



Is it perceived as fair when craft unions exploit bottleneck positions? A quasi-experimental study

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Abstract

Using vignettes, we analyze under which conditions workers perceive over-proportional wage increases for occupational groups that are represented by craft unions as (rather) fair. Perceptions depend on the burdens of the occupational group, the size of the wage increase, information policies, and potential consequences for other groups.

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Author note

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1 Introduction

The German industrial relation system has received increasing international attention, which is partly due to the good performance of the German economy and labor market during and after the economic crisis (Dustmann et al., 2014). Although the German system can be generally described as cooperative compared to other countries, some recent challenges have occurred. Since the beginning of the millennium, Germany has experienced an increasing impact of craft unions (Burgess and Symon, 2012, Keller, 2015, Schnabel, 2015). The most important craft unions control bottleneck positions in rail transport (train drivers), air transport (pilots) and in hospitals (medical doctors). In recent years, their strike activities affected public life in Germany strongly. Labor conflicts were partly aimed at pecuniary improvements, but partly also to competition between different unions.

Dütsch et al. (2014) asked employees working in rail and air transport or hospitals on high salary increases negotiated by craft unions and find that around a third judges these increases as unfair. Organizational and social justice considerations (Konow, 2003) suggest that the precise setting of wage negotiations should have an impact on fairness judgments. Other than Dütsch et al. (2014) we use a quasi-experimental approach to analyze under what circumstances the general public perceives over-proportional wage increases for specific occupational groups as fair. Thus our results refer to assessments of hypothetical scenarios (vignettes) by impartial spectators.

2 Data and method

During the year 2012, we conducted a telephone survey among workers aged 18 to 65 years (Stephan et al., 2013). Around 2,500 employees were asked to judge three or four randomly chosen hypothetical scenarios. Such vignettes avoid any problems of selection of individuals into different situations. Around 15 percent each were randomly drawn from three sectors with the most active craft unions in Germany: Rail transport, air transport, and hospitals. The remaining 55 percent were randomly drawn from all other sectors.

The wording of the vignettes is provided in Table 1. Respondents were asked to assess the scenarios as fair, rather fair, rather unfair, or unfair. For the following analysis, the dependent variable takes the value one if the respondent considered the over-proportional wage increases to be fair or rather fair, and zero if they were considered to be rather unfair or unfair. Table 2 displays variable means and average marginal effects from two specifications of a probit model with clustered standard errors at the individual level.

We have performed several robustness checks. At first, we have re-estimated the probit regression with additional interaction terms for craft union and other union membership with all explanatory variables (Table A.1 in the Appendix). The key results remain qualitatively and quantitatively the same. Moreover, we have estimated an ordered probit model, a fixed effects linear model, and a conditional fixed effects ordered logit model, which obtain very similar results (Table A.2 in the Appendix).

3 Results and discussion

The first specification of the probit regression in Table 2 only includes scenario features as explanatory variables. The average marginal effects on the probability to perceive an over-proportional wage increase as (rather) fair are highly significant for all features. The first block of scenario features is concerned with the situation of the occupational group, who gets the over-proportional wage increase. The reference feature is that the work requires long education and experience at the workplace. If instead other situations are described, the probability to perceive the wage increase as fair is on average significantly lower: 5 percentage points lower if the burden has increased for the group, 38 percentage points lower if group bears no additional burden, and 22 percentage points lower if group feels that employer's valuation of their work has decreased. The difference between an increased burden and no additional burden is about 33 percentage points and highly significant. These findings are in line with equity theory (Adams, 1965), which frames justice in terms of a perceived ratio of outcomes to input: Higher outcomes by wage increases are partly justified by higher inputs via increased burdens or higher job requirements. Employer's valuation of work can alternatively be interpreted as an outcome if employees have preferences

for such a valuation. Thus, a decrease of the valuation can be compensated by a wage increase.

The wage increase of the occupational group is 4 percent in the reference scenario and 8 percent in a variant (compared to 2 percent for all other employees). In the latter case, the probability to perceive the over-proportional wage increase as fair is on average 26 percentage points lower. In a *ceteris paribus* interpretation, i.e., inputs of the occupational group and inputs as well as outcomes of other employees are constant, a larger wage increase for the occupational group should be perceived as less fair from an equity perspective.

The scenarios also varied with respect to the information policy. Whereas the reference feature does not contain additional information for the workforce, we have sometimes added that employees are informed about the reasons of the wage increase and also that they have explicitly not been informed. The information feature increases the probability to perceive the wage increase slightly by 4 percentage points and the non-information feature decreases the probability by 45 percentage points. Thus, independently of the outcomes and inputs, information has a significant impact on the fairness perceptions, which is in line with informational justice theory (Greenberg, 1993).

Our last variants additionally include positive and negative consequences for other employees. If the over-proportional wage increases clear the path for wage increases for others, the probability of their acceptance is 19 percentage points larger. In contrast, the probability to perceive an over-proportional wage increase as fair is 46 percentage points lower if the craft union does not consider potential consequences for other employees. As positive and negative consequences for other employees are related to their outcomes, our findings are again consistent with equity theory.

In the second specification of the probit regression in Table 2, we have additionally included basic socio-demographics, wages and attitudes as control variables. The estimated average marginal effects for the scenario features are not affected by the inclusion, which indicates that the results for our scenario features are indeed not largely affected by the personal situation of the respondents. Moreover, only two characteristics are significantly corre-

lated with the probability to perceive an over-proportional wage increase as fair. Older workers are less likely and craft union members, who would personally benefit from such over-proportional wage increases in the real world, are more likely to perceive the wage increases as fair.

4 Conclusions

Our study contributes to the literature by isolating critical factors for the acceptance of over-proportional wage increases, which in our case have been forced by a craft union for a specific occupational group. Whereas the majority in our sample perceives the over-proportional wage increases as (rather) fair, we could also show that fairness perceptions significantly depend on burdens and requirements for the occupational group, the size of the over-proportional wage increases, information about reasons, and consequences for other employees. The results are consistent with social and organizational justice theories about equity and informational justice.

Over-proportional wage increases for specific occupational groups without justification or positive consequences for other employees could lead to increased tensions due to low acceptance levels. This might erode the willingness to cooperate between different occupational groups within the same firm or even work team. In Germany, such an adverse effect is likely to be even larger if craft unions would succeed in claims to represent union members from further employee groups. Then different unions would negotiate different outcomes for the same occupational group in the same firm, which would also contradict the union claim of equal pay for equal work.

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Table 1: Vignettes

	Reference scenario	Variants[#]		
A. Situation of the occupational group	The work of a particular occupational group requires long education and much experience at the workplace.	Compared to other occupational groups in a company, a particular occupational group did not face any additional burden during the last years.	For a particular occupational group, time pressure and requirements of the job has markedly increased during the last years.	A particular occupational group is of the opinion that their employer's valuation of their work markedly decreases over time.
B. Size of wage increase For this occupational group, a craft union negotiates a wage increase of 4%. All other employees receive a wage increase of 2%.	... 8%. All other employees receive a wage increase of 2%.		
C. Information policy	[not mentioned]	The craft union comprehensively informed other employees about the reasons of the wage increase.	The craft union did not inform other employees about the reasons of the wage increase.	
D. Consequences for colleagues from other occupational groups	[not mentioned]	The craft union pointed out that the wage increase also cleared the path for further wage increases regarding other employees.	The occupational group used its key position at the company to secure the wage increase. It did not consider potential consequences for other employees.	

[#]) Compared to the reference scenario, the other scenarios were varied within one to three dimensions.

Table 2: Variable means and average marginal effects from probit estimates on the probability to perceive the wage increase of the occupational group as (rather) fair

	Means	Average marginal effects	
		(1)	(2)
i) Scenario features			
<i>Reference: Work requires long education and experience at the workplace</i>			
Group bears no additional burden	0.06	-0.38**	-0.38**
Burden for group has increased	0.12	-0.05**	-0.05**
Group feels that employers do not value work	0.12	-0.22**	-0.22**
<i>Reference: Wage increase of 4 percent</i>			
Wage increase of 8 percent	0.39	-0.26**	-0.26**
<i>Reference: Information of other employees not mentioned</i>			
Information of other employees about reasons	0.11	0.04**	0.04**
No information of other employees about reasons	0.05	-0.45**	-0.45**
<i>Reference: Consequences for other employees not mentioned</i>			
Clear the path for wage increases for others	0.10	0.19**	0.19**
Consequences for others not considered	0.05	-0.46**	-0.47**
ii) Basic socio-demographics and wages			
Female	0.52		0.0004
Work in sector with craft unions	0.34		0.01
<i>Reference: Age up to 30</i>			
Age 30-39	0.25		-0.06**
Age 40-49	0.34		-0.10**
Age 50 and older	0.32		-0.15**
<i>Reference: Net monthly wage rate up to 1000 Euro</i>			
Net monthly wage 1001-1500 Euro	0.26		0.01
Net monthly wage 1501-2000 Euro	0.24		0.02
Net monthly wage more than 2000 Euro	0.22		0.03
Wage information missing	0.08		0.02
iii) Attitudes			
Member of craft union	0.07		0.09**
Member of other union	0.21		0.02
Own earnings are less than would be just	0.62		0.02
Observations	9612	9,612	9,612
Individuals	2493	2493	2493
Pseudo R2		0.12	0.13
Mean assessment reference scenario	0.73		
Mean predicted probability		0.51	0.51

Note: All variables are binary. Standard errors are clustered at the individual level. *) $\alpha = 0.05$, **) $\alpha = 0.01$.

Appendix

Table A.1: Average marginal effects from probit estimates with interactions on union membership on the probability to perceive the wage increase of the occupational group as (rather) fair

	Average marginal effects		
	Non-interacted	Interaction craft union membership	Interaction other union membership
i) Scenario features			
<i>Reference: Work requires long education and experience at the workplace</i>			
Group bears no additional burden	-0.40**	-0.04	0.11*
Burden for group has increased	-0.05**	0.03	-0.01
Group feels that employers do not value work	-0.23**	0.02	0.03
<i>Reference: Wage increase of 4 percent</i>			
Wage increase of 8 percent	-0.26**	-0.09	0.01
<i>Reference: Information of other employees not mentioned</i>			
Information of other employees about reasons	0.04*	0.05	-0.02
No information of other employees about reasons	-0.42**	-0.21*	-0.06
<i>Reference: Consequences for other employees not mentioned</i>			
Clear the path for wage increases for others	0.21**	-0.06	-0.07
Consequences for others not considered	-0.47**	0.12	-0.04
ii) Basic socio-demographics and wages			
Female	0.01	-0.12*	-0.01
Work in sector with craft unions	0.01		
<i>Reference: Age up to 30</i>			
Age 30-39	-0.08**	0.03	0.08
Age 40-49	-0.11**	-0.01	0.04
Age 50 and older	-0.16**	0.04	0.03
<i>Reference: Net monthly wage rate up to 1000 Euro</i>			
Net monthly wage 1001-1500 Euro	0.03	-0.03	-0.07
Net monthly wage 1501-2000 Euro	0.03	-0.04	-0.07
Net monthly wage more than 2000 Euro	0.04	-0.07	-0.04
Wage information missing	0.03	0.13	-0.08
iii) Attitudes			
Member of craft union		0.21*	
Member of other union			0.04
Own earnings are less than would be just	0.02	0.01	-0.01
Observations		9,612	
Individuals		2493	
Pseudo R2		0.14	

Note: All variables are binary. Standard errors are clustered at the individual level. *) $\alpha = 0.05$, **) $\alpha = 0.01$.

Table A.2: Average marginal effects from ordered probit estimates and coefficients from fixed effects linear and fixed effects ordered logit models on the perception of wage increases

	Orderd Probit				Fixed effects (FE)	FE ordered logit [#]
	Average marginal effects on outcome				Coefficients	
	Unfair	Rather unfair	Rather fair	Fair		
i) Scenario features						
<i>Reference: Work requires long education and experience at the workplace</i>						
Group bears no additional burden	0.26**	0.08**	-0.06**	-0.27**	-0.94**	-2.31**
Burden for group has increased	0.04**	0.01**	-0.01**	-0.04**	-0.13**	-0.25**
Group feels that employers do not value work	0.13**	0.04**	-0.03**	-0.14**	-0.47**	-1.09**
<i>Reference: Wage increase of 4 percent</i>						
Wage increase of 8 percent	0.17**	0.05**	-0.04**	-0.18**	-0.64**	-1.75**
<i>Reference: Information of other employees not mentioned</i>						
Information other employees about reasons	-0.03**	-0.01**	0.01**	0.03**	0.13**	0.40**
No information of other employees about reasons	0.34**	0.11**	-0.08**	-0.36**	-1.15**	-2.86**
<i>Reference: Consequences for other employees not mentioned</i>						
Clear the path for wage increases for others	-0.13**	-0.04**	0.03**	0.14**	0.46**	1.32**
Consequences for others not considered	0.30**	0.09**	-0.07**	-0.31**	-1.06**	-2.63**
ii) Basic socio-demographics and wages						
Female	0.002	0.001	0.0004	0.002		
Work in sector with craft unions	-0.01	0.00	0.00	0.02		
<i>Reference: Age up to 30</i>						
Age 30-39	0.03*	0.01*	-0.01*	-0.04*		
Age 40-49	0.06**	0.02**	-0.02**	-0.07**		
Age 50 and older	0.10**	0.03**	-0.02**	-0.11**		
<i>Reference: Net monthly wage rate up to 1000 Euro</i>						
Net monthly wage 1001-1500 Euro	0.01	0.00	0.00	-0.01		
Net monthly wage 1501-2000 Euro	0.00	0.00	0.00	0.00		
Net monthly wage more than 2000 Euro	-0.02	-0.01	0.00	0.02		
Wage information missing	0.01	0.00	0.00	-0.01		
iii) Attitudes						
Member of craft union	-0.08**	-0.02**	0.02**	0.08**		
Member of other union	0.00	0.00	0.00	0.00		
Own earnings are less than would be just	0.00	0.00	0.00	0.00		
Observations		9612			9612	8144
Individuals		2493			2493	1680
(Pseudo) R2		0.10			0.26	0.29

Note: All variables are ordinal (unfair, rather unfair, rather fair, fair). Standard errors are clustered at the individual level. *) $\alpha = 0.05$, **) $\alpha = 0.01$.

#) Ferrer-i-Carbonell and Frijters (2004) conditional logit estimation for ordered dependent variables (stata ado-file fcf); see Ferrer-i-Carbonell, A., Frijters, P., 2004. How Important Is Methodology for the Estimates of the Determinants of Happiness? The Economic Journal 114, 641-659.