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## ORIGINAL ARTICLE

# Political spillovers of workplace democracy in Germany

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**Abstract**

Although works councils provide a highly developed mechanism to promote workplace democracy, research on their consequences has been dominated by economic aspects. This study brings a new perspective to the understanding of works councils by examining their influence on workers' political behavior. Political spillover theory suggests that participation in the firm's decision making has the potential to foster workers' political participation in civic society. Our study for Germany indeed finds a positive association between the presence of a works council and workers' interest in politics. This holds in panel data estimations including a large set of controls and accounting for unobserved individual-specific factors. However, separate estimations by gender show a positive association between works councils and political interest only for men, but not for women. Traditional gender roles may make it difficult for women to be politically engaged even when a works council is present.

**KEYWORDS**

gender, political interest, union member, works council, works councilor

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## JEL CLASSIFICATION

J51, J52, J53, J58

## 1 | INTRODUCTION

Economists and management scholars have shown an increasing interest in the economic consequences of works councils during the last three decades or so. A remarkable number of studies have examined the influence of works councils on productivity, profitability, innovation, investment, employment, and wages (Jirjahn & Smith, 2018 and Mohrenweiser, 2022). The discussion nowadays appears to be dominated by economic aspects. However, while economic factors are clearly important for an evaluation of works councils, a predominant focus on these factors is far too narrow. As Müller-Jentsch (2008: p. 272) puts it:

“Co-determination is no lubricant of business performance and no servant of economic efficiency.”

Giving workers a say in the firm's policy can be seen as an important ingredient to workplace democracy (Müller-Jentsch, 1995, 2008). It smoothenes the unequal playing field between management and employees and breaks with hierarchical management forms that are characterized by conformity to organizational rules and obedience to authority. This may not only contribute to the quality of work by giving workers a sense of self-determination, self-esteem, and dignity (Green, 2021). It may also have consequences for society as a whole which go far beyond the narrow boundaries of the workplace (Budd, 2014). In particular, political spillover theory suggests that participation in the firm's decision making has the potential to foster workers' political participation in civic society (Budd & Lamare, 2020).<sup>1</sup> Participation in the firm's decision making may lead to feelings of political effectiveness, the development of political skills, a higher awareness of political issues, and increased generalized solidarity among workers.

This study is the first to systematically examine political spillovers of works councils. Works councils play a role in the corporate governance of firms in many European countries. Compared to their counterparts in other countries, German works councils have acquired relatively extensive powers. They provide a highly developed mechanism for firm-level participation in decision-making. German works councils have been shown to substantially shape the personnel policy of firms (Jirjahn, 2018). At issue is whether they also play a broader role in the functioning of civic society.

In Germany, the creation of a works council depends on the initiative of the firm's workforce. Hence, works councils are not present in all eligible firms. This allows conducting a within-country study that compares workers in firms with and without a works council. Using data from the Socio-Economic Panel (SOEP), we examine the influence of works councils on the political interest of workers. Of course, there are many different dimensions of political participation in civic society, such as propensity to vote, volunteering for election campaigns, attending protests, or signing petitions. An advantage of considering political interest is that it is strongly associated

<sup>1</sup> The idea that experience with decision-making participation in firms may build effective participation in democratic processes goes back at least to J.S. Mill (1848). The idea has been revived by political theorists (Pateman 1970) and advocates of labor-managed firms (Vanek 1971). Greenberg (1981) and Smith (1985) provide early empirical studies on the political spillover theory.

with the various dimensions of political engagement and democratic citizenship. As Prior (2019: p. 9) puts it in his review of the empirical literature:

“Political interest is typically the most powerful predictor of political behaviors that make democracy work. More politically interested citizens know more about politics, think more systematically about their political decisions, vote at higher rates, and participate more in the political process in other ways. The evidence for a strong association between political interest and these outcomes is overwhelming, and evidence demonstrating causal impact, while sparser, exists as well.”

Our panel data estimates show that works councils have a significant influence on the political interest of workers. Workers are more likely to have interest in politics if a works council is present in the firm. However, our estimates also reveal important gender differences. Separate estimates by gender show that the positive relationship between works council presence and political interest is confined to male workers. The estimates do not provide evidence of a positive relationship for female workers. We argue that unequal gender roles make it more difficult for women to be politically active even when a works council is present.

This study contributes in several ways to the literature. Examining the political consequences expands the perspective on works councils and brings an important new twist to the works council literature. That literature has narrowly focused on economic issues so far. The evidence provided by this study is timely, given a globally increasing political apathy that poses serious threats to democracies (Solijonov, 2016). The results of this study indicate that works councils have the potential to strengthen the functioning of democratic systems. However, the results also show that the extent to which works councils can develop this potential depends on broader societal factors. They conform to the notion that gender inequality within society may limit the influence of workplace democracy on workers' political participation.

On a broader scale, our study also contributes to the literature on political spillovers. Political spillovers have been studied by psychologists (Weber et al., 2020), political scientists (Carter, 2006), and industrial relations scholars (Budd & Lamare, 2020). Various studies have examined the spillovers of individual worker voice, worker ownership, and worker cooperatives. A series of studies have also examined the role of unions.<sup>2</sup> Our study sheds light on an institution of worker representation that has functions sufficiently different from those of unions. Crucially, it isolates the influence of works councils from that of unions as our dataset allows controlling for union membership. From a methodological viewpoint, disentangling the roles of nonunion and union worker representation is particularly important in a European context where works councils are mandated in many countries and strong linkages between works councils and unions exist. Of course, insights into the broader consequences of works councils are also interesting for scholars and policy makers in countries without mandated nonunion worker representation. In the United States, the interest in nonunion worker representation has been spurred by a sharp decline in union density and the growth of a substantial representation gap in the workforce (Freeman & Rogers, 1999; Hertel-Fernandez et al., 2022).

<sup>2</sup> See the studies by Arndt and Rennwald (2016), Becher and Stegmueller (2019), Booth et al. (2017), Bryson et al. (2013, 2014), Budd et al. (2018), D'Art and Turner (2007), Freeman (2003), Hadziabdic and Baccaro (2020), Kerissey and Schoffer (2013, 2018), Kim and Margalit (2017), Lamare (2010a, 2010b), (Leigh 2006), Mosimann et al. (2019), Schur (2003), Timming and Summers (2020), Turner et al. (2020), Radcliff and Davis (2000), Ryan and Turner (2021), Wasser and Lamare (2014), and Zullo (2011).

Moreover, most of the studies on political spillovers have used cross-sectional data. This has given rise to the concern that the findings of those studies may be at least partially driven by workers' self-selection and, hence, suffer from endogeneity issues. Our panel data estimations help mitigate endogeneity concerns. The key finding of positive political spillovers of works councils not only holds in regressions including a rich set of control variables. It also persists in fixed effects estimations accounting for unobserved time-invariant influences.

Finally, previous studies usually have not distinguished between worker representatives and those who are represented. Yet, such distinction can be important as the presence of worker representatives in the data is likely to result in positively skewed estimates of the influence of worker representation on workers' political engagement (Bryson et al., 2013).<sup>3</sup> Our data allows distinguishing between works councilors (worker representatives) and those who are represented by the works council. We find political spillovers not only for works councilors, but also for workers who are represented by the works council. Thus, our results are not simply driven by politically active worker representatives.

The rest of the paper is organized as follows. Section 2 provides an institutional and theoretical background discussion. Section 3 discusses the data, variables and estimation methods. Section 4 presents the empirical results. Section 5 concludes.

## 2 | BACKGROUND DISCUSSION

### 2.1 | Works councils and workplace democracy

Industrial relations in Germany are characterized by a dual structure of employee representation with both works councils and unions. Unions in Germany are industrial unions. They negotiate over collective agreements on a broad industrial level. Employers are typically covered by a collective agreement if they are members of an employers' association.

Works councils provide a highly developed mechanism for participation in decision making at the establishment level. Their rights are defined in the Works Constitution Act (WCA). Works councils shall be elected by the whole workforce of establishments with five or more employees, but the creation of the council depends on the initiative of the establishment's employees. On some issues works councils have the right to information and consultation, on others a veto power over management initiatives and on still others the right to co-equal participation in the design and implementation of policy. Their rights are strongest in social and personnel matters including the introduction of payment methods, the allocation of working hours, the introduction of devices designed to monitor employee performance, and up- and down-grading. Works councils are institutionalized bodies of employee representation that have functions distinct from those of unions. They do not have the right to strike. If council and management fail to reach an agreement, they may appeal to an internal arbitration board or to the labor court. This shall restrict distributional conflicts so that works councils can help increase joint establishment surplus. The WCA makes clear that the aim is cooperation "in a spirit of mutual trust ... for the good of the employees and of the establishment."

The extensive participation rights provided by the WCA suggest that works councils have substantial power to shape decisions within firms. Works councils may even informally extend their

<sup>3</sup> Bryson et al. (2013) make this point referring to a unionized setting. They suggest that it could be important to distinguish between union leaders and union members. Of course, on a broader scale, this point is relevant for every type of worker representation.

influence to issues that are nowhere covered by the WCA (Jirjahn & Smith, 2006; Jirjahn et al., 2011). Empirical research confirms that works councils indeed have a far-reaching influence on the personnel policy of firms (Behrens & Pekarek, 2023; Jirjahn, 2018). Firms with a works council pay higher wages and have lower wage inequality. They are less likely to use the threat of dismissal as an incentive (Jirjahn, 2016) and are more likely to use incentive schemes such as profit sharing. These firms also provide more training and have a higher probability of implementing family friendly practices. They are more likely to invest in environmentally friendly technologies and to promote occupational health and safety (Jirjahn et al., 2022). Furthermore, firms with works councils appear to have larger internal labor markets. They are characterized by increased employee retention and a higher tendency to pay seniority wages.

Altogether, the available evidence suggests that works councils are an effective institution of representative worker voice. Such voice institution has the potential to contribute to workplace democracy. Workplaces without worker voice are highly authoritarian entities (D'Art & Turner, 2007; Ryan & Turner, 2021; Turner et al., 2020). Baumgartner et al. (1979) go so far to assert that these workplaces are the most authoritarian milieus in democratic societies. Management unilaterally makes decisions, determines the rules of the workplace and even structures the dominant discourse of beliefs and attitudes that construct a particular world view. Workers are supposed to conform to organizational rules, to give unquestioned obedience to authority and to identify wholly with management. A works council allows workers to challenge management authority and to raise concerns over matters affecting their working lives. Such representative voice provides a channel through which workers can influence managerial decision making and the setting of the terms and conditions of employment relationships. It enables workers to bring in their own perspectives and ideas.

A works council can even strengthen the opportunities of the individual worker to raise direct voice against management. The WCA gives each worker the right to be duly informed about changes to their tasks and to discuss these changes with the employer. Moreover, each worker who feels they are being treated in an unfair or discriminatory manner is entitled to make complaints. The worker may call on the works council for assistance or mediation.

Moreover, the WCA not only contributes to workplace democracy by breaking with authoritarian relationships between management and workers. It also promotes democratic processes among workers. Regular elections of works councilors are held every four years. All employees of the establishment have an active and passive voting right—the right to vote for candidates and the right to be elected as a works councilor. Once implemented the works council may fix hours for consultation. This allows workers to be in contact with the works council. Each worker has the right to propose issues to be discussed by the works council. Furthermore, the works councils holds regular works meetings with the whole workforce to report about its activities and to discuss topics such as collective bargaining policy, social policy, environmental and financial matters, equal opportunities, or work-life balance. The works meeting may make suggestions to the works council and take a stand on its activities.

## 2.2 | Political spillovers

The literature on political spillovers suggests a series of (partially overlapping) transmission channels through which workplace democracy can influence workers' civic and political engagement outside the workplace. In what follows, we distinguish between increased efficacy, the

development of civic skills, increased social and political awareness, and increased solidarity and responsibility.<sup>4</sup>

Pateman (1970) argued that workplace democracy strengthens workers' feelings of political competence and effectiveness. In authoritarian workplaces, workers are supposed to give unquestioned obedience to management. They have little scope to exercise control over their working lives. This leads to feelings of ineffectiveness, poor political self-confidence and habits of doing what one is told. Thus, authoritarian workplaces tend to result in apathy and stifle workers' motivation to participate in civic society. By contrast, giving workers an effective voice creates self-confidence and a sense of efficacy. Workers experience that they are able to influence management decisions.<sup>5</sup> The sense of self-efficacy can extend to political behaviors outside the employment sphere. An increased sense of internal political efficacy (the belief that one is well qualified to participate in politics) and external political efficacy (the belief that the political system is responsive to one's interests) stimulates political interest and motivates the individual worker to participate in political activities (Schur, 2003).<sup>6</sup>

The development of civic skills provides a further transmission channel. Workplace democracy can enhance skills such as the ability to speak in public, lead meetings or write an effective letter.<sup>7</sup> To the extent these skills are transferrable from the workplace to the political arena, they facilitate political participation (Verba et al., 1995). Or put somewhat differently, workplace democracy enables workers to accumulate the political human capital that makes their civic engagement more effective.<sup>8</sup>

Moreover, workplace democracy may promote greater social and political awareness (Bryson et al., 2013, 2014; Kim & Margalit, 2017). Workers become more educated about their rights on the job and obtain more policy-relevant information. They learn that the quality of working life depends on labor law legislation and, hence, on political decisions. More generally, workers learn to appreciate the value of participation and democracy. Altogether, a greater awareness of the political dimension of work should lead to greater political interest and participation.

Finally, workplace democracy may promote values of solidarity, collective responsibility, caring, and compassion (Ahlquist et al., 2014; Booth et al., 2017; Cregan et al. 2009, Weber et al., 2008; Weber et al., 2009). Repeated interaction with other workers in the establishment, learning about others' needs and developing a sense of shared interests shape the individual worker's

<sup>4</sup> In his review of the early literature, Greenberg (2008) makes a very similar distinction. He distinguishes between three transmission channels: an increased sense of efficacy, increased democratic skills, and an increased sense of commonality.

<sup>5</sup> Pateman's (1970) original spillover theory is often interpreted as highly psychological (Weber et al. 2020). For example, Pateman's reasoning is closely related to Deci and Ryan's (2012) theory of self-determination. However, as emphasized by Carter (2006), Pateman (1971) clarified later that efficacy has a strong cognitive component. In a similar vein, one can interpret Pateman's theory even within the context of an information economics approach. If workers have imperfect self-knowledge, they will use the signals they receive from their environment to learn about themselves and to update the beliefs they have about their own abilities (Benabou and Tirole 2003). Against this theoretical background, one can argue that an authoritarian workplace is an instrument of ego bashing. It signals to workers that they are powerless. By contrast, workplace democracy contributes to ego boosting by showing workers that they have the power and ability to influence decisions.

<sup>6</sup> In a similar vein, one may argue that workplace democracy fosters political interest and activity by lowering workers' respect for societal authority and making them more critical about society (Wu and Paluck 2020).

<sup>7</sup> For example, social learning theory (Bandura 1977) suggests that workers in a participatory environment are exposed to positive role models (Weber et al. 2020).

<sup>8</sup> See, for example, Turner-Zwinkels and Mills (2020) on the role political human capital plays in political careers.



identity.<sup>9</sup> Individuals identify to a larger degree with the working class and develop a sense of “oneness.” I is transformed into We. Individuals pay more attention to others’ needs and welfare and have a perspective that goes beyond myopic self-interest. They feel more motivated to contribute personal time and effort to help others and to advocate for the goals of working people. To the extent workers develop a sense of generalized solidarity and also care about the fate of working people outside the workplace, greater political interest and participation can be expected.

Altogether, workplace democracy has the potential to boost the political engagement of workers through strengthened feelings of political efficacy, the development of political skills, a higher awareness of political issues, and increased solidarity among workers. Of course, in the end it is an empirical question of whether or not workplace democracy is associated with increased political and civic engagement. While political spillover theory suggests some plausible transmission channels, there can be a series of factors and circumstances hindering positive spillover effects (Hadiziabdic & Baccaro, 2020). Political preferences may be more or less inertial after they have been shaped by family background and educational path during childhood and adolescent years. Moreover, the presence of a works council does not necessarily imply that workers actively participate in decision making within the firm. Workers may be rather passive consumers of the services provided by the works council and, hence, may remain passive consumers of the services provided by political parties.<sup>10</sup> Instead of raising their own voice, workers may rely on the works council to represent their interests. One may go a step further and argue that even if workplace democracy contributes to an active involvement in decision making, workers nonetheless focus to a higher degree on leisure and family activities outside the workplace as their need for autonomy is already fulfilled at work (Lup, 2022; Stain, 1980).

Finally, it has to be taken into account that political spillover effects of workplace democracy may be heterogeneous. The effects may depend on circumstances and type of worker. In what follows, we argue that political spillovers may differ between male and female workers.

## 2.3 | A moderating role of gender

There is a long-standing concern that worker organizations predominantly take men’s interest into account and women fall more or less outside the scope of those organizations (Cunnison and Stageman 1993, Dickens, 2000). If this also holds true for German works councils, we would observe political spillovers of workplace democracy particularly for men, but not for women. However, there are two reasons suggesting that works councils take women’s interests into account. First, the WCA stipulates the promotion of gender equality and also provides a gender quota for works councilors. Second, works councils foster notions of fairness and solidarity within the workforce to increase cohesiveness among workers and, hence, to strengthen their bargaining power (Jirjahn & Kraft, 2007; Levine, 1991).

<sup>9</sup> In a similar vein, Kohlberg (1984), Power et al. (1989), and Lempert (1993) emphasize that participation in decision-making, open and free discussion about the fairness and legitimacy of rules, exposure to different points of view, confrontation with social problems, allocation of responsibility for the well-being of others, support from colleagues, and organizational respect for the individual are important for moral growth and occupational socialization.

<sup>10</sup> See Schumpeter (1942) for the idea that voters mirror passive consumers. From Schumpeter’s viewpoint, voters are characterized by apathy, ignorance, and lack of foresight. Therefore, political elites play a crucial role in democracy. Democracy is a political market in which political elites compete for voters just as producers in the economy compete for consumers. Such a view of democracy leaves little scope for an active political and civic engagement of citizens.



Indeed, empirical research suggests that works councils are associated with greater gender equality. Works councils contribute to a smaller gender wage gap within establishments (Gartner & Stephan, 2004; Heinze & Wolf, 2010). Works councils appear to decrease profits that are due to wage discrimination of women while they increase profits that are due to cooperation (Jirjahn, 2011). Works councils promote the use of family-friendly and equal opportunity practices (Heywood & Jirjahn, 2009; Jirjahn & Mohrenweiser, 2021). This suggests that workplace democracy may also have positive political spillover effects for women. The effects may be even particularly strong as works councils help integrate otherwise marginalized female workers into the workplace.

Yet, it has to be taken into account that women disproportionately fulfill family responsibilities even when they work (Heywood & Jirjahn, 2002). Time use studies show that women on average spend much more time on childcare and homecare than men (Bredtmann, 2014; Garcia et al., 2011; Sellach & Libuda-Köster, 2017). They also experience more psychological strain from combining work and family than men (DGB, 2017; Klünder & Meier-Gräwe, 2017; Ross & Mirowsky, 1988). Family-friendly and equal opportunity practices may help women to reconcile work and family and to advance their careers. Nonetheless women usually remain disproportionately responsible for family and, hence, bear the double burden of work and family. Thus, time limitations and higher psychological strain make it more difficult for women to develop political interest and be politically engaged. This implies that political spillover effects of workplace democracy may be less pronounced for women even though works councils promote gender equality within establishments.

More generally, unequal gender roles within society may imply that the political behavior of women is less responsive to workplace democracy. Gender roles reflect the different normative expectations a society has of individuals based on their sex. These normative expectations constitute the identity of men and women and guide their behavior (Akerlof & Kranton, 2000). Traditional gender roles infer that political participation is more of a male than a female characteristic (Campbell et al., 1960; Fraile & Gomez, 2017; Glatte & de Vries, 2015). Gender roles are learned through socialization during childhood and adolescence. Thus, they may even prove resistant to later changes encouraging more female participation (Hershey, 1977; Jennings, 1983). Traditional gender roles may even imply that women more actively engaging in their work role conform to a higher degree to traditional gender roles in their private life in order to compensate for the violation of gender norms stemming from the work sphere (Staines, 1980).<sup>11</sup> This could imply a negative political spillover effect for women. If women are actively involved in democratic decision-making at work, they may focus on their traditional female role outside the work domain.

Altogether, gender is likely to play a moderating role in the link between workplace democracy and the political engagement of workers. However, the direction of this moderating influence is ambiguous from a theoretical viewpoint. Even though previous research suggests that works councils take the interests of female workers into account, this does not necessarily imply that they have a positive influence on the political participation of women. The basic point remains that our considerations suggest separate estimations for male and female workers.

<sup>11</sup> On a broader scale, a study by Bertrand et al. (2015) conforms to this notion. Economic success of a wife entails a threat to the gender identity of her husband. Thus, wives who earn more than their husbands spend more time on household chores to compensate for that threat. Nonetheless female breadwinning increases the risk of divorce.

## 2.4 | Methodological issues

Most of the empirical studies on union membership and political spillovers have been based on cross-sectional data (see Hadiziabdic & Baccaro, 2020 for an exception). This has given rise to the concern that results may have been influenced by a positive self-selection of workers (Budd & Lamare, 2020). Unions may tend to attract workers who are anyway characterized by a systematically higher civic and political engagement. For example, unobserved skills may influence both selection into unions and political engagement. Becher and Stegmüller (2019) find that union members have higher cognitive ability and people with higher cognitive ability are more likely to vote. Alternatively, individuals wanting a higher degree of autonomy in all aspects of their life may sort into unions and simultaneously look for opportunities to be politically engaged. Individuals with authoritarian personality structures may instead prefer to avoid unions (Timming & Johnstone, 2015).

One may call into question if self-selection of workers also plays a role in our context. The presence of a works council is not a decision made by the individual worker. It depends on the decision of the workforce and this decision is influenced by establishment characteristics such as size, age, and the economic situation of the establishment (Jirjahn, 2009; Jirjahn & Smith, 2006). However, nonetheless workers are more or less mobile and decide about the employer they work for. Thus, individual worker characteristics can influence the sorting into and out of establishments with works councils (Jirjahn & Lange, 2015). Against this background, we use panel data in order to account for unobserved worker characteristics.

A further possible problem of many studies on political spillovers is that they do not distinguish between worker representatives and those who are represented (Bryson et al., 2013). Being a worker representative means that an individual is strongly concerned with social issues and questions of labor law. This makes it much more likely that the individual reflects the political dimension of work and, hence, is politically more engaged. If a study does not distinguish between worker representatives and those who are represented, estimated political spillovers of worker voice may be positively skewed as the estimates may be particularly driven by politically engaged worker representatives in the data. In order to avoid this bias, we will distinguish in our empirical analysis between works councilors and those who are represented by a works council.

## 3 | DATA, VARIABLES, AND ESTIMATION METHODS

### 3.1 | The data set

We draw our data from the SOEP. The SOEP is a large representative longitudinal survey of private households in Germany (Goebel et al., 2019). The survey is administered by the German Economic Institute (DIW). Infratest Sozialforschung, a professional survey and opinion institute, conducts the face-to-face interviews. Routine socio-economic and demographic questions are asked annually. Different 'special' topic questions appear in specific waves.

For our empirical analysis, we use panel data from the waves 2001, 2006, 2011, 2016, and 2019. These waves provide both information on works councils and information on political interest. We focus on native workers aged 18 to 65 in private sector firms with at least five employees. We do not consider employees with extensive managerial duties, as the WCA does not apply to managers. We also exclude marginally employed individuals (monthly earnings of below €450)

and those working for an employment agency. The former usually work only a few hours and the latter very frequently change the firm they have to work for.

### 3.2 | Variables

Table 1 shows the definitions of the variables and their descriptive statistics. Our dependent variable is a dummy equal to one if a worker has a strong or very strong interest in politics. Empirical research has shown that political interest is strongly associated with political engagement and democratic citizenship (Prior, 2019). Political interest is a key indicator of political engagement that is associated with more knowledge about politics, more systematic thinking about political decisions, a higher propensity to vote, and more participation in the political process in other ways.

Our basic hypothesis is that workplace democracy involves positive political spillover effects and, hence, is associated with an increased interest in politics. The data set provides information on whether a works council is present in the firm an employee works for. Importantly, it allows distinguishing between worker representatives and those being represented by a works council (Brébrion, 2022). We include a dummy equal to one if an employee works in a firm with a works council and is not a works councilor. In order to examine if being a worker representative has a special influence on political interest, we also include a dummy equal to 1 if an employee is a works councilor. The reference group consists of employees working in firms without a works council.

We also account for the worker's union membership. Workers in firms with a works council have a higher likelihood of being union members (Behrens, 2009; Jirjahn, 2021). Thus, it is important to disentangle the influences of works councils and unions.

Our background discussion suggests that there can be important gender differences in political interest. Thus, we control for worker's gender. In estimations with the combined sample of male and female workers, we examine whether gender plays a role in political interest. Furthermore, we provide separate estimations for men and women to examine whether gender plays a moderating role in the relationship between workplace democracy and political interest.

The dataset provides a rich set of control variables. As emphasized by Budd and Lamare (2020), a worker's earnings can be a confounding factor when estimating the influence of worker voice on political participation. Indeed, most studies find that the presence of a works council is associated with higher wages (Mohrenweiser, 2022). Thus, in order to avoid that the estimated works council coefficient simply reflects a higher wage, we control for the worker's earnings.

Furthermore, variables for tenure, occupation, industry, firm size, working hours, and a temporary employment contract capture work-related characteristics. A variable for unemployment experience takes into account the person's work history. We also include variables for age, health, disability, education, marital status, number of children in the household, and home ownership to account for the socio-demographic background. Finally, residence in East Germany and the year of observation are controlled for.

### 3.3 | Estimation methods

In what follows, we will present both random effects logit and conditional fixed effects logit estimates (Greene, 2008; Wooldridge, 2010). The logit model assumes that the dummy  $y_{it}$  for the

TABLE 1 Variable definitions and descriptive statistics.

<i>Variable</i>	<i>Definition</i>	<i>Mean</i>	
		<i>Men</i>	<i>Women</i>
Political interest	Dummy equals 1 if the employee has a strong or very strong interest in politics.	0.452	0.251
Works council	Dummy equals 1 if a works council is present in the firm and the employee is not a works councilor.	0.535	0.438
Works councilor	Dummy equals 1 if a works council is present in the firm and the employee is a works councilor.	0.040	0.026
Union member	Dummy equals 1 if the employee is a member of a trade union.	0.205	0.108
Woman	Dummy equal 1 if the employee is a woman.	0.000	1.000
Earnings	The employee's annual gross earnings.	41,131.35	24,494.09
Education	The employee's years of schooling.	12.552	12.588
Age	The employee's age.	42.898	42.735
Age squared	The employee's age squared.	1965.912	1950.792
Health	Ordered variable for the person's health status during the past four weeks. The variable ranges from 1 "bad" to 5 "very good".	3.577	3.532
Disability	Dummy equals 1 if the employee is disabled.	0.067	0.051
Partner	Dummy equals 1 if the employee is married or cohabiting.	0.626	0.544
Number of children	Number of children under 18 years in the household.	0.740	0.616
Home ownership	Dummy equals 1 if the employee owns their house or flat.	0.557	0.501
Unemployment experience	The employee's total length of unemployment experience in years.	0.493	0.761
Working hours	Number of weekly hours the employee actually works including possible overtime.	43.561	34.602
Tenure	The employee's tenure with the firm in years.	11.669	9.669
Temporary contract	Dummy equals 1 if the employee has a temporary employment contract.	0.092	0.124
Firm size 20–199	Dummy equals 1 if the employee works in a firm with 20–199 employees.	0.320	0.314
Firm size 200–1999	Dummy equals 1 if the employee works in a firm with 200–1999 employees.	0.232	0.203
Firm size $\geq 2000$	Dummy equals 1 if the employee works in a firm with 2000 or more employees.	0.278	0.226
East Germany	Dummy equals 1 if the employee resides in East Germany.	0.259	0.277

(Continues)

TABLE 1 (Continued)

Variable	Definition	Mean	
		Men	Women
Occupation dummies	Nine occupation dummies (untrained blue-collar worker, trained blue-collar worker, skilled blue-collar worker, blue-collar foreman, untrained white-collar worker, trained white-collar worker, white-collar foreman, qualified white-collar worker, highly qualified white-collar worker). The reference group consists of apprentices.	—	—
Industry dummies	Eight industry dummies (agriculture, energy, mining, manufacturing, construction, trade, transport, banking and insurance). The reference group consists of workers in the service sector.	—	—
Year dummies	Four dummies for the year of observation.	—	—
Number of observations		11,771	9532

political interest of worker  $i$  in year  $t$  depends on a latent variable  $y_{it}^*$ :

$$y_{it} = \begin{cases} 1 & \text{if } y_{it}^* > 0, \\ 0 & \text{otherwise,} \end{cases} \quad (1)$$

The latent variable is given by:

$$y_{it}^* = \beta' \mathbf{x}_{it} + u_i + v_{it}, \quad (2)$$

where  $\mathbf{x}_{it}$  is the vector of explanatory variables and  $\beta$  the vector of coefficients. The random effects and the fixed model both assume that the error term of the regression can be decomposed into two parts, a time-varying component  $v_{it}$  and an individual-specific time-invariant component  $u_i$ . The two models differ in their distributional assumptions with respect to  $u_i$ . A potential shortcoming of the random effects model is the requirement that  $u_i$  is assumed to be uncorrelated with the explanatory variables. By contrast, the fixed effects model allows for any correlation between  $u_i$  and the explanatory variables. It accounts for a possible endogeneity of the explanatory variables that is due to time-invariant unobserved factors. Thus, the fixed effects model is more suited to address a possible self-selection of workers on unobserved time-invariant characteristics. However, this does not come without a cost. While the random effects model uses both the within and between variation in the variables, the fixed effects model throws away the between variation and only uses the within variation contained in the data. Singleton observations and observations from persons who have no changes in the explanatory variables or in the dependent variable are not considered.

In nonlinear models such as probit or logit, a quantitative evaluation of the estimated influences requires calculating marginal effects. For the random effects model, marginal effects can be calculated by integrating out the individual-specific component of the error term (Bland & Cook, 2019). Thus, we will show both estimated coefficients and average marginal effects. For the

conditional fixed effects we will follow the usual procedure and only report the coefficients. The conditional fixed effects logit does not deliver estimates of the individual-specific fixed effects that can be used when calculating marginal effects.

Nonetheless it is important to note that the conditional fixed effects logit provides very valuable information. The estimated coefficients show whether or not there exist significant relationships when possible endogeneity due to unobserved time-invariant factors is taken into account.<sup>12</sup>

## 4 | EMPIRICAL ANALYSIS

### 4.1 | Initial estimates

Table 2 shows the initial estimates with the combined sample of male and female employees. The table provides both random effects and fixed effects logit estimates. As the fixed effects logit only takes into account cases with within variation in the explanatory and dependent variables, the number of observations is much smaller than in the random effects regression.

A series of control variables emerge with significant coefficients in the random effects regression. Education, income, age, health, and a temporary employment contract are positive covariates of political interest. Unemployment experience, tenure, home ownership, and residence in East Germany are negative covariates. While a series of these variables do not take significant coefficients in the fixed effects estimates, age and health remain significant covariates.

The variable for trade union membership emerges as a significantly positive determinant of political interest in the random effects estimation, but does not play a significant role in the fixed effects regression. By contrast, being represented by a works council is a significantly positive determinant of a worker's political interest not only in the random effects, but also in the fixed effects estimation. Hence, a positive influence of works councils on workers' political interest is confirmed even when accounting for possible endogeneity due to unobserved time-invariant factors. The estimated coefficient is even higher in the fixed effects than in the random effects estimation. Thus, the analysis does not support the notion that the association between works council presence and political interest simply reflects a positive self-selection of politically active employees into firms with works councils. Instead, it supports the hypothesis that being represented by a works councils involves positive political spillovers. The presence of a works council may boost a worker's political interest through strengthened feelings of political efficacy, the development of political skills, a higher awareness of political issues or an increased solidarity among workers. The random effects estimation provides a quantitative evaluation. The presence of a works council is associated with a roughly 2 percentage point higher probability that a worker has a strong or very strong interest in politics. Given that 36% of workers in our sample have a strong or very strong political interest, this implies an increase in the probability of political interest by 5%. Taking into account that the estimated coefficient in the random effect logit is smaller than the one in the fixed effects logit, we may interpret this magnitude as a lower bound.

Being a works councilor is also a significantly positive determinant of political interest in both the random effects and the fixed effects estimation. Thus, a positive influence of being a works councilor on political interest is confirmed even when accounting for possible endogeneity due to

<sup>12</sup> Of course, the fixed effects model does not address endogeneity that is due to unobserved time-varying factors. However, at least partially addressing the issue of endogeneity by accounting for unobserved time-invariant factors is important progress, given that most studies on political spillovers are of a cross-sectional nature.

TABLE 2 Initial estimates.

<i>Variable</i>	<i>Random effects logit (1)</i>	<i>Conditional fixed effects logit (2)</i>
Works council	0.199 [0.018] (2.15)**	0.259 (1.81)*
Works councilor	0.902 [0.085] (4.64)***	0.798 (2.80)***
Union member	0.281 [0.026] (2.68)***	0.067 (0.39)
Woman	-2.130 [-0.196] (19.65)***	—
Earnings	5.50e-06 [5.02e-07] (2.53)**	-9.79e-08 (0.02)
Education	0.368 [0.034] (16.27)***	0.097 (0.74)
Age	0.047 [0.004] (1.76)*	0.142 (2.98)***
Age squared	3.46e-04 [3.20e-05] (1.12)	2.42e-04 (0.50)
Health	0.129 [0.012] (3.16)***	0.118 (1.98)**
Disability	-0.005 [-4.43e-04] (0.03)	—
Partner	-0.089 [-0.008] (1.03)	—
Number of children	-0.004 [-3.62e-04] (0.09)	-0.061 (0.87)
Home ownership	-0.144 [-0.013] (1.85)*	0.072 (0.52)
Unemployment experience	-0.068 [-0.006] (2.69)***	0.099 (0.86)
Working hours	-0.007 [-0.001] (1.62)	-0.005 (0.67)
Tenure	-0.030 [-0.003] (6.17)***	-0.014 (1.28)
Temporary contract	0.462 [0.043] (3.34)***	0.086 (0.44)
Firm size 20–199	0.046 [0.004] (0.46)	-0.128 (0.78)
Firm size 200–1999	0.102 [0.009] (0.82)	-0.106 (0.53)
Firm size $\geq 2000$	0.041 [0.004] (0.31)	-0.270 (1.24)

(Continues)



TABLE 2 (Continued)

Variable	Random effects logit (1)	Conditional fixed effects logit (2)
East Germany	−0.397 [−0.036] (4.23)***	−0.049 (0.11)
Occupation dummies	Included	Included
Industry dummies	Included	Included
Year dummies	Included	Included
Log likelihood	−10961.138	−1190.827
Number of individuals	12,964	1206
Number of observations	21,303	3431

Dependent variable: Political interest. The table shows the estimated coefficients. Z-values in parentheses are based on standard errors clustered at the employee level. Average marginal effects on the probability of political interest are in square brackets. The marginal effects of works councils and works councilor are changes in probability compared to the reference group of employees in firms without a works council. The marginal effects of the firm size dummies are changes in probability compared to the reference group of employees in firms with 5–19 employees. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

unobserved time-invariant factors. The magnitude of this influence is particularly strong. Being a works councilor is associated with an almost 9 percentage point higher probability of having a strong or very strong political interest. Taking the mean of 36% again into account, this implies an increase in the probability of having political interest by 23%. Being a works councilor means that an individual is particularly concerned with social issues and questions of labor law. This makes it much more likely that the individual reflects the political dimension of work and, hence, has a stronger interest in politics.

Finally, note that we include the variable for gender only in the random effects regression as the variable is time-invariant. The variable for female employees takes a significantly negative coefficient confirming a gender gap in political interest. This gender gap in political interest is quantitatively quite substantial. A female employee has an almost 20 percentage point lower probability of political interest than her male counterpart.<sup>13</sup> This result conforms to the notion that traditional gender roles limit women's political engagement. At issue is now whether gender also plays a moderating role in the relationship between workplace democracy and political interest. In order to examine this moderating role, we perform in the next step separate regressions for male and female employees.

## 4.2 | Separate estimates for men and women

Table 3 shows the key results of the separate regressions for male and female employees. Control variables are included in the regressions, but are suppressed to save space. Being represented by a works council is a significantly positive determinant of political interest for men. This result holds in both the random effects and the fixed effects estimation with the estimated coefficient being greater in the latter one. Thus, for men, we find clear evidence of positive political spillovers of works councils. Compared to our initial estimates with the combined sample of male and female employees, the estimated magnitude of the political spillovers is higher if we only consider men.

<sup>13</sup> Fraile and Gomez (2017) find a similar gender gap in political interest for European countries. They estimate that, on average, interest in politics is 16% lower for women.

TABLE 3 Separate estimates by gender.

<i>Variable</i>	<i>Random effects logit</i> (1) <i>Only men</i>	<i>Conditional fixed effects logit</i> (2)
Works council	0.480 [0.048] (3.98)***	0.659 (3.58)***
Works councilor	1.393 [0.141] (5.60)***	1.350 (3.49)***
Union member	0.281 [0.028] (2.16)**	0.101 (0.50)
Log likelihood	−6508.389	−744.967
Number of individuals	6979	754
Number of observations	11,771	2173
<i>Variable</i>	<i>Only women</i>	
Works council	−0.209 [−0.017] (1.43)	−0.512 (2.01)**
Works councilor	0.087 [0.007] (0.26)	−0.074 (0.16)
Union member	0.234 [0.019] (1.29)	−0.104 (0.31)
Log likelihood	−4425.797	−416.343
Number of individuals	5985	452
Number of observations	9532	1258

Dependent variable: Political interest. The table shows the estimated coefficients. Z-values in parentheses are based on standard errors clustered at the employee level. Average marginal effects on the probability of political interest are in square brackets. The marginal effects of works councils and works councilor are changes in probability compared to the reference group of employees in firms without a works council. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ . Control variables are included, but are suppressed to save space.

For men, being represented by a works council is associated with an almost 5 percentage point higher probability of having a strong or very strong interest in politics. Given that the mean of our dependent variable is 45% in the male subsample, this implies an increase in the probability of being interested in politics by about 11%.

Being a works councilor is also a significantly positive determinant of political interest of male employees. This holds in both the random effects and the fixed effects estimation. The magnitude of the influence is higher than in the initial estimation with the combined sample of male and female employees. For men, being a works councilor is associated with a 14 percentage point higher probability of having a strong or very strong interest in politics. This implies an increase in the probability of having political interest by more than 30%. Again, this particularly strong influence can be explained by the specific tasks of works councilors.

The results for women sharply contrast with those for men. The estimations do not provide any evidence of a positive influence of works councils on the political interest of women. Being a works councilor does not emerge as a significant determinant, neither in the random effects nor in the fixed effects estimation. Being represented by a works council also does not emerge as a significant determinant of women's political interest in the random effects estimation. In the fixed effects estimation, the variable even takes a significantly negative coefficient.

In order to obtain more insights into the issue of gender, Table A1 provides separate estimations for women born before and after 1965. This reflects the idea that traditional gender roles play a larger role for older cohorts while younger cohorts of women may have more egalitarian beliefs. Many European countries including Germany experienced new women's movements in the 1960s and 1970s (Chafetz & Dworkin, 1986; Gerhard, 2002; Naumann, 2005). The women's movements have led to at least gradual changes in gender norms within societies. Moreover, we distinguish between women with and without a partner. Women with a partner are more likely to conform to traditional gender norms than those without a partner (Davis & Greenstein, 2009).

Our estimations show that a negative association between works council representation and political interest is confined to women who were born before 1965 and have a partner; that is, to women who are most likely to have a more traditional view about gender relations. This result holds in both the random and in the fixed effects estimation. It suggests that women with a traditional gender role attitude show even more gender role-conforming behavior outside the work domain if they are employed in a firm with a works council. They may try to compensate for the more active work role associated with workplace democracy (Stain, 1980). The estimates do not show a significant link between works council representation and political interest for unpartnered women or women born after 1965; that is, for those women who may conform to a lesser degree to traditional gender norms. On the one hand, this indicates that there are no negative political spillovers for women with more equal gender role attitudes. On the other hand, it suggests that the degree to which these women have more equal gender role attitudes is on average not strong enough to imply positive political spillovers. Thus, while our additional estimations provide some indications that gender norms play a role in the link between works councils and the political interest of women, we do not find evidence of positive political spillovers for women.

Altogether, our analysis suggests that there is not only a substantial gender gap in political interest with women having a much lower likelihood of being interested in politics than men. Gender also moderates the relationship between workplace democracy and political interest. Although we find evidence of a positive relationship between works council representation and political interest for men, our estimations do not provide such evidence for women. The findings fit the notion that unequal gender roles make it difficult for women to be politically engaged even when a works council is present in the firm. Their interest in politics remains at a lower level with or without a works council.<sup>14</sup>

### 4.3 | Personality traits

As a robustness check, we additionally account for personality traits. Personality traits may not only influence workers' sorting into firms with a works council (Jirjahn & Lange, 2015), but also their political interest (Gallego & Oberski, 2012; Gerber et al., 2011; Larsen, 2022). While

<sup>14</sup> We recognize that a field experiment by Wu and Paluck (2020) with overwhelmingly female workers in a Chinese factory found that participatory work group meetings led workers to have a more critical view about authority and justice and, most salient to our topic, increased their willingness to participate outside work. While this indicates that more workplace democracy can also involve positive political spillovers for women, it provides no insights into the moderating role of gender. Wu and Paluck do not report whether the influence of the work group meetings on participation outside work differs between women and men. Thus, their study does not answer the question of whether political spillovers are stronger for male or female workers. Moreover, note that the authors conducted a similar field experiment with university staff in the United States without analyzing the influence of work group meetings on workers' participation outside work in this country. This also makes it difficult to assess their findings for one factory in China.

personality traits can be considered as being relatively stable, they may vary to some extent across time and, hence, are not completely time-invariant (Cobb-Clark & Schurer, 2013; Elkins et al., 2017). Our fixed effects regressions may not capture the role of personality traits as it can only account for time-invariant unobservables. Against this background, it may be important to check whether or not controlling for personality makes a difference for our key results. Given the high stability and, hence, small within variation of the variables for personality, we include these variables only in the random effects estimations.

Appendix Table A2 shows the definitions and descriptive statistics of the personality variables. As we have to match information from other waves of the SOEP, the number of observations is noticeably reduced. The dataset provides information on Big Five personality traits (extraversion, openness to experience, agreeableness, conscientiousness, and neuroticism), locus of control, trust, reciprocity, and risk attitudes.

Appendix Table A3 presents the key results of random effects regressions for men and women. A series of personality traits emerge as significant determinants. For men, extraversion and openness to experience are positive determinants of political interest while a more internal locus of control is a negative determinant. For women, risk tolerance, positive reciprocity, trust, openness to experience and neuroticism are positive covariates of political interest while agreeableness is a negative covariate. Most salient to our topic, the estimations confirm positive political spillover effects of works councils for men while they still do not provide evidence of positive spillover effects for women.

## 5 | CONCLUSIONS

Previous research on works councils has focused on their economic consequences. Our study brings a new perspective to the understanding of this institution of nonunion worker representation. It shows that workers in firms with a works council have a higher interest in politics. This result holds in panel regressions controlling for a broad set of control variables and accounting for individual-specific fixed effects. Political interest is widely considered as an important indicator of political engagement that makes democracy work. Thus, works council do not only play a role in the economic performance of firms. Their consequences transcend the narrow boundaries of the firm. Our study suggests that works councils have the potential to strengthen the functioning of democratic political systems. This appears to be particularly important in times of increasing political apathy.

This aspect should be taken into account in political discussions on measures to strengthen the position of works councils. In Germany, works councils are in decline in recent years (Ellguth & Kohaut, 2021). Managers' fear to lose power and their resistance to worker voice appear to be one factor contributing to a lower prevalence of works councils (Hartcourt et al., 2020; Jirjahn & Mohrenweiser, 2016). In the United States, there is an ongoing discussion on how to overcome the representation gap in the workforce (Freeman & Rogers, 1999; Hertel-Fernandez et al., 2022). Measures facilitating the implementation of works councils and strengthening their position may not only be important to increase economic performance and workers' well-being, but also to stabilize democratic processes in the political system of a country.

However, our findings also indicate that the extent to which works councils involve positive political spillover effects depends on broader societal circumstances. Separate estimations by gender provide evidence of a positive influence on political interest only for male workers, but not for female workers. Unequal gender roles not only entail a substantial gender gap in political

interest, but they also imply that the political behavior of women is less responsive to workplace democracy.

Future research could fruitfully expand our analysis in several ways. It would be interesting to examine if works councils can have a positive influence on women's political behavior in societal environments with more gender equality. Moreover, future research could examine the influence of works councils on the various dimensions of political behavior and civic engagement in more detail. This may include the influence on party preferences, volunteering, or donations.

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The authors declare that there is no conflict of interest.

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APPENDIX

TABLE A1 Separate estimates by birth cohort and partnership status; only women.

Variable	Random effects logit		Conditional fixed effects		Random effects logit		Conditional fixed effects	
	(1)		logit		(3)		logit	
	With partner		Without partner		Without partner			
Born before 1965								
Works council	-0.845 [-0.069] (2.86)***	-1.387 (2.41)**			-0.331 [-0.025] (0.71)		-2.249 (1.00)	
Works councilor	-0.752 [-0.062] (1.23)	-1.547 (1.45)			1.026 [0.082] (1.26)		-22.115 (0.00)	
Union member	0.471 [0.041] (1.40)	0.844 (1.30)			-0.482 [-0.036] (0.97)		-1.204 (0.54)	
Log likelihood	-1179.152	-101.132			-607.567		-27.680	
Number of individuals	1459	141			781		51	
Number of observations	2426	386			1206		145	
Born in 1965 or later								
Works council	0.397 [0.032] (1.38)	0.615 (1.03)			0.019 [0.001] (0.07)		-0.725 (1.15)	
Works councilor	0.315 [0.025] (0.44)	0.962 (0.83)			0.018 [0.001] (0.03)		-0.644 (0.54)	
Union member	0.048 [0.004] (0.12)	-0.889 (0.84)			0.636 [0.045] (1.72)*		1.209 (1.10)	
Log likelihood	-1285.849	-90.499			-1327.293		-62.113	
Number of individuals	1865	112			2262		101	
Number of observations	2756	305			3144		248	

Dependent variable: Political interest. The table shows the estimated coefficients. Z-values in parentheses are based on standard errors clustered at the employee level. Average marginal effects on the probability of political interest are in square brackets. The marginal effects of works councils and works councilors are changes in probability compared to the reference group of employees in firms without a works council. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ . Control variables are included, but are suppressed to save space.

**TABLE A2** Definitions and descriptive statistics of the variables for personality traits.

<i>Variable</i>	<i>Definition</i>	<i>Mean</i>	
		<i>Men</i>	<i>Women</i>
Risk tolerance	Score of risk tolerance. The interviewee answers the question: "Are you generally willing to take risks or do you try to avoid taking risks?" on an 11-point Likert scale. The scale ranges from 0 "not at all willing to take risks" to 10 "very willing to take risks".	5.246	4.527
Locus of control	Score of locus of control constructed from adding up 9 items measured on a 7-point Likert scale ranging from 1 "disagree completely" to 7 "agree completely". The sum of items is divided by 9. The items are "How my life takes course is dependent on me", "Success is gained through hard work", "Inborn abilities are more important than any efforts one can make", "Compared to others, I have not achieved what I deserve", "What one achieves in life is, in the first instance, a question of destiny or luck", "I often experience that others have a controlling influence over my life", "When I encounter difficulties in my life, I often doubt my own abilities", "The opportunities that I have in life are determined by the social conditions" and "I have little control over things that happen in my life". Items 4–9 are recoded in inverse order before adding up.	4.971	4.912
Negative reciprocity	Score of negative reciprocity constructed from adding up three survey items measured on a 7-point Likert scale ranging from 1 "does not apply to me at all" to 7 "applies to me perfectly". The sum of the three items is divided by 3. The items are "If I suffer a serious wrong, I will take revenge as soon as possible, no matter what the cost", "If somebody puts me in a difficult position, I will do the same to him/her", "If somebody offends me, I will offend him/her back".	3.269	2.865
Positive reciprocity	Score of positive reciprocity constructed from adding up three survey items measured on a 7-point Likert scale ranging from 1 "does not apply to me at all" to 7 "applies to me perfectly". The sum of the three items is divided by 3. The items are "If someone does me a favor, I am prepared to return it", "I go out of my way to help somebody who has been kind to me before", "I am ready to undergo personal costs to help somebody who helped me before".	5.864	5.832
Conscientiousness	Score of conscientiousness constructed from adding up three survey items measured on a 7-point Likert scale ranging from 1 "does not apply to me at all" to 7 "applies to me perfectly". The sum of items is divided by 3. The items are: I see myself as someone who... "does a thorough job", "does things effectively and efficiently", "tends to be lazy". The last item was recoded in inverse order before adding up.	5.861	6.001

(Continues)

TABLE A2 (Continued)

<i>Variable</i>	<i>Definition</i>	<i>Mean</i>	
		<i>Men</i>	<i>Women</i>
Extraversion	Score of extraversion constructed from adding up three survey items measured on a 7-point Likert scale ranging from 1 “does not apply to me at all” to 7 “applies to me perfectly”. The sum of items is divided by 3. The items are: I see myself as someone who... “is communicative”, “is sociable”, “is reserved”. The last item was recoded in inverse order before adding up.	4.683	5.018
Agreeableness	Score of agreeableness constructed from adding up three survey items measured on a 7-point Likert scale ranging from 1 “does not apply to me at all” to 7 “applies to me perfectly”. The sum of items is divided by 3. The items are: I see myself as someone who... “is sometimes somewhat rude to others”, “has a forgiving nature”, “is considerate and kind to others”. The first item was recoded in inverse order before adding up.	5.174	5.481
Openness	Score of openness constructed from adding up three survey items measured on a 7-point Likert scale ranging from 1 “does not apply to me at all” to 7 “applies to me perfectly”. The sum of items is divided by 3. The items are: I see myself as someone who... “is original”, “values artistic experiences”, “has an active imagination”.	4.350	4.512
Neuroticism	Score of neuroticism constructed from adding up three survey items measured on a 7-point Likert scale ranging from 1 “does not apply to me at all” to 7 “applies to me perfectly”. The sum of items is divided by 3. The items are: I see myself as someone who... “worries a lot”, “gets nervous easily”, “deals well with stress”. The last item was recoded in inverse order before adding up.	3.494	3.974
Trust	Score of trust constructed from adding up three survey items measured on a 4-point Likert scale ranging from 1 “Agree strongly” to 4 “Disagree strongly” was used to measure all items. The sum of items is divided by 3. The items are: “People can generally be trusted”, “Nowadays you can not rely on anymore”, “If you are dealing with strangers, it is better to be careful before trusting them”. The first item was recoded in inverse order before adding up.	2.348	2.338
Number of observations		4628	3631

Risk tolerance: Information is available for 2006, 2011, and 2016. Locus of control and reciprocity: Information from wave 2005 (2010, 2015) is matched to 2006 (2011, 2016). Big Five personality traits: Information from wave 2005 (2009, 2013) is matched to 2006 (2011, 2016). Trust: Information from wave 2003 (2008, 2013) is matched to wave 2006 (2011, 2016).

**TABLE A3** Controlling for personality traits.

Variable	Men	Women
Works council	0.670 [0.064] (3.41)***	−0.408 [−0.035] (1.76)*
Works councilor	1.359 [0.129] (3.48)***	−0.079 [−0.007] (0.16)
Union member	0.567 [0.054] (2.67)***	0.113 [0.010] (0.40)
Risk tolerance	0.045 [0.004] (1.21)	0.073 [0.006] (1.79)*
Locus of control	−0.208 [−0.020] (1.89)*	−0.040 [−0.003] (0.31)
Negative reciprocity	0.021 [0.002] (0.38)	−0.098 [−0.008] (1.45)
Positive reciprocity	−0.018 [−0.002] (0.22)	0.220 [0.019] (2.20)**
Conscientiousness	−0.033 [−0.003] (0.35)	0.005 [4.27e−04] (0.04)
Extraversion	0.127 [0.012] (1.75)*	0.094 [0.008] (1.07)
Agreeableness	−0.058 [−0.006] (0.73)	−0.284 [−0.024] (2.80)***
Openness	0.427 [0.040] (5.79)***	0.391 [0.033] (4.64)***
Neuroticism	−0.019 [−0.002] (0.28)	0.261 [0.022] (3.36)***
Trust	0.191 [0.018] (1.37)	0.430 [0.036] (2.52)**
Log likelihood	−2565.759	−1712.820
Number of individuals	3060	2562
Number of observations	4628	3631

Dependent variable: Political interest. Method: Random effects logit. Estimations are based on waves 2006, 2011, and 2016. The table shows the estimated coefficients. Z-values in parentheses are based on standard errors clustered at the employee level. Average marginal effects on the probability of political interest are in square brackets. The marginal effects of works councils and works councilors are changes in probability compared to the reference group of employees in firms without a works council. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ . Control variables are included, but are suppressed to save space.