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DISCUSSION PAPER SERIES

IZA DP No. 10750

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ABSTRACT

The Role of Works Councils for Severance Payments

Using representative German employee data, we analyse the role of works councils for the incidence of severance payments subsequent to dismissals. While there is a positive relation with severance payments after those dismissals which stem from plant closings, the incidence of a works council is negatively associated with severance pay subsequent to individual layoffs. In both cases, we find a negative moderating effect of individuals' higher reemployment chances. We also explore gender differences and differences between the types of previously held jobs.

JEL Classification: J53, J63, J65
Keywords: dismissals, layoffs, plant closings, severance pay, works councils

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1. Introduction

Works councils have the purpose of acting as firm-level complements to nationally or sectorally organized unions in several countries. They are intended to foster communication between employees and management and to contribute to trustful employment relations within firms. A considerable body of literature has thus investigated the economic consequences of works councils on firm performance (see Addison et al. (2004b) for an overview). Works councils primarily represent the interests of the employees, though. Indeed, previous research hints at some effects of works councils on the individual level, namely on employees' outcomes. Hübler & Jirjahn (2003) and Addison et al. (2010) report a positive relation between the existence of a works council and employees' wages. Kraft & Lang (2008) do not find direct wage effects from an introduction of works councils based on individual data, though. There is also evidence for a job satisfaction enhancing role of works councils (Grund & Schmitt 2013, Jirjahn & Tsertsvadze 2006). Besides, scholars have extensively explored the role of works councils in the separation of employment relationships. There is a broad consensus that works councils are associated with lower quit and dismissal rates by acting as the employees' voice vis a vis the management resulting in better employer-employee relationships (Addison et al. 2001, Backes-Gellner et al. 1997, Boockmann & Steffes 2010, Dilger 2002, Frick 1996, Frick & Möller 2003, Grund et al. 2016, Hirsch et al. 2010, Pfeifer 2007). Hence, works council activities can discourage employees from deliberately quitting their firms and prevent employers from dismissing individual employees. The role of works councils is somewhat different when it comes to mass dismissals in the wake of plant closings. Addison et al. (2004a) provide evidence for a positive relation of works council presence and plant closings. One argument for a potential causal interpretation of this finding is that works councils are involved in negotiating social plans which regulate, among others, financial compensations for affected employees, making it easier to accept plant closings in the first place. On the other hand, there is also empirical evidence from Jirjahn (2009) that poor sales numbers of a firm increase the probability of the introduction of a works council. Thus, reverse causality can also be relevant: The threat of a plant closing down leads to a works council being established by the employees.

However, we surprisingly still know only little about the actual role and impact of works councils for employees in cases where a decision about a dismissal has already been made. The loss of a job constitutes a grave problem for affected individuals in most cases, so that institutions whose purpose is to support workers should be interested in the personal situation

of these people. But do works councils, as the firm-level employee representation institution, still take care of employees who are no longer part of the establishment's workforce anymore or will not be in the near future? Or does their support stop at the factory gate?

In general, there is evidence that some dismissed employees benefit from outplacement measures of firms which lead to higher re-employment possibilities (Alewell & Hauff 2013, Doherty 1998, Mayrhofer 1987, Pull 2008) or their monetary losses are reduced by receiving severance payments (Goerke & Pannenberg 2010, Grund 2006). However, these cited contributions did not examine the specific role of works councils in this context.

We therefore want to address this issue empirically and explore the role of works councils for the incidence of severance payments in cases of dismissal. We focus on Germany. We consider possible selection effects of dismissal decisions and distinguish between individual layoffs and plant closings. We also take a possible subsequent re-employment of affected individuals in other firms into account and examine differences between groups of employees, e.g. with regard to gender and the type of previously held jobs.

Based on institutional and theoretical considerations (section 2), we describe the data of the German Socio-Economic Panel (SOEP) and the methodology that we make use of (section 3). We present the results in section 4, discuss them in section 5 and conclude in section 6.

2. Institutional framework and theoretical considerations

According to the German Works Constitution Act (Betriebsverfassungsgesetz, WCA), works councils can be established by the employees in plants which consists of at least five employees. Their overall purpose is to advocate the interests of the workforce. Therefore, the WCA equips works councils with several information, consultation and even codetermination rights. Employers have to discuss every employer-initiated termination of an employment (=dismissal) with the works council and provide reasons for it. The council can object to the dismissal if the employer has disregarded social aspects and/or if the employee could remain in the firm in another job. However, in many cases of in actual fact unjustifiable dismissals, a further cooperation between the employee and the employer is no longer possible and both parties may agree to financial compensation in terms of a severance payment. In this process,

works councils can play a certain role and influence the negotiations.[1] Being the safe guarder of employees' interests, works councils should then act in favour of a severance package then.

However, one can also analyse this situation from a political economy perspective. As works councils are re-elected every four years, they are assumed to focus on measures that will maximize their chances of staying in office. On the one hand, dismissed workers who have to leave the firm cannot take part in the elections anymore, as they become outsiders in the sense of the insider-outsider theory (Lindbeck & Snower 2001). Works councils may therefore expend more time and effort on measures that help the remaining employees. On the other hand, supportive actions on dismissed employees' behalf can be interpreted, also by the incumbent insiders, as a signal of the willingness of the works council to defend the interests of all workers.

The incentives of the works council to support dismissed employees in their negotiation for a severance package should also depend on the kind of dismissal. In general, dismissals can be differentiated into three kinds with regard to the German Employment Protection Act (EPA, Kündigungsschutzgesetz): (1) layoffs due to severe misconduct, e.g. being under the influence of alcohol in the workplace or being repeatedly late; (2) layoffs due to personal characteristics that prohibit the performance demanded by the job, e.g. being chronically ill; (3) dismissals due to operational reasons, e.g. redundancies because of a severe decrease in the firm's sales. In the latter case, works councils are supposed to help employees firstly by avoiding dismissals, but also afterwards with their severance negotiations, should a dismissal be unavoidable. This is most obvious in the case of mass dismissals, e.g. in the case of plant closings. Then, works councils have the right to negotiate a social plan (including severance payments for affected employees) according to § 112 of WCA.

Hence, we expect:

Hypothesis 1: The probability of receiving a severance payment in the case of a plant closing down is higher when employees have been working in a firm which has a works council.

The situation might be less straightforward regarding individual layoffs, especially if it is not possible to assess the exact circumstances of the dismissal (which is usually the case when

[1] Ultimately, if there is no agreement between both sides, the case can go to court, where the employer might also be obliged to pay a severance package.

making use of quantitative data). In general, we can assume the probability of a layoff to decrease with individuals' effort and ability. The worse that employees perform in their workplace, the higher the chance is that employers will consider dismissing them. However, the presence of a works council should complicate dismissals stemming from inferior performance if a works council still takes care of employees with regard to layoffs. Its existence may then lower the thresholds for effort and ability below which employees are actually laid off. In consequence, average levels of ability and in particular of previous effort are then lower for laid-off workers who worked in firms which had works councils compared to those individuals whose establishment had no employee representation, given that we are observing layoffs. Because works councils may hinder firms from laying off employees in cases of moderate misconduct or weak performance, the dismissed individuals tend to be the "more severe" cases (e.g. excessively consuming alcohol during work, or stealing). These are supposed to be the cases where works councils do not support the affected workers, as the behaviour of these individuals possibly not only harms the firm as a whole, but also the co-workers.

What is the implication of our conjecture of the role of works councils for the relation between individual layoffs and severance payments? If we could exactly observe and control for individuals' ability for the recent job, effort in a broad sense and all circumstances of a dismissal decision, then we could cancel out reasons for a non-supportive behaviour of the works council. In consequence, we would expect to observe a severance pay enhancing role of works councils also in the case of individual layoffs. However, we will discuss below that it is questionable about adequately controlling for all of these issues sufficiently and will refer to the likely corresponding selection effects. We therefore abstain from formulating an explicit hypothesis at this point.

Receiving a severance package might mitigate the most severe financial problems in the wake of losing a job. From the employees' perspective, the possibility of soon finding a new job should be a valuable alternative to a severance pay. Hence, works councils' efforts in favour of severance payments might be moderated by re-employment possibilities. First, works councils may concentrate their effort on cases with low re-employment chances in order to avoid the most severe financial problems. Second, they may play an active role in negotiations with firms and trade-off severance payments against (costly) outplacement measures. The most obvious indicator of re-employment possibilities is the actual re-employment after the dismissal.

We therefore formulate

Hypothesis 2: Re-employment of an employee in another firm after the dismissal negatively moderates the relation between works councils and severance payments.

3. Data and methods

We use data from the German Socio-Economic Panel (SOEP, see Wagner et al. (2007) for an overview) and restrict our sample to full- and part-time employees between 18 and 65 years of age who work in private-sector firms consisting of five or more employees. Civil servants are excluded from the analysis. Employees are asked about the existence of a works council in their firms in the years 2001, 2006 and 2011 only. We therefore construct a pooled sample of these three years. As with respect to the reasons of dismissals, to severance payments and to potential re-employment, we gather information if individuals have been dismissed because of a layoff or the shut-down of their plant, whether they received a severance payment from their former employer, and whether they have already been re-employed. Therefore, we also use the SOEP waves of 2002, 2007 and 2012 that include retrospective questions about these aspects and match the individuals' information with the corresponding previous years based on the panel data structure of the SOEP.

In the SOEP, participants are asked about the incidence and the reason for the termination of their previous job in the preceding year. Among others (such as own resignation or the expiration of a temporary contract), individuals can report plant shut-down and individual layoff as potential reasons. In the first case, it is straightforward that the dismissal took place due to operational reasons in the sense of the German EPA. However, it is important to notice that in the latter case we are not aware of the exact reason and circumstances of the dismissal as it might have been due to severe misconduct, due to personal characteristics that prohibit the performance demanded by the job, or even due to operational reasons as well (because there is no need for a particular job in the firm any more).

Our sample comprises 11,256 observations, including 478 dismissals. Table 1 gives an overview of our sample. A number of 339 individuals have been laid off. 27 percent of them previously worked in a firm with a works council. An additional number of 139 individuals lost their job because of a plant closing down (these employees worked in firms which had works councils in 42 percent of the cases). In cases of individual layoffs, 16 percent got a

severance payment from their former employer. The share of workers having received a payment is about 11 percentage points higher among those who had worked for a firm which had a works council (0.24 vs. 0.13). The raw difference is with 25 percentage points even more pronounced with respect to plant closings: 35 percent workers whose firm had a works council received a severance payment, while only 10 percent of them without employee representation report such a payment. However, workers whose previous employer had a works council differ considerably from their counterparts who worked for a firm which did not have an employee representation, for instance in terms of the size of the firm or the industry which they worked in (see Table 1). As these variables are likely to be related to the incidence of severance payments as well, we have to control for them in a multiple regression model in order to distinguish the distinctive role of works councils.

Table 1: Descriptive statistics (shares/means)

	No separation n=10,689		Plant closing n=139		Layoff n=339	
	No WoCo n=4,554	WoCo n=6,232	No WoCo n=81	WoCo n=58	No WoCo n=249	WoCo n=90
Severance payment (1=yes)	0	0	0.099	0.345	0.133	0.244
Female (1=yes)	0.454	0.355	0.420	0.328	0.406	0.389
Age (in years)	41.64	42.90	40.94	42.86	39.15	41.21
Marital status (1=married)	0.643	0.687	0.654	0.724	0.550	0.589
Children in the household (1=yes)	0.387	0.396	0.432	0.414	0.378	0.367
Nationality (1=German)	0.938	0.905	0.877	0.931	0.936	0.844
Residence in Eastern Germany (1=yes)	0.300	0.209	0.420	0.207	0.454	0.289
Years of schooling	12.09	12.35	12.23	11.73	11.55	11.52
Gross monthly wage	2,183	2,947	1,937	2,606	1,779	2,083
Tenure (in years)	8.539	13.09	6.260	11.23	4.344	6.187
Working time (in hours per week)	40.57	40.33	41.73	39.78	42.66	40.00
Job status						
Un-/ semi-trained blue collar workers	0.151	0.163	0.185	0.207	0.217	0.356
Trained blue-collar workers	0.240	0.217	0.296	0.241	0.329	0.156
White collar workers with simple tasks	0.153	0.096	0.136	0.103	0.153	0.167
Qualified professionals	0.278	0.286	0.210	0.241	0.213	0.144
Highly qualified professionals	0.178	0.238	0.173	0.207	0.088	0.178
Firm size						
5-19 employees	0.421	0.021	0.593	0.017	0.482	0.044
20 - 199 employees	0.430	0.263	0.370	0.414	0.446	0.344
200 - 1999 employees	0.096	0.344	0.025	0.293	0.052	0.344
>=2000 employees	0.053	0.371	0.012	0.276	0.020	0.267
Industry						
Construction	0.289	0.526	0.235	0.586	0.257	0.456
Manufacturing	0.116	0.042	0.247	0.138	0.253	0.111
Retail/Tourism/Transportation	0.312	0.188	0.247	0.138	0.277	0.267
Financial/Corporate services	0.141	0.134	0.198	0.086	0.108	0.089
Private services	0.142	0.111	0.074	0.052	0.104	0.078
Days absent due to sickness	5.495	7.314	8.951	7.000	9.988	18.48
Overtime hours per week	2.764	2.738	2.980	1.998	2.806	1.785
Bonus payment (1=yes)	0.097	0.218	0.062	0.121	0.044	0.078
Disabled (1=yes)	0.049	0.063	0.074	0.034	0.036	0.089
Concerns about job security						
None	0.442	0.420	0.288	0.228	0.211	0.244
Somewhat concerned	0.431	0.444	0.363	0.351	0.370	0.367
Very concerned	0.127	0.136	0.350	0.421	0.419	0.389
Finding a similar job						
Easy	0.240	0.176	0.185	0.190	0.206	0.256
Hard	0.624	0.623	0.605	0.535	0.661	0.622
Almost impossible	0.136	0.201	0.210	0.276	0.133	0.122
Regional unemployment rate	0.097	0.090	0.116	0.094	0.115	0.093

We use the incidence of a severance payment as our binary dependent variable (1=yes), and we apply a binary probit model. Our model can be described by

$$Severance\ pay_t = \beta_1 WoCo_{t-1} + \beta_2 Ind_{t-1} + \beta_3 Job_{t-1} + \beta_4 Year_{t-1}\,, \quad (1)$$

where $Severance\ pay_t$ indicates whether the dismissed individual had received a severance payment from the old employer. We will differentiate between severance payments after plant closings and after individual layoffs by estimating separate models with identical independent variables. *WoCo* is a dummy that indicates whether a works council existed in the former firm of the individual. Ind_{t-1} is a vector of several individual characteristics, such as gender, age and schooling. Job_{t-1} is a vector of job- and firm-specific characteristics such as wage, tenure, job status and firm size. $Year_{t-1}$ is a vector of survey year controls. All explanatory variables are taken from the survey year before the dismissal (=t-1). The coefficients β_1 to β_4 show the association of our independent variables with the incidence of a severance payment. Most importantly, β_1 indicates whether a previous works council presence is related to severance pay, controlling for several individual and job-/firm-specific characteristics. In the wake of plant closings, we expect a positive sign according to our Hypothesis 1.

In a second step, we also want to investigate whether the relationship between works council presence and severance pay is moderated by a potential re-employment. We therefore extend (1) in the following manner:

$$\begin{aligned} Sev\ pay_t = \quad & \beta_1 WoCo_{t-1} + \beta_2 WoCo_{t-1} * Re\text{-}employed_t + \beta_3 Re\text{-}employed_t \\ & + \beta_4 Ind_{t-1} + \beta_5 Job_{t-1} + \beta_6 Year_{t-1}\,. \end{aligned} \quad (2)$$

$WoCo_{t-1} * Re\text{-}employed_t$ is an interaction term between a previous works council presence and a dummy that indicates whether the individual has already been re-employed by survey year t. First, we understand re-employment as a person having a full- or part-time job again. Second, we will also differentiate between the two employment forms. As stated in Hypothesis 2, we expect a negative moderation effect, which would be revealed by a negative sign of β_2 in this model.

As mentioned above, the SOEP does not supply us with the exact circumstances of job terminations in an extensive way. However, we argued in section 2 that works councils are

likely to already influence the layoff decisions of the firms. As a result, we expect that there will be differences within the group of laid-off people with regard to the degree of misconduct or lack of ability, dependent on whether a works council existed in their former firm or not. We will tackle this challenge by applying a two-stage Heckman model in the case of individual layoffs: [2]

$$\begin{aligned} &1^{st} \text{ stage:} \quad Layoff_t = \gamma_1 WoCo_{t-1} + \gamma_2 Effort_{t-1} + \gamma_3 Ind_{t-1} + \gamma_4 Job_{t-1} + \gamma_5 Year_{t-1} \\ &2^{nd} \text{ stage:} \quad Severance\ pay_t = \beta_1 WoCo_{t-1} + \beta_2 Ind_{t-1} + \beta_3 Job_{t-1} + \beta_4 Year_{t-1} \ . \end{aligned} \tag{3}$$

The 2nd stage model is identical to (1). However, we now control for possible selection effects by simultaneously estimating a 1st stage where we account for the circumstances of the layoff in order to get ß-coefficients that are selection-corrected. The corresponding dependent variable is a dummy that indicates whether the individual was laid off during the previous year, whereas the control group are stayers in their firm. The equation includes a wide array of variables regarding individual and job- and firm-specific characteristics that have been identified by the literature as relevant for layoffs (see, for example, Grund et al., 2016). Moreover, it contains the vector $Effort_{t-1}$ comprising the variables "days absent due to sickness" [# in the year], "overtime hours per week" and "got a bonus payment" [1=yes], which may be interpreted as proxies for individual performance prior to the layoff. We assume individuals who show severe misconduct in the workplace to score worse on these variables. If we are able to capture the relevant circumstances of the individual layoffs with these variables, we would then expect a positive sign of β_1.

The coefficients resulting from estimations of the models above in connection with their significance levels indicate the statistical significance, in particular in terms of the relation between works council presence and severance pay incidence. However, as we are also interested in the economic relevance of our results, we additionally compute average marginal effects of works councils after each model based on the estimated coefficients.

Regarding the interaction with re-employment, we acknowledge the challenge of interpreting marginal effects of interaction terms in maximum likelihood models, as discussed by Ai & Norton (2003) and Greene (2010). Karaca-Mandic et al. (2012) propose the following solution, which we also use here: First, we estimate the probit model with the additional

[2] Using SOEP data, this approach does not seem to be suitable with respect to plant closings. Their determinants should mainly be firm-specific. However, the SOEP as household panel only includes few firm-level variables.

interaction effect. Second, we compute average marginal effects of works council presence on the incidence of severance pay for (1) individuals who have already been re-employed by the subsequent year and for (2) workers who are not by using the coefficients of the probit models. The difference between the two marginal effects can be interpreted as the interaction effect averaged over all individuals in our sample.

4. Results

We start with the results of our binary probit models of the incidence of severance payments. The findings are shown in Table 2. Individuals who were dismissed because of a plant closing benefit from a works council through an increased probability of a severance payment, see model (1). This is in line with our Hypothesis 1. In contrast to that, model (2) reveals that individuals who were laid off and after working in a firm which had a works council have a significantly lower probability of a severance payment than those who worked for a firm which did not have employee representation. Hence, controlling for other covariates changes the unconditional result from a positive to a negative differential.

The results with regard to the control variables indicate that firm size in particular is responsible for this shift. The larger the firm, the more likely that laid-off workers will receive severance pay. In addition, the previous wage as well as the tenure with the firm are positively related to the incidence of severance payments, both after plant closings and in the wake of layoffs. This might stem from the legal regulation in the German EPA that conditions the amount of severance packages on previous wage, tenure and age (§10).

Using these results, we compute average marginal effects in order to explore the economic meaning of the coefficients. The results are shown below the works council coefficient in italics. We see that for both layoffs and plant closings the effect sizes are quite substantial. Controlled for our covariates (with firm size in particular that is highly correlated with works council presence), we find that the probability of getting severance pay after a plant closure is 16.4 percentage points higher when the old firm had a works council. Compared to our unconditional differential of 25.6 percent, we see that our covariates can explain only about a third of it. Regarding layoffs, the size of the marginal effect is also considerable with -9.3 percentage points.

Table 2: Binary probit models of severance payments

	(1) Severance Payment after plant closing	(2) Severance Payment after layoff
Works council (dummy, 1=yes)	0.841* (0.437)	-0.507* (0.276)
Marginal effect of works council	*0.164** (0.081)*	*-0.093* (0.051)*
Female (dummy, 1=yes)	0.556 (0.417)	0.162 (0.243)
Age (in years)	-0.031* (0.018)	0.011 (0.010)
Marital status (dummy, 1=married)	0.389 (0.402)	-0.51 (0.225)
Children in the household (dummy,1=yes)	-0.218 (0.380)	0.328 (0.209)
Nationality (dummy, 1=German)	0.199 (0.493)	-0.143 (0.349)
Resid. in Eastern Germany (dummy, 1=yes)	-0.226 (0.352)	-0.133 (0.218)
Years of schooling	-0.034 (0.095)	0.045 (0.055)
Gross monthly wage/100	0.024* (0.014)	0.049*** (0.002)
Tenure (in years)	0.060*** (0.020)	0.36*** (0.012)
Working time (in hours per week)	0.016 (0.014)	-0.002 (0.011)
Job status (ref: Trained blue collar)		
Un- and semi-trained blue collar workers	-0.885* (0.488)	0.432 (0.328)
White collar workers with simple tasks	-0.621 (0.571)	0.782** (0.349)
Qualified professionals	-0.662 (0.446)	0.356 (0.357)
Highly qualified professionals	0.090 (0.580)	-0.072 (0.501)
Firm size (ref: 5-19 employees)		
20 - 199 employees	0.099 (0.428)	0.452* (0.247)
200 - 1999 employees	-0.187 (0.587)	0.950*** (0.369)
>=2000 employees	-0.521 (0.663)	1.362*** (0.386)
Industry (ref: Construction)		
Manufacturing	-0.413 (0.408)	-0.295 (0.330)
Retail/Tourism/Transportation	-0.570 (0.464)	-0.042 (0.235)
Financial/corporate services	0.165 (0.459)	-0.001 (0.313)
Private services	0.243 (0.469)	-1.468*** (0.413)
Year controls	Yes	Yes
Observations	139	339
Pseudo-R^2	0.306	0.245
Pseudo-R^2 without works council dummy	0.281	0.234

Notes: Robust standard errors in parentheses. ***p<0.01, ** p<0.05, *p<0.1

However, it is unclear whether the negative coefficient with respect to severance payments after layoffs really indicates a negative impact of works councils. As discussed above, we assume works councils to already influence the layoff decisions of the firms, which results in differences within the group of laid-off people with regard to the degree of misconduct or lack of ability, dependent on whether a works council existed in their former firm or not. We therefore apply the Heckman probit model, as described in section 3. The results are shown in Table 3. On the selection stage, only sickness days are predictive of an individual layoff among our proxies for effort on the previous job. The signs of the coefficients for overtime hours and bonus payments are in line with our expectations, though. Confirming the results in the literature, a works council presence is negatively related to a layoff.

Table 3: Heckman probit model of receiving a severance payment

Works council (dummy, 1=yes)	-0.486* (0.296)
Marginal effect of works council | layoff=1	*-0.128* (0.065)*
Female (dummy, 1=yes)	0.112 (0.244)
Age (in years)	0.011 (0.010)
Marital status (dummy, 1=married)	-0.009 (0.228)
Children in the household (dummy,1=yes)	0.373* (0.211)
Nationality (dummy, 1=German)	-0.165 (0.352)
Residence in Eastern Germany (dummy, 1=yes)	-0.254 (0.217)
Years of schooling	0.042 (0.058)
Gross monthly wage/100	0.045*** (0.017)
Tenure (in years)	0.042** (0.017)
Working time (in hours per week) / 100	0.031 (1.259)
Job status (base category: Trained blue collar)	
Un- and semi-trained blue collar workers	0.480 (0.342)
White collar workers with simple tasks	0.817** (0.374)
Qualified professionals	0.399 (0.363)
Highly qualified professional/Managerial position	-0.074 (0.503)
Firm size (base category: 5-19 employees)	
20 - 199 employees	0.530** (0.246)
200 - 1999 employees	0.960*** (0.372)
>=2000 employees	1.468*** (0.388)
Industry controls	Yes
Year controls	Yes
Selection stage: layoff=1	
Works council (dummy, 1=yes)	-0.283*** (0.068)
Days absent due to sickness	0.004*** (0.001)
Overtime hours per week	-0.007 (0.008)
Bonus payment (1=yes)	-0.086 (0.104)
Female (dummy, 1=yes)	-0.023 (0.068)
Age (in years)	-0.046** (0.023)
Age squared/100	0.063** (0.027)
Disabled (1=yes)	-0.029 (0.132)
Marital status (dummy, 1=married)	-0.074 (0.064)
Children in the household (dummy,1=yes)	0.018 (0.064)
Nationality (dummy, 1=German)	-0.005 (0.100)
Residence in Eastern Germany (dummy, 1=yes)	0.096 (0.131)
Years of schooling	-0.045*** (0.017)
Gross monthly wage/100	-0.014*** (0.004)
Tenure (in years)	-0.036*** (0.006)
Working time (in hours per week)	0.012*** (0.004)
Job status (base category: Trained blue collar)	
Un- and semi-trained blue collar workers	0.084 (0.080)
White collar workers with simple tasks	0.087 (0.097)
Qualified professionals	0.088 (0.090)
Highly qualified professional/Managerial position	0.241** (0.121)
Firm size (base category: 5-19 employees)	
20 - 199 employees	-0.078 (0.065)
200 - 1999 employees	-0.145 (0.095)
>=2000 employees	-0.198* (0.106)
Concerns about job security (base category: none)	
Somewhat concerned	0.247*** (0.067)
Very concerned	0.715*** (0.078)
Finding a similar job (base category: easy)	
Hard	-0.120* (0.071)
Almost impossible	-0.177* (0.108)
Regional unemployment rate/100	-0.004 (0.014)
Industry controls	Yes
Year controls	Yes
Observations 1st stage	11,117
Observations 2nd stage	331
Prob > chi^2	0.000

Notes: Robust standard errors in parentheses. The sample size on the 2nd stage is slightly smaller than in the models of Table 2, as for 8 observations some information on the selection stage is missing.

At the 2nd stage with the incidence of severance pay as dependent variable, though, the works council coefficient is still negative and significant at the 0.1 percent level. The marginal effect of works councils, which now takes possible selection effects into account, is even larger in size with -12.8 percentage points. We will discuss this finding in section 5 below.

Table 4: Binary probit models of severance payments – interaction with re-employment

	(1) Severance Payment after plant closing	(2) Severance Payment after layoff
Works council (dummy, 1=yes)	1.457*** (0.535)	-0.191 (0.313)
Works council * re-employed	-1.312** (0.593)	-0.887** (0.409)
Re-employed (1=yes)	-0.153 (0.472)	0.398 (0.243)
Marginal effect of works council | re-employed=1	*0.022 (0.085)*	*-0.168*** (0.050)*
Marginal effect of works council | re-employed=0	*0.336*** (0.118)*	*-0.031 (0.049)*
Wald test of equality	***	**
Female (dummy, 1=yes)	0.682* (0.412)	0.166 (0.241)
Age (in years)	-0.039** (0.019)	0.012 (0.010)
Marital status (dummy, 1=married)	0.466 (0.427)	-0.055 (0.223)
Children in the household (dummy,1=yes)	-0.183 (0.410)	0.309 (0.214)
Nationality (dummy, 1=German)	0.065 (0.509)	-0.189 (0.353)
Resid. in Eastern Germany (dummy, 1=yes)	-0.264 (0.375)	-0.113 (0.221)
Years of schooling	-0.023 (0.098)	0.059 (0.056)
Gross monthly wage/100	0.033** (0.015)	0.050*** (0.016)
Tenure (in years)	0.052** (0.021)	0.037*** (0.013)
Working time (in hours per week)	0.017 (0.015)	-0.003 (0.012)
Job status (ref: Trained blue collar)		
Un- and semi-trained blue collar workers	-1.357** (0.553)	0.463 (0.326)
White collar workers with simple tasks	-0.835 (0.553)	0.758** (0.348)
Qualified professionals	-0.438 (0.446)	0.342 (0.356)
Highly qualified professionals	0.119 (0.581)	-0.096 (0.490)
Firm size (ref: 5-19 employees)		
20 - 199 employees	0.081 (0.454)	0.463* (0.247)
200 - 1999 employees	0.127 (0.708)	0.998*** (0.362)
>=2000 employees	-0.291 (0.690)	1.386*** (0.391)
Industry (ref: Construction)		
Manufacturing	-0.578 (0.418)	-0.291 (0.334)
Retail/Tourism/Transportation	-1.018** (0.506)	-0.022 (0.236)
Financial/corporate services	-0.196 (0.479)	-0.040 (0.315)
Private services	-0.046 (0.529)	-1.612*** (0.436)
Year controls	Yes	Yes
Observations	139	339
Pseudo-R^2	0.364	0.260
Pseudo-R^2 without works council dummy	0.320	0.236

Notes: Robust standard errors in parentheses. ***p<0.01, ** p<0.05, *p<0.1

We also argued above that the impact of works councils on negotiations on severance packages might be moderated by re-employment possibilities for the dismissed employees. We therefore interact the works council dummy with a dummy that indicates whether workers have already been re-employed (full-time or part-time) by the point in time when they are

asked about a dismissal in the previous year. The results can be seen in Table 4. Indeed, we do find a significant and negative interaction effect between the two variables, both after plant closings and after layoffs. This is in line with our Hypothesis 2. It seems to be the case that works councils put more effort into supporting dismissed employees in terms of severance packages when these individuals have lower re-employment chances and vice versa. For both kinds of dismissals, the average marginal effect of works councils is significantly lower when individuals have already been re-employed. We also check whether the type of new employment is crucial. Indeed, the interaction effect is dominated by workers who have been re-employed full-time and we do not find a significant interaction with part-time re-employment.

Table 5: Average marginal effects of a works council - subgroups

	Severance Payment after plant closing		**Severance Payment after layoff**	
	Marginal effects	Wald-Test of equality	Marginal effects	Wald-Test of equality
Male	0.124 (0.097)	n.s.	-0.136*** (0.047)	**
Female	0.274* (0.141)		0.009 (0.065)	
Un- and semi-trained blue collar workers	Too few observations		-0.134* (0.074)	
Trained blue collar workers			-0.060 (0.058)	
White collar workers with simple tasks			-0.259*** (0.084)	
Qualified professionals			0.004 (0.103)	
Highly qualified professionals			0.013 (0.066)	
Member of a trade union	0.256* (0.145)	n.s.	-0.116 (0.120)	n.s.
No member of a trade union	0.147 (0.098)		-0.102** (0.041)	
German	Too few observations		-0.103 (0.116)	n.s.
Foreigner			-0.082** (0.042)	
Observations	139		339	

Notes: Robust standard errors in parentheses. The results are based on coefficients of probit models which are similar to those in Table 4. Regarding subgroups, we interact the works council dummy with the respective subgroup dummies and calculate the marginal effect of the works council based on this model. The number of observations was too small for interaction terms between the works council dummy and the job status dummies as well as the foreigner dummy in the model of severance payments after plant closings. Regarding union membership, we imputed the information for the year 2006 from 2007, as the question was not included in the 2006 SOEP questionnaire. ***p<0.01, ** p<0.05, *p<0.1.

We do several robustness checks in order to investigate whether there are differences across other subgroups. For this purpose, we reiterate our approach with respect to re-employment possibilities and interact the works council dummy with the respective subgroup dummy. In the following, we only illustrate the average marginal effects computed on the base of the coefficients of the binary probit models (the detailed results are available from the authors on request). First, we find that average marginal effects for men are lower than for women, even

though the difference is only significant with respect to layoffs. Second, we look at possible differences with respect to job statuses. Due to the small sample size, we cannot assess differences following plant closings. Regarding severance pay after layoffs, though, we see the biggest effect sizes in the lower hierarchical ranks. Third, we examine whether dismissed workers get any support from their trade union which substitutes help from the works council. However, we do not find significant differences between members and non-members of a trade union. Fourth, we differentiate between German and non-German nationals, but also find no significant differences in terms of the impact of works councils.

We abstain from exploring differences in the amount of severance payments in this contribution in detail due to the small number of observations. However, our data yield information that huge differences in severance payments between dismissed employees in firms with (median = 2,600 €, n=40) and without works councils (median = 12,650 €, n=40) can be explained by differences in previous firm tenure and wages. Corresponding severance pay factors (=severance payment / [previous monthly wage * years of tenure]) do not differ considerably (median 0.45 and 0.48, respectively). This pattern holds for both individual layoffs and plant closings. Hence, it might be that works councils are only relevant for the occurrence of severance pay and not for their actual size.

5. Discussion

In contrast to prior studies that investigated the relationship between works council presence and individual outcomes of incumbent employees, we explore whether works councils still take care of dismissed employees by supporting them with regard to severance payments. We find a positive association between works councils with severance payments after plant closings. This is in line with our theoretical considerations, which expect works councils to be supportive when the reason for the dismissal has not been self-induced by the worker. It might also be seen as an empirical confirmation of Addison et al.'s (2004a) explanation for their finding of a positive correlation of works council presence and the incidence of plant closings. They argue that works councils are able to negotiate social plans that "make the work-force more amenable to reductions in size" (p. 144). Taking this for granted, it is not surprising that we observe a higher probability of severance pay if a works council existed in the establishment. Otherwise, the council and the work-force as a whole would have opposed the shut-down of the plant.

Our findings point in the opposite direction when it comes to the incidence of severance pay after individual layoffs. Here, we reveal a negative association with works council presence. This result can be interpreted in two directions. First, it seems likely that the SOEP data are not detailed enough to capture all relevant information for the circumstances of the different kinds of dismissal and the degrees of misconduct or the lack of ability. Even though we apply a two-stage model which controls for a wide variety of possible antecedents of layoffs, the negative relation remains stable and significant. Second, a non-supportive works council may even encourage firms not to pay a severance package. Either explanation is likely to be relevant to some extent.

In a second step, we explored whether works councils make their support contingent on the degree of re-employability of the affected workers. We find that the relation of works councils presence and severance pay is weaker for those workers who have better re-employment possibilities. Hence, there seems to be a trade-off in the sense that councillors might alternatively advocate appropriate outplacement measures to be conducted by the firm instead of monetary payments to dismissed employees. We also looked at worker subgroups that might be affected differently by works councils. Regarding layoffs, our results reveal that the negative association of prior works council presence is only significant for males. One explanation might be that works councils even act against severance payments in cases of severe misconduct. In fact, there is evidence that men are more likely to engage in counterproductive behaviour in the workplace that harm both the organization (such as theft) and their colleagues (such as physical or verbal assaults), especially in stressful conditions (Spector & Zhou 2014). It is also known that heavy alcohol consumption is more common among men (Wilsnack et al. 2009), which leads to a considerably worse performance at work (Mangione et al. 1999) and is one of the reasons for individuals layoffs due to misconduct. All in all, this supports our notion that layoffs in firms with works councils stem much more often from severe misbehaviour, which makes it unlikely that councils will act in favour of severance pay.

6. Conclusion

We provide first evidence of the role of works councils in providing severance payments for dismissed employees. The incidence of severance payments is considerably positively associated with the existence of a works council in the context of plant closings. In contrast,

our results are very different for individual layoffs. This result, however, may be driven by unobserved heterogeneity between individually dismissed employees in firms with and without works councils due to a lack of more detailed data on the circumstances of the dismissals. We find interesting differences between groups of employees and interdependencies with the observation of individuals' re-employment in the year after the dismissal.

Future research may try to capture the circumstances of dismissals more exactly, most preferably with a direct assessment of the reason of the dismissal in the logic of the German law (severe misconduct vs. operational reasons). We also suggest additionally taking the type of works council into account. Pfeifer (2014) shows that the effect size of works council presence on different HRM problems depends on the degree of the council's cooperativeness. Hence, one might assume that the negotiation behaviour of the works council is influenced by its relationship with the management. In this sense, also evidence from other countries would be helpful to explore the robustness of our results across similar and different institutional environments. Future research may also extent the analyses from the pure incidence of the severance payment and consider the amount of the payment and severance pay factors (taking previous firm tenure and wages into account).

References

Addison, J. T., Bellmann, L. and Kölling, A. (2004a). 'Works councils and plant closings in Germany'. *British Journal of Industrial Relations*, 42: 125-148.

Addison, J. T., Schnabel, C. and Wagner, J. (2001). 'Works councils in Germany: Their effects on establishment performance'. *Oxford Economic Papers,* 53: 659-694.

Addison, J. T., Schnabel, C. and Wagner, J. (2004b). 'The course of research into the economic consequences of German works councils'. *British Journal of Industrial Relations*, 42: 255-281.

Addison, J. T., Teixeira, P. and Zwick, T. (2010). 'German works councils and the anatomy of wages'. *Industrial and Labor Relations Review,* 63: 247-270.

Ai, C. and Norton, E.C. (2003). 'Interaction terms in logit and probit models'. *Economics Letters*, 80(1): 123-129.

Alewell, D. and Hauff, S. (2013). 'Employers' motives behind outplacement activities: A theoretical and empirical investigation'. *Personnel Review*, 42(4): 466-487.

Backes-Gellner, U., Frick, B. and Sadowski, D. (1997). 'Codetermination and personnel policies of German firms: The influence of works councils on turnover and further training'. *International Journal of Human Resource Management,* 8: 328-347.

Boockmann, B. and Steffes, S. (2010). 'Workers, firms, or institutions: What determines job duration for male employees in Germany?'. *Industrial and Labor Relations Review*, 64: 109-127.

Davy, J. A., Anderson, J. S. and Dimarco, N. (1995). 'Outcome comparisons of formal outplacement services and informal support'. *Human Resource Development Quarterly*, 6: 275-288.

Dilger, A. (2002). *Ökonomik betrieblicher Mitbestimmung: die wirtschaftlichen Folgen von Betriebsräten*. München und Mering: Hampp.

Doherty, N., Tyson, S. and Viney, C. (1993). 'A positive policy? Corporate perspectives on redundancy and outplacement'. *Personnel Review*, 22: 45-53.

Frick, B. (1996). 'Co-determination and personnel turnover: The German experience'. *Labour,* 10: 407-430.

Frick, B. and Möller, I. (2003). 'Mandated works councils and firm performance: Labor productivity and personnel turnover in German establishments'. *Schmollers Jahrbuch*, 123: 423-454.

Goerke, L. and Pannenberg, M. (2010). 'An economic analysis of dismissal legislation: Determinants of severance pay in west Germany'. *Journal of Law and Economics,* 33: 71-85.

Greene, W. (2010). 'Testing hypotheses about interaction terms in nonlinear models'. *Economics Letters*, 107(2): 291-296.

Grund, C. (2006). 'Severance payments for dismissed employees in Germany'. *European Journal of Law and Economics*, 22: 49-71.

Grund, C., Martin, J. and Schmitt, A. (2016). 'Works councils, quits and dismissals'. *German Journal of Human Resource Management*, 30: 53-75.

Grund, C. and Schmitt, A. (2013). 'Works councils, wages, and job satisfaction'. *Applied Economics,* 45: 299-310.

Hirsch, B., Schank, T. and Schnabel, C. (2010). 'Works councils and separations: Voice, monopoly, and insurance effects'. *Industrial Relations* 49: 566-592.

Hübler, O. and Jirjahn, U. (2003). 'Works councils and collective bargaining in Germany: The impact on productivity and wages'. *Scottish Journal of Political Economy*, 50: 471-491.

Jirjahn, U. (2009). 'The introduction of works councils in German establishments — Rent Seeking or Rent Protection?'. *British Journal of Industrial Relations*, 47: 521–545.

Jirjahn, U. and Tsertsvadze, G. (2006). ' Betriebsräte und Arbeitszufriedenheit'. *Jahrbücher für Nationalökonomie und Statistik*, 226: 537-561.

Karaca-Mandic, P., Norton, E.C. and Dowd, B. (2012). 'Interaction terms in nonlinear models'. *Health Services Research*, 47: 255-274.

Kraft, K. and Lang, J. (2008). 'The causes and consequences of adopting a works council'. *Jahrbücher für Nationalökonomie und Statistik*, 228: 512-532.

Lindbeck, A., and Snower, D.J. (2001). 'Insiders versus outsiders'. *Journal of Economic Perspectives*, 15: 165-188.

Mangione, T. W., Howland, J., Amick, B., Cote, J., Lee, M., Bell, N. and Levine, S. (1999). 'Employee drinking practice and work performance'. *Journal of Studies on Alcohol,* 60: 261-270.

Mayrhofer, W. (1987). 'Der gegenwärtige Stand der Outplacement-Diskussion'. *Zeitschrift für Personalforschung*, 1: 147-180.

Pfeifer, C. (2007). 'Betriebsräte, Tarifverträge und freiwillige Kündigungen von Arbeitnehmern'. *WSI Mitteilungen*, 60: 63-69.

Pfeifer, C. (2014). 'Works councils and the management of human resources: Evidence from German establishment data'. *Economic and Industrial Democracy*, 35(1): 143-163.

Pull, K. (2008). 'Die betriebswirtschaftliche Logik von Outplacement-Leistungen: Theoretische Erklärungsansätze und ihre Plausibilität im Lichte vorliegender empirischer Befunde'. *Industrielle Beziehungen,* 15: 233-255.

Spector, P. E. and Zhou, Z. E. (2014). 'The moderating role of gender in relationships of stressors and personality with counterproductive work behavior'. *Journal of Business & Psychology,* 29: 669-681.

Wagner, G. G., Frick, J. R. and Schupp, J. (2007). 'The German socio-economic panel study (SOEP) – scope, evolution and enhancements'. *Schmollers Jahrbuch,* 127: 139-169.

Wilsnack, R. W., Wilsnack, S. C., Kristjanson, A. F., Vogeltanz-Holm, N. D. and Gmel, G. (2009). 'Gender and alcohol consumption: Patterns from the multinational GENACIS project. *Addiction*, 104: 1487-1500.