature of ownership management and heteroskedasticity of the disturbances that possibly arise from the nature of the unbalanced panel data and the endogeneity of ownership variables. These requirements are taken into account in the Mundlak/Chamberlain device (Mundlak, 1978; Chamberlain, 1982) where the unobserved heterogeneity is modelled as a normally distributed variable conditional on the averages of the time-varying exogenous regressors. Here, we use the method of Wooldridge (2019) for unbalanced panel data, which means that we have to control for heteroskedasticity.

The decision of a specific ownership and management structure of a company is possibly influenced by variables that also determine an establishments' adoption of a works council or a collective agreement. For instance, the notion of maximizing socio-emotional wealth includes keeping control over the family business (Gomez-Mejia et al., 2007, 2011). Both, external managers and worker representation could weaken the influence of the owners on the firm. There-

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limited to the payment of contributions and any additional contributions. In Germany, most of the limited companies are established as GmbH, but also other types of limited companies are allowed, like UG or the British Ltd. A *corporation* is a private law entity based on a partnership agreement whose members pursue a common, usually economic, purpose. It is a legal entity that usually includes limited companies. For our purposes, we only apply the expression corporation to joint-stock or public limited companies in Germany (mostly 'AG') and exclude private limited companies like GmbH.

fore, both decisions, the employment of external managers and the introduction of works councils and/or collective agreements, probably rely on the same covariates and one must take care when approaching the endogeneity of being a family firm. Here, we apply a two-step control variable approach, where the residual of estimation on the first stage is used as an additional variable in the estimation of the model on the second stage (Wooldridge, 2015). This requires some additional exogenous variables on the first stage of the estimation to fit the exclusion restriction. In the following, we assume that the possibly endogenous variable  $y_{2it}$  is related to all exogenous variables  $z_{it}$ , including three additional dummy variables that describe the legal form of the firm.

Our fixed-effects probit estimations of the existence of works councils and collective bargaining agreements control for unobserved firm-fixed heterogeneities, endogeneity of the decision to be a family-managed firm and heteroskedastic structures of the disturbances. We assume that location and industry affiliation do not change over time (neither does the year of founding). Therefore, the regressions do not contain the means of these variables. In Table 2, we present the average marginal effects rather than the estimated, difficult-to-interpret parameters of the non-linear regressions (which are available on request). The dependent variable in columns (a) and (b) is the probability of adopting a works council, and columns (c) and (d) present the corresponding results for the existence of a collective agreement. Columns (a) and (c) are the outcome of our base models, whereas columns (b) and (d) contain the average marginal effects of our specifications that control for unobserved heterogeneities, endogeneity and heteroskedasticity.

The results of the base models in columns (a) and (c) largely confirm the outcome of previous research (Jirjahn, 2009; Addison et al., 2013; Jirjahn & Mohrenweiser, 2016; Ertelt et al., 2017; Oberfichtner, 2019). The probabilities of having a works council and being bound by a collective agreement show a statistically significant negative relationship with the shares of female employees, low skilled workers and temporary employed workers. Single establishments and exporting firms record lower probabilities of having works councils and collective bargaining agreements. In contrast, establishments that are located in Western Germany or experience higher competition show a higher probability of worker representation. Other relationships differ between the regressions for works councils and collective agreements. Although the probability of observing a works council increases for establishments with a large share of employees holding a university degree and for establishments that are partnerships or corporations rather than single-owner entities, we find opposite effects of these variables when estimating the equations for collective bargaining agreements. Moreover, we report statistically significant associations with establishment age, year of observation, industry affiliation and establishment size. Wald-Tests of joint statistical significance of the variables that indicate firm-fixed effects and heteroskedasticity show large and highly significant outcomes.

The variables of major interest in this analysis concern the management structure of the observed establishments. We use establishments that are managed solely by the owners or family members of the owners as reference category and estimate the differences to entities with complete or partial external management. In addition, in Table 3, we test whether the calculated average partial effects of establishments that exclusively employ external executives significantly differ from the effects in firms with partly external executives. First looking at columns (a) and (c) in Table 2, we see that in the base models, the estimated effects of purely external management on worker representation are positive and statistically significant. The probability of observing a works council in an establishment exclusively run by external executives is 19.6% larger than in establishments solely managed by owners. The corresponding marginal effect for establishments with partial family management indicates a 8.3% higher probability. Moreover, the difference of 11.3 percentage points between these two marginal effects is statistically significant at the 1% level

**TABLE 2** Average partial effects from probit regressions of the existence of works councils and collective agreements

Specification	Works council		Collective agreement	
	(a)	(b)	(c)	(d)
Firms partly with external executives	0.083** (0.007)	0.141** (0.006)	-0.009 (0.010)	-0.020* (0.010)
Firms exclusively with external executives	0.196** (0.005)	0.320** (0.010)	0.150** (0.008)	0.128** (0.015)
Generalized residuals of first-stage estimation (from Table A2, controlling for endogeneity)	-	-0.076** (0.005)	-	0.004 (0.007)
Share of low skilled workers	-0.019* (0.008)	-0.016 (0.010)	-0.053** (0.010)	-0.021 (0.013)
Share of employees with university degree	0.071** (0.014)	0.017 (0.020)	-0.020 (0.022)	0.059 (0.032)
Share of female workers	-0.038** (0.012)	-0.023 (0.021)	-0.081** (0.016)	0.010 (0.027)
Share of part-time workers	0.000 (0.013)	-0.027 (0.015)	0.026 (0.017)	0.000 (0.021)
Share of temporary employed	-0.091** (0.017)	-0.007 (0.018)	-0.050* (0.020)	-0.013 (0.024)
Exporting establishment	-0.005 (0.006)	-0.004 (0.006)	-0.101** (0.008)	-0.011 (0.009)
Foreign ownership	-0.002 (0.008)	-0.009 (0.010)	-0.018 (0.013)	-0.007 (0.017)
Single establishment	-0.070** (0.005)	0.014* (0.006)	-0.092** (0.008)	0.011 (0.010)
High competition	0.012** (0.004)	0.005 (0.004)	0.024** (0.005)	0.005 (0.005)
Western Germany	0.022** (0.006)	0.030** (0.003)	0.114** (0.008)	0.120** (0.004)
26 year-of-founding dummies	**	**	**	**
9 time dummies	**	**	**	**
40 industry dummies	**	**	**	**
6 firm size dummies	**	**	**	**
Pseudo- $R^2$	0.4887	0.5053	0.2136	0.2270
Log Likelihood	-21,136	-20,432	-37,841	-37,198
Wald-Test $\chi^2$ (df.)	6347** (94)	1157** (214)	4848** (94)	725.91** (214)
Wald-Test $\ln(\sigma^2) \chi^2$ (df.)	-	400.58** (20)	-	301.89** (20)
Wald-Test FE $\chi^2$ (df.)	-	1228** (137)	-	1519** (137)
Observations(no. of establishments)	70,945 (19,885)	70,894 (19,877)	70,808 (19,875)	70,757 (19,867)

Source: IAB Establishment Panel 2008–2017, establishments with five and more employees.

Note: The model also includes a constant. The number of observations differs across regressions because of missing values in the dependent variables and in the first-stage estimation residuals. Columns (a) and (c): The regressions do not control for unobserved firm heterogeneity (firm fixed effects) and heteroskedasticity. Standard errors are adjusted for clustering on establishments. Columns (b) and (d): The Chamberlain/Mundlak approach for unbalanced panels to control for unobserved firm heterogeneity requires including the means of the time-varying covariates and an indicator that identifies the number of observations of each unit, respectively, the interactions of both in the regression (Wooldridge, 2019). Bootstrapped standard errors in parentheses (1000 repetitions) and control for heteroscedasticity and serial correlation. \*\* and \* denote significance at the 0.01 and 0.05 level, respectively.



**TABLE 3** Differences in the coefficients for firms exclusively with external executives and firms partly with external executives

	(a)	(b)	(c)	(d)
Firms with partial non-family management versus firms exclusively with external executives	0.113** (0.007)	0.179** (0.006)	0.158** (0.011)	0.148** (0.009)

Note: Z-tests of the difference between the particular parameter estimates of the mentioned variables in Table 2. \*\* and \* denote significance at the 0.01 and 0.05 level, respectively. The calculation uses STATA's command 'lincom'.

(Table 3). The relationship between exclusively external management and the existence of collective bargaining is also positive, indicating a 15% higher probability of observing a collective agreement, but there is no statistically significant difference between the effects of partial external management and pure family management (Table 2).

When turning to the results in columns (b) and (d) of Table 2, we observe some changes compared to the base models. These estimates control for the endogeneity of family management, unobserved firm-fixed effects and heteroskedasticity. As described above, we use a two-step control function method to account for the probable endogeneity of observing owner-run businesses. Therefore, in the first step, we conduct ordered probit regressions of family management, the results of which are presented in the online Appendix (Table A2). The results show that the different legal forms, that is the instruments that are used to secure the exclusion restriction, are highly significant and have a positive sign. As expected, the probability of observing (partial or exclusively) external management is higher when there are no single owners. An *F*-test indicates that these variables are rather strong instruments. In addition, foreign owned firms are less likely to be owner-managed, and structural variables like the year of founding, firm size and industry affiliation significantly explain variation among family management. Then, we calculate the generalized residuals from the outcome of the estimations and use this as an additional covariate in the main regressions on the second stage. A *J*-test confirms that the overidentifying restrictions hold.

In Table 2, the average marginal effect of the generalized residuals of the estimations on the first stage (control variables) in column (b) is statistically significant, so we cannot reject a possible influence of endogeneity in the case of works councils. The negative sign of the residuals in (b) reflects a negative correlation between these and the existence of a works council. If we did not take into account possible endogeneity of family management, we would underestimate the impact of external management on worker representation at the firm level. It seems that structural variables like firm size, workforce composition or industry affiliation cover the true effect of family management on the existence of worker representation in firms. In contrast, the outcome of this instrumental variable in column (d) is insignificant (as long as we do not distinguish between collective bargaining at firm or industry level, on which below). This implies that endogeneity does not play a role here. Therefore, we prefer the results presented in columns (b) and (c) of Table 2.

In our preferred specification in column (b) of Table 2, some of the covariates discussed above become insignificant, which underscores the importance of controlling for potential endogeneity and unobserved firm-fixed effects. Also, the effect of external management on worker representation becomes larger. Establishments that are partly managed by non-family executives record a more than 14% higher probability of having a works council. This value increases to more than 30% for firms exclusively run by external managers. Moreover, the differences between

establishments with complete and partial external management are statistically significant for the model in column (b), as shown in Table 3. These findings are in accordance with our hypotheses 1 and 2.

Note that our main result is robust to different specifications of the model controlling for heteroskedasticity, endogeneity and fixed effects separately. The probability of observing works councils always increases significantly if external managers work in the establishments. Our insights also do not change when taking account of potential interdependencies between the two variants of worker representation by estimating bivariate probit regressions or a fixed-effects probit regression on the joint non-existence of both works councils and collective agreements in an establishment. The outcome of these regressions is available from the authors on request.

In order to check whether the level at which collective bargaining takes place does make a difference (as suggested in hypothesis 4), we further distinguish between multi-employer bargaining at industry level and single-employer bargaining at company level. We run multinomial logit regressions of the (non-)existence of collective bargaining agreements at industry or company level, the results of which are reported in Table A3 in the online Appendix. Note that this multinomial estimation approach differs from our previous approach in that it is not able to take account of heteroscedasticity, so that results are not fully comparable. Starting with industry-level bargaining, we find that controlling for endogeneity does play a role now and that establishments which are partly managed by external executives record an 8.2% lower probability of having an industry-level collective bargaining agreement than other establishments. The effect for firms exclusively run by external executives is close to zero and statistically insignificant. In contrast, when looking at company-level bargaining, the positive effect of external management is statistically significant and also stronger for establishments exclusively run by external executives than for establishments where management is mixed. This difference is statistically significant and thus in accordance with hypothesis 4 and with our works council results. Apparently, the close contact with the union in company-level bargaining (or with a company works council) is a more serious problem for owners than for external managers. In contrast, if negotiations mainly take place at the remote industry level, this might be less of a concern for owners and their considerations of socio-emotional wealth.

Altogether, these results are in largely line with our first four hypotheses. Works councils and collective bargaining agreements are more likely to exist in establishments where owners are not involved in the management of the firm compared to establishments where executives are exclusively from the owner family (hypotheses 1 and 3). The collective bargaining effect seems to be driven mainly by company-level bargaining. Moreover, works councils are more likely to be found in family firms where management is mixed than in establishments with pure owner management, but they are less likely to exist than in establishments where the owners are not involved in management (hypothesis 2). In contrast, hypothesis 4 on the relevance of mixed management for the adoption of collective bargaining is not clearly supported by the data and seems to hold only for company-level but not for industry-level bargaining. These findings suggest that it is not only the attitudes of the owners that (negatively) affect the existence of works councils and collective agreements. Another important, but hitherto neglected factor is the influence of external managers who increase the probability of worker representation. These outcomes contradict our fifth hypothesis that there should be no further formalization of industrial relations since external managers act as stewards rather than agents in family firms.

## 5 | CONCLUDING REMARKS

Using data from the representative IAB Establishment Panel in Germany for the period 2008–2017, this paper has found a positive relationship between the existence of external management in an establishment and the probabilities of having a works council or a (company-level) collective bargaining agreement. This finding is largely consistent with previous results in the literature (e.g. Hauser-Ditz et al., 2013; Addison et al., 2013; Oberfichtner & Schnabel, 2019), and it is sometimes attributed to an aversion of the owners against worker co-determination and trade unions. In the case of family firms, which are in the focus of this paper, owners are said to avoid worker representation and collective bargaining mainly because they want to maintain their full managerial freedom. We have argued that this explanation is difficult to reconcile with the fact that many family firms also employ external managers. If paternalistic owners were so keen to preserve their prerogatives, they should in the same vein avoid worker participation and hiring external managers.

Going beyond the extant literature, we have taken into account the potential endogeneity of the owners' decision to employ external managers, arguing that the specific ownership and management structure of a company may be influenced by variables that also determine the decisions of setting up a works council or having a collective agreement. Estimating a heteroskedastic probit model with fixed effects, we have found that family firms that are exclusively managed by external managers significantly differ in the presence of works councils and (company-level) collective bargaining agreements. Our results show that the probabilities of having works councils and company-level collective agreements increase substantially if only some of the managers do not belong to the owner family, which has not been investigated so far. Apparently, the close contact and the sharing of power with a company-based works council or with a union in company-level bargaining is a more serious problem for owners than for external managers.

Several factors may play a role in explaining the complex relationship between owner-managers, external managers and the organization of industrial relations in family firms. Although owners attempting to maximize their socio-emotional wealth and control of the establishment may be reluctant to hire external executives, they may be forced to do so if there is a lack of managerial skills in the owner family, if management workload increases and/or if a family firm is growing or reorganizing. Possibly, this goes along with a higher need for formalized structures and a larger weight given to economic principles in securing the existence and development of the family firm rather than following non-economic family goals.<sup>9</sup> The external executives hired seem to be more willing than owners to adopt (or at least not oppose) collective bargaining and works councils and company-level collective bargaining, probably since worker representation reduces transaction costs, allows employees to safely express their dissatisfaction with working conditions instead of quitting the job and enables management to run a more efficient personnel policy. But if it is mainly executives agreeing with the goals of family firms who are hired or who self-select themselves into such firms, this type of executives would act as stewards and their management style and attitude towards worker representation should be similar to that of the managers from the owner family. However, since we have found substantial differences in the presence of works councils and (company-level) collective agreements between firms that are managed by external managers and owners, this stewardship hypothesis is not supported by the data.

<sup>9</sup> Although our results are consistent with the notion of socio-economic wealth that increasingly plays an important role in the literature on family firms, we acknowledge that they do not provide direct evidence on socio-economic wealth.

Obtaining more information on the characteristics of external managers hired in family firms should be an interesting avenue of future research and could shed more light on the stewardship hypothesis. Another limitation of our data is that we only know whether external managers are employed but not how large their share in the board of managers is. Moreover, our data consist of establishment data rather than observations at the company level. Whereas this makes no difference for small companies with only one establishment (and we have controlled for this status in our estimations), for larger entities, we have to assume that the behaviour at the establishment level is a good instrument for the behaviour of the whole company.

Despite these limitations and caveats, our empirical analysis suggests that the black-and-white story of paternalistic owner opposition against co-determination and trade unions – though not fundamentally flawed – is probably not the whole story. The hiring and the strategic behaviour of external managers in family firms must also be taken into account. In doing so, the notion of socio-emotional wealth should be given more attention in explaining family firms' stance on industrial relations.

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## SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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