

ORIGINAL ARTICLE

Do firms with works councils prefer agreeable job applicants? A discrete choice experiment

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Abstract

Works councils in many countries are involved in dismissal procedures and may therefore invoke high hold-up costs for firms laying off workers. To avoid these conflicts, firms with a works council may have a stronger preference for more agreeable job applicants who have a low risk of dismissal. We conduct a discrete choice experiment among recruiters to assess their preferences regarding job applicants' personality traits and competence. In line with our expectations, we find that recruiters from works-council firms more strongly prefer agreeable job applicants. We also find that more agreeable recruiters choose more agreeable employees, indicating a similarity-attraction effect.

JEL CLASSIFICATION

J23, J53, D91, M51

INTRODUCTION

Firms with firm-level employee representation—such as works councils in various European countries—tend to provide safer jobs and higher wages (Addison et al., 2010). Therefore, employee representation provides an incentive for employees to apply for a job in these firms. This holds especially for those at the lower end of the skill distribution (Kugler & Saint-Paul, 2004). However, from a firm perspective, employee representation at the work place and the associated protection mechanisms also go along with certain risks and costs. Most importantly, it is more costly to dismiss an employee when there is strong employee representation. Alewell et al. (2009) find that employee representation is positively related with the suing rate of dismissed employees. They interpret this as a direct consequence of employee representatives giving legal advice on e.g., employees' rights or on the prospect of success in a potential labour

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suit. Thus, firms with employee representation have incentives to screen applicants more carefully to lower the risks and costs of conflicts with less co-operative employees.

This raises the question: which employee characteristics do firms prioritize during the hiring process in order to reduce the risk of facing higher dismissal costs? Various studies show that apart from professional/cognitive skills, personality and attitudes are important predictors for an employee's productivity and behavior at the workplace (see e.g., Deming & Kahn, 2018; Hoeschler et al., 2018; Humburg & Van der Velden, 2015). Therefore, firms with employee representation might have strong incentives to recruit employees with certain personality traits that they perceive as favorable. Because literature shows that the Big-Five personality facet of agreeableness is an important determinant for conflict-, compromising- and obliging-styles of employees (Tehrani & Yaminib, 2020), this paper specifically focuses on this personality trait. Employee agreeableness goes along with various beneficial outcomes for firms, including high job performance, reduced turnover, and low workplace deviance or counterproductive work behaviors (e.g., Berry et al., 2007; Mount et al., 1998; Zimmermann, 2008). As firms with employee representation face higher costs when they employ "difficult" employees, a high level of agreeableness may be particularly important. One might expect that recruiters in these firms value agreeableness relatively more than recruiters from firms without employee representation.

In this paper, we analyze whether recruiters from firms with firm-level employee representation have a stronger preference for agreeable job applicants than recruiters from firms without employee representation. We thereby contribute to two strands of literature: the industrial relations literature on the impact of employee representation and the psychological literature on employee personality. Although recruitment behavior of firms has received increasing attention in recent years (e.g., Deming & Kahn, 2018; Humburg & van der Velden, 2015; Piopiunik et al., 2020; Wehner et al., 2022), little is known about potential effects of the association between employee representation and recruitment. We argue that recruiters are aware of the high dismissal costs due to the potential intervention of employee representatives and therefore prefer more agreeable employees to avoid conflicts that eventually lead to dismissal procedures. We expect this relationship to be especially relevant in countries in which employee representation is strong. We therefore focus on Germany, where employee representation in the form of works councils has extended legal rights.

In our empirical approach, we first provide descriptive evidence that firms with a works council are facing a higher likelihood of having to pay severance payments upon laying off workers, leading to a higher level of dismissal costs. Using individual-level data (GSOEP), we further show that agreeable workers are less likely to be dismissed by the firm. We then use a discrete choice experiment among German firms. For this experiment, we use the same BIBB Cost-Benefit Survey 2017/2018 data as Wehner et al. (2022) who focused on the role of firms' task structures. Our approach purely focuses on the selection mechanism on the employer side, whereas observational survey data on recruited workers are driven by preferences of both employees and employers and thus difficult to disentangle (Humburg & van der Velden, 2015).

MATERIALS AND METHODS

Literature review

Works councils and labour turnover

The German works council is a strong case of employee representation because its legal rights are extensive with respect to the hiring and firing of employees (Freeman & Lazear, 1995). By law, the staff of each firm with 5 or more employees is entitled (but not

forced) to elect a works council. About 10% of all firms have a works council, covering around 42% of all employees in Germany (Ellguth & Kohaut, 2019). The Works Constitution Act (1972)¹ defines the rights and duties of works councils. With respect to the laying off of individual workers, works councils have to be consulted in every single case. If a works council objects to the proposed dismissal, employment must be continued until the case is decided by a labour court. If the labour court decides that a dismissal is unfair, the employee must be reinstated. If a works council is not consulted by the management prior to a dismissal, the dismissal is not valid and cannot be processed by the employer. In most cases, however, the parties agree on compensation payments depending on tenure and age of the employee (see Kraft, 1997).

An abundant literature deals with the effects of works councils on firm-level employment. Various studies show that firms with a works council have higher wage levels and lower employee turnover. Turnover refers to voluntary quits as well as involuntary lay-offs (Grund & Schmitt, 2011; Hirsch et al., 2010). Lower numbers of lay-offs could be due to the “protection” by works councils that shield employees from being dismissed.

One of the methodological challenges in analyzing the causal impact of works councils on employee wages and turnover is that these institutions signal safer working conditions and higher wages to potential applicants (Addison et al., 2010; Backes-Gellner & Tuor, 2010). This leads to self-selection incentives especially for employees at the lower end of the skill distribution. Various studies discuss adverse selection of less able employees (“lemons”) into firms offering high dismissal protection (e.g., Kugler & Saint-Paul, 2004).

However, the self-selection of employees is only one side of an employment outcome. The other side is the selection by firms. Firms have strong incentives to select carefully and avoid hiring “difficult” employees who are prone to conflict and dismissal. Given that works councils increase the dismissal costs through intervention and representation (Alewell et al., 2009), firm's incentives to hire the “right” employee are especially high. We therefore expect that recruiters from firms with a works council pay more attention to worker characteristics that minimize the dismissal risk.

What do we know about hiring preferences of firms?

Empirically, several studies have explored the determinants of recruiters' hiring choices. For example, Dunn et al. (1995) analyze US managers' preferences regarding employees' Big-Five personality traits and general mental ability. They show that conscientiousness and general mental ability are most important for being hired. Hoeschler et al. (2018) focus on the relative importance of the Big-Five personality traits, but also on grit, economic preferences (i.e., risk aversion and time preferences), grades and intelligence in the recruitment of former apprentices. They find that the Big-Five personality traits are the most important predictors for receiving a job offer at the end of the training period. Baert (2018) analyses the probability of call-backs of hypothetical applicants varying by Facebook pictures, which relate to attractiveness and personality of the applicant. They find positive effects of more favorable Facebook pictures, however, without being able to differentiate between potential effects of attractiveness and personality. Wehner et al. (2022) analyze whether recruiters prefer applicants with different personality traits for different tasks. They find that particularly agreeableness and conscientiousness improve the hiring probability of job applicants. However, for analytical tasks, recruiters prefer more open and conscientious applicants, whereas they favor more open, extraverted, and agreeable workers for interactive tasks.

¹According to this act, employees in firms with 5 or more employees have the legal right to set up a works council. However, firms with fewer than 5 employees can also set up a works council; and several firms of these small firms actually do so.

Deming and Kahn (2018) analyze the correlation between the demand for cognitive as well as social skills and workers' wages. They find that firms that demand higher levels of cognitive and social skills from their employees pay higher wages. Their results point at the complementarity between cognitive and social skills in the labour market. Humburg and van der Velden (2015) study the recruitment of Dutch university graduates. In line with Deming and Kahn (2018), they find that hiring decisions depend on both professional and social skills as interpersonal communication.

Piopiunik et al. (2020) show that preferences for different skills and personality traits may vary depending on recruiter and firm characteristics. They analyze the probability of being invited for a job interview and find that older recruiters value school grades less and social skills and maturity more than younger recruiters. Furthermore, they find that recruiters in larger firms put a higher weight on college grades.

Why would firms with a works council prefer agreeable employees?

Tehrani and Yaminib (2020) show that the Big-Five personality facet of agreeableness is an important determinant of conflict, compromising and obliging styles of employees. Individuals high in agreeableness are characterized as kind, cooperative, and warm (Goldberg, 1999; McCrae & Costa Jr., 1990). In the workplace, highly agreeable employees strive to establish positive and satisfying social relationships with others (Barrick et al., 2002; Zimmermann, 2008). Consequently, agreeableness is the Big-Five trait that most strongly correlates with supervisor ratings of employees' interactions with others (Mount et al., 1998). Employees high on agreeableness also tend to avoid conflict (Goldberg, 1999; McCrae & Costa Jr., 1990). Moreover, when conflicts at work occur, more agreeable employees respond with less negative emotions and tend to use more constructive conflict resolution strategies (Graziano et al., 1996; Judge & Zapata, 2015). Their understanding, tolerant, and forgiving nature also helps individuals high on agreeableness to deal with negative aspects in their work environment such as, e.g., injustice, in a constructive way (Flaherty & Moss, 2007; Skarlicki et al., 1999).

Therefore, employing highly agreeable individuals promises various beneficial outcomes for organizations. These employees show less turnover (Zimmermann, 2008) and absenteeism (Vlasveld et al., 2013), because they feel obliged to fulfill their employment contract and to stay with the firm (Maertz & Griffeth, 2004). They also reveal, on average, higher job performance, especially in collaborative working contexts (Mount et al., 1998). Moreover, a low level of agreeableness is one of the strongest predictors when it comes to deviant and counterproductive work behavior (Berry et al., 2007; Kluemper et al., 2015). That is, highly agreeable employees have a low tendency to, for instance, withhold effort, steal, or act rudely to co-workers (Colbert et al., 2004). Taken together, Kluemper et al. (2015) recommended that assessing agreeableness “provides useful information for hiring professionals as they attempt to determine whether candidates could potentially harm the organization or their co-workers” (p. 247).

Research in the field of person-organization (P-O) fit (Kristof, 1996; Kristof-Brown, 2000) shows that recruiters base their hiring decisions on the degree to which they perceive that the applicant fits with the broader attributes of the firm (García et al., 2008; Higgins & Judge, 2004; Rynes & Gerhart, 1990). This includes assessments of the candidates' personality (Caldwell & Burger, 1998; Dunn et al., 1995). As outlined above, firms with a works council have a strong interest in minimizing the risks and costs of conflicts and dismissal.² Consequently, recruiters

²A recent field experiment on hiring discrimination in Germany finds stronger discrimination of union members in larger firms (Nüb, 2024). Assuming that union membership could signal less agreeableness or, vice versa, a higher conflict potential, the study supports the assumption that certain firms strive to hire more agreeable employees.

in these firms will be likely to focus especially on those applicant characteristics that signal a lower likelihood of conflict and dismissal. Given that highly agreeable applicants possess these favorable characteristics, they should have a particularly good match for firms with a works council, which face high dismissal costs. By contrast, candidates with very low scores on agreeableness are characterized by uncooperative, self-centered, and conflict-seeking behavior (Mount et al., 2006), which should appear particularly unattractive and risky in firms with a works council. On the basis of the literature discussed, we test the hypothesis that recruiters for firms with a works council have a higher preference for agreeable applicants than recruiters for other firms do.

Descriptive evidence

To strengthen our argumentation on the potential role of workers' agreeableness in the hiring process, we present descriptive results for three important assumptions underlying our hypothesis. First, we assume that firms with works councils face higher dismissal cost. Second, these firms therefore dismiss less frequently compared to firms without a works council. Third, we assume that firms generally are less likely to dismiss agreeable workers.

Building on data from a novel firm-level survey (BIBB CBS 2022/23—see Wenzelmann et al., 2023) measuring separation costs, Table A1 in the Appendix shows that when workers leave the firm, works council firms have a lower overall likelihood of having dismissed the worker (Column 1). The table also shows that the amount of the severance payment is higher in works council firms (Column 2), leading to an increase in overall dismissal costs (Column 3). Although the regression results are of a correlative nature, they lend some empirical support for the assumptions that firms with a works council may be less likely to dismiss workers, but if they do, they face higher dismissal costs.

Addressing the third assumption, we use individual-level data of the German Socio-Economic Panel (GSOEP) to gain further insights into the relationship between workers' level of agreeableness and the likelihood of being dismissed. We therefore regress the incidence of employer induced dismissal on the Big-Five personality traits measured in the GSOEP in several waves. Table A2 in the Appendix shows that agreeable employees are less likely to be dismissed, whereas there is no significant relationship between the other personality traits and the probability of being dismissed. This holds for all employees (Columns 1 and 2) as well as for those having left the employer for various reasons (i.e. all “movers”—Columns 3 and 4). These results support our assumption that agreeable workers are less likely to be laid off by the firm.

Empirical strategy and data

Discrete choice experiment

When addressing firms' recruitment decisions, it is difficult to identify relationships in studies with data from standard surveys because the attributes of the hired applicant and the rejected candidates are typically not observed simultaneously. Hainmüller et al. (2015) show that experimentally elicited stated preferences are similar to revealed preferences when committed participants must make trade-offs they are used to make in practice. In this study, we conduct a randomized discrete choice experiment among a sample of firms' recruiters who hire skilled

employees³ and randomly vary the attribute values of all the job applicants. To frame the experiment as realistic as possible for the participating recruiters, we inform the recruiters that the observed applicant characteristics (i.e. competence level, personality traits and the wage demanded) are observable not only from the candidates' CV but also from a job interview and a trial working day. This means that the recruiters know that they have had the opportunity to observe the applicants in their working environment and could draw well-informed conclusions about their personality traits. Our approach is based on studies that show a high correlation of the observational assessment of several personality traits with the formal testing of personality based on validated testing instruments (Funder & Dobroth, 1987; Funder & Colvin, 1988 or John & Robins, 1993). Furthermore, Caldwell and Burger (1998) argue that hiding specific personality traits in social situations is very difficult. Thus, we conclude from the literature that recruiters are able to relate to our experimental framing of the personality assessment during the recruitment phase. Each recruiter must make seven different choices between two hypothetical job applicants with different attributes. The combination of all possible attribute values in our experiment amounts to $(2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 7)$ 448 vignettes. These can be combined into $(448 \times 447) / 2 = 100,128$ choice sets (full factorial design). Because including all possible choice sets in the discrete choice experiment is neither time- nor cost-efficient, we present a subset of 112 vignettes by maximizing the efficiency of the design, using the Stata command programmed by Hole (2015). Then, we group the 112 choice sets into 16 blocks resulting in seven choice sets per block. To avoid a selection bias, both the distribution of the 16 blocks among the respondents and the order of choice sets within one block is carried out randomly. The choices made by the recruiters allow us to assess their preferences for the different values of applicants' attributes.

Figure 1 provides an example of the choice set-up as seen by the respondent on the screen during the interview. Table A3 shows the frequencies of all attributes, and their mean values and recruiters' mean preference of all attribute values.

Data

We obtain both the data from the discrete choice experiment and the information about the presence of a works council in the firm from the BIBB Cost–Benefit Survey (BIBB-CBS) 2017/2018. This is a representative survey of German firms focusing on training and recruitment activities. The addresses are drawn from a full sample of German firms with at least 1 employee. Interviewers from the Institute for Applied Social Sciences (infas) visit the sampled firms personally and use a computer-assisted interviewing method (CAPI). A random subset of firms in the survey is then assigned to participate in our discrete choice experiment. Within each firm, one respondent involved in recruitment answered the survey questions and participated in our experiment. Probit regressions on the experiment assignment as the outcome variable show no significant selection into the assignment, as all coefficients of observables (firm-size categories, economic sector, firm-level institutions such as works council or collective agreement) are insignificant.⁴

While recent literature is inconclusive about the validity of discrete choice experiments compared to the validity of field experiments (Pedulla, 2016; Wulff & Villadsen, 2020), we follow Hainmüller et al. (2015) and Pedulla (2016) by only including respondents in our discrete

³Skilled employees in this paper refers to employees who graduated from an upper-secondary level vocational training program (apprenticeship) of 2 to 3.5 years in an officially recognized occupations. Section 2.3.2 gives more details on the roles of the respondents in the recruitment decisions of the firms.

⁴Results are available upon request.

The following is a question on the recruitment of skilled employees. Please imagine the following situation, regardless of whether your company is currently looking for professionals or not:

In your company there is an urgent need to occupy a full-time position in the profession (*Prog.: Show selected profession*). After reviewing the application documents there are only two people to choose from, of which you will in any case be hiring one.

- Both are 28 years old with German as their mother tongue.
- Both have a good educational degree and have five years of relevant professional experience in the initial training firm.
- All other unspecified decision criteria for recruitment, such as gender or additional qualifications, are the same for both professionals.

On the basis of the personal interview and a trial working day, you have received an impression of the professional competences as well as the personality of the two professionals. This information is presented below. Please indicate if you would hire skilled employee 1 or 2.

Please enter the appropriate number 1 or 2 and then click Return.

1: Profile Job Applicant 1	2: Profile Job Applicant 2
... has average professional competence.	... has above average professional competence.
... shows active imagination and solves tasks in an original way.	... shows little imagination and solves tasks in a conventional way.
... completes tasks thoroughly and efficiently.	... completes tasks carelessly and unorganized.
... seems to be reserved and quiet when dealing with others.	... seems to be communicative and sociable when dealing with others.
... seems to be considerate and kind to others.	... seems to be sometimes somewhat rude to others.
... seems to be tense and nervous.	... seems to be relaxed and to handle stress well.
... receives a wage that equals the average skilled worker wage in your company.	... receives a wage that is 15% above the average skilled worker wage in your company.

FIGURE 1 Example of the discrete-choice experiment on recruiting decisions.

choice experiment who have real-life involvement in recruitment decisions for their firm⁵ as it yields externally valid results when committed participants must make trade-offs they are used to make in practice. We therefore limit our working sample to firm owners, CEOs, heads of HR departments and personnel in other positions, who have decision-making power in recruitment on a regular basis. The respective query in the survey is: “Please indicate the extent

⁵Instead, Wulff and Villadsen (2020) use data from the Danish YouGov Panel that is used extensively in survey experimental research. In two studies on ethnic discrimination, they respectively include all managers and public employees in this panel in their two survey experiments, for which they find different results.

TABLE 1 Descriptive statistics.

Variable names	<i>N</i>	Mean	SD	Min	Max
Works council	786	0.17	0.37	0.00	1.00
Recruitment: Alone	786	0.30	0.46	0.00	1.00
Recruitment: Together	786	0.70	0.46	0.00	1.00
Owner	786	0.46	0.50	0.00	1.00
CEO	786	0.16	0.36	0.00	1.00
Department head	786	0.10	0.30	0.00	1.00
Head HR	786	0.13	0.33	0.00	1.00
Head commerce	786	0.07	0.26	0.00	1.00
Head of training	786	0.03	0.18	0.00	1.00
Other position	786	0.06	0.24	0.00	1.00
Male	786	0.63	0.48	0.00	1.00
Tenure in years	786	15.29	10.95	1.00	50.00
No vocational degree	786	0.00	0.00	0.00	0.00
Vocational degree	786	0.17	0.37	0.00	1.00
Higher voc. degree	786	0.40	0.49	0.00	1.00
Academic degree	786	0.44	0.50	0.00	1.00

Note: Source: BIBB-CBS 2017/2018, own calculations.

to which you participate in the decision-making, whether and which skilled employees are recruited". The answer categories are "I decide on my own", "I decide together with others", "I support or advise the decision-makers", "I am not involved in the decision", "refused", and "don't know". We select on the respondents stating either to decide on their own or together with others. 885 of the 983 recruiters participate in the discrete choice experiment (90%).⁶ 786 of these recruiters provide information about their personality (89%). Among those 786 recruiters, 687 made all seven choices. Of those recruiters not making all choices, 32 recruiters made six choices, 15 made five choices, 21 respondents made four choices, 16 respondents made 3 choices, 10 respondents made two choices and 5 respondents made just one choice. This means that, overall, we have data from 786 recruiters making 5233 recruitment decisions by analyzing 10,466 employee profiles.

Table 1 provides an overview of the sample characteristics. The table shows that 63% of the recruiters are male and the largest group of 44% has an academic degree, followed by 40% with a higher vocational degree and 17% with a vocational degree. Average firm tenure of the recruiters is 15 years. 46% of the respondents are firm owners, 16% CEOs, 10% department heads, 13% HR heads, 7% heads of commerce and 3% heads of training.

Job Applicants' attributes and attribute values in the choice experiment

The job applicants in our discrete choice experiment differ in the following attributes in the order of appearing in the experiment: (1) professional competence, (2) personality traits as

⁶In detail, 41 recruiters withdraw from the survey before entering the discrete choice experiment. 57 recruiters enter the discrete choice experiment but did not make a recruitment decision. Running regressions on the withdrawal to participate in the experiment on various recruiter and firm characteristics (gender, ownership of the firm, (job) tenure, level of education, agreeableness, firm size and sector) yields no significant coefficients. Only small firms are marginally less likely to participate in the experiment.

TABLE 2 Operationalizing the big-five model in the framework of a choice experiment.

Openness to experience	<ol style="list-style-type: none"> 1. ...Shows little imagination (BFI & GSOEP, (reverse)) and solves tasks in a conventional way (TIPI). 2. ...Shows active imagination (BFI & GSOEP) and solves tasks in an original way (BFI & G SOEP).
Conscientiousness	<ol style="list-style-type: none"> 1. ...Completes tasks carelessly (BFI) and disorganized (BFI). 2. ...Completes tasks thoroughly (BFI & GSOEP) and efficiently (BFI & GSOEP).
Extraversion	<ol style="list-style-type: none"> 1. ...Seems to be reserved (BFI & GSOEP) and quiet (BFI) when dealing with others. 2. ...Seems to be communicative (GSOEP) and sociable (BFI & GSOEP) when dealing with others.
Agreeableness	<ol style="list-style-type: none"> 1. ...Seems to be cold (BFI) and sometimes somewhat rude to others (BFI & GSOEP). 2. ...Seems to be considerate (BFI & GSOEP) and kind to others (BFI & GSOEP).
Emotional Stability	<ol style="list-style-type: none"> 1. ...Seems to be tense (BFI) and nervous (BFI & GSOEP). 2. ...Seems to be relaxed (BFI & GSOEP) and to handle stress well (BFI & GSOEP).

conceptualized in the Big-Five Model of Personality and (3) wage the firm has to pay relative to the average wage of skilled employees in the company.⁷

Applicants' competences can either be average (1) or above average (2).⁸ The personality in our discrete choice experiment is operationalized based on the Big-Five Personality Model, which includes the traits openness to experience, conscientiousness, extraversion, agreeableness and emotional stability.⁹ In order to operationalize the Big-Five Model in the framework of our choice experiment, we draw on the survey items used in the literature, i.e. on previously implemented and validated items. The sources consist of the Big-Five Inventory (BFI) (John et al., 1991), the German Socio-Economic Panel (GSOEP) (Richter et al., 2013, p.44–46), and the Ten-Item Personality Inventory (TIPI) (Gosling et al., 2003). For each of the five personality-trait attributes, we contrast an item with a positive loading (attribute value 2) with an item with a reversed loading (attribute value 1), as shown in Table 2:

With respect to the wage level demanded by the applicants in the discrete choice experiment, the vignettes distinguish between a gross wage that is equal to the firm's average gross wage for skilled employees in the occupation, or a wage that deviates from the average gross wage by -15% , -10% , -5% , $+5\%$, $+10\%$, $+15\%$.

Table 3 provides an overview of the entire set of applicant attributes as they were presented to the respondents in the discrete choice experiment.

⁷Wehner et al. (2022) report on all outcomes of the discrete choice experiment. In our study with a slightly different sample, we find very similar results for recruiters' average preference for all personality traits. In this paper, we however entirely focus on agreeableness and consider the other four personality traits as relevant controls that we include in the tables on our estimates but don't discuss in our paper as they go beyond the research question of our paper.

⁸We do not include the attribute value "below average", because in our experiment, the candidates are assumed to be pre-selected based on their CV. Under this premises, it is unrealistic that a recruiter would select below average candidates for the further stage of interview and trial working day.

⁹For a detailed discussion see Matthews et al. (2012). The order of the Big-Five personality traits does not vary randomly, but is presented according to the name OCEAN traits that refers to the initial letters of the Big-Five and which is typically used in psychological studies (Borghans et al., 2008).

TABLE 3 Overview of applicants' attributes and values in the discrete-choice experiment.

Attribute	Attribute values
	The applicant...
Professional Competence	(1) ...has average professional competence. (2) ...has above average professional competence.
Big-Five: Openness	(1) ...shows little imagination and solves tasks in a conventional way. (2) ...shows active imagination and solves tasks in an original way.
Big-Five: Conscientiousness	(1) ...completes tasks carelessly and unorganized. (2) ...completes tasks thoroughly and efficiently.
Big-Five: Extraversion	(1) ...seems to be reserved and quiet when dealing with others. (2) ...seems to be communicative and sociable when dealing with others.
Big-Five: Agreeableness	(1) ...Seems to be sometimes somewhat rude to others. (2) ...Seems to be considerate and kind to others.
Big-Five: Emotional Stability	(1) ...Seems to be tense and nervous. (2) ...Seems to be relaxed and to handle stress well.
Gross Wage	(1) ...Receives a wage that is 15% above the company's average skilled labor wage. (2) ...Receives a wage that is 10% above the company's average skilled labor wage. (3) ...Receives a wage that is 5% above the company's average skilled labor wage. (4) ...Receives a wage that equals the company's average skilled labor wage. (5) ...Receives a wage that is 5% below the company's average skilled labor wage. (6) ...Receives a wage that is 10% below the company's average skilled labor wage. (7) ...Receives a wage that is 15% below the company's average skilled labor wage.

Measurement and distribution of works councils

The BIBB-CBS survey also collects information on a number of firm characteristics. We obtain information about the presence of a works council from the question “Is there a works council elected in your company in accordance with the Works Constitution Act or the Federal Employee Representation Act?”. The answer categories are “yes” or “no”.¹⁰ Table 1 shows that 17% of the firms in our working sample have a works council. This percentage is somewhat higher than average in Germany according to a larger firm-level survey, the IAB Establishment Panel (Ellguth & Kohaut, 2019).

Econometric model

We base our econometric approach on the notion that respondents maximize their utility when taking choices. Following Revelt and Train (1998), the utility U of the respondent n , choice alternative j and choice set t is determined by $U_{njt} = \beta_n X_{njt} + \varepsilon_{njt}$. The vector X_{njt} consists of observed

¹⁰For the purpose of simplification, we refer to the variable as “works council”.

applicant attributes in our data, i.e. the competence level, the Big Five personality traits and the wage level of the applicants. β_n is the corresponding parameter vector. In a simple logit model, the unobserved error term ε_{njt} is independent and identically distributed (IID) (McFadden, 1973). This assumption means that respondents' tastes are uncorrelated over the alternatives. In our experiment, each respondent makes up to seven recruitment choices between two applicants. This means that the respondents' choices are not independent from each other. To account for the nested structure of our data, we use a mixed logit model to estimate our empirical models. The mixed logit model can be structured hierarchically and is able to account for the correlation of choices among respondents by modeling the choices as dependent on the respondent level. Moreover, we make use of clustered standard errors on the respondent level.

Mixed logit models take also account of the possibility that tastes differ, i.e. that there is a distribution of preference weights across respondents. These models explicitly estimate the parameters of this distribution for each attribute level (Hauber et al., 2016). Thus, it relaxes the assumption of "independence of irrelevant alternatives" by modeling $\beta_n = b + \eta_n$, whereas b is the sample mean and η_n is a measure relating respondents tastes to the sample mean. To take account of the potential role of respondent-specific tastes, mixed logit models add $\eta_n X_{njt}$ to the unobserved error term ε_{njt} , yielding the utility function. (Revelt & Train, 1998, p. 649).¹¹

$$U_{njt} = b_n X_{njt} + (\eta_n X_{njt} + \varepsilon_{njt}) \quad (1)$$

To analyze whether the differences in recruiter tastes depend on the existence of a works council (WC) in the firm, we add the interaction term $b_n X_{njt} WC$ to the model, yielding the utility function.

$$U_{njt} = b_n X_{njt} + b_n X_{njt} WC + \eta_n X_{njt} + \varepsilon_{njt} \quad (2)$$

This approach of dealing with potential influences of respondent specific tastes has been adopted in several studies analyzing discrete choice experimental data (e.g., Eriksson & Kristensen, 2014; Humburg & van der Velden, 2015; Wehner et al., 2022). Mixed logit models use maximum simulated likelihood for the estimation and so-called Halton draws to approximate the log-likelihood function. These draws refer to a sequence of numbers generated by Halton sequences, which are used in quasi-random sampling methods and designed to cover a multi-dimensional space more uniformly than purely random sampling. Moreover, Halton draws are preferred over random draws due to their superior properties in sampling efficiency. Train (2000) shows that 100 Halton draws provided more precise estimates than 1000 random draws in a mixed logit model. We calculate 300 Halton draws to approximate the log-likelihood function.

We finally estimate the equation.

$$Choice_{njt} = \beta_1 X_{njt} + \beta_2 X_{njt} WC_n + \beta_3 \eta_n X_{njt} + \varepsilon_{njt} \quad (3)$$

with *Choice* being the hiring decision of the respondent n for applicant j in choice set t , β_1 as the coefficients for the applicants' attributes and β_2 as the coefficient of the interaction between works council presence in respondent's firm with applicants' attributes.

¹¹Note that if there would be no respondent heterogeneity in tastes, $\eta = 0$ and the model resembles the standard logit model (Lancsar et al., 2017).

RESULTS

Preference for applicants' personality and competence

Based on our mixed logit estimations, we calculate predicted probabilities for the applicants' attributes and whether a works council is present in the firm or not. Note that the calculated hiring probabilities have to be interpreted in relation to the attributes included in the experiment only. The probabilities do not allow for an assessment of an overall importance of the attributes compared to other characteristics (age, education, experience), which are held constant in the choice experiment.

Table 4 shows that being more agreeable significantly increases the hiring probability of employees applying in a firm with a works council. Although also in a non-works council firm the hiring probability of a more agreeable applicant is higher (55%) than for a less agreeable applicant (37%), the hiring probability of a more agreeable applicant further increases by 6 percentage points (to 61%) if the firm has a works council.

Table 4 also reveals that the hiring probability of applicants with above average competencies also increases if a firm has a works council. While the hiring probability for applicants with above average competencies is 45% in firms without works councils, this increases to 49% in firms with a works council.

Moreover, **Table 4** shows that in firms with a works council the hiring probabilities for more open, more conscientious, more extravert or more emotionally stable applicants are not significantly different from the probabilities observed for firms without a works council.

Robustness tests including recruiter personality

Research has shown that recruiters do not only evaluate the candidates' fit with the organization, but also candidates' similarity with themselves (Tsai et al., 2011). Similarity attraction theory (Byrne & Griffitt, 1969) argues that recruiters might favor applicants who are similar to themselves, e.g., in terms of demographic characteristics, but also in terms of personality (Graves & Powell, 1995; Rynes et al., 2000). If recruiters in firms with a works council are on average more agreeable than those in firms without a works council, the preference for agreeable job applicants might be dedicated to (or mediated by) the recruiters' agreeableness and not of having a works council.

The BIBB-CBS survey also collects information on various recruiter characteristics such as their Big-Five personality traits. We measure the respondents' Big-Five personality traits using a 16 items scale proposed and used in the SOEP (Richter et al., 2013, p.44–46). For our results to hold, we need to test whether recruiters' preference for more agreeable job applicants in firms with a works council is not due to a different personality of the recruiters in these two types of firms. Therefore, we first provide a graphical comparison of the recruiters' agreeableness distribution in firms without and with a works council. Second, we include interaction terms of recruiters' agreeableness with applicants' personality traits and professional competence in our main analysis to disentangle the effect of having a works council and the possible preference of agreeable recruiters for agreeable applicants.

Figure A1 shows that the distributions of recruiters' agreeableness in firms without and with a works council are very similar.¹² A Kolmogorov–Smirnov test for equality of distribution

¹²This also suggests on a descriptive level that works council firms particularly select non-managerial skilled workers based on their agreeableness or alternatively that further selection into managerial jobs mitigates the difference between firms that have a work council and firms that do not."

TABLE 4 Recruitment decisions by applicants' personality and works council.

	Mixed logit MEAN	SD
Applicants' characteristics		
Above average competence (Ref. Average competence)	0.274*** (0.058)	0.414*** (0.139)
More open to experience (Ref. Less open to experience)	0.592*** (0.060)	0.467*** (0.120)
More conscientiousness (Ref. Less conscientiousness)	1.516*** (0.089)	0.773*** (0.086)
More extraversion (Ref. Less extraversion)	0.185*** (0.052)	-0.111 (0.267)
More agreeableness (Ref. Less agreeableness)	1.484*** (0.087)	1.045*** (0.090)
More emotional stability (Ref. Less emotional stability)	0.732*** (0.067)	0.617*** (0.103)
Interaction between applicants' characteristics and works council		
Above Average Competence × Works Council	0.328** (0.146)	
More Open to Experience × Works Council	0.131 (0.157)	
More Conscientiousness × Works Council	0.017 (0.174)	
More Extraversion × Works Council	0.018 (0.125)	
More Agreeableness × Works Council	0.434** (0.178)	
More Emotional Stability × Works Council	0.125 (0.153)	
Wage Attributes: Ref. Average Wage		
15 Percent above Average Wage	-0.757*** (0.121)	
10 Percent above Average Wage	-0.408*** (0.128)	
5 Percent above Average Wage	-0.232** (0.116)	
5 Percent below Average Wage	-0.255** (0.114)	
10 Percent below Average Wage	-0.258** (0.125)	
15 Percent below Average Wage	-0.363*** (0.129)	
Observations	10,466	
<i>N</i>	786	
Log-likelihood	-2353	

Note: The coefficients are based on mixed logit model specifications with standard errors shown in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). ML with clustered standard errors based on 300 Halton draws. Source: BIBB-CBS 2017/2018, own calculations on unweighted data.

functions shows that the two distributions on the recruiters' agreeableness in firms without and with a works council are not statistically different from each other.¹³ This suggests that the recruiters' preference for more agreeable job applicants in firms with a works council is not related to a different personality of the recruiters in these two types of firms.

Table A4 shows the interaction effect of works council with applicants' personality traits and professional competence, when controlling for the interaction effects between recruiter's agreeableness and applicants' personality traits as well as professional competence. Column 1 shows that agreeable recruiters particularly prefer applicants with high agreeableness, i.e. "look-alikes". However, the significant interaction terms between having a works council in the firm and applicants' agreeableness as well as above average competence remains significant when including interactions with recruiters' agreeableness in the model.

In Subsection 3.3, we provide estimates of linear probability and logit models including fixed effects that also address the potential influence of all possible time invariant characteristics of the recruiter (including gender, age, and level of education) on our results. These robustness checks show that the coefficients for both the interactions of having a works council and applicants' agreeableness as well as professional competence are robust.

Robustness tests including firm characteristics

In this subsection, we take up the discussion whether our results are driven by firm size because very small firms almost never have a works council while large firms almost always do (e.g., Kriechel et al., 2014). We here provide four different robustness tests that take account of this issue. First, we provide a subsample analysis for small- and medium-sized firms. For this group of firms, the likelihood of having a works council is more evenly distributed (see Figure A2). The results for small- and medium-sized firms with between 5 and 500 employees show that the coefficient for the interaction between the applicants' agreeableness and having a works council is robust at a 10% significance level. Although the coefficient is somewhat smaller, the decrease of the significance level is likely to be related to the reduced sample size (664 instead of 786 firms) due to the exclusion of very small and very large firms (see Table A5).¹⁴

Second, we address concerns about potential firm-size heterogeneity by re-estimating the main mixed logit model including firm-size interactions with the personality attributes and professional competence. Thereby, we use a binary firm size variable based on a split below vs. above the median number of employees in the firm. This test shows that the coefficients for the interactions between firm size and the two variables of interest are insignificant, while both the interactions between having a works council and applicants' agreeableness as well as professional competence are significant at a 10% significance level (see Table A7).

Third, we provide estimates of linear probability and logit models including recruiter, job and firm fixed-effects to address the potential influence of characteristics of the recruiter (e.g., gender), the job (e.g., tasks) and the firm (e.g., firm size and sector of industry) on our results. Our robustness check shows that the coefficients for both the interactions of having a works council and applicants' agreeableness as well as professional competence are robust at a 5% significance level in the logit regression model (see Table A8, Column 2). In the linear probability regression model including recruiter and firm fixed-effects, the coefficient for applicants'

¹³Estimation results can be obtained from the corresponding author on request.

¹⁴For reference, we also report in Table A6 the estimation results for a subsample of private sector firms, which are on average smaller than public sector firms. The results remain robust with both works council interaction terms (competence and agreeableness) remaining significant at the 10% level.

agreeableness remains robust at a 5% significance level, while the coefficient for professional competence turns insignificant (see Table A8, Column 1).

Finally, we apply a *propensity score weighting approach* developed by Caliendo et al. (2024) to address potential selection on observables between recruiters in firms with and without a works council. Observables include gender, firm tenure, position and education as well as the personality traits (Big 5) of the recruiter. Furthermore, we add job tasks, firm size, sector of industry as well as legal form of the firm to the propensity score estimation model. We find that the coefficient for the interaction between the applicants' agreeableness and having a works council remains robust at a 5% significance level. For the interaction between the applicants' professional competence and having a works council, the coefficient turns insignificant (see Table A9). All four robustness analyses show that—although the higher preference for applicants' professional competence might be driven by firm-size—the higher preference for agreeable workers in firms with a works council holds when taking account of differences in firm size and other firm characteristics.

DISCUSSION

Our findings on the importance of agreeableness and high competence levels for the choices of recruiters from firms with a works council contribute to the industrial relations literature on employee representation and the psychological literature on employee personality. We find suggestive evidence that works councils influence hiring decisions based on applicants' personality traits. Specifically, agreeableness plays a significant role in the selection process of recruiters from works council firms. Agreeable employees tend to avoid conflict (Goldberg, 1999; McCrae & Costa Jr., 1990) and use more constructive conflict resolution strategies (Graziano et al., 1996; Judge & Zapata, 2015) and better deal with negative aspects in their work environment such as, e.g., injustice (Flaherty & Moss, 2007; Skarlicki et al., 1999). These characteristics make highly agreeable job candidates an attractive target for firms with work councils where non-agreeable employees can cause high costs and risks.

Over and above, our findings show that recruiters prefer above-average competencies in job candidates, as more competent employees may also reduce the risk of dismissal. One reason is that a high competence is linked to higher job performance (Miller, 2001; Schmidt & Hunter, 1980, 1983), which reduces the threat of having to dismiss the employee due to underperformance. Another reason is that high competence is related to more favorable problem-solving and decision-making processes within teams (Devine et al., 1999; Devine & Philips, 2001), which may reduce the likelihood of having to solve such conflicts with the help of the works council. In addition, firms with strong worker protection seem to pay special attention to the selection of competent employees because job searchers at the lower end of the skill distribution have a stronger incentive to apply for a job in these firms to reduce their risk of dismissal (Kugler & Saint Paul, 2004). In line with this reasoning, Muehleman and Pfeifer (2016) find that firms with a works council invest more resources on screening and selecting employees compared to firms without a works council. By contrast, recruiters in firms without a works council may place lower emphasis on candidates' competence, because they can dismiss underperforming candidates more easily.

Our results also have important implications for future research on the association between works councils and labour turnover. Past studies that relate survey measures of wages and employment to the existence of a works council might have overestimated the “protection” and “rent seeking” effect of works councils. When recruiters or these firms select employees more carefully with respect to their agreeableness, the underlying reason for observing lower turnover rates could be that the selected (more) agreeable employees tend to be less vulnerable to quits and dismissals (Zimmermann, 2008) and absenteeism (Vlasveld et al., 2013).

Furthermore, the often found works-council wage effect in the literature could relate to recruiter selection of more competent employees rather than on the rent seeking behavior of works councils (Addison et al., 2010; Beckmann et al., 2010).

CONCLUSION

In this paper, we analyze the recruitment behavior of German firms with strong firm-level employee representation. Works councils have extended legal rights and duties concerning the dismissal of employees. We argue that recruiters in these firms are aware of the potentially higher dismissal costs due to the intervention of works councils and therefore aim to hire more agreeable employees to avoid conflicts that eventually lead to costly dismissal procedures.

Our empirical strategy is based on a discrete choice experiment among firms. We find that recruiters from firms with a works council have a higher preference for more agreeable employees than recruiters from firms without a works council. Similarly, recruiters from firms with a works council have a higher preference for high-competence employees compared to recruiters from firms without a works council. Because these employees have a lower risk of dismissal due to underperformance, this supports the evidence that firms with works councils take into account potential conflict costs in their hiring decisions. Finally, we show that recruiters hire more agreeable workers when they themselves score high on agreeableness. However, this relationship is rather a complement than a substitution effect because the differences due to works council presence in the firm remain robust in joint regressions.

Overall, our results provide suggestive empirical evidence for employer selection mechanisms induced by employee representation institutions, such as works councils. Recruiters from these firms seem to take the potentially higher dismissal costs into account when screening and hiring new employees.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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APPENDIX

TABLE A1 Firm-level regression models—dismissal probability (Probit), severance pay in Euro (OLS) and overall separation costs in Euro (OLS).

	(1)	(2)	(3)
	Reason for separation: Dismissal by firm	Severance payment made by firm (in euro)	Overall separation costs (in euro)
Works council	-0.314** (0.132)	764.90** (360.75)	665.13 (949.85)
Dismissal by firm		265.20 (240.87)	1575.65** (634.19)
Interaction Works Council/Dismissal		1246.15** (607.81)	2818.66* (1600.35)
Firm control variables	Yes	Yes	Yes
Observations	1565	1565	1565

Note: Standard errors in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Dependent variable for Column 1: Dismissal vs. other reasons for separation. Dependent variable for Column 2: Severance pay in Euro (including zeros). Dependent variable for Column 3: Overall costs of separation in Euro. Overall costs include severance pay, personnel costs for administrating separation and continuous wage payments after separation. Controls include Firm-size dummies (4 categories), 2-digit sector-of-industry dummies (NACE), Training-firm dummy, Re-hiring intention dummy, Collective-bargaining dummy. Source: BIBB CBS 2022/23, own calculations based on interims data set (see DOI [10.7803/370.2223.1.7.10](https://doi.org/10.7803/370.2223.1.7.10)).

TABLE A2 Probit regression models—personality traits (Big 5) and dismissals among employees and job changers.

	(1)	(2)	(3)	(4)
	Dismissal in past year— standardized big 5	Dismissal in past year— standardized big 5 and controls	Dismissal in past year (only job changers)— standardized big 5	Dismissal in past year (only job changers)—standardized big 5 and controls
Standardized values	-0.062*** (0.022)	-0.045* (0.023)	-0.111*** (0.034)	-0.082** (0.037)
of Agreeableness				
Standardized values	0.012 (0.022)	0.021 (0.024)	0.016 (0.034)	0.016 (0.037)
of Neuroticism				
Standardized values	0.000 (0.023)	-0.013 (0.024)	0.053 (0.036)	-0.018 (0.038)
of Conscientiousness				
Standardized values	0.007 (0.024)	-0.001 (0.025)	-0.033 (0.036)	-0.044 (0.038)
of Extraversion				
Standardized values	0.007 (0.023)	0.038 (0.025)	-0.062* (0.036)	0.014 (0.039)
of Openness				
Individual-level and firm controls	No	Yes	No	Yes
Observations	26,387	26,387	1975	1973

Note: Standard errors in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Dependent variable for Columns 1 and 2: 1: Dismissed in previous year (all employees), 0: Not dismissed in previous year (all employees); Dependent variable for Columns 3 and 4: 1: Dismissed in previous year (job changers only), 0: Not dismissed in previous year (job changers only). Controls include Age, Age2, Male, Education (ISCED) dummies, Firm-size dummies (4 categories), 2-digit sector-of-industry dummies (NACE), survey-year dummies, public-sector dummy. Source: GSOEP Waves 2005, 2009, 2012, 2013, own calculations.

TABLE A3 Proportional frequencies and choices made.

Attributes names	<i>N</i>	Mean	<i>N</i>	Mean
Average Competencies	10,466	0.50	5233	0.51
Above Average Competencies	10,466	0.50	5233	0.49
Less Open to Experience	10,466	0.50	5233	0.43
More Open to Experience	10,466	0.50	5233	0.57
Less Conscientiousness	10,466	0.50	5233	0.30
More Conscientiousness	10,466	0.50	5233	0.70
Less Extraversion	10,466	0.50	5233	0.47
More Extraversion	10,466	0.50	5233	0.53
Less Agreeableness	10,466	0.50	5233	0.27
More Agreeableness	10,466	0.50	5233	0.73
Less Emotional Stability	10,466	0.50	5233	0.43
More Emotional Stability	10,466	0.50	5233	0.57
P 15 Percent Above Average Wage	10,466	0.15	5233	0.13
P 10 Percent Above Average Wage	10,466	0.14	5233	0.13
P 5 Percent Above Average Wage	10,466	0.14	5233	0.14
Average Wage	10,466	0.14	5233	0.16
P 5 Percent Below Average Wage	10,466	0.15	5233	0.15
P 10 Percent Below Average Wage	10,466	0.14	5233	0.15
P 15 Percent Below Average Wage	10,466	0.14	5233	0.14

Note: Source: BIBB-CBS 2017/2018, own calculations.

TABLE A4 Recruitment decisions by applicants' characteristics, recruiter's agreeableness and works council.

	Mixed logit Mean	SD
Applicants' Characteristics		
Above Average Competencies (Ref. Average Competence)	0.471 (0.318)	0.424 *** (0.135)
More Open to Experience (Ref. Less Open to Experience)	0.440 (0.310)	0.467 *** (0.120)
More Conscientiousness (Ref. Less Conscientiousness)	1.536*** (0.381)	0.773*** (0.087)
More Extraversion (Ref. Less Extraversion)	-0.052 (0.285)	-0.121 (0.262)
More Agreeableness (Ref. Less Agreeableness)	0.566 (0.360)	1.032*** (0.089)
More Emotional Stability (Ref. Less Emotional Stability)	0.365 (0.342)	0.618*** (0.104)
Interaction between applicants' characteristics and recruiters' agreeableness		
Above Average Competencies × Recruiters' Agreeableness	-0.036 (0.056)	
More Open to Experience × Recruiters' Agreeableness	0.028 (0.055)	
More Conscientiousness × Recruiters' Agreeableness	-0.004 (0.068)	
More Extraversion × Recruiters' Agreeableness	0.043 (0.051)	
More Agreeableness × Recruiters' Agreeableness	0.166** (0.066)	
More Emotional Stability × Recruiters' Agreeableness	0.067 (0.061)	
Interaction between applicants' characteristics and works council		
Above Average Competencies × Works Council	0.319** (0.146)	
More Open to Experience × Works Council	0.134 (0.158)	
More Conscientiousness × Works Council	0.010 (0.173)	
More Extraversion × Works Council	0.023 (0.123)	
More Agreeableness × Works Council	0.442** (0.179)	
More Emotional Stability × Works Council	0.128 (0.153)	

(Continues)

TABLE A4 (Continued)

	Mixed logit Mean	SD
Wage Attributes: Ref. Average Wage		
10 Percent above Average Wage	0.351*** (0.116)	
5 Percent above Average Wage	0.521*** (0.110)	
Average Wage	0.758*** (0.121)	
5 Percent below Average Wage	0.499*** (0.115)	
10 Percent below Average Wage	0.499*** (0.122)	
15 Percent below Average Wage	0.401*** (0.113)	
Observations	10,466	
N	786	
Log-likelihood	-2348	

Note: The coefficients are based on mixed logit model specifications with standard errors shown in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). ML with clustered standard errors based on 300 Halton draws. Source: BIBB-CBS 2017/2018, own calculations on unweighted data.

TABLE A5 Recruitment decisions by applicants' characteristics and works council: Middle-size firms (5–500 Employees).

	Mixed logit MEAN	SD
Applicants' Characteristics		
Above Average Competence (Ref. Average Competence)	0.315*** (0.064)	0.453*** (0.139)
More Open to Experience (Ref. Less Open to Experience)	0.635*** (0.066)	0.432*** (0.136)
More Conscientiousness (Ref. Less Conscientiousness)	1.563*** (0.103)	0.780*** (0.105)
More Extraversion (Ref. Less Extraversion)	0.173*** (0.058)	–0.266 (0.181)
More Agreeableness (Ref. Less Agreeableness)	1.570*** (0.104)	1.056*** (0.098)
More Emotional Stability (Ref. Less Emotional Stability)	0.728*** (0.072)	0.590*** (0.116)
Interaction between applicants' characteristics and works council		
Above Average Competence × Works Council	0.239 (0.162)	
More Open to Experience × Works Council	0.144 (0.191)	
More Conscientiousness × Works Council	0.023 (0.198)	
More Extraversion × Works Council	0.020 (0.146)	
More Agreeableness × Works Council	0.329* (0.200)	
More Emotional Stability × Works Council	0.131 (0.179)	
Wage Attributes: Ref. Average Wage		
15 Percent above Average Wage	–0.877*** (0.138)	
10 Percent above Average Wage	–0.486*** (0.146)	
5 Percent above Average Wage	–0.312** (0.132)	
5 Percent below Average Wage	–0.272** (0.130)	
10 Percent below Average Wage	–0.331** (0.140)	
15 Percent below Average Wage	–0.388*** (0.145)	
Observations	8826	
<i>N</i>	664	
Log-likelihood	–1948	

Note: The coefficients are based on mixed logit model specifications with standard errors shown in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). ML with clustered standard errors based on 300 Halton draws. Source: BIBB-CBS 2017/2018, own calculations on unweighted data.

TABLE A6 Recruitment decisions by applicants' personality and works council (only private sector firms).

	Mixed logit MEAN	SD
Applicants' Characteristics		
Above Average Competence	0.280***	-0.483***
(Ref. Average Competence)	(0.058)	(0.110)
More Open to Experience	0.594***	0.414***
(Ref. Less Open to Experience)	(0.061)	(0.122)
More Conscientiousness	1.542***	0.809***
(Ref. Less Conscientiousness)	(0.096)	(0.094)
More Extraversion	0.195***	-0.204
(Ref. Less Extraversion)	(0.053)	(0.209)
More Agreeableness	1.502***	1.039***
(Ref. Less Agreeableness)	(0.094)	(0.094)
More Emotional Stability	0.731***	0.627***
(Ref. Less Emotional Stability)	(0.068)	(0.097)
Interaction between Applicants' Characteristics and Works Council		
Above Average Competence	0.287*	
× Works Council	(0.167)	
More Open to Experience	0.107	
× Works Council	(0.170)	
More Conscientiousness	0.082	
× Works Council	(0.200)	
More Extraversion	0.013	
× Works Council	(0.142)	
More Agreeableness	0.368*	
× Works Council	(0.194)	
More Emotional Stability	0.211	
× Works Council	(0.172)	
Wage attributes: ref. average wage		
15 Percent above Average Wage	-0.741***	
	(0.124)	
10 Percent above Average Wage	-0.385***	
	(0.132)	
5 Percent above Average Wage	-0.221*	
	(0.120)	
5 Percent below Average Wage	-0.223*	
	(0.118)	
10 Percent below Average Wage	-0.226*	
	(0.129)	
15 Percent below Average Wage	-0.319**	
	(0.133)	
Observations	10,016	
N	752	
Log-likelihood	-2261	

Note: The coefficients are based on mixed logit model specifications with standard errors shown in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). ML with clustered standard errors based on 300 Halton draws. Source: BIBB-CBS 2017/2018, own calculations on unweighted data.

TABLE A7 Recruitment decisions by applicants' characteristics and works council: controlling for firm size.

	Mixed logit MEAN	SD
Applicants' Characteristics		
Above Average Competence	0.247***	0.419***
(Ref. Average Competence)	(0.072)	(0.137)
More Open to Experience	0.573***	0.463***
(Ref. Less Open to Experience)	(0.075)	(0.120)
More Conscientiousness	1.445***	0.768***
(Ref. Less Conscientiousness)	(0.104)	(0.086)
More Extraversion	0.249***	-0.100
(Ref. Less Extraversion)	(0.064)	(0.256)
More Agreeableness	1.416***	1.046***
(Ref. Less Agreeableness)	(0.101)	(0.090)
More Emotional Stability	0.710***	0.619***
(Ref. Less Emotional Stability)	(0.081)	(0.102)
Interaction between Applicants' Characteristics and Works Council		
Above Average Competence	0.290*	
× Works Council	(0.158)	
More Open to Experience	0.104	
× Works Council	(0.163)	
More Conscientiousness	-0.075	
× Works Council	(0.185)	
More Extraversion	0.101	
× Works Council	(0.139)	
More Agreeableness	0.353*	
× Works Council	(0.191)	
More Emotional Stability	0.102	
× Works Council	(0.167)	
Interaction between Applicants' Characteristics and Firm Size		
Above Average Competence	0.072	
× Firm Size	(0.116)	
More Open to Experience	0.048	
× Firm Size	(0.111)	
More Conscientiousness	0.181	
× Firm Size	(0.137)	
More Extraversion	-0.163	
× Firm Size	(0.105)	
More Agreeableness	0.168	
× Firm Size	(0.139)	
More Emotional Stability	0.051	
× Firm Size	(0.122)	
Wage Attributes: Ref. Average Wage		

(Continues)

TABLE A7 (Continued)

	Mixed logit MEAN	SD
15 Percent above Average Wage	-0.761*** (0.121)	
10 Percent above Average Wage	-0.412*** (0.128)	
5 Percent above Average Wage	-0.234** (0.116)	
5 Percent below Average Wage	-0.258** (0.114)	
10 Percent below Average Wage	-0.264** (0.125)	
15 Percent below Average Wage	-0.368*** (0.129)	
Observations	10,466	
N	786	
Log-likelihood	-2350	

Note: The coefficients are based on mixed logit model specifications with standard errors shown in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). ML with clustered standard errors based on 300 Halton draws. The binary variable firm size is based on a median split of the variable number of employees in the firm. Source: BIBB-CBS 2017/2018, own calculations on unweighted data.

TABLE A8 Recruitment decisions by applicants' characteristics and works council: linear probability and logit models including recruiter/ firm fixed-effects.

	Linear probability model incl. Recruiter/ firm fixed-effects	Logit model incl. Recruiter/ firm fixed-effects
Works Council	-0.039	-0.777*
(Ref. No Works Council)	(0.028)	(0.409)
Applicants' Characteristics		
Above Average Competence	0.046***	0.431***
(Ref. Average Competence)	(0.013)	(0.086)
More Open to Experience	0.125***	0.855***
(Ref. Less Open to Experience)	(0.014)	(0.088)
More Conscientiousness	0.374***	2.203***
(Ref. Less Conscientiousness)	(0.016)	(0.108)
More Extraversion	0.050***	0.275***
(Ref. Less Extraversion)	(0.013)	(0.079)
More Agreeableness	0.385***	2.157***
(Ref. Less Agreeableness)	(0.017)	(0.106)
More Emotional Stability	0.167***	1.079***
(Ref. Less Emotional Stability)	(0.014)	(0.093)
Interaction between Applicants' Characteristics and Works Council		
Above Average Competence	0.049	0.462**
× Works Council	(0.031)	(0.221)
More Open to Experience	0.011	0.260
× Works Council	(0.032)	(0.238)
More Conscientiousness	-0.033	0.136
× Works Council	(0.034)	(0.275)
More Extraversion	-0.012	-0.011
× Works Council	(0.028)	(0.189)
More Agreeableness	0.075**	0.658**
× Works Council	(0.038)	(0.271)
More Emotional Stability	0.006	0.206
× Works Council	(0.033)	(0.228)
Wage Attributes: Ref. Average Wage		
15 Percent above Average Wage	-0.116***	-0.748***
	(0.017)	(0.111)
10 Percent above Average Wage	-0.072***	-0.430***
	(0.016)	(0.110)
5 Percent above Average Wage	-0.039**	-0.240**
	(0.017)	(0.104)
5 Percent below Average Wage	-0.056***	-0.317***
	(0.017)	(0.111)

(Continues)

TABLE A8 (Continued)

	Linear probability model incl. Recruiter/ firm fixed-effects	Logit model incl. Recruiter/ firm fixed-effects
10 Percent below Average Wage	-0.042** (0.017)	-0.305*** (0.112)
15 Percent below Average Wage	-0.069*** (0.017)	-0.350*** (0.119)
Constant	-0.020 (0.018)	-3.183*** (0.176)
Observations	10,466	10,466
N	786	786
Log-likelihood		-4899
R ²	0.377	

Note: The coefficients are based on linear probability and logit regression models including recruiter/ firm fixed-effects with standard errors shown in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Source: BIBB-CBS 2017/2018, own calculations on unweighted data.

TABLE A9 Recruitment decisions by applicants' characteristics and works council: propensity-score weighting.

	Mixed logit MEAN	SD
Applicants' Characteristics		
Above Average Competence (Ref. Average Competence)	0.264* (0.146)	-0.100 (0.204)
More Open to Experience (Ref. Less Open to Experience)	0.301** (0.147)	-0.012 (0.063)
More Conscientiousness (Ref. Less Conscientiousness)	1.296*** (0.225)	0.585*** (0.163)
More Extraversion (Ref. Less Extraversion)	0.199 (0.141)	-0.011 (0.020)
More Agreeableness (Ref. Less Agreeableness)	1.099*** (0.192)	0.598*** (0.193)
More Emotional Stability (Ref. Less Emotional Stability)	0.455*** (0.160)	0.465** (0.221)
Interaction between Applicants' Characteristics and Works Council		
Above Average Competence × Works Council	0.205 (0.213)	
More Open to Experience × Works Council	0.289 (0.201)	
More Conscientiousness × Works Council	0.022 (0.260)	
More Extraversion × Works Council	-0.068 (0.183)	
More Agreeableness × Works Council	0.470** (0.234)	
More Emotional Stability × Works Council	0.278 (0.227)	
Wage Attributes: Ref. Average Wage		
15 Percent above Average Wage	-1.041*** (0.312)	
10 Percent above Average Wage	-0.455 (0.278)	
5 Percent above Average Wage	-0.430 (0.265)	
5 Percent below Average Wage	-0.296 (0.290)	
10 Percent below Average Wage	-0.440* (0.262)	
15 Percent below Average Wage	-0.627** (0.292)	
Observations	6762	
N	483	
Log-likelihood	-509	

Note: The coefficients are based on mixed logit model specifications with standard errors shown in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). ML with clustered standard errors based on 300 Halton draws. Number of observations is lower than in the main regressions due to missing values in control variables in the propensity-score weighting procedure. Source: BIBB-CBS 2017/2018, own calculations on unweighted data.

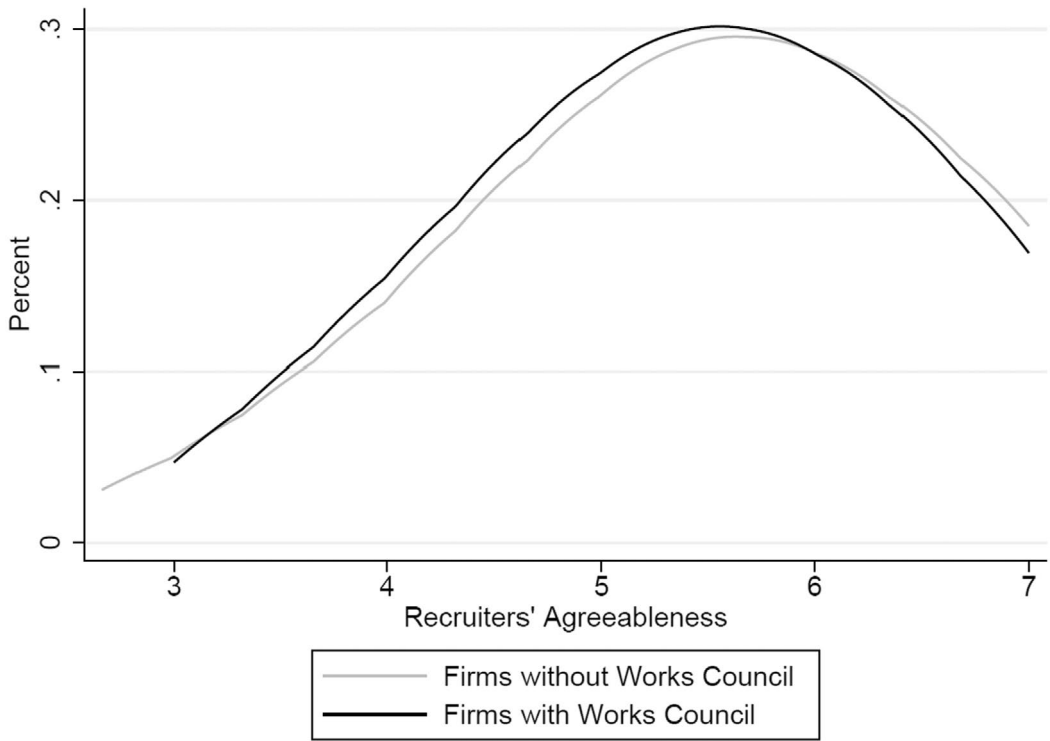


FIGURE A1 Distribution of recruiters' agreeableness in firms without and with a works council.
Source: BIBB-CBS 2017/2018, own calculations. $N=786$. The Kolmogorov–Smirnov test for equality of distribution functions shows that the two distribution on the recruiters' agreeableness in firms without and with a works council are not statistically different from each other.

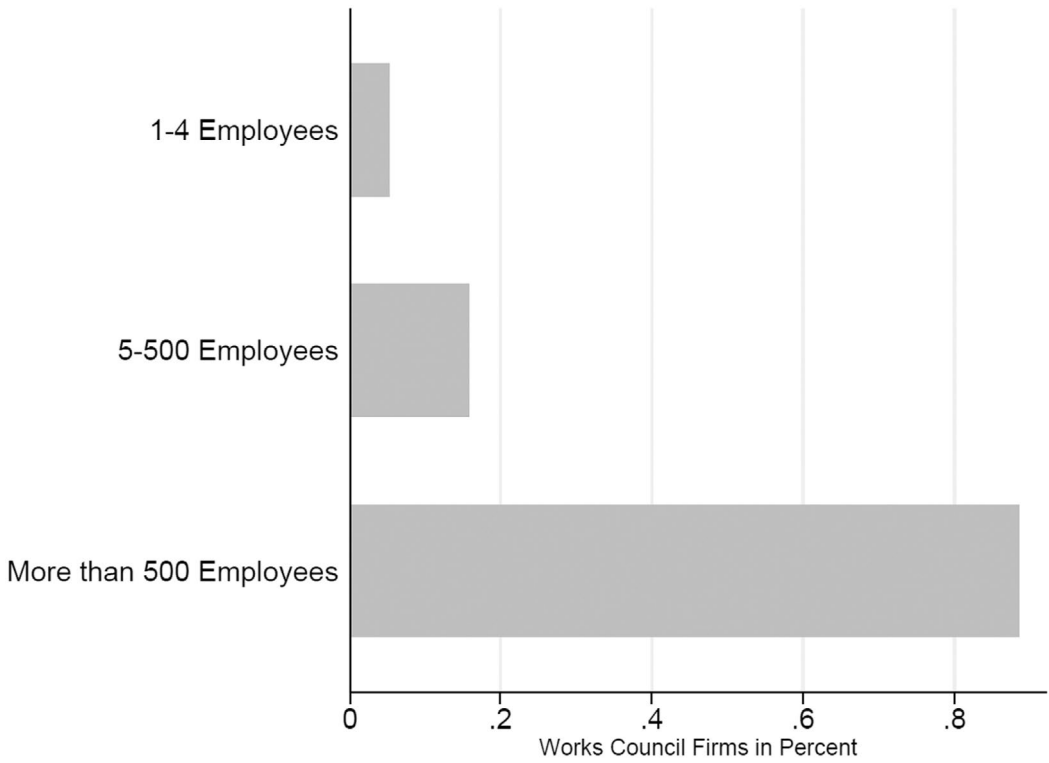


FIGURE A2 Share of works council presence by firm-size category.

Source: BIBB-CBS 2017/2018, own calculations. $N = 786$. In total, 12.21% of the firms in the working sample have 1–4 employees, 84.48% have 5–500 employees, and 3.31% have more than 500 employees.